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# Inclusive Growth Diagnostic: Dominican Republic





UNITED STATES AGENCY FOR INTERNATIONAL DEVELOPMENT

# **INCLUSIVE GROWTH DIAGNOSTIC: DOMINICAN REPUBLIC**

## **FINAL REPORT**

Prepared for:  
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**November 2012**

**Cover photo:** Jones, Adam. "Street Scene with Pedestrian – Puerto Plata – Dominican Republic." Flickr Photo. April 1, 2004

# **INCLUSIVE GROWTH DIAGNOSTIC: DOMINICAN REPUBLIC**

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## INTRODUCTION AND METHODOLOGY

In 2011, the USAID/Washington Inclusive Growth Diagnostic (IGD) Working Group began discussing how to modify existing growth diagnostic tools to align with Agency priorities, primarily the inclusion of marginalized subpopulations in economic growth.<sup>1</sup> The original growth diagnostic methodology developed by Ricardo Hausmann, Dani Rodrik and Andres Velasco (HRV) at Harvard University provides a tool for identifying the most severe constraints to accelerating economic growth in a country.<sup>2</sup> However, it does not address the pattern of growth—whether sufficient “productive employment” (discussed below) is being generated or whether there is much potential for increasing productivity in smallholder agriculture—both of which are important components of the sustained, broad-based (inclusive) economic growth objective of USAID.<sup>3</sup>

This Dominican Republic (DR) inclusive growth diagnostic constraints analysis was undertaken as a field test of two draft approaches to IGD constraints analysis: the “productive employment” model which seeks to identify barriers to inclusive growth through improving smallholder

agriculture, the employability of labor and/or the demand for labor; and the “production sector” model which identifies links between target households and particular economic sectors and applies the HRV model to those sectors. The production sector version presented data challenges in identifying industries of interest that the team was unable to overcome. Consequently it was not pursued in-depth. The team’s experience with both models will be discussed in a separate paper.

The Dominican Republic IGD Team was composed of Alice Brooks of LAC/RSD, Stu Callison of E3/EP, Luis C. González of USAID/Dominican Republic, and Daniel Handel of USAID/Nicaragua. Anastasia de Santos of E3/MPEP was the contributing author of the analysis of women entrepreneurs. The USAID/ Dominican Republic Mission provided enthusiastic morale and logistical support, and the Dominican Republic’s National Statistical Office and Central Bank National Accounts Division were very helpful in providing access to data.

In addition to the Agency economists working on the team, Optimal Solutions Group, Inc. and key staff supported the research with data analysis of the three survey databases provided by the Dominican government (labor market survey data, household survey data and national business registry database). Claudia A. Gonzalez Martinez was the contributing author of the returns to education regressions, and Soham Banerji worked behind the scenes with a group of analysts to produce data dictionaries and codebooks of the datasets. Their contributions are greatly appreciated.

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<sup>1</sup> Original USAID working group members were Jerry Wolgin (AFR) chair, Rachel Bahn (E3), Alice Brooks (LAC), Stu Callison (E3), Michael Crosswell (PPL), David Garber (E3), Caren Grown (PPL), Gary Linden (E3), Lisa Ortiz (E3) and Don Sillers (E3). Recently, they have been joined by Anastasia de Santos (E3), Steve Anderson (E3), Danielle Dukowicz (ME), Dany Khy (ME), and James Walker (ME).

<sup>2</sup> The technique was developed by Ricardo Hausmann, Dani Rodrik and Andres Velasco at Harvard University and is commonly known as the HRV model. The most accessible description detailing how to apply the HRV model can be found in Ricardo Hausmann, Bailey Klinger and Rodrigo Wagner, “Doing Growth Diagnostics in Practice: A ‘Mindbook,’” Harvard University, Center for International Development, 2008.

<sup>3</sup> *Securing the Future: A Strategy for Economic Growth*, USAID, April 2008.

## What Is More Productive Employment?

In the effort against poverty we assume that employment is the link between people and growth. Labor is often the primary asset owned by the poor so that for growth to lead to poverty reduction, it must lead to increased employment and wages for marginalized populations. We assume that actual unemployment is usually a ‘luxury’ for those with enough of a safety net to draw upon to survive during their unemployment. The very poor however are unlikely to be entirely unemployed as they must constantly work at least at a subsistence level to survive.

Given that wages in an open economy are generally a function of productivity per worker and bargaining power, growth which leads to employment can benefit the poor through two channels. First, employment will benefit the unemployed directly by providing them with income where they had none before. For the worst off— those poor working at or near a subsistence level— higher levels of employment might be expected to increase their bargaining power and increase their wage level in their current sector. However, here the pattern of employment becomes important. Even if all surplus labor is drawn into low productivity activities like small scale agriculture or simple retail, the low productivity of these sectors will limit wage increases despite the improved bargaining power. For those workers wanting to move into higher productivity industries, the competition from large numbers of other workers desiring to move out of low productivity sectors will limit wage increases despite the higher productivity of these new jobs.

Therefore, returning to the identity that wages are a function of both bargaining power and productivity, in an environment of full employment where much of the workforce is in low productivity industries, the wage increasing bargaining power for the poor is diminished by the inherent low productivity of these jobs. The wage increasing higher productivity of jobs in industries such as commercial farming and off-farm sectors is diminished by the supply of poor workers competing for these jobs. Only when the economy moves towards full employment in sectors with higher productivity than the poor are currently in, will growth lead to large benefits for the poor and marginalized.<sup>4</sup> This requires “increasing more productive employment,” which is the focus of this DR IGD analysis.

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Following an introduction to the Inclusive Growth Diagnostic methodology, the Executive Summary provides a brief overview of the Dominican economy then moves on to discuss the results of the screening questions which quickly ruled out two branches of the model. This is followed by summaries of the in-depth analyzes of each remain branch of the model. The Summary Findings present the binding constraints that were identified in the diagnostic. The remainder of the report provides a full discussion of the analytic branches of the model.

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<sup>4</sup> There is a rich empirically-based body of literature on this topic, including Barrios and Mellor 2006 in Guatemala, Fan et al. 2002 in China, Bhalla 2004 in India, Mellor and Gavian 1999 in Egypt, Mellor and Usman 2006 in Afghanistan, and Haddad and Ahmed 1999 in Egypt.” (USAID-Weidemann Associates, p. 9)

## The Inclusive Growth Diagnostic Methodology

The productive employment model used to identify the binding constraints to inclusive growth in the Dominican Republic builds on the HRV model developed and pioneered by Harvard University professors Hausmann, Rodrik and Velasco. The logic behind the original model is that there are limits to the resources of governments and donors and therefore that in developing economies where a wide variety of constraints exist, policymakers need to focus on the most binding constraints in order to maximize the impact of their limited budgets and political capital. To do this, the HRV model analyzes constraints to growth through the lens of private investment (its level and returns), but does not address the pattern of growth. USAID's Inclusive Growth Diagnostic methodology builds on the HRV model but with several important extensions.

The original HRV methodology starts with private investment as the objective function. This model is limited to exploring constraints to the returns to private enterprise without considering whether the policy matrix within which it operates promotes employment generation or more capital intensive activities, nor does it consider constraints to small-scale agriculture, some of which are qualitatively different than those affecting commercial agriculture and non-agricultural activities. As such, the original HRV model does not target sustainable, broad-based economic growth.

The productive employment IGD model starts with the premise that there are two important ways to achieve sustained, broad-based economic growth that more rapidly

reduces household poverty and promotes household food security:

- increasing agricultural production and incomes in rural areas where smallholder agriculture is still important, and
- increasing more productive and higher wage non-farm employment.

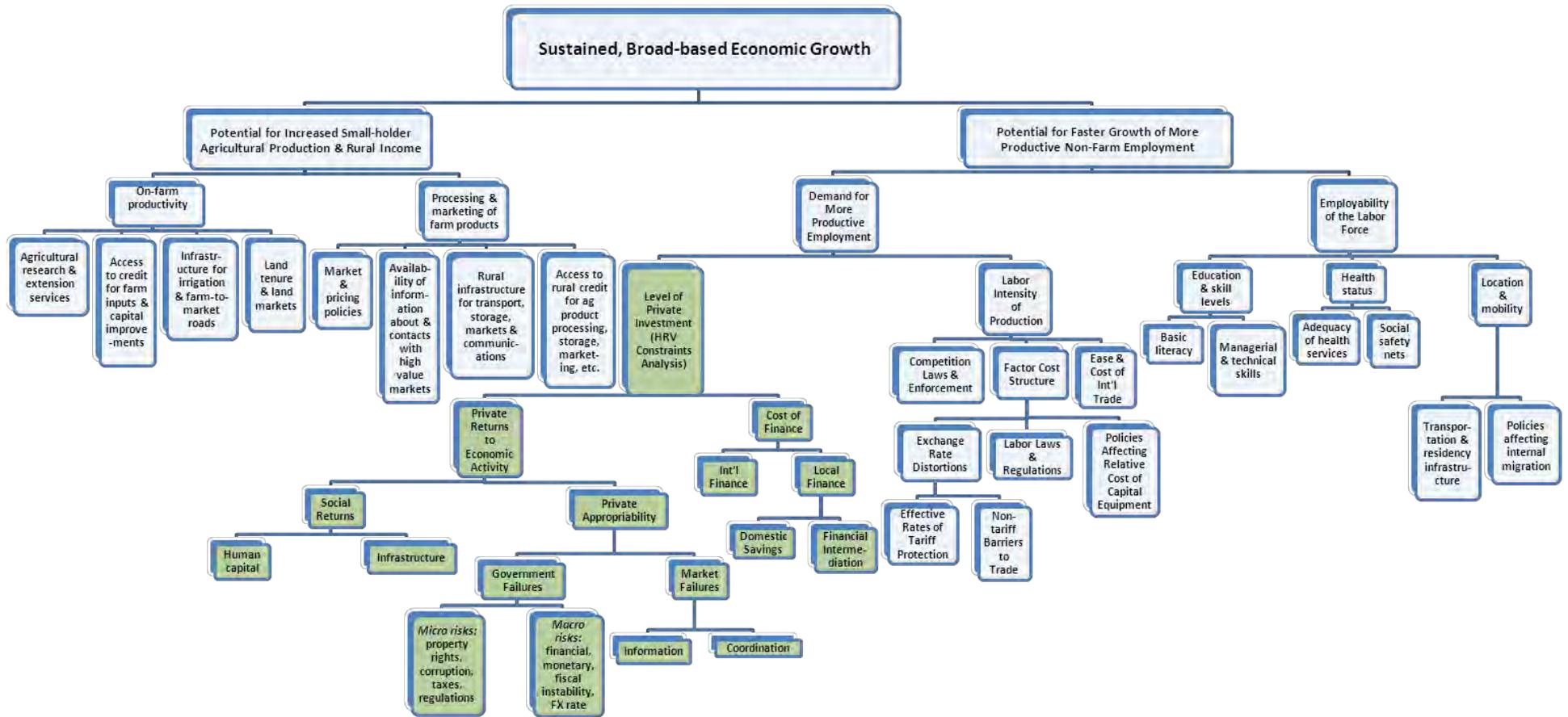
A comprehensive growth diagnostic approach looks for potential for improvement in both of these areas, and if scope for improvement exists, analyzes why that potential is not being realized. It must also analyze whether there are important constraints on the employability of the workforce and/or significant constraints imposed by the policy incentive structure that discourage investment in more productive employment-oriented activities.

The analysis undertaken for the Dominican Republic follows the productive employment diagram shown below. To use the model, researchers begin with a series of screening questions to identify which branches of the model can be immediately discarded as constraints to inclusive growth, and which branches need in-depth analysis. Researchers then use economic analysis to move down through the branches of the model to identify which underlying issues are the binding constraints to growth and what are the keys to releasing them.<sup>5</sup> In addition to the branches below, the Dominican Republic IGD team also found it illuminating to analyze why informal sector entrepreneurs are not registering their businesses and joining the formal sector, which would enhance their ability to access finance for expansion, link them to larger markets and better technology and to employ more workers.

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<sup>5</sup> A full description on the methodology can be found in Callison (2012).

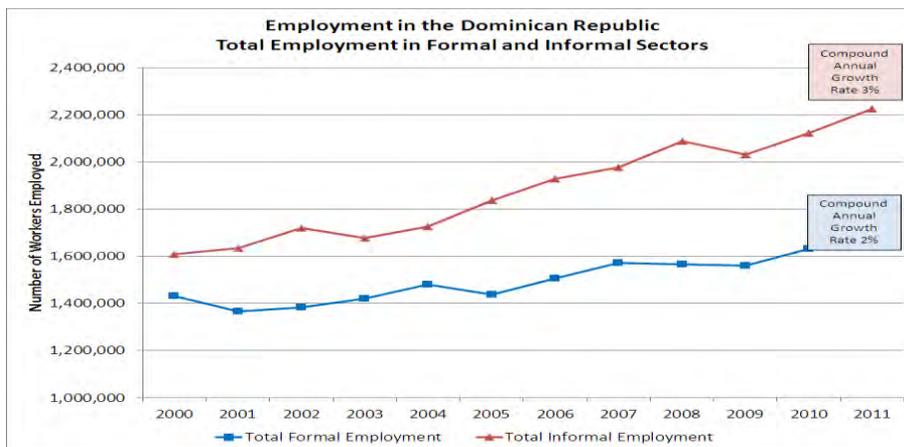
Figure I&M | Full IGD Decision Tree, Productive Employment Model



## EXECUTIVE SUMMARY

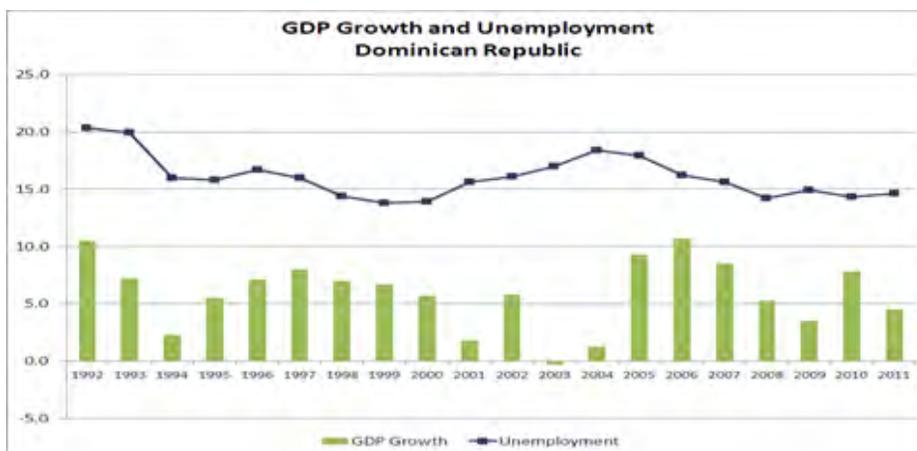
The Dominican Republic recorded average compound real economic growth of 5.2% from 1991-2011, considerably higher than regional comparators and one of the strongest average growth rates in the world. However, open unemployment in the Dominican Republic has remained stubbornly high, decreasing from 20% in 1991 to 14.6% in 2011, while employment in the less productive informal sector of the economy has remained above 50% of the total and has been rising in recent years, up to 57% in 2011 from 53% in 2000.<sup>67</sup> Labor force participation is much lower among women (44 percent vs. 68.5 percent among men) and the unemployment rate among women is 21.5 percent against 10.1 percent for men.<sup>8</sup>

Figure ES 1 Employment in Formal and Informal Sectors, Dominican Republic



Source: Author's calculations based on data from the Central Bank of the Dominican Republic

Figure ES 2 GDP Growth and Unemployment, Dominican Republic



Source: Central Bank of the Dominican Republic

<sup>6</sup> Central Bank of the Dominican Republic

<sup>7</sup> Open unemployment (*tasa de desocupación abierta*) as defined by the International Labor Organization occurs when people are without jobs and they have actively sought work within the past four weeks. Covered unemployment (*tasa de desocupación ampliada*) includes people who have given up looking for work but would accept a job if one was offered.

<sup>8</sup> Central Bank of Dominican Republic. [http://www.bancentral.gov.do/english/statistics.asp?a=Labor\\_Market](http://www.bancentral.gov.do/english/statistics.asp?a=Labor_Market)

The national poverty line headcount ratio declined from a peak of 43% in 2004 to 34.6% in 2009, 34.4% in 2010, but was still higher than it was at 28-29%, before the DR financial crisis of 2003. The poverty incidence is higher in rural areas (47.0% in 2009, the latest year with a rural/urban breakout) where 30% of the people live, than in urban areas (28.6%). The proportion of households below the World Bank US\$1.25 absolute poverty line has diminished, falling from 5.24% in 2000 to 2.24% in 2010, after rising to 8.13% in 2004.

### Screening Question Analysis

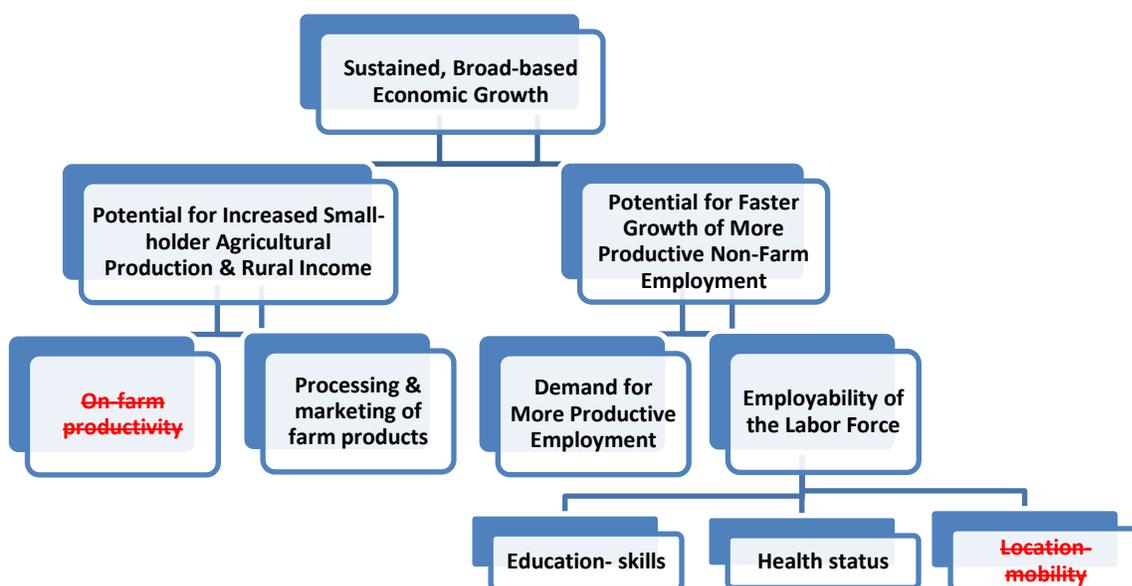
As is typical of an industrializing country, agriculture contributed only 6.2% to GDP in 2010 and provided jobs for only 14.5% of total employment. Given the preponderance of sugar cane production, 71% of total agriculture value added in 2009, an even smaller percentage of total employment is engaged in small-holder agricultural production. While there are opportunities for improved yields and diversified agricultural production, greater

potentials for poverty reduction appear to lie in the improved processing and marketing of agricultural products— commercial agribusiness and value chain development— for both domestic and international markets. Accordingly, the constraints analysis focused on agribusiness and not on on-farm productivity.

Regarding the employability of the workforce, there were indications that health status and levels of education might impose serious constraints; but the DR is a small country with a fairly good transportation system, and rural-urban migration rates have been reportedly fairly high. Location and lack of mobility were therefore not considered problematic in the DR, despite the neglect and poor condition of rural roads.

The research team also chose to look closely at constraints to private investment in the more productive formal sector and the large array of policies that may be inhibiting the demand for more productive employment in that sector.

Figure ES 3 IGD Decision Tree After Screening Questions



## **Agribusiness: Processing and marketing of farm produce**

The main problems facing the marketing and processing of farm products, and the generation of more productive employment in that sector, can be grouped into three categories of key constraints: I) poor business climate for small, labor-intensive activities, II) inadequate education and technical training and III) poor governance, including insecurity and corruption.

The generally poor business climate facing small rural entrepreneurs stems primarily from: A) lack of access to credit for micro and small entrepreneurs, which is largely ascribed to the high level of informality, the low level and quality of education, the lack of land titles as collateral, and insecure land tenure, B) poor rural roads and unreliable electric power, especially for cold-chain facilities, C) ineffective anti-monopoly policies and D) the prevalence of trade barriers and high tariffs on staple food imports, which protect inefficient agriculture technologies that keep local costs of production high; so that many DR food products are not competitive on world markets. Most of these barriers can be attributed to ineffective governance, including the high level of informality in preventing access to credit. For this reason, barriers in agribusiness itself were not determined to be binding constraints on the Dominican economy's ability to generate productive employment, but rather were symptoms of binding constraints found elsewhere.

### **Informal/formal sector dichotomy**

The high level of informality seemed to be so important not only in the analysis of the agribusiness sector but throughout the study, and so fundamental to the problem

of chronically high unemployment that the team chose to add it as a separate branch of inquiry even though it was not a part of the original productive employment model.

Informality is seen as a potential constraint to productive employment as with better access to markets, legal processes and credit, formal sector firms can more easily expand, increase productivity and hire more workers than informal firms. Because of this, if the total set of incentives that the governance environment provides encourages firms to stay informal, more productive employment generation will be less than it would otherwise be. In the Dominican Republic there are a number of factors that taken together provide disincentives for informal sector entrepreneurs to register and join the formal sector, despite long-run growth advantages for doing so. These include individual and household social safety net benefits for which they would be ineligible as owners of a registered business, profit taxes, labor laws and other regulations they would have to follow.<sup>9</sup> Many informal entrepreneurs mention the cost and trouble associated with registration and the hassles with government bureaucrats they can avoid by remaining unregistered.

### **Employability of the labor force**

The Dominican Republic has a relatively meager fiscal revenue stream and insufficient or inefficient expenditures on health, education and social safety nets. It appears that education spending would benefit from both more resources and more efficient expenditure, while health expenditure appears to achieve relatively

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<sup>9</sup> Including severance pay packages, minimum wages, and employee retirement contributions.

poor returns for the level invested, so that an improved quality of expenditure is the first priority. However, analytical results discussed in Chapter 2 indicate that neither health nor education are binding constraints to growth and employment generation.

Having ruled out on-farm productivity and employability of labor as constraints, the analysis turned to the Demand for More Productive Employment branch which includes a series of areas of inquiry under Labor Intensity of Production as well as the original HRV model under Level of Private Investment.

### **Labor intensity of production**

Large monopolistic or oligarchic firms tend to dominate some industries, and the government is ineffective in promoting competition. Labor restrictions *per se* do not appear to be a major problem. Minimum wage laws (and the lack of their enforcement) do not seem to be high enough to be a major drag on employment. However, food prices (on wage goods) and redundancy costs (the costs of firing a permanent worker) are high, the latter averaging 88 weeks of severance pay. Other policies do not appear to be artificially raising the cost of labor relative to capital, or reducing the cost of capital relative to labor. The DR is a relatively open economy with a trade to GDP ratio of 56% in 2010. The peso has been fairly stable since 2005 and has not appreciated in real terms. The DR maintains variable tariff rates, but the overall levels are relatively low and the Dominican Republic-Central America-United States Free Trade Agreement (CAFTA-DR) accords that took effect in 2007 will further liberalize trade. Therefore, while tariffs remain high on key food commodities, raising domestic prices

of wage goods, tariffs and non-tariff barriers to trade overall are not considered major constraints to broad-based growth.

### **Level of private investment (HRV constraints analysis):**

#### *Cost of finance*

A significant factor limiting the expansion of credit to the business sector is the large number of unregistered (informal) businesses, relative to the number of registered (formal) businesses. The average interest rates applied to commercial credit are not grievously high in real terms, suggesting more credit would be available to businesses that satisfied lending requirements, including government registry. The current accelerated expansion of consumer credit corroborates this finding, as personal lines of credit are independent of the government business registry. Lending to the private sector would be accelerated by increasing the number of formal firms and thus expanding the acceptable business demand for credit. Access to finance has issues that can be addressed individually, but the cost of finance does not rise to the level of a binding constraint to inclusive growth in the DR.

#### *Social returns*

Regarding infrastructure, inadequate electric power was cited in the 2010 World Bank Enterprise Survey by 20% of firms as their most significant obstacle, while another 63% said it was a major constraint. The Dominican Republic has the highest cost among comparator countries of the energy that is provided. The expensive energy is also unreliable as in a typical month there were 18 power outages averaging 4.5 hours each. Of the firms interviewed 49% either owned or shared a generator and used it to provide 45% of their electric power needs.

The high cost of access or self-provision of electricity seriously erodes the Dominican Republic's global competitiveness. Other forms of infrastructure are not considered binding constraints.

In analyzing human capital, high and similar unemployment rates among all levels of education suggest that the supply of educated and skilled labor is sufficient to meet demand. Higher returns to tertiary education suggest a significant jump in labor productivity as a result of the university training. The high emigration rate of the university educated despite these high returns may reflect non-monetary factors, the relative ease of acquiring a visa for the more educated or yet higher returns to education in the United States. Without the escape value of emigration, domestic unemployment rates within the Dominican Republic may be even higher and wage rates further depressed. Therefore, an insufficient supply of human capital does not appear to be a binding constraint to more productive employment generation.

#### *Private appropriability of returns*

In the DR, the macroeconomic environment is favorable for the profitability of existing firms, so macro risks are not likely to be serious impediments to investment. However, government failures related to micro risks do seem to have a pernicious effect on growth and investment in the Dominican economy. Ineffective governance inhibits both existing and new firms from hiring more employees, and creates perverse incentives for firms to stay in the informal sector as discussed above. The binding constraint limiting conversion from informal to formal sector activities is the ineffectiveness of government institutions and public regulations and policies in creating a supportive business environment and an appropriate incentive

structure. It is also evident that the constraints in electric power supply can be traced back to public policies that do not provide an appropriate investment climate and incentives for more investment in power production and transmission.

There is evidence that monopolistic or oligarchic firms tend to dominate some industries, like transportation of both goods and people, and that the government is ineffective in promoting competition. The Dominican Republic scores low on indicators related to competition, including those for starting a business, receiving an operating license and effectiveness of anti-monopoly rules. Low rankings in favoritism in decisions of government officials, ethical behavior of firms, judicial independence and the efficiency of legal framework in challenging regulations partly explain the ineffective anti-monopoly policies.<sup>10</sup> This environment limits the ability of new firms to succeed and cuts off a vital channel of employment generation.

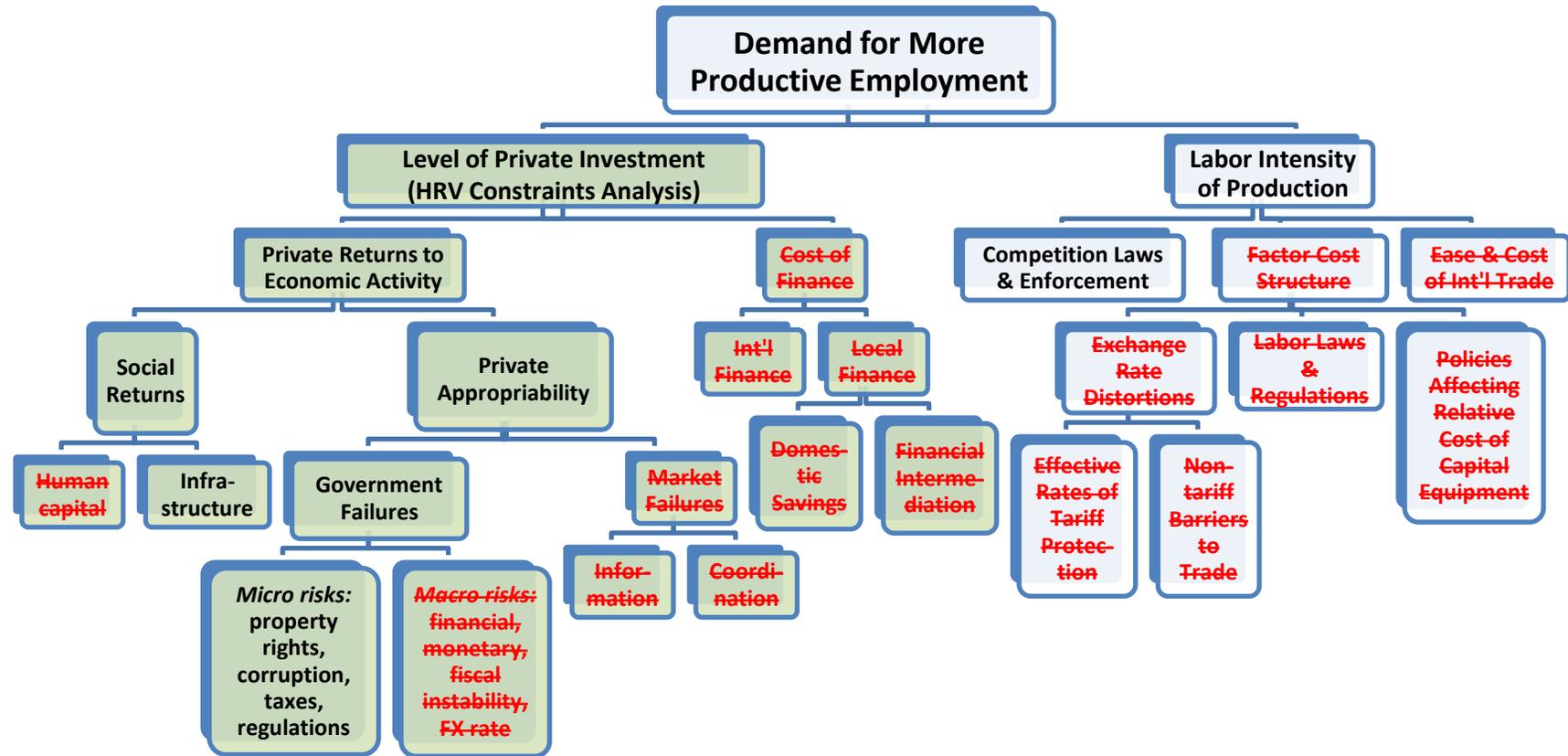
Market failures do not appear to be a binding constraint to inclusive growth in the Dominican Republic. The large and growing number of different products produced and exported by the country suggests coordination failures and information externalities do not pose a serious limitation to productive employment generation.

Collectively, these findings lead to the diagram below. The two binding constraints identified—inadequate electric power and ineffective governance—are discussed in detail in the following Summary Findings.

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<sup>10</sup> World Economic Forum *Global Competitiveness Index*

Figure ES 4 IGD Decision Tree after Full Analysis



## SUMMARY FINDINGS

### Binding Constraint: Inadequate Electric Power

The inadequate supply and unreliability of electric power is well documented in Chapter 3 as a binding constraint to economic growth and productive employment generation in the Dominican Republic. In the 2010 World Bank Enterprise Survey 20.1% of firms chose electricity as their single biggest obstacle, compared to only 4.0% for Costa Rica firms, 1.7% in El Salvador and 12.4% in Jamaica. Some 63% of DR firms interviewed cited electricity as a major constraint. They reported 18 power outages in a typical month, compared to no more than 3 in the comparison countries,<sup>11</sup> and the average duration of an outage was 4.5 hours. They estimated that 4.4% of the value of sales was lost due to these outages. Some 49% of the firms interviewed either owned or shared a generator, and those that used generators said they provided 45% of their electric power needs. In the quality of its electric supply the DR ranked 129 out of 142 countries in the World Economic Forum (WEF) Global Competitiveness Index (GCI) of executive perceptions compiled in 2011.

The Dominican Republic also has the highest total cost for electrical energy among five Latin America and Caribbean (LAC) comparator countries as well as the highest distribution cost. This negatively impacts the competitiveness of DR export products, including agricultural products. The high cost and frequent interruptions of electric power supply in the Dominican Republic have long placed a damper on the level of investments that are made in the country.<sup>12</sup>

The two technical problems with the electric system in the DR are the large volume of lost or stolen energy and the lack of capacity in the transmission system.<sup>13</sup> With private sector investment the system was able to lower the loss rate to 27%. However, by 2009, the loss rate had risen to 38%, at least partly a result of the renationalization of the distribution companies.<sup>14</sup> This implies that only about 62% of the energy purchased by the distribution companies is actually paid for by consumers. In the Caribbean sub-region, the levels of absolute distribution losses are comparable to the Southern Cone and Central America, with the exception of the Dominican Republic, where losses are about 10% higher than in the rest of the region, and have been increasing in recent years.<sup>15</sup>

Despite the growing expenses, the Government of the Dominican Republic (GODR) does not have an energy policy that promotes diversification of power generation into lower cost, locally produced renewable sources, such as additional hydroelectric power, wind power, or solar energy.<sup>16</sup> Since the mid-2000s, the GODR has promoted increased use of coal and natural gas for power generation because they are less expensive than fuel oil. However, both are

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<sup>11</sup> Chapter 11 describes the use of comparator countries in the inclusive growth diagnostic methodology, and how Jamaica, Costa Rica and El Salvador were selected as comparators to the Dominican Republic.

<sup>12</sup> USAID, "Doing Agribusiness in Latin America and the Caribbean – Dominican Republic," Final Draft, December 2011., p. 74

<sup>13</sup> *Ibid.*, p. 62, interview with Osvaldo Irueta, General Manager of the Organismo Coordinador del Sistema Eléctrico Nacional Interconectado de la República Dominicana, July 29, 2011

<sup>14</sup> *Ibid.*, p. 62, interview with Marco de la Rosa

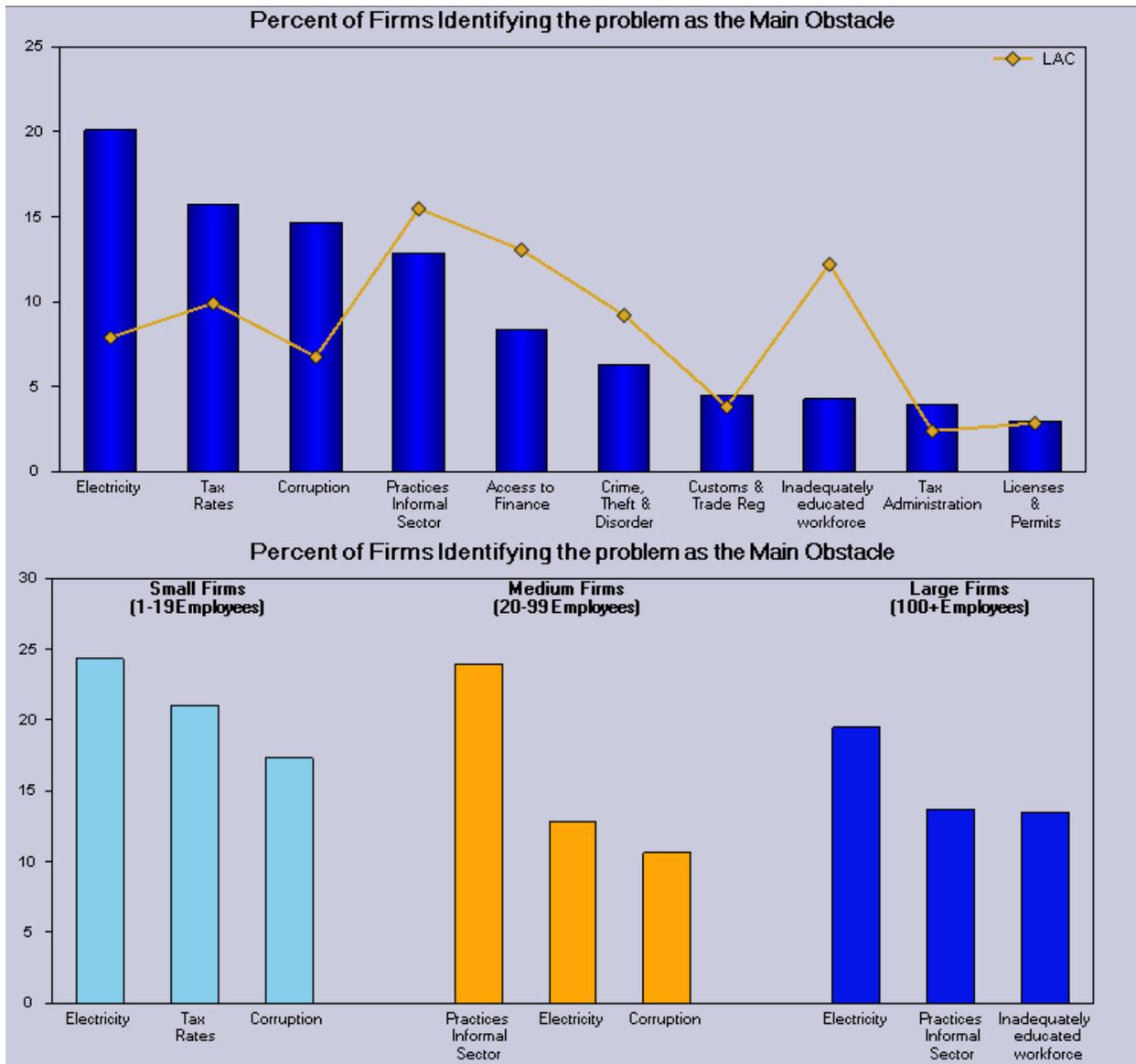
<sup>15</sup> World Bank, "Meeting the Electricity Supply/Demand Balance in Latin America & the Caribbean," September 2010, p. 89

<sup>16</sup> *Ibid.*, p. 63, citing Banco Agrícola de la República Dominicana. "Memoria Annual 2009," Santo Domingo. The comparator countries are Panama, El Salvador, Guatemala, Nicaragua, and Honduras.

Summary Findings

imported fuel sources.<sup>17</sup> As a hopeful sign that the constraint is being addressed, the GODR has recently invested in an expansion of the transmission network resulting in the 2011 inauguration of a new “electric highway” that will enable more stable and better coverage of electric services in the Cibao agricultural region.<sup>18</sup>

**Figure SF I Major Constraints Identified by Enterprises**



Source: World Bank/IFC Enterprise Survey, Dominican Republic Country Profile 2010, p. 4

<sup>17</sup> *Ibid.*, p. 63

<sup>18</sup> USAID, “Doing Agribusiness in Latin America and the Caribbean – Dominican Republic,” Final Draft, December 2011, p. 62, “Inaugurarán la Autopista Eléctrica une Stgo. y SD,” *DiarioLibre*, July 20, 2011.

## **Binding Constraint: Inefficient Governance**

In an undistorted market, abundant unemployed labor creates a price incentive for investment in sectors that are labor intensive. In general this could happen through any combination of two primary mechanisms: 1) the creation of new firms which hire workers or 2) existing firms expanding and hiring more workers. As these processes take hold, over time the unemployment rate would be expected to come down to its natural level. However, over the last decade in the Dominican Republic this has not happened.

### *Barriers to employment generation*

The standard Hecksher-Ohlin model predicts that in an open economy, countries will produce goods and services intensive in the economy's relatively abundant factor of production. In the case of the Dominican Republic this would mean unskilled labor. As shown by the high unemployment rate and continued high and increasing level of informal employment despite rapid and sustained growth shows, this has not happened in the Dominican Republic. A variety of distortions may explain why. Poor competition laws or regulations discourage entry of new firms. Incentives that make registering in the formal sector unattractive and regulations that make labor artificially expensive reduce firm expansion and hiring.

### *Barriers to new firm entry*

Established monopolies or oligopolies in large segments of the economy prevent new firm entry. A more competitive business environment allows new firms to challenge established firms with lower cost goods and services, using more low-cost labor when available and thereby generating more productive employment. As a preliminary sign of problems with barriers to entry, the World Economic Forum's Competitiveness Index places the Dominican Republic at an extremely low ranking of 137<sup>th</sup> out of 142 countries in the dominance of a few corporate groups and 122<sup>nd</sup> in effectiveness of anti-monopoly rules. This indicates that large, monopolistic or oligarchic firms tend to dominate at least a few industries, and the government is ineffective in promoting competition.

The World Bank's *Doing Business 2012* places the Dominican Republic 108<sup>th</sup> of 183 countries in overall business environment, which indicates a general barrier to new firms. As indicators of the barriers facing would be new firms, the country ranks low in starting a business (140), registering a property (105) and dealing with construction permits (105). Within the category of 'starting a business' the number of days has dropped significantly since 2004 from 77 to 19 days and the 'cost of starting a business in terms of income per capita' from 28% to 18%, both significantly better than the Latin American average. However, the amount of capital required at startup as a percent of income per capita is a stunning 56%, compared to the Latin American average of 4.3%.<sup>19</sup> This requirement poses a particular barrier to entrepreneurs who lack personal financing or have poor access to commercial loans.

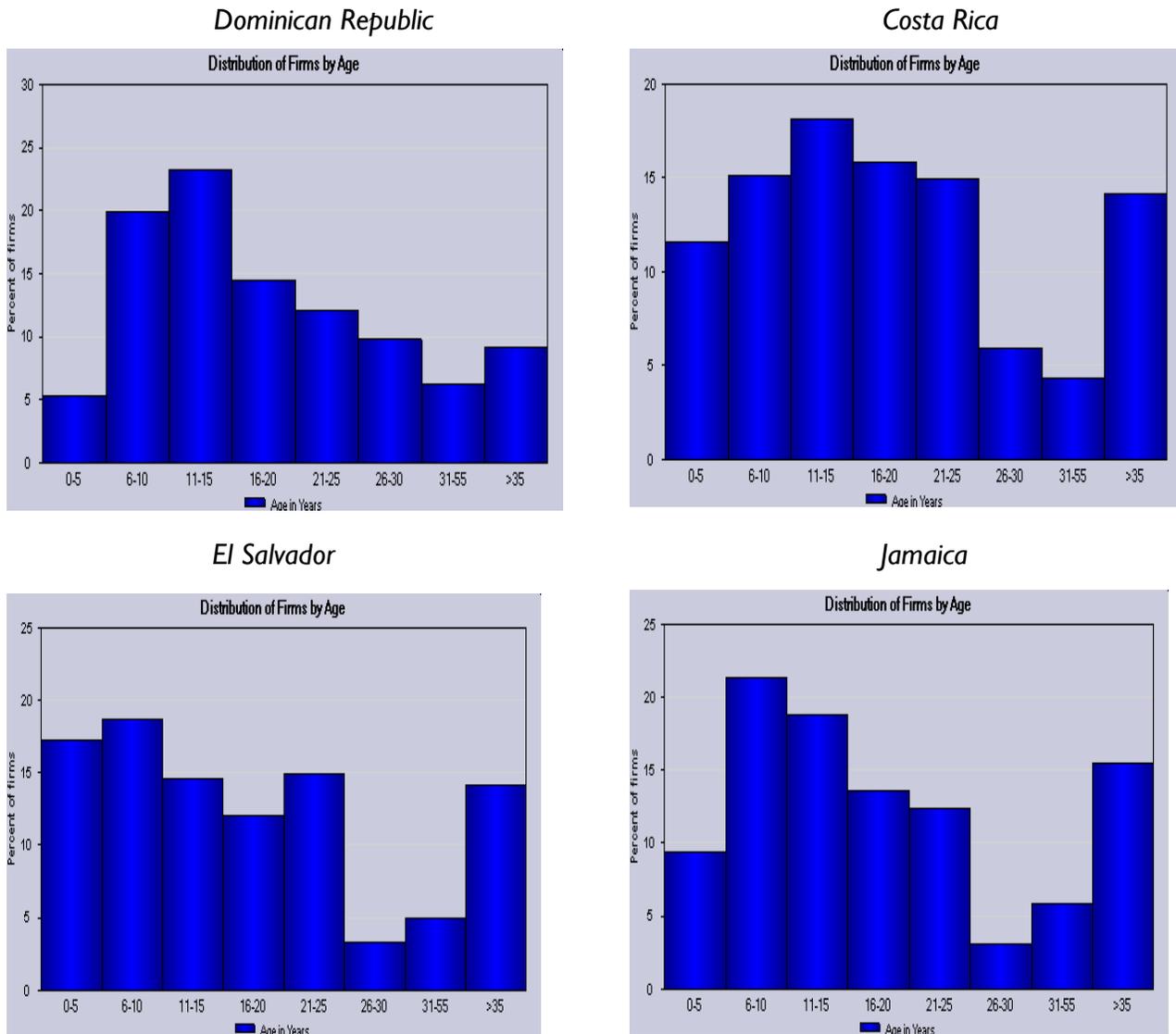
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<sup>19</sup> The paid-in minimum capital requirement reflects the amount that the entrepreneur needs to deposit in a bank or with a notary before registration and up to 3 months following incorporation and is recorded as a percentage of the economy's income per capita. The amount is typically specified in the commercial code or the company law. Many economies require minimum capital but allow businesses to pay only a part of it before registration, with the rest to be paid after the first year of operation. In Italy in June 2011 the minimum capital requirement for limited liability companies was €10,000, of which at least €2,500 was payable before registration. The paid-in minimum capital recorded for Italy is therefore €2,500 or 9.9% of income per capita. In Mexico the minimum capital requirement was 50,000 pesos, of which one-fifth needed to be paid before registration. The paid-in minimum capital recorded for Mexico is therefore 10,000 pesos, or 8.4% of income per capita.

Summary Findings

According to the World Bank’s Enterprise Surveys, in the Dominican Republic only 5% of firms are less than five years old as seen in Figure SM-2 below. This compares with Costa Rica at 12%, El Salvador at 17%, Jamaica at 9% and may indicate that there is are significant barriers to entry for new firms.<sup>20</sup> This conclusion is strengthened by the fact that in this survey firms report an average of 140 days to obtain an operating license, more than double the LAC average and three times more than the lower middle income country average.<sup>21</sup> These figures only cover formal (registered) firms– the missing young firms in the Dominican Republic may be informal ones.

**Figure SF 2 Distribution of Firms by Age**



Sources: World Bank/IFC Enterprise Survey, Cost Rica Country Profile 2010, p. 5; World Bank/IFC Enterprise Survey, Dominican Republic Country Profile 2010, p. 5; World Bank/IFC Enterprise Survey, El Salvador Country Profile 2010, p. 5; World Bank/IFC Enterprise Survey, Jamaica Country Profile 2010, p. 5

<sup>20</sup> World Bank Enterprise Survey 2010  
<sup>21</sup> World Bank Enterprise Survey 2010

*Informality and barriers to firm expansion*

While Chapter 4 on the labor intensity of production discusses that labor laws are not themselves a binding constraint to firm expansion and increased employment, the total set of incentives that the governance environment provides for firms to stay informal are a drag on employment generation as discussed in detail in Chapter 7. To summarize, it appears that there are a number of governance factors that taken together, do not provide sufficient incentives for informal sector entrepreneurs to register and join the formal sector, despite long run growth advantages for doing so. Disincentives include individual and household social safety net benefits for which they would be ineligible as owners of a registered business, profit taxes they would have to pay and labor laws and other regulations they would have to follow. Many informal firms mention the cost and trouble associated with registration and the hassles with government bureaucrats they can avoid by remaining unregistered. In addition, the generally poor business climate, as documented in the World Bank Doing Business and WEF Global Competitiveness reports, inhibits formal sector growth as well as the conversion from informal to formal.

## Chapter I OVERVIEW OF THE DOMINICAN REPUBLIC ECONOMY

### The Current Structure of Production and Employment

One of the manifestations of growth in the Dominican Republic is that the fastest growing sectors have not generated many more jobs. Despite experiencing positive growth in employment in absolute terms, the three fastest growing sectors from 2000-2010 still accounted for less than 10% of total employment in 2010. Communications gained nearly 12 percentage points in its share of GDP, but only gained 0.4 percentage points of total employment. Similarly, financial intermediation, which from 2000-2011 grew by 176%, only increased its employment by about a third of that level. So the rapid growth in GDP occurred mostly in sectors that were not labor-intensive.

**Table I-1 Growth and Employment by Sector**

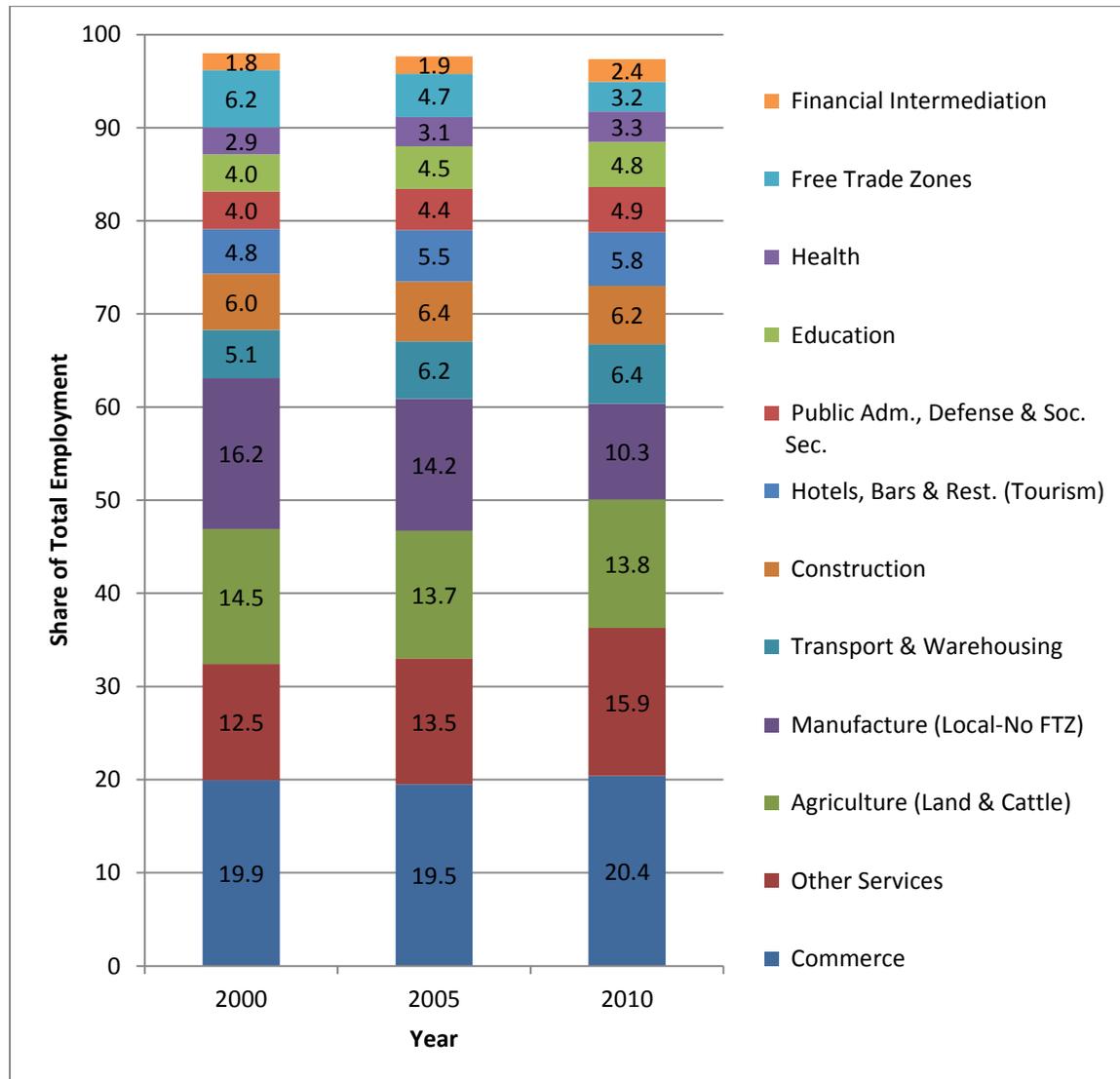
<b>Same Highest Average (2000-2010) RGDPG &amp; EAEP Sectors</b>						
Sectors	Share Total of GDP 2010	Total Growth (%) 2000-2011	Percentage Point Change in GDP Share 2000-2011	Employment		
				Share of Total Employment 2010	Total Growth (%) 2000-2010	Percentage Point Change in Employment Share 2000-2010
<i>ECONOMY OVERALL</i>	–	75	–	–	21.3	–
Communications	17.3	525	11.7	1.1	74.1	0.4
Financial Intermediation	4.0	176.2	1.5	2.4	60.6	0.6
Education	1.0	64.5	-0.1	4.8	44.7	0.8
Agriculture (Land & Cattle)	7.5	56.8	-0.9	13.8	13.8	-0.7
Commerce	9.0	54.4	-1.2	20.4	22.4	0.5
Tourism	6.1	54.2	-0.9	5.8	43.4	1.0
Local Manufacturing	18.8	50.7	-3.1	10.3	-24.2	-5.9
Other Services	5.6	50.5	-1.0	15.9	52.2	3.4
Public Admin.	1.0	47.9	-2	4.9	44.2	0.8

Source: Banco Central de la República Dominicana

As seen in Figure I.1 below, from 2000 to 2010 the structure of employment across sectors of the Dominican economy stayed fairly stable. The most significant changes were a relative

decline in the share of employment in free trade zone (FTZ) and local manufacturing (declines of 3 and 5.9 percentage points respectively). Local manufacturing did increase output over the period, a sign that domestic industry became more capital intensive, while free trade zone manufacturing simply contracted (due to the expiration of textile quotas and competition from China), shedding both employees and output. The biggest relative increase in employment came from the broad “other services” category, which in this graph appears to include utilities (electric power and water), communication, real estate, and still “other”.

**Figure I-1 Sector Share of Employment, 2010**

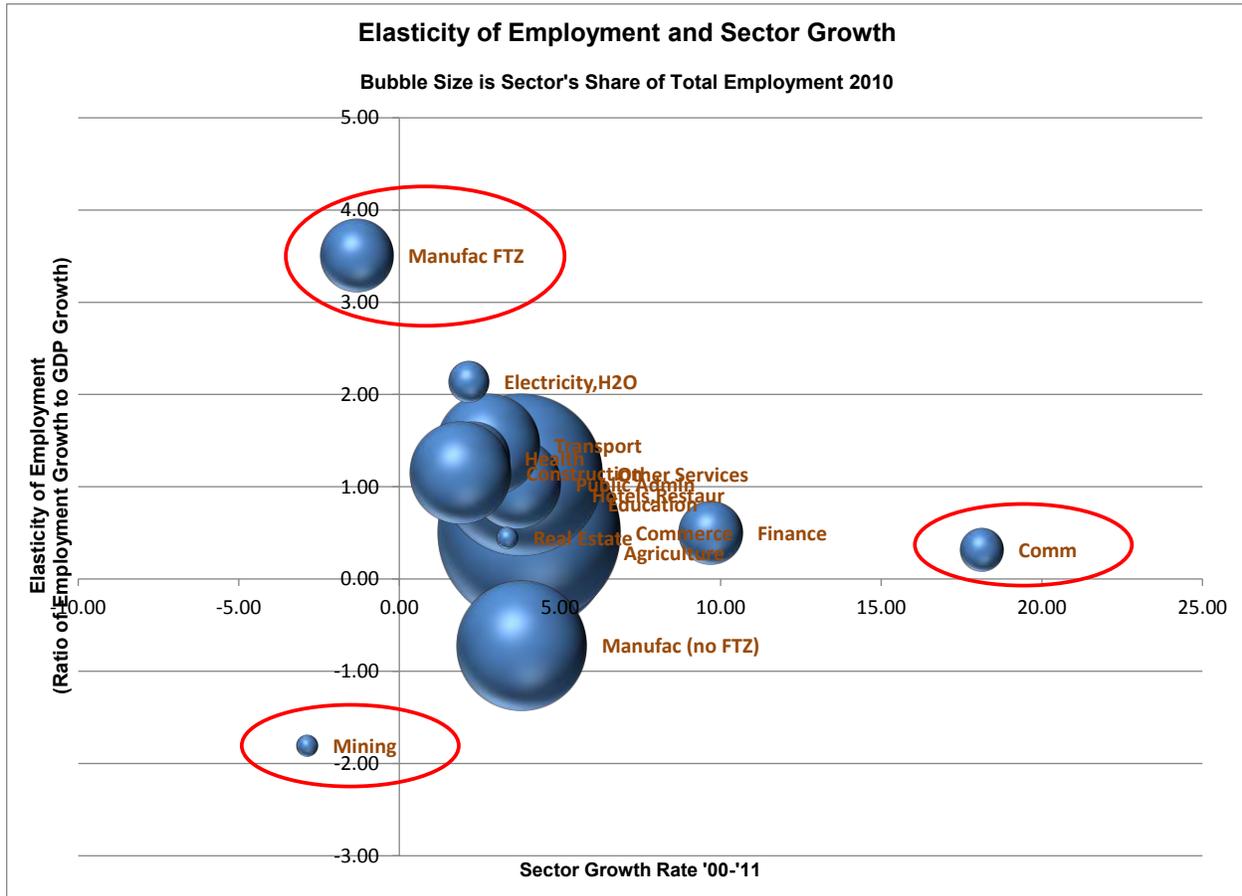


Source: Author's calculations; Banco Central de la República Dominicana

So is the cause of persistent high unemployment that growth is biased towards capital intensive industries with low employment? To further evaluate this relationship we follow the approach discussed above in calculating the change of employment for each percentage point of growth, but focus on growth and employment generation at the sector level. Figure I-2 below shows

the relationship between growth and employment generation per percentage point of growth, with each sector illustrated to show its share in total employment. Again, the two fastest growing sectors in terms of value-added are communications and financial intermediation, but they show very little growth in employment. They are the outliers in terms of the elasticity of employment generation to growth in value-added.

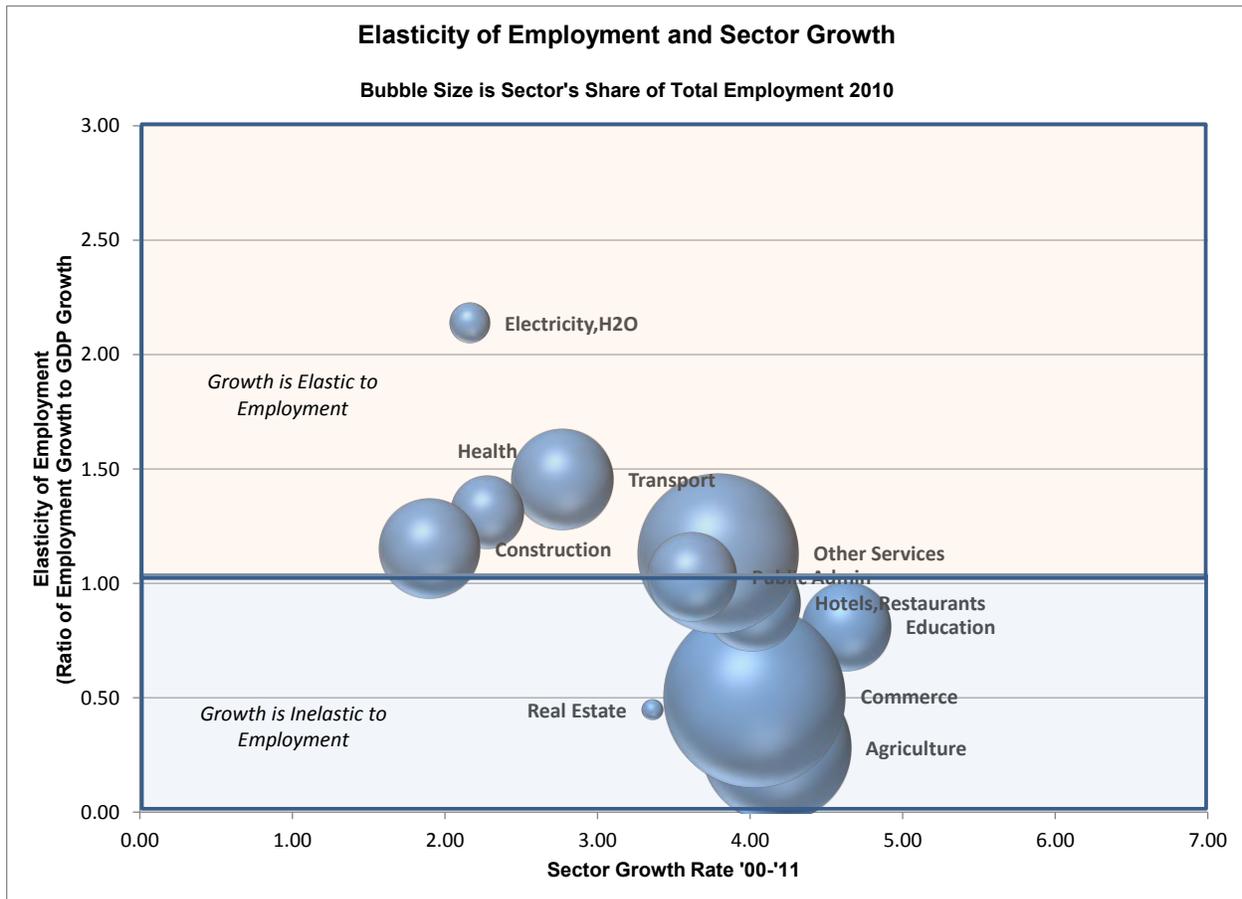
**Figure I-2 Employment Elasticity by Sector, Part I**



Source: Author's calculations; Banco Central de la República Dominicana

Leaving aside those sectors (mining, manufacturing, free trade zones) which either had declining growth, declining employment, or both, and focusing in on the main growth sectors and their propensity to add labor for each percentage point of growth the story becomes more interesting. As seen in Figure I-3, any sector which adds labor at a higher rate than 1 percentage point for every percentage point of growth is considered to have a high elasticity of employment to growth and make a relatively large contribution to employment generation. Any sector which adds less than 1 percentage point of employment for each percentage point of growth makes a relatively weak contribution to employment generation. Notably the largest sectors, commerce, agriculture and other services— represented by the largest bubbles— all have a labor demand elasticity of around 1 or less.

**Figure I-3 Employment Elasticity by Sector, Part 2**



Source: Author's calculations; Banco Central de la República Dominicana

Even at the sectoral level it appears there is only a weak systematic relationship between economic growth and employment generation. The sheer size of the 'commerce' and 'other services' sectors makes them the main drivers of employment growth, even though they do not generate much extra employment per unit of output. The major conclusion from this sectoral analysis is that growth in output is well distributed among almost all sectors while growth in employment is not. This suggests cross-cutting and transversal constraints to growth overall, incentives to remain unemployed or in the informal sector likely account for the persistent unemployment in the Dominican Republic.

As an indicator of future growth, foreign direct investment (FDI) in 2011 fell 70% in the previously booming telecommunications sector but shrank by a third in the large employment commerce sector. With the most significant FDI increases being investment in mining, energy, financial services and free trade zones sectors— which collectively employ just 6.9% of the employed workforce— it appears that the trend of growth in low job creating industries will continue.

**Table I-2 Foreign Direct Investment by Sector**

(US\$ m, unless otherwise indicated)			
	2010	2011	% change
Tourism	94.6	103.6	9.5
Commerce/industry	465.7	304.5	-34.6
Telecommunications	500.2	149.4	-70.1
Energy	108.0	345.5	219.9
Financial	93.6	202.7	116.6
Free zones	71.8	151.2	110.6
Mining	298.3	964.9	223.5
Real estate	264.1	149.3	-43.5
<b>Total</b>	<b>1,896.3</b>	<b>2,371.1</b>	<b>25.0</b>

Source: Economist Intelligence Unit May 2012

## The External Sector

The Dominican Republic is a relatively open economy with a trade to GDP ratio of 56% in 2010. While this is down from 66% in 2005, the absolute value of imports and exports has increased 36% over the same time period.<sup>22</sup> A signatory to the CAFTA-DR free trade agreement with the United States, the Dominican Republic has an average applied tariff of 8.3%.<sup>23</sup> The nation performs well on the World Bank's *Doing Business* trading across borders sub-category (45<sup>th</sup>). This is better than comparator countries (El Salvador 69, Jamaica 97, LAC 87).<sup>24</sup>

Since the turn of the millennium the Dominican Republic has experienced a fairly steady increase in trade interrupted by the recession of 2001 and more substantially the global financial crisis in 2008 and 2009. In the last two years the country has seen a strong rebound in both its free trade zone exports and exports writ large with an increase of 18% for the former and 26% for the latter in 2011.

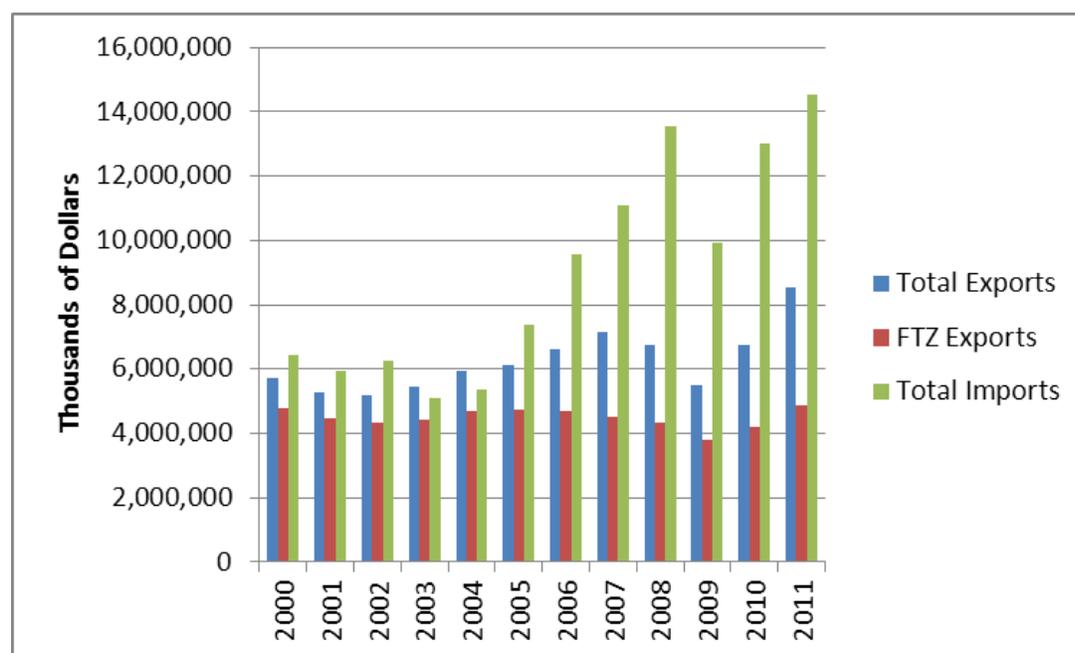
In 2010 textiles was the largest single category of export followed by electronics and jewelry as they were in 2005. However, these three industries all showed substantial declines over the period, suffering from increased competition from China and the end of textile quotas. While total free trade zone exports only increased 1.7% since 2005, picking up the slack other industries such as cacao (350% increase); sugar (76% increase) and "other" (152% increase) lead the rebound in exports in 2010 and 2011.

<sup>22</sup> Author's calculations, World Development Indicators

<sup>23</sup> World Development Indicators

<sup>24</sup> <http://www.doingbusiness.org/data/exploreeconomies/dominican-republic>

**Figure I-4 Evolution of Trade**



Source: Banco Central de la República Dominicana, 2012.

**Table I-3 Change in Exports**

	2005	2010	Percent Change
<b>Textiles</b>	1,904,638	964,194	-49
<b>Electronics</b>	700,330	534,723	-24
<b>Jewelry</b>	602,894	464,235	-23
<b>Minerals</b>	380,804	0	-100
<b>Tobacco</b>	352,362	457,857	30
<b>Other</b>	1,117,234	2,819,167	152

Source: Banco Central de la República Dominicana, 2012.

Like many Caribbean nations, tourism is a major service export for the Dominican Republic. In recent years average daily expenditure per tourist has increased from \$103 in 2005 to \$109 in 2011. While 2011 was not at the peak in 2008, 2010 and 2011 saw a recovery from the sharp fall in 2009 due to the global recession. However, average nights stayed has continued to decline to 8.9 from a high of 9.3 in 2006.<sup>25</sup>

<sup>25</sup> Central Bank of Dominican Republic

**Table I-4 Tourism**

<b>Expenditure and Nights Stayed (Foreigners) 2005-2011</b>		
<b>Year</b>	<b>Average Expenditure (USD)</b>	<b>Average Nights Stayed</b>
<b>2005</b>	<b>103.27</b>	<b>9.20</b>
<b>2006</b>	<b>101.94</b>	<b>9.30</b>
<b>2007</b>	<b>105.12</b>	<b>9.26</b>
<b>2008</b>	<b>110.35</b>	<b>9.23</b>
<b>2009</b>	<b>107.02</b>	<b>9.19</b>
<b>2010</b>	<b>107.24</b>	<b>9.22</b>
<b>2011</b>	<b>109.11</b>	<b>8.91</b>

*Foreign Direct Investment, Inflation and Exchange Rate*

As seen in the table below, foreign direct investment reached \$2.4 billion in 2011. While it is substantially below the \$2.9 billion peak in 2008 it is more than double the investment level of 2005. Over the timeframe investment has increased in all reported sectors with the highest growth in real estate, mining and the broad category of commerce.

**Table I-5 Foreign Direct Investment (\$ Millions)**

<b>Economic Activity</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>Total</b>	<b>%</b>
Tourism	312	285	541	228	186	95	104	1,751	13
Commerce/Industry	199	-168	184	574	280	466	305	1,840	14
Telecommunications	112	340	-145	213	181	500	149	1,350	10
Electricity	117	-52	59	113	121	108	346	812	6
Finance	44	104	28	168	137	94	203	777	6
Free Trade Zones	175	131	70	45	67	72	151	710	5
Mining	31	107	30	357	758	298	965	2,546	19
Real Estate	133	338	900	527	436	264	149	2,748	21
Transport		0	0	645	0	0	0	645	5
<b>Total FDI</b>	<b>1,123</b>	<b>1,085</b>	<b>1,667</b>	<b>2,870</b>	<b>2,165</b>	<b>1,896</b>	<b>2,371</b>	<b>13,178</b>	<b>100</b>

Source: Banco Central de la República Dominicana, 2012.

After experiencing very high inflation of over 50% in 2004 following the financial crisis of 2003, the Dominican Republic returned to macroeconomic stability in 2011 with inflation at 8%. Inflation is expected to decrease further to 5% by 2013.<sup>26</sup> While the nominal value of the peso depreciated by 20% against the dollar between 2005 and 2011, peso prices increased by nearly 48%, resulting in a real appreciation of the peso against the dollar of 18%. However, a trade-weighted geometric average of the consumer price indices of the Dominican Republic's 13 major trading partners indicates that they increased by 28% during this period, so that the real, trade-weighted average peso value actually depreciated by 7%. Therefore, the real value of the peso has been fairly stable since 2005 and has not appreciated in real, trade-weighted terms. (See Figure 4.6 in Chapter 4.)

<sup>26</sup> Economist Intelligence Unit, May 2012.

## Macroeconomic Trends (Monetary/Fiscal)<sup>27</sup>

The strong growth of the Dominican economy discussed above is remarkable considering the 2003 collapse of three private sector banks (Baninter, Bancrédito and Banco Mercantil). The political stability of the country compared to other nations in the region contributed to this growth, in part by allowing structural reforms to take place.<sup>28</sup> In the mid-1980s the Government of the Dominican Republic changed its exchange rate regime from fixed to flexible which allowed the transformation of the tradable sector away from the more traditional-agricultural based export sector (sugar, cacao, tobacco, coffee). Likewise, the country engaged in several market structural reforms during the 1990s including tariff and tax reform, privatization of state owned enterprises, health, education, labor and justice<sup>29</sup>. Fanelli and Guzmán stated that these structural reforms resulted in strong structural transformations in the productive sector of the economy but were insufficient to foster broad-based growth.

*“...the DR became a net exporter of labor-intensive products and not anymore a net exporter of tropical agriculture products...the duality has not disappeared after three decades of growth. The difficulties to create quality jobs and to reduce the informality in the labor market resulted in that an important segment of the society and the economy found barriers to take advantage of the growth which in spite of the per capita income increases, the proportion of people living below the poverty line is still high, the inequality is significant and the unemployment rate and the emigrant flows be relevant”<sup>30</sup>*

### Fiscal Policy

Even before the past decade, the history of fiscal and monetary policies implemented in the Dominican Republic has been essentially one where the Central Bank has been counterbalancing the GODR expenditure excesses. The past decade was not an exception. The expansionary fiscal policy adopted by the GODR has run deficits in eight out of the twelve years from 2000 to 2011.

Since the year 2000 the GODR has engaged in six tax reforms in addition to two fiscal amnesties in an effort to increase the amount of resources available to comply with its increasing economic, social and political responsibilities.<sup>31</sup> Beginning in 2001 the DR engaged

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<sup>27</sup> See Chapter 9 for a full discussion.

<sup>28</sup> Attali, Jacques, “Dominican Republic 2010-2020: International Commission for the Strategic Development of the Dominican Republic (República Dominicana 2010-2020, Informe de la Comisión Internacional para el Desarrollo Estratégico de la República Dominicana)”, November 2010, p. 8.

<sup>29</sup> For a more detailed explanation on this process, see: Julio G. Andújar Scheker “Economic Reforms and Political Negotiations: Notes on the Dominican Experience of the 90s (Reformas Económicas y Negociaciones Políticas: Apuntes sobre la Experiencia Dominicana de los Noventa)”, Science and Society, January-March 2005/Vol. 30, No. 001; Instituto Tecnológico de Santo Domingo (INTEC), Sto. Dgo., Dominican Republic.

<sup>30</sup> Fanelli, José María and Rolando Guzmán, “Development Diagnosis for the Dominican Republic (Diagnóstico de Crecimiento para la República Dominicana)”, CEDES/PARETO Consulting Group; Inter-American Developing Bank (IDB), Working Document CSI-118, Sept. 2008, p. 13-16 & 24-25.

<sup>31</sup> 2000/Law 147-00; 2004/Law 288-04, 2005/Law 557-05; 2006/Law 495-06; 2007/Law 172-07, and 2011/Law 139-11 for tax reform and 2001/Law 11-01 & 2007/Law 183-07 for fiscal amnesty.

more aggressively in the international market with the issuance for the first time of a \$500 million sovereign bond.<sup>32</sup> These funds allowed the GODR to finance several infrastructure projects while at the same time applying a restriction on its expenditures including elimination of an electrical subsidy in an attempt to balance fiscal outlays. In 2003, the year of the banking crisis, the GODR was planning to tighten both fiscal and monetary policies in an attempt to contain the expansion of the aggregate demand. In the fiscal side for that year the crisis was not as dramatic (the government had a surplus of 0.9% of GDP) as it was on the monetary side. The government was concerned at that time with Venezuelan political difficulties as well as an escalation in the Iraq conflict since both events could affect the international oil price and therefore negatively impact the whole DR economy (higher inflation, exchange rate deterioration, necessity of more pesos to pay the external debt, costlier imports and other domestic restrictions, etc.)

Given the declining real growth rates of both GDP (since 2006) and tax revenues (since 2008) the GODR has engaged in an expansionary fiscal policy which resulted in successive deficits (2008-2011 averaging 3.3% of GDP) larger than the ones posted in the 2004-2006 period (which averaged 0.4% of GDP). In 2010 GDP growth rate was 7.8%, a significant increase from the 2009 rate of 3.5%. This boost in output forced the Central Bank to continue applying a restrictive monetary policy.<sup>33</sup> Therefore, foreigners and Dominicans are both worried about the nation's fiscal situation. As noted in the Economist Intelligence Unit's March 2012 report,

*"The main challenge facing policy makers will be to support economic growth while tightening fiscal policy in order to prevent a decline in confidence following expiry of the International Monetary Fund (IMF) stand-by agreement and as uncertainties generated by the transition to a new government growth"...Fiscal progress has been interrupted by pre-election spending, and poor management will remain an obstacle to eliminating the fiscal deficit...Despite recent fiscal measures to correct budget imbalances, weaker progress on fiscal consolidation than previously estimated and the early termination of the IMF arrangement in February have led us to slightly increase our fiscal deficit forecast for 2012 to 2.9% of GDP (up from a revised 2.8% deficit in 2011). The deficit reflects election-related spending and a rush to complete major infrastructure projects before the current presidential term ends in August."*<sup>34</sup>

Many economists in the DR are also concerned with the public debt level and the figures published by the Hacienda (Finance) Minister showing a level of US\$17, 000 million. However,

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<sup>32</sup> The DR has issued a total of US\$3,300 million in Sovereign Bonds (2001, 2003, 2005, 2006, 2010 and 2011) from which there is a total of US\$2,466.6 million in circulation as of Dec-2011.

<sup>33</sup> The GDP recovering was mainly due by the IMF, World Bank and the Inter-American Development Bank financing as well as the Venezuelan Petro-Caribe agreement (See USAID/DR Rural Economic Diversification Project (USAID/RED) "Rice Production Evaluation in the Dominican Republic and Total Support to Producers (Evaluación de la Producción de Arroz en la República Dominicana y Apoyo Total a los Productores), 2011" by Apolinar Veloz, PARETO Consulting Group Associate Consultant (not yet published)

<sup>34</sup> The Economist Intelligence Unit (EIU), Dominican Republic Country Report March 2012.

this does not include other government and Central Bank liabilities for which the GODR is acting as guarantor, such as loans issued by the state-owned commercial Reserve Bank (Banco de Reservas). Therefore, there are questions to be asked regarding not only the debt level but also the appropriateness of the debt GDP indicator.

### *Monetary Policy*

As stated, the Central Bank's monetary policy has with rare exceptions been restrictive as a way to accommodate expansionary fiscal policy. From 2000 to through March 2012, the amount of money in circulation (M1) and the monetary issues/bills in circulation increased 103.4% and 92.9% respectively. Both are drivers of inflation, apply pressure to the exchange rate and distort relative prices in the economy. Therefore, a typical counterbalance measure of a restrictive monetary policy is shown as the "Central Bank Certificates and Notes (Certificados y Notas del Banco Central)", i.e. Central Bank domestic bonds increased 159.8% since January 2005 and the "Short Term Remunerated Deposits-Overnights (Depósitos Remunerados de Corto Plazo-Overnights)", which are commercial bank excesses of legal reserve requirements deposited at the Central Bank, increased 125.1% which reveals that the Central Bank has been controlling the currency in circulation very tightly by selling bonds, ending up with an increase of the Central Bank debt. In other words, all those funds are not circulating in the economy and therefore it is not possible to channel them to the productive sectors of the economy.

Additionally, it seems that the Central Bank open market operations were focused on piling up international reserves which increased approximately 300% with the final goal of anchoring the exchange rate to avoid a further depreciation of the peso.<sup>35</sup> If the peso depreciates it would be difficult not only for the government (since its foreign denominated debt will become more expensive in DR pesos) but also for the majority of the productive sectors of the economy with the exception mainly of exporters like free trade zones and tourism. The anchoring of the exchange rate to prop up the value of the peso has different results for the economy. In general, it favors importers (as the imports are relatively less expensive) and therefore supports aggregate demand given the high 57.7% share of imports but hurts the export oriented sectors since their goods and services become relatively more expensive for foreigners.

Another sign of the restrictive monetary policy applied can be seen in the Central Bank interest rate levels for its overnight loans which are five-day loans to multiple banks, savings and loans associations and development banks and the Lombard Window, loans which are one to five day-loans only to banks. The overnight interest rate was increased by 1.75 percentage points since December 2010 to 6.75% by the end of December 2011. The Lombard Window interest rate however, was reduced from 9.5% in December 2010 to 9.0% by the end of December 2011 in an attempt to narrow the spread between the two rates.<sup>36</sup>

## **The Financial Sector**

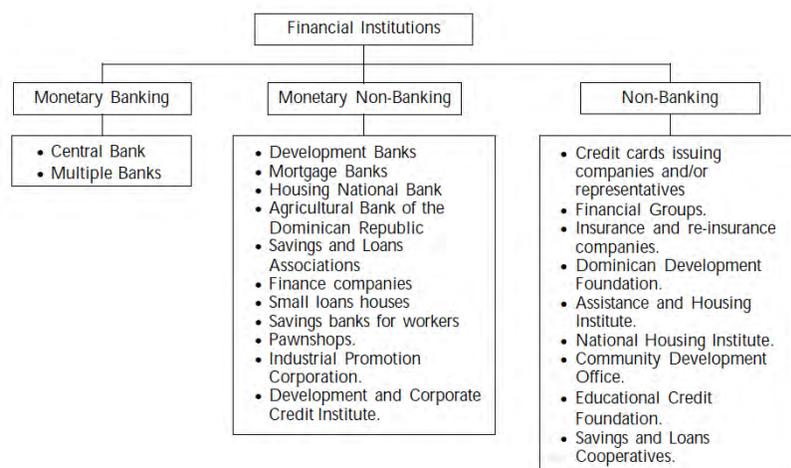
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<sup>35</sup> Veloz, Apolinar, "The efficacy of the Monetary Policy (La Eficacia de la Política Monetaria)", Opinion section, March 02 and 16, 2012, <http://www.acento.com.do/>.

<sup>36</sup> Central Bank of the Dominican Republic, "Dominican Economy Report", January-December 2011, Values (bonds, certificates) in Circulation, p. 35

The Dominican financial system is characterized by a modern regulatory system and a balanced mix of foreign and domestic ownership. There are no government mandated interest rate controls on lending. Deposits denominated in foreign currencies in savings and term accounts were authorized in 1993, and financial entities can lend and invest in foreign currency.

**Figure I-5 Structure of the Dominican Financial System**

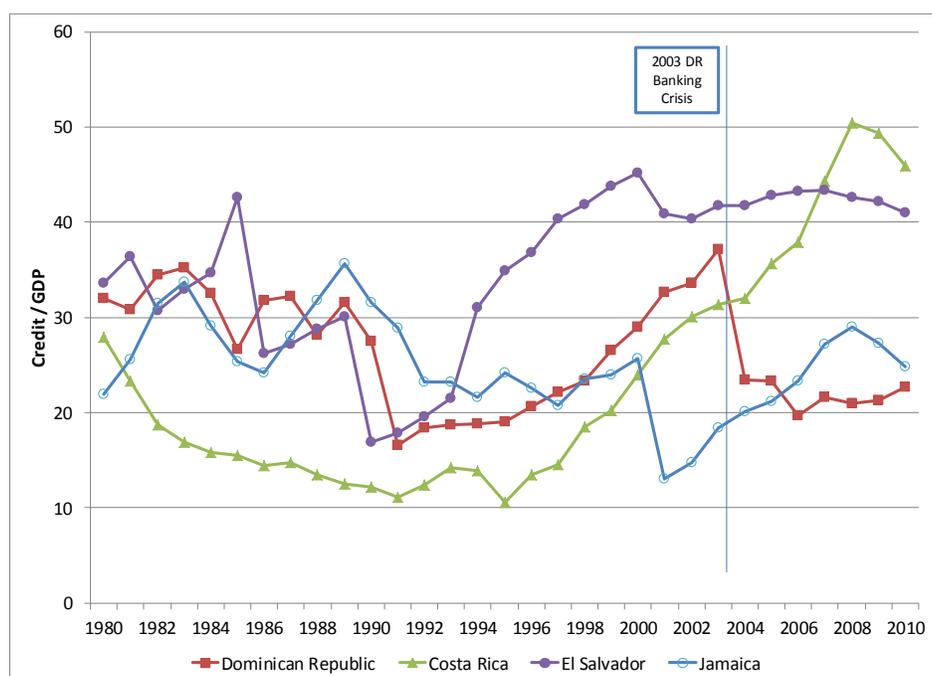


Source: World Bank<sup>37</sup>

The Dominican capital market is still in its first stages of development, dominated by the secondary market for government securities. The lack of an adequately functioning capital market is frequently cited in entrepreneur perception studies as a barrier to the growth of their businesses. For those businesses with access to credit, the cost of finance does not appear prohibitively high. The real lending rate to the commercial sector was 17.4% in 2011. It should be noted that this interest rate is only extended to a relatively small number of businesses, however, as reflected in the low credit/GDP ratio. While financial intermediaries are currently generally well-positioned in terms of liquidity and asset size to expand credit to the private sector, lending has not kept pace with economic growth in the aftermath of the 2003 domestic banking crisis. It may take years, if not decades, for lending to the private sector to resume a vibrant growth path. The low level of credit to the private sector as a percentage of GDP is striking, and examined in more detail in Chapter 8 Cost of Finance.

<sup>37</sup> World Bank, March 2003 "Payments and Securities Clearance and Settlement Systems in the Dominican Republic", [http://www.forodepagos.org/pdf/report\\_dominicana.pdf](http://www.forodepagos.org/pdf/report_dominicana.pdf)

Figure I-6 Private Credit / GDP



Source: USAID Economic Analysis and Data Services (EADS) Database

## Labor Market

Despite the fact that the Dominican economy has been growing since 2004 with a consequent growth of employment, the economic-employment growth relationship has become weaker each period. Data from the National Labor Force Survey shows that during the period 2000-2006, for each percentage point growth of GDP, employment grew on average by 0.14%, significantly lower than the rates in the periods 1991-1995 (0.8%) and 1996-1999 (0.66%).<sup>38</sup>

### Okun's Law

An observed statistical relationship first documented by Arthur Okun in the 1960s links economic growth to increased employment of the labor force, resulting in lower unemployment rates. Okun postulated two statistical relationships based on the premise that more labor is typically required to produce more goods and services within an economy. More labor can come through a variety of forms, such as having employees work longer hours or hiring more workers.<sup>39</sup> Okun's law in the difference version reflects how changes in the unemployment rate respond to growth in real output in the same period. It takes the form:

$$\Delta \text{unemployment rate} = \alpha + \beta * (\text{real output growth})^{40}$$

<sup>38</sup> Translated from the Inter-American Development Bank "La ruta hacia el crecimiento sostenible en la República Dominicana, Capítulo 14: Mercados laborales y protección social" (IDB: The path to sustainable growth in the Dominican Republic, Chapter 14: Labor markets and social protection), September 2009, p. 261, citing Lizardo, J. 2008. "Análisis del Desempeño Económico y Social de la República Dominicana, enero-junio 2007". Unpublished manuscript.

<sup>39</sup> Knotek, pg 75.

<sup>40</sup> The slope parameter  $\beta$  is expected to be negative – as growth increases the productive sector utilizes more labor, and the unemployment rate drops. Real output growth is the percent change in GDP during the period. Both the unemployment rate and

Setting the change in unemployment rate to zero and solving for real output growth provides the rate of GDP growth that will keep the unemployment rate steady. The empirical relationship between growth and unemployment can be explored in a variety of ways including Okun's original interest in deriving a measure of potential GNP and in turn estimating the output gap.<sup>41</sup>

Starting with open unemployment, the growth-unemployment relationship observed from 2000-2011 is remarkably flat – open unemployment is relatively unresponsive to movements in the growth rate.<sup>42</sup>

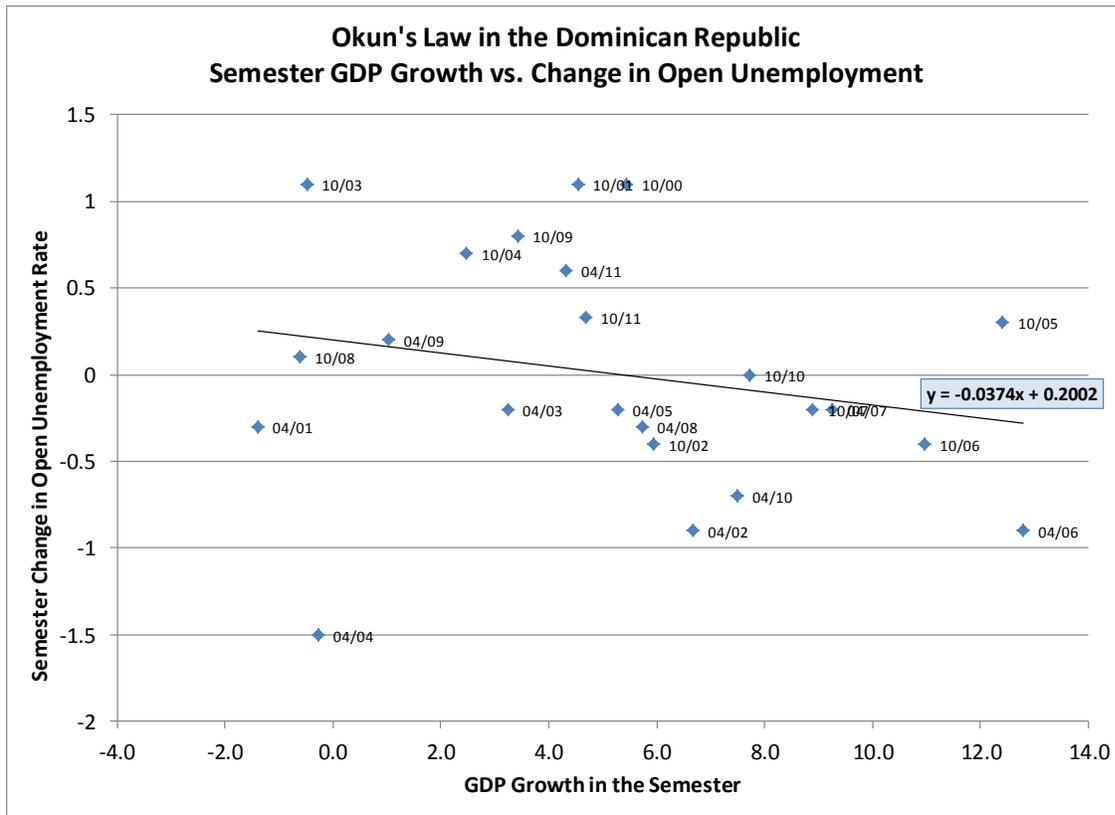
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GDP percentage change are measured concurrently in the same period, which assumes there is no lag in the labor market's response to increases in value added growth. The value of  $-\alpha/\beta$  is the minimum level of output growth needed to reduce the unemployment rate given labor force and labor productivity growth.

<sup>41</sup>Schnabel, pg 1.

<sup>42</sup> All data comes from the government of the Dominican Republic. GDP data comes from the National Accounts and Economic Statistics Department of the Central Bank. The series used is quarterly real GDP from 1991 – 2011, base year 1991. Unemployment figures are provided by the Survey Division of the same department in the Central Bank. The semi-annual national workforce survey is the basis for the unemployment rate calculations. The Dominican Republic tracks both open and covered or hidden unemployment. Open unemployment (*tasa de desocupación abierta*) as defined by the International Labor Organization occurs when people are without jobs and they have actively sought work within the past four weeks. Covered unemployment (*tasa de desocupación ampliada*) includes people who have given up looking for work but would accept a job if one were offered. Both series are used to estimate Okun's relationship in this study.

Figure I-7 Okun's Law and Open Unemployment

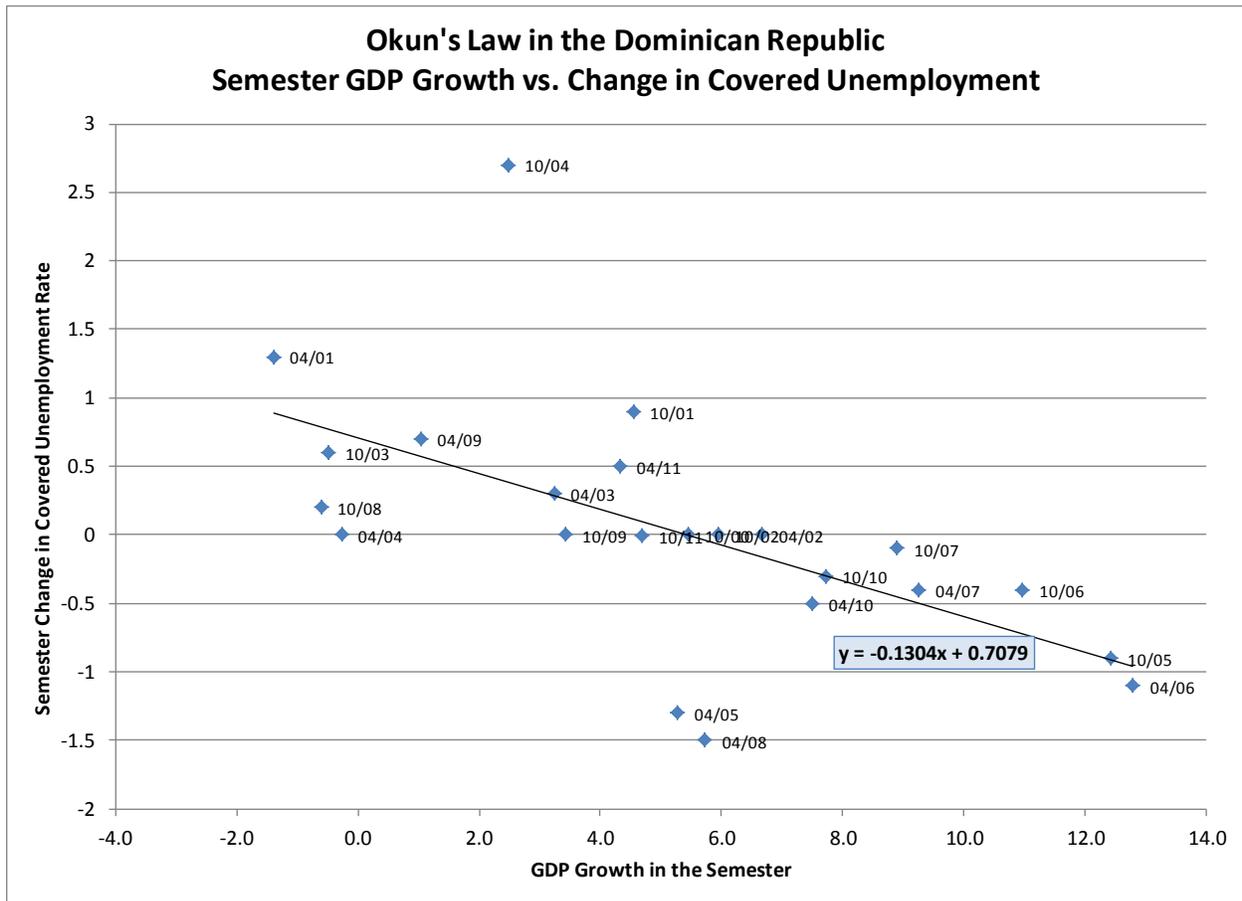


Source: Author's calculations

Turning now to covered (or hidden) unemployment, a slightly more dynamic relationship can be observed.<sup>43</sup>

<sup>43</sup> Open unemployment (*tasa de desocupación abierta*) as defined by the International Labor Organization occurs when people are without jobs and they have actively sought work within the past four weeks. Covered unemployment (*tasa de desocupación ampliada*) includes people who have given up looking for work but would accept a job if one were offered. Both series are used to estimate Okun's relationship in this study.

**Figure I-8 Okun's Law and Covered Unemployment**



Source: Author's calculations

Based on these findings, we see that there is little difference in the sensitivity of unemployment to growth, using either the open or covered unemployment figures. The estimations in Table I.6 below show that growth in the range of 5.35% to 5.43% in annual terms will simply maintain the existing level of unemployment, keeping it constant. The 5.7% annual compound growth rate since 1991 has therefore only had a small impact on the unemployment rate, and structural changes in the labor market will be necessary to increase the responsiveness of labor demand to increased output.

**Table I-6 Okun's Law Coefficient Estimations for the Dominican Republic<sup>44</sup>**

	$\alpha$ (intercept)	$-\beta$ (slope)	$-\alpha / \beta$
Open	0.2002	0.0374	5.35
Covered	0.7079	0.1304	5.43

How does this result for the Dominican Republic compare to other countries in Latin America? In 1999 the World Bank estimated Okun's slope coefficient ( $\beta$ ) of the difference equation using

<sup>44</sup> The coefficient estimations do not examine the stability of the parameter estimates over the 12 year time span, which would be an interesting expansion for future research.

growth and unemployment figures for thirteen Latin American countries, and the table below shows how the Dominican Republic compares:

**Table I-7 Okun's Difference Equation Slope Coefficients for the 1980s and 1990s  
(Dominican Republic estimations for 2000-2012)**

Country	Slope Coefficient Estimate	( $\beta$ )
Dominican Republic (Open)	0.04	
Dominican Republic (Covered)	0.13	
Uruguay	0.15	
Peru	0.18	
Brazil	0.19	
Chile	0.20	
Argentina	0.21	
Mexico	0.22	
Venezuela	0.23	
Panama	0.29	
Costa Rica	0.35	
<b>Bolivia</b>	0.38	
United States	0.37	
Colombia	0.39	

Source: Gonzalez, p 49 (World Bank)

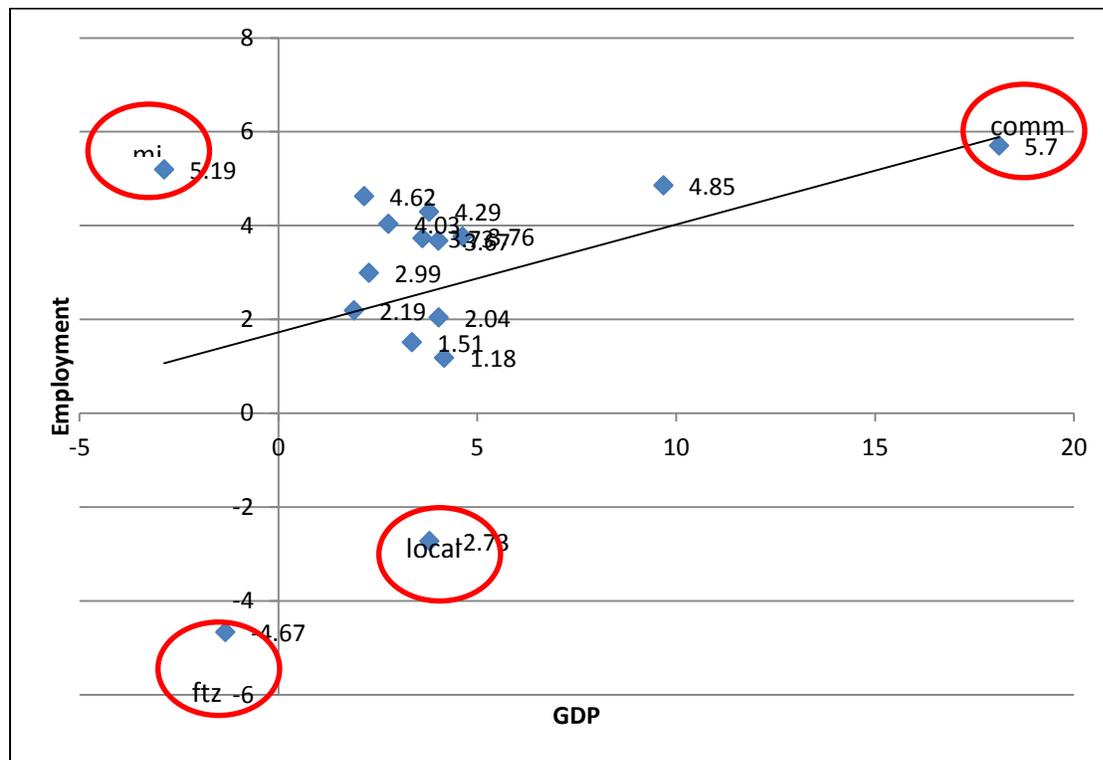
The  $\beta$  coefficient shows how responsive the unemployment rate is to changes in the growth rate in each country – the greater the coefficient, the larger the reduction in unemployment per percentage point of growth. Clearly in the Dominican Republic the relationship is much more tenuous than in the other selected countries. This conclusion holds for both open and covered unemployment estimates. It is important to mention the coefficients are not directly

comparable due to the different time periods used for the analysis (the DR estimates are much more recent), and so should be considered indicative estimates only.

*Additional Notes on Structure of Economy and Employment*

To determine whether there is a systematic relationship between sector growth and employment we calculate the average compound growth rate of output and employment for each sector. Plotting the results we see that most sectors grew around 4% and added employment around 2-4% per year. Most notable are the four outliers. Communications grew an average of 18% a year and increased employment at a much lower but still substantial rate of nearly 6% per year. Moving clockwise through the quadrants, local manufacturing increased output but shed employment in doing so. As previously discussed, free trade zone manufacturing declined both in terms of absolute and relative growth and employment. Finally, mining while experiencing a 14% growth from 2010-2011, declined in output compared to 2000 but added some employment. Eliminating the outliers however, the growth of the Dominican economy seems fairly steady across the board without significant bias against employment generating sectors.

**Figure I-9 Average Compound Growth and Employment by Sector**



Source: Author's calculations; Banco Central de la República Dominicana

The relationship between average compound growth rate and average compound growth in employment can be seen for each sector in the table below. As the explicit policy concern of USAID for the Dominican Republic is increasing more productive employment as the best way to achieve more inclusive economic growth, absolute changes in employment in more

productive subsectors matter more than relative changes. For example, the four sectors with fastest employment growth (communications; mining; financial intermediation; electricity and water) added a total of 70,626 jobs, just slightly more than the ninth fastest employing sector, tourism, which contributed 66,100 jobs.

Asking the question the other way around, not, “Are the fastest growing sectors increasing employment?” but rather, “Are the biggest employers growing in terms of output?” we see that the broad categories of other services and commerce have added over half of the net 620,000 jobs created since 2000, followed by transportation, tourism, agriculture, public administration and education. None of the most important providers of new jobs are growing very fast in terms of the value of output, they simply represent large shares of the economy’s employment to begin with, much of it in less productive informal sector activities, and are therefore adding more total employment for each percentage point of growth, but slowly in percentage terms.

**Table I-8 Growth and Employment by Sector, Part 2**

Sector	% Average Compound Growth of Employment '00-'10	Total Change in Employment '00-'10	Share of Total Employment 2010	% Average Compound Growth of GDP '00-'11	Share of GDP 2011	Employment Change per Percentage Point of Growth
<i>ECONOMY OVERALL</i>	1.8	620,487	—	5.8	—	
Communications	5.7	18,184	1.1	18.12	16.3	.31
Mining	5.2	3,970	0.3	-2.87	0.4	-1.81
Financial Intermediation	4.9	34,751	2.4	9.68	4.0	.50
Electricity and Water	4.6	13,721	1.0	2.16	1.3	2.14
Other Services	4.3	206,405	15.9	3.79	5.6	1.13
Transport and Warehousing	4.0	79,083	6.4	2.77	5.0	1.45
Education	3.8	56,492	4.8	4.63	1.0	.81
Public Administration	3.7	56,568	4.9	3.62	1.0	1.03
Tourism	3.7	66,100	5.8	4.02	6.1	.92
Health	3.0	31,540	3.3	2.28	1.3	1.31
Construction	2.2	46,166	6.2	1.9	4.2	1.15
Commerce	2.0	141,392	20.4	4.03	9.0	.51
Real Estate	1.5	1,424	0.3	3.36	5.0	.45
Agriculture	1.2	63,230	13.8	4.17	7.6	.28
Local Manufacturing	-2.7	-124,278	10.3	3.8	18.9	-.72
Free Trade Zones	-4.7	-74,261	3.2	-1.33	2.7	-3.51

Source: Author’s calculations; Banco Central de la República Dominicana

### *Characteristics of the Workforce*

Underlying the open unemployment rate in the Dominican Republic are stark differences in the employment of more and less educated labor and the high number of self-employed and informal sector workers. According to the Central Bank’s 2011 labor market survey, 6.9% of the workforce (economically active population) has no education and 40.2% has only primary

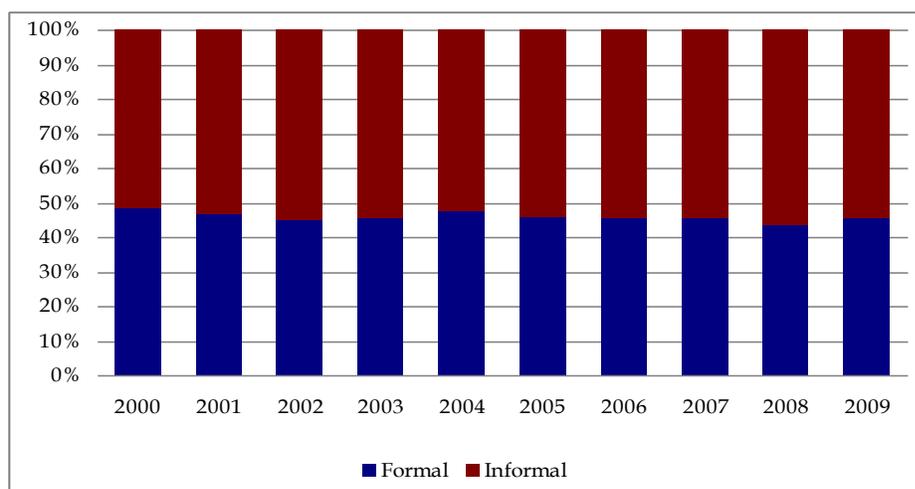
school education. While unemployment rates are high in all education categories, they actually increase with level of education. Informality rates are very high for the 47% of the workforce that has only primary education or less, and even for those with secondary education and/or vocational training. In 2010 56.5% of all employed labor was in the less productive informal sector, a rate which has not varied much over the Dominican Republic's decade of growth. Levels of unemployment and informality also vary considerably across age groups. Younger workers aged 20-39 have more than twice the unemployment rate as older workers aged 40-59. Both very young (10-19 year old) and very old (60-plus) workers some 50% higher than the middle of the workforce.

**Table I-9 Characteristics of Dominican Workforce by Education Level**

2010 Dominican Education, Employment and Unemployment Characteristics				
Education Level	Number in Workforce	% of Workforce	Unemployment Rate	% Informally Employed
None	303,972	7%	10%	80%
Primary	1,759,758	40%	12%	74%
Secondary and Vocational	1,408,894	32%	19%	53%
University and Post Grad	906,242	21%	13%	20%

Source: Banco Central de la Republica Dominicana, *Labor Market 2010*, p. 133 and 168

**Figure I-10 Formal vs. Informal Economic Sectors in the DR**



Source: Calculations by Labor Force National Survey (ENFT).

**Table I-10 Characteristics of Dominican Workforce by Age**

Age	% of Workforce	% Employed	% Unemployed	% Formal Employment	% Informal Employment
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(Total = 4,378,866)

10-19	8.5	68.6	31.4	25.6	74.4
20-39	51.4	83.2	16.8	49.4	50.6
40-59	32.6	91.9	8.1	42.7	57.3
60+	7.5	95.3	4.7	25.8	74.2

Source: Banco Central de la República Dominicana, *Mercado de Trabajo 2010*, p.121 and p.166

## Employment, Poverty and Inequality Trends

Unemployment in the Dominican Republic has remained stubbornly high, decreasing from 20% in 1991 to 14.6% in 2011.<sup>45</sup> However, even more worrying is the persistently high level of employment in the less productive informal sector of the economy, which has remained above 50% of the total and has been rising in recent years (up to 57% in 2011 from 53% in 2000). The informal sector is discussed at length in Chapter 7.

Estimations for thirteen LAC countries by the World Bank show that other economies have labor markets that are generally much more responsive to growth.<sup>46</sup> Similarly, growth in the Dominican Republic has had a relatively weaker growth elasticity of poverty during growth than during recessions, when poverty increases more rapidly than it declines during periods of growth.<sup>47</sup> While there has been growth, it has not been as broad-based as desired.<sup>48</sup>

**Table I-11 Average Growth and Unemployment Among Comparators**

	Average Compound Growth Rate (1991-2010)	Unemployment 2010
Dominican Republic	5.8	14.3
Costa Rica	4.8	5.7
El Salvador	3.3	7.3
Jamaica	1.4	13.8
LAC Developing Countries	3.3	8.0

Source: World Bank, World Development Indicators (WDI).

The DR has had a somewhat lower employment to adult (ages 15+) population ratio than any of the comparator countries until El Salvador dipped slightly below its 55.7% level during the recession in 2009. The male employment ratio declined a few percentage points from the 1990s to its 2009 level of 73%, which is lower than that of Costa Rica but higher than El

<sup>45</sup> Central Bank of the Dominican Republic

<sup>46</sup> Gonzalez (1999)

<sup>47</sup> *Long Run Economic Growth in the Dominican Republic: A Policy Note*. World Bank

<sup>48</sup> Nearly all growth is welfare enhancing in the aggregate unless inequality is an explicit concern. In the case of the Dominican Republic average incomes have increased, poverty has been reduced and unemployment diminished but not as much as desired or expected.

Salvador and Jamaica. However, the female employment rate, while gradually rising, has historically been well below that of Costa Rica and El Salvador and fell below that of Jamaica in 2001, reaching only 39% in 2008-2009.<sup>49</sup>

The youth employment to population (ages 15-25) ratio has hovered around the 40% range, but falling a few percentage points below it since 2001. In 2009 it was 39%, slightly below that of Costa Rica and El Salvador, but well above Jamaica's 30%. Young DR men have again fared better at finding jobs than young women, with 52% employed in 2009 compared with only half of that, or 26% of young women.<sup>50</sup>

The ratio of those employed in the agricultural sector to total DR employment fell from 20% in the late 1990s to only 14.5% in 2007, the latest year the DR sector employment figures are available. The percent employed in industry also fell, from 26% in the mid-1990s to 22% in 2007, while those employed in the services sector increased from 54% (after dropping off from an earlier 61%) to 63.5% in 2007, with a dip in 2004-2005. These overall trends are roughly consistent with those of the comparator countries, with the exception of Jamaica which has a much lower percentage of employment in industry. Agricultural employment reached a peak at around 571,500 in 1997, then it dropped off to 442,800 in 2003, before rising back up to 515,200 in 2007 (the latest figure available). But only one third of the rural labor force is in agriculture, and 70% of rural workers are in the informal sector, which by all accounts are mostly activities of low productivity providing low incomes.<sup>51</sup>

The proportion of men employed in the agricultural sector to total male employment has also seen a declining trend since reaching 27% in 1997, but has hovered around 21% since 2001. The ratio of men employed in the industrial sector increased rapidly until it reached 28% in 1996, fell back to 24% in 2002, but bounced back up again in 2003 and stabilized around 26% between 2005 and 2007. Male employment in the services sector has vacillated between 55 and 45%, with services appearing to act as the residual employer depending on the demand for labor in agriculture and industry.

As for women, only 2% of those employed worked in the agricultural sector since 1997. The proportion of women employees working in the industrial sector has fallen gradually from 22% in 1998 to only 13.7% in 2007. The growth in women's employment has taken place solely in the services sector, where its proportion of total female employment reached 84% in 2007.

According to World Bank World Development Indicators, the poverty headcount ratio under the national poverty line rose from 28% in 2000 to a peak of 43% in 2004 during the financial crisis, and then dropped back down to 34.6% in 2009, 34.4% in 2010, not yet recovering to pre-crisis levels, with a higher poverty incidence in rural areas (47.0% in 2009, latest year with a rural/urban breakout) than in urban areas (28.6%). However, given the larger urban population

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<sup>49</sup> WB WDI

<sup>50</sup> WB WDI

<sup>51</sup> Translated from "Inputs for the Elaboration of the Strategy of National Development," Chapters submitted by SEEPYD/CONARE for discussion, Chapter on Employment and Labour Market, pp. 4-5.  
<http://www.camaradediputados.gov.do/masterlex/MLX/docs/2F/1B0/1B1/1C5/1D2/1D8.pdf>

this means that roughly 58% of all those below the national poverty line live in urban areas, compared with 41% in rural areas.

In July 2012 the DR Office of National Statistics, Ministry of Economy, Planning and Development, published the results of a 4-year interagency effort to revise and update the DR national poverty line methodology. The results, henceforth considered the official poverty data, recalculated poverty line data back to the year 2000 to make the various time series consistent with the new methodology. These dates indicate that the percent of population below the severest poverty line (indigence) rose from 8.1 in 2000 to 16.6 in 2005 and recovered to only 10.2 by 2011. The percent below the “general” poverty line rose from 32.0 in 2000 to a peak of 49.8 in 2004, falling back to only 40.4 in 2011. In neither case has the reduction in poverty since the financial crisis caught up with the percentages preceding it. In a population of just under 10 million, over 4 million remain under the national poverty line, one million of whom still remain in the indigent category, despite fairly robust overall economic growth.

The proportion of households below the World Bank US\$1.25 absolute poverty line has been diminished, falling from 5.24% in 2000 to 2.24% in 2010, after rising to 8.13% in 2004. Some of this improvement may be attributed to the Dominican Republic’s *Solidaridad* welfare program that was initiated in 2005. In 2005 the program started funding at US \$18.3 million and ramped up quickly to around US\$200 million in 2010 and 2011. It eventually reached 793,846 households, 78% of which were receiving more than \$26/month. (The \$1.25 poverty line equals \$37.50 per month per person or \$135/month per average household size of 3.6.)

The recently revised DR official poverty data indicates that there were 1,509,260 individuals (roughly 419,239 households at the HH survey average of 3.6 persons per household) living below the absolute poverty line and 4,352,444 individuals (1,209,012 HH) living below the national (“general”)poverty line in 2005. Those eventually reached by the *Solidaridad* program over this 5-6 year period constituted almost double those in absolute poverty and almost 2/3 of those in general poverty in 2005. (The DR “general” poverty line is roughly equal to \$4.00/day, or \$120/month per person.)

By 2011 the households living in absolute poverty as defined by the DR declined to 280,010, from 16.6% of the population in 2005 to 10.2%, a decline of one-third terms of numbers in the growing population, while those living below the national poverty line declined to 1,113,684, from 47.8% in 2005 to 40.4% of the population, a decline of only 8% in terms of numbers, since 2005. At this point in time the *Solidaridad* program was reaching almost three times the number of those still in absolute poverty and 71% of those still below the general poverty line. While this program is apparently having the desired effect of reducing poverty, it is a recurring drain on the national budget at a time when the increasing fiscal deficit is alarming many Dominican economic analysts.

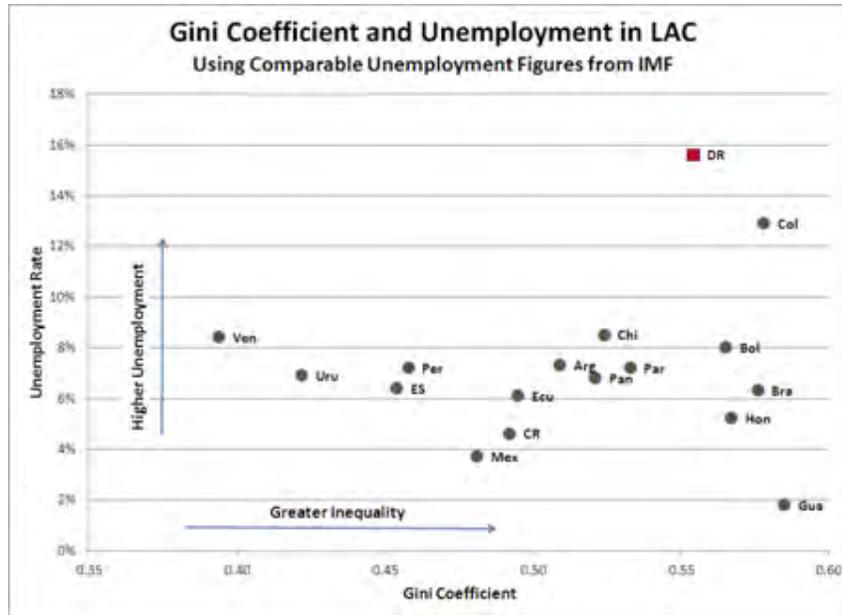
The Gini coefficient declined from 52% in 2000 and 2006 to 47.2% in 2010,<sup>52</sup> indicating a somewhat more equal distribution of income. However, a comparison of the Gini coefficients with unemployment rates among LAC countries indicates that the Dominican Republic is an

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<sup>52</sup> World Bank World Development Indicators

outlier in having both relatively high open unemployment and greater inequality in the distribution of income.

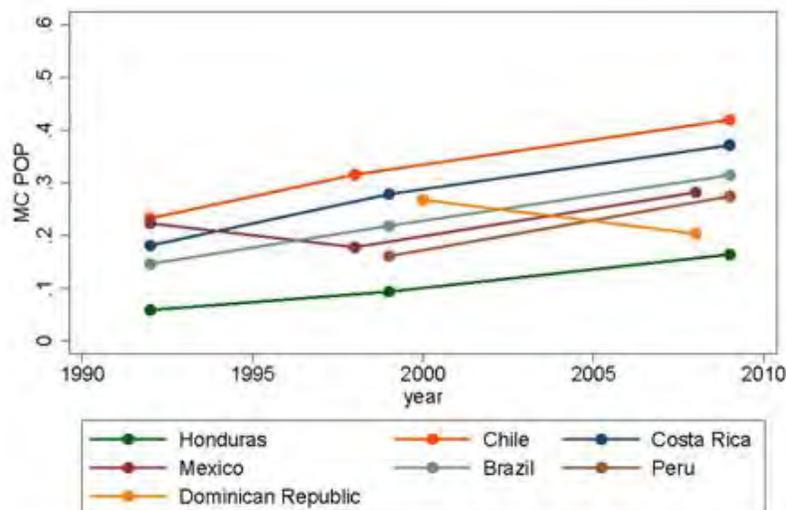
**Figure I-11 Gini Coefficient and Unemployment in LAC**



Sources: (Unemployment): Ball, Laurence, Nicolás De Roux and Marc Hofstetter (Nov 2011) "Unemployment in Latin America and the Caribbean", IMF Working Paper WP/11/252  
 (Gini): ECLAC 2011 "Statistical Yearbook for Latin America and the Caribbean" Table 1.6.4 "GINI COEFFICIENT, URBAN AND RURAL AREAS"

Furthermore, the Dominican middle class has been shrinking as a percentage of total households, a trend running quite contrary to other countries in the LAC region.

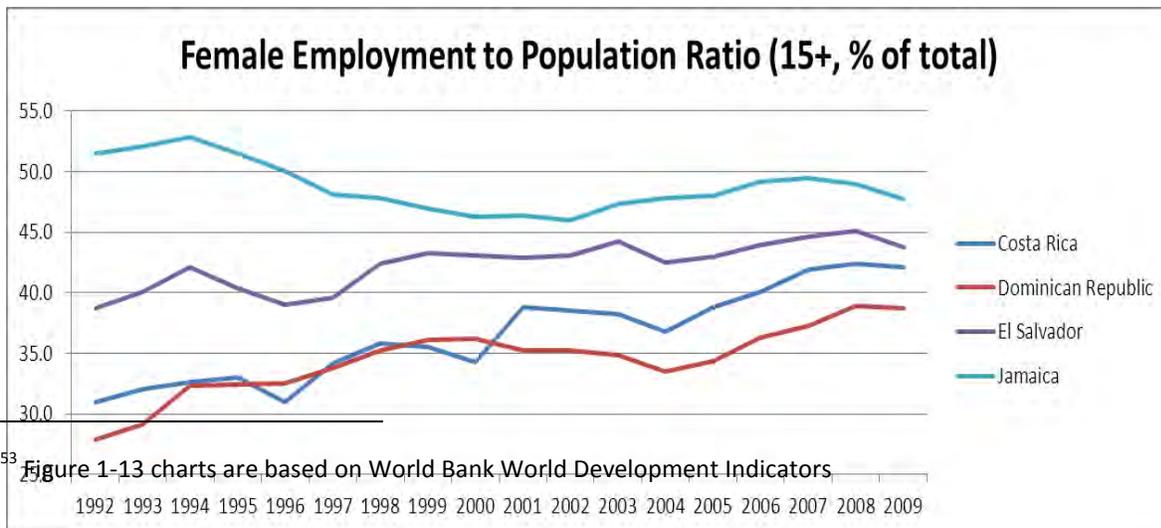
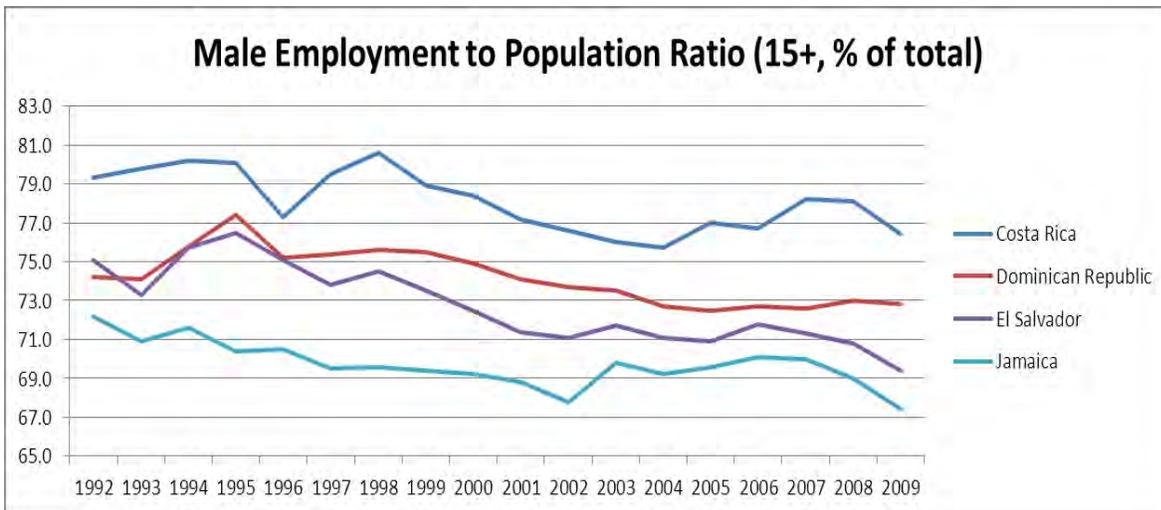
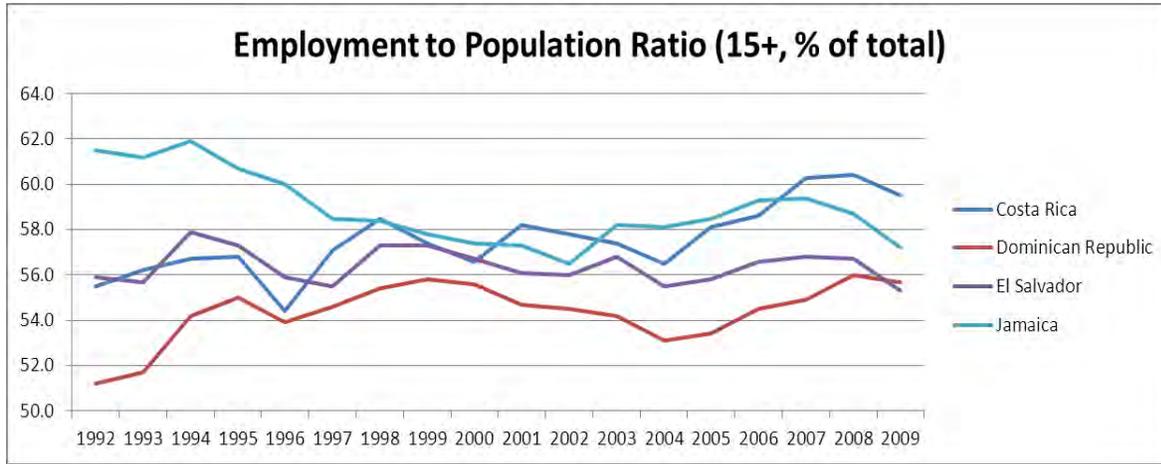
**Figure I-12 Middle Class Share of Population, LAC Region**



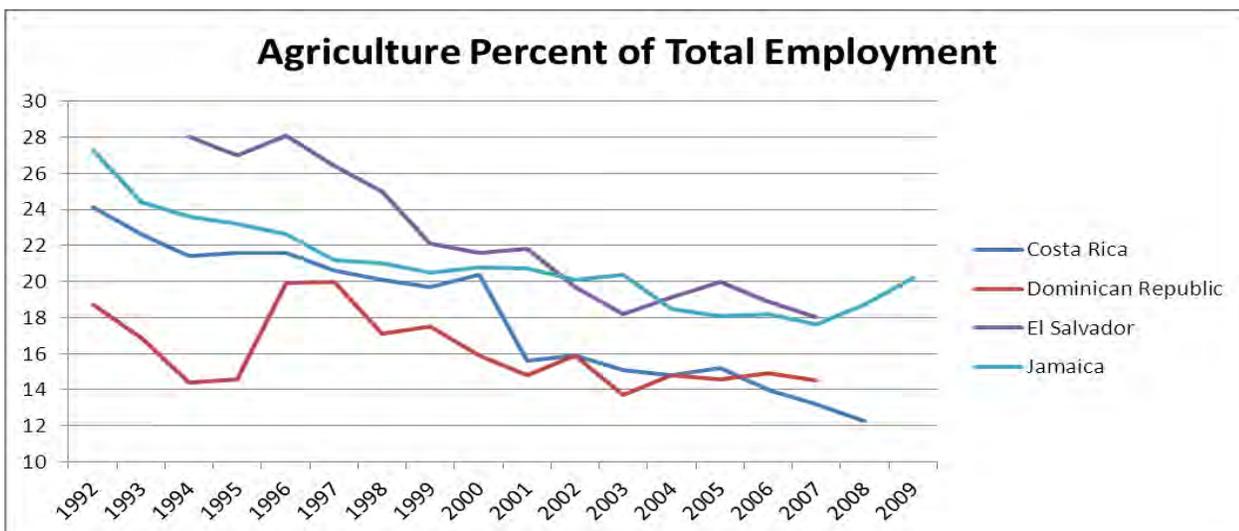
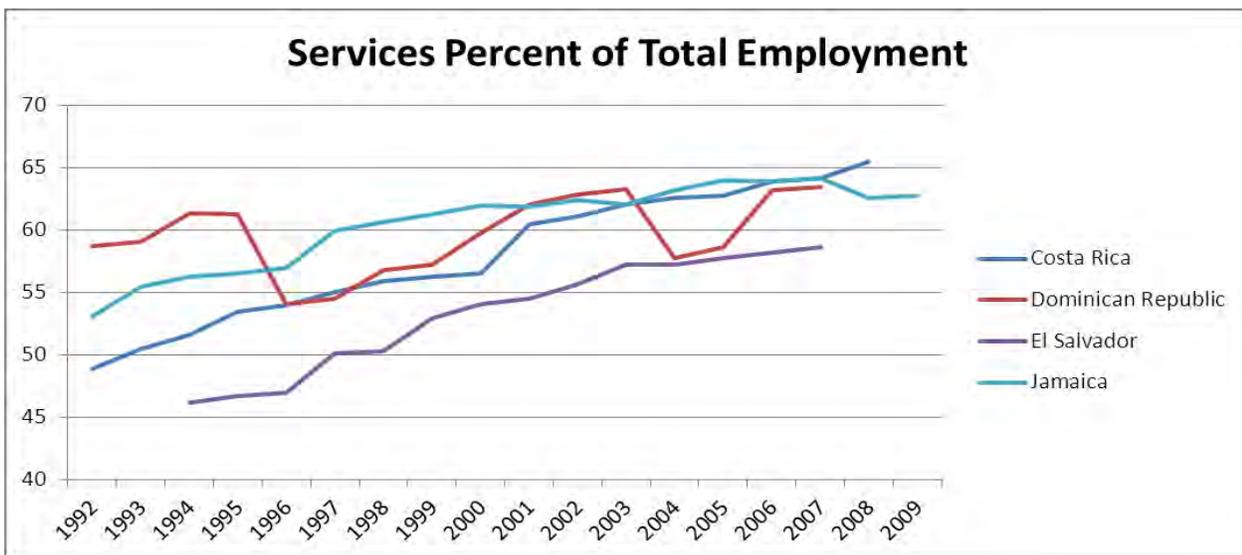
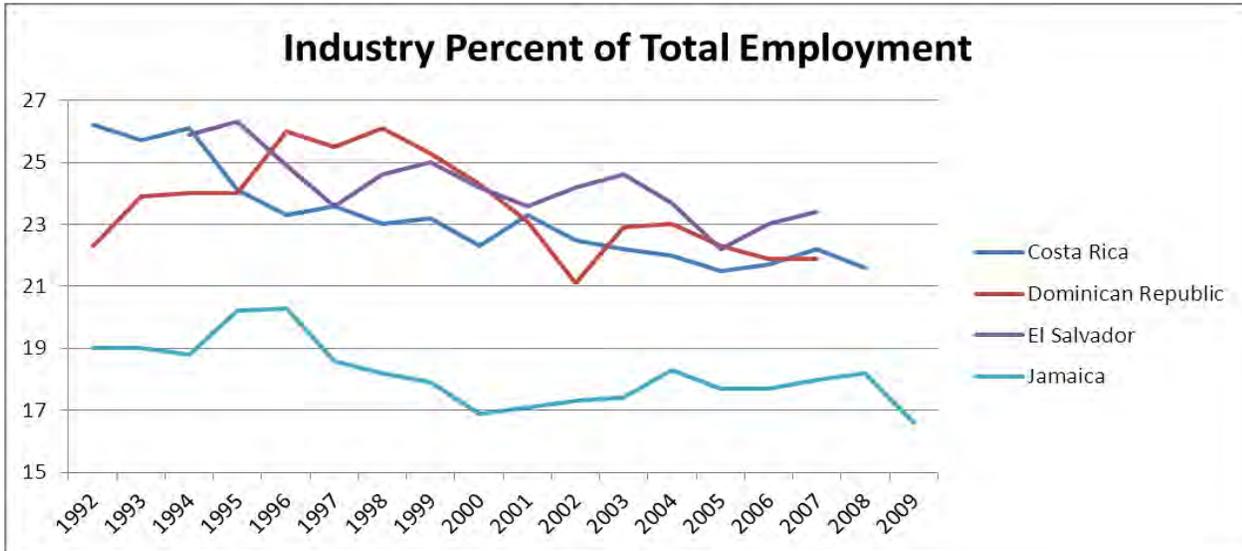
Source: Socio-Economic Database for Latin America and the Caribbean (CEDLAS and The World Bank).

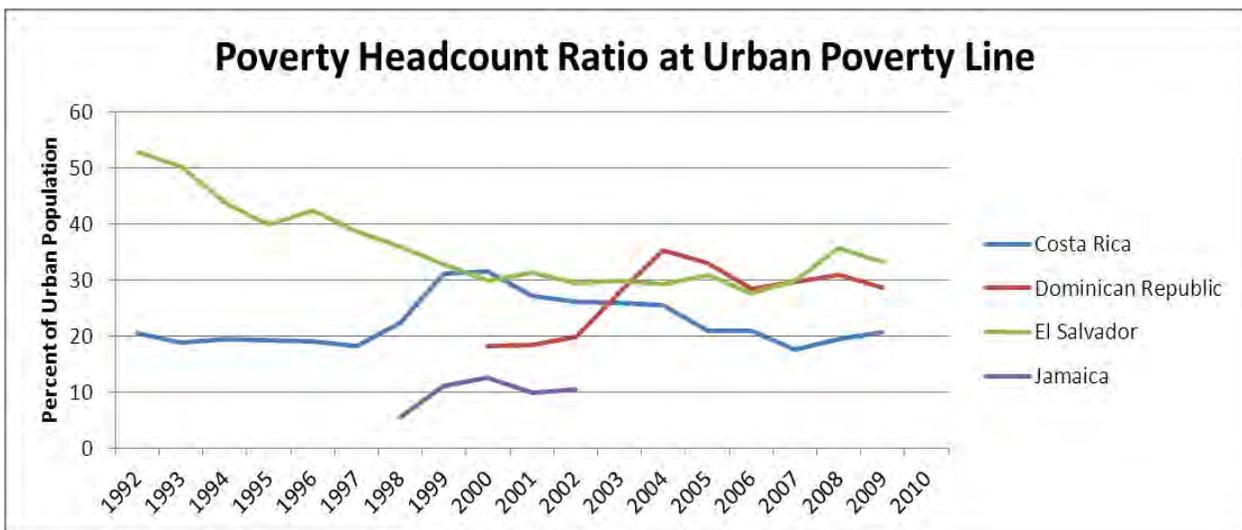
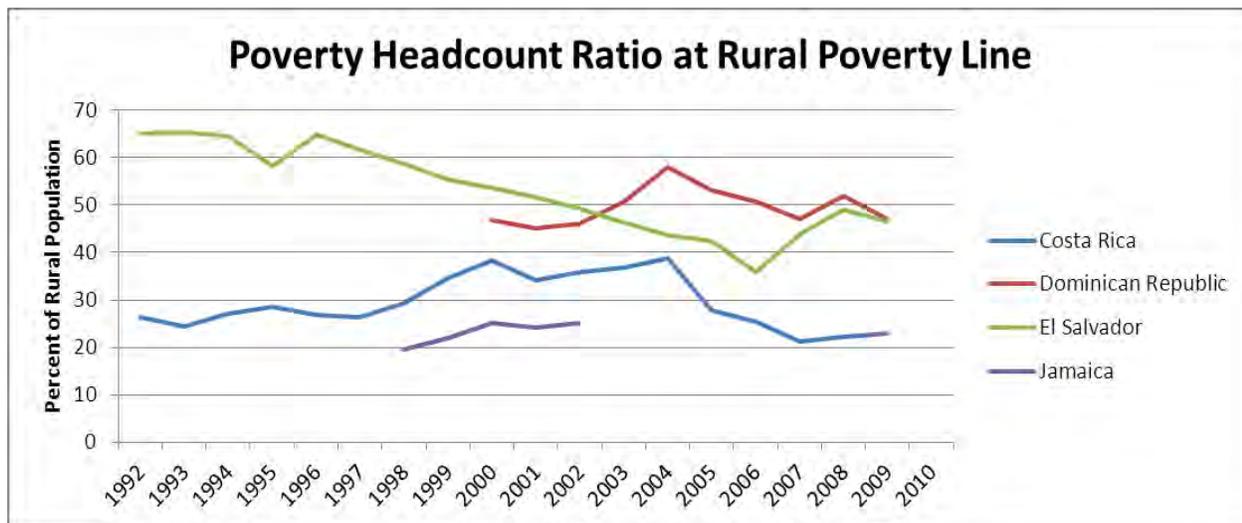
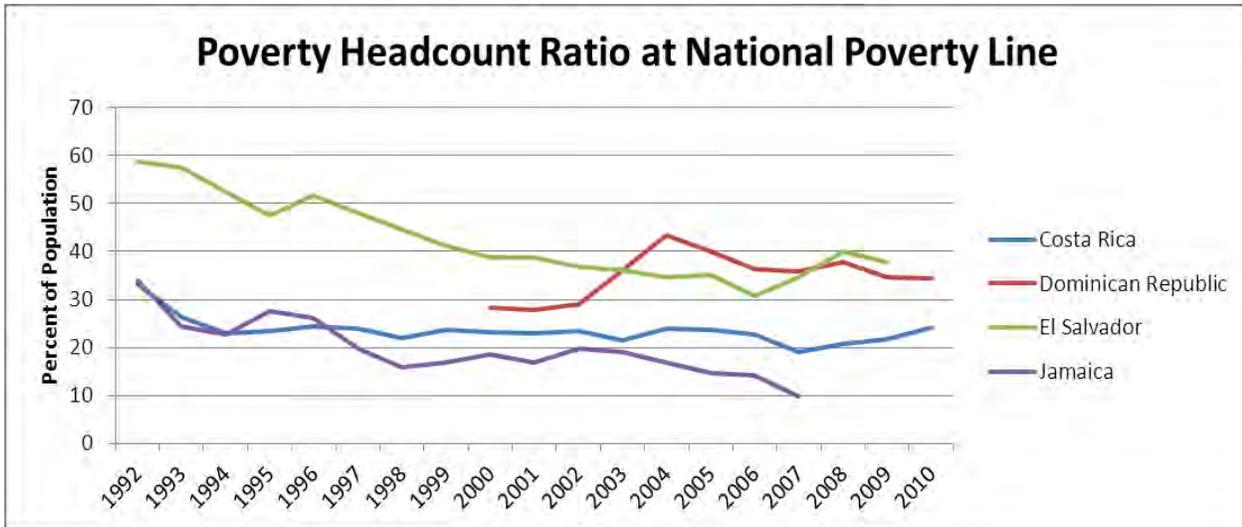
Figure I-12 is from: Birdsall, Nancy, "A Note on the Middle Class in Latin America," Working Paper 303, August 2012, Center for Global Development, Washington, DC, [www.cgdev.org](http://www.cgdev.org)

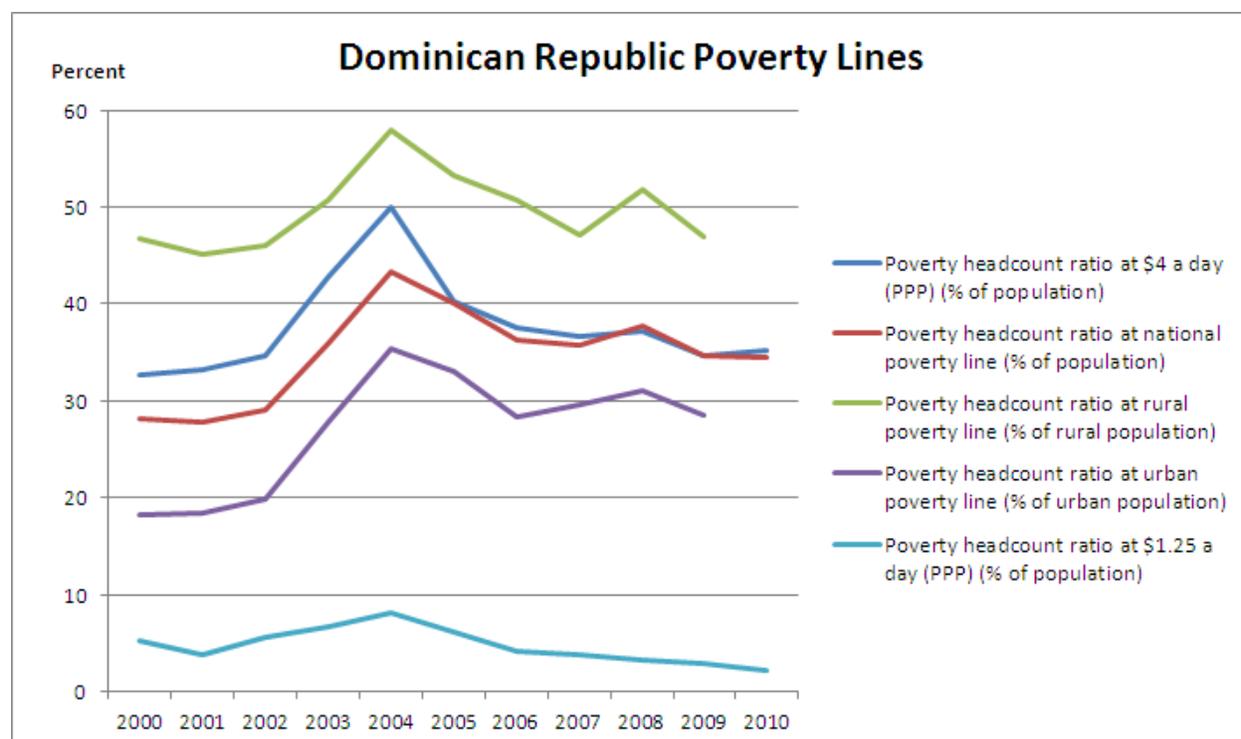
**Figure I-13 Employment and Poverty Trends (from WB WDI)<sup>53</sup>**



<sup>53</sup> Figure 1-13 charts are based on World Bank World Development Indicators







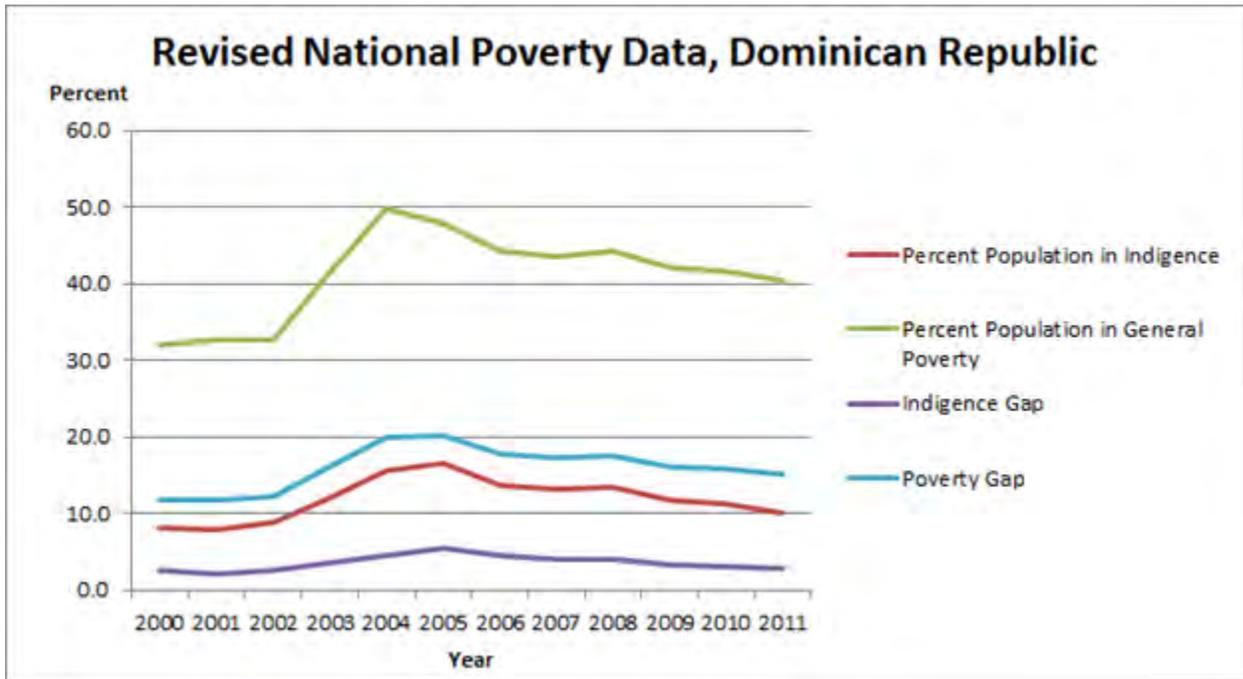
Source: World Bank World Development Indicators

**Table I-12 Revised National Poverty Data, Dominican Republic**

Year	% Population in Monetary Indigence	% Population in General Monetary Poverty	Indigence Gap	Poverty Gap	Poverty Severity	Population in Indigence	Population in Poverty
2000	8.1	32.0	2.6	11.7	6.0	682,658	2,684,241
2001	7.8	32.8	2.2	11.7	5.8	665,254	2,795,318
2002	8.7	32.7	2.6	12.2	6.3	758,596	2,838,863
2003	12.0	41.5	3.6	16.1	8.4	1,052,982	3,655,582
2004	15.5	49.8	4.5	20.0	10.6	1,388,621	4,455,199
2005	16.6	47.8	5.4	20.1	11.2	1,509,261	4,352,444
2006	13.7	44.2	4.4	17.9	9.6	1,270,213	4,087,210
2007	13.2	43.6	4.1	17.4	9.3	1,239,585	4,096,178
2008	13.4	44.2	4.1	17.6	9.4	1,277,724	4,219,010
2009	11.8	42.1	3.4	16.1	8.3	1,141,646	4,086,961
2010	11.4	41.6	3.1	15.9	8.0	1,114,602	4,074,007
2011	10.2	40.4	2.8	15.1	7.5	1,008,037	4,009,261

Source: Sistema de Indicadores Sociales de la República Dominicana. SISDOM 2012.

Figure I-14 Revised National Poverty Data, Dominican Republic



Source: Sistema de Indicadores Sociales de la República Dominicana. SISDOM 2012.

## Chapter 2 EMPLOYABILITY OF THE WORKFORCE

For employment to occur, the supply of labor must meet the needs of businesses. While the structure of production (and therefore the demand for labor) will naturally tend towards use of the available workforce, this process of matching and market clearing can be retarded by policy and regulatory distortions. However, without a minimal level of education, skills and health, much of the population may become very difficult to employ in any industry.

### Education, Employability and Wages

Human capital formation is a key determinant of worker productivity and therefore wages, alongside capital and technology per worker and the general level of human capital embodied (literally) in coworkers. Basic education provides a starting point for most professions that require complex organization, ability to read and follow directions, learning and innovation. Advanced education and skills must match the particular demand of the private sector to provide high returns. One of the primary motivations for parents to send their children to school, and for children to continue schooling, is to obtain better paying work in the future once they enter the labor force. Under the assumption that better educated workers are more productive, it follows that the increased value of their marginal product would be reflected in higher wages for their work.

Using the government of Dominican Republic's labor force survey we estimate the relationship between education and wages over the time period 2000-2011. From these estimations, we can determine some of the incentives that face students deciding whether to pursue further education or enter the workforce with less education.

#### *The Returns to Education Model and Results*

Mincerian equations, originally developed by economist Jacob Mincer, model education as an investment in individual human capital, assuming individuals choose how many years of schooling to pursue with the goal of maximizing the present value of lifetime earnings.<sup>54</sup>

The functional form of the basic returns to education equation is given as:

$$wage = f(Education, Experience)$$

The relationship is intuitive: as educational attainment increases, the worker becomes more productive and wages rise. Likewise, as workers become more experienced in their job, they become more productive and wages will also respond positively<sup>55</sup>. In practice, researchers have modified the basic functional form to incorporate an array of additional explanatory variables.

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<sup>54</sup> Dahlin, 2002.

<sup>55</sup> Empirical estimations of Mincerian equations frequently use (age – years of schooling) as a proxy for work experience. This study takes the same approach.

## Chapter 2. Employability of the Workforce

- *Wage returns to different levels of educational attainment.* The “sheepskin effect” reflects evidence that credentialed workers (those with high school diplomas or college degrees) earn more than their non-credentialed counterparts.
- *Marital status and household variables.* There is empirical evidence that married workers earn more than unmarried workers<sup>56</sup>. The causality of this relationship has been widely debated.
- *Gender.* Women earn less than men on average, when controlling for other variables.
- *Locality.* Wages in rural areas are typically lower than those in urban areas, even when controlling for type of work and other factors.
- *Job information.* The type of work impacts on wages, and in the current formulation we will pay specific attention to differing returns to formal versus informal sector employment.

The complete functional relationship analyzed for the Dominican Republic is:

$$\ln wage_i = f(\text{gender, locality, experience, educational attainment, household variables, job info, yearly and provincial dummies})$$

### Data

The data set used for the regression estimations is the National Work Force Survey conducted every April and October by the Central Bank of the Dominican Republic<sup>57</sup>. Observations for 24 surveys from April 2000 to October 2011 were pooled to create a dataset with 231,135 usable observations (individual surveys). Histograms and summary statistics for the variables used in the returns to education regressions are presented at the end of this chapter.

The work force survey data set contains a structural break in 2008, as described below:

*It is important to note that through 2007, the April and October surveys overlapped in their samples. Over 50% of the households were surveyed two times a year, and a simple average was taken of the surveys to create the labor market indicators. Starting in 2008, however, the semi-annual household samples were designed to be independent of each other which allow them to be combined in one annual data set. The combined annual data set has enough observations to provide more disaggregate geographic results.”<sup>58</sup>*

The regression analysis that follows utilizes ID clustering to account for these changes in the datasets over time.

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<sup>56</sup> Cohen and Haberfeld, 1991.

<sup>57</sup> The authors would like to thank the Department of National Accounts and Economic Statistics of the Central Bank for generously providing access to the full dataset of survey responses for this study. All estimation and interpretation errors rest with the authors.

<sup>58</sup> Translated and interpreted from Spanish text of the introduction to “*Mercado de Trabajo 2010*”

Some unusual results are noted in the histogram for potential experience, which is calculated as Potential Experience = Age - Education - 6. There are groups of people being sampled at multiples of 10<sup>th</sup>s ages (30, 40, 50, etc.). The unusual groupings in the age categories are unexplained at this time.

Unemployment rates presented by the Central Bank in the “Labor Market 2010” (*Mercado de Trabajo 2010*) were shown alongside the summary calculations from the returns to education regressions for comparison purposes. The underlying source data for the unemployment rates is the April and October 2010 surveys.

### *Regression Specifications and Estimations*

A log linear specification is used in the estimations, a standard formulation for the returns to education model. Below are the estimation results using three different specifications.<sup>59</sup>

Sample selection bias is present in the regression sample, as only those workforce survey respondents who reported a wage are included. This group is categorized as visibly employed, not visibly employed, or fully employed according to Central Bank classifications. Other respondents can be either unemployed (newly unemployed or those who are not actively looking for work but would accept a job if one were offered) or inactive in the workforce.

As described by Espinoza<sup>60</sup>, the problem is:

*Trying to understand how education and experience are correlated with wages is complicated because of non-random selection in the labor market. People work because the wages they are offered are greater than what economist call their reservation wage. The reservation wage is the minimum wage a person would be willing to work for, if wages are below this amount then people would leave the labor market. This leaves researchers with wages only of those people who are offered higher wages than their reservation wages, but this can introduce non-random selection bias. Since education and experience are related to the wages people are offered, we are selecting people into the labor market with higher education and experience than what is present in the total population. The people with less experience and education make up a larger part of those unemployed or completely out of the labor force. This causes problems when trying to estimate the impact of education and experience on wages, theoretically it would mean that estimates for the correlation between education and experience would be biased upward.*

The first regression estimation in Table 2-1 uses ordinary least squares (OLS) with a multiple of interactive terms. To correct for sample selection bias described above, two Heckman Correction (HC) model estimations are provided as well— one using maximum likelihood estimations, and a second using a two-step model with a probit first stage and OLS second stage.

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<sup>59</sup> Data manipulation, model specifications and regression estimations were performed by Dr. Claudia Gonzalez-Martinez of Optimal Solutions Group. The authors are very grateful for Dr. Gonzalez' significant contributions and recommendations to the study.

<sup>60</sup> Espinoza, 2010.

**Table 2-1 Returns to Education in the Dominican Republic (Mincer Estimations)****Returns to Education in Dominican Republic - Years 2000-2010**

Dependent variable: Log Hourly Wages, adjusted by yearly inflation

Independent Variable	OLS Specification with female/rural/geographic interactions			Heckman Correction 1 : Maximum Likelihood Estimator			Heckman Correction 2: Two Step (Original Method)		
	Coefficient	T-statistic		Coefficient	T-statistic		Coefficient	T-statistic	
Constant	3.784	136.70	***	3.827	231.49	***	3.869	114.63	***
Female	(0.250)	(18.40)	***	(0.174)	(11.14)	***	(0.148)	(6.03)	***
Rural	(0.175)	(43.40)	***	(0.175)	(43.26)	***	(0.175)	(44.99)	***
Female*Rural	0.093	13.35	***	0.094	13.44	***	0.095	13.95	***
<b>Experience</b>									
Potential Experience	0.037	85.81	***	0.031	37.18	***	0.028	14.73	***
Potential Experience Squared	(0.001)	(78.03)	***	(0.000)	(35.80)	***	(0.000)	(14.46)	***
Female*Potential Experience	(0.014)	(18.48)	***	(0.013)	(16.91)	***	(0.013)	(16.14)	***
Female*Potential Experience^2	0.000	18.39	***	0.000	18.12	***	0.000	19.46	***
<b>Education</b>									
Years of Education									
Female*Years of Education									
Primary	0.195	42.34	***	0.195	42.18	***	0.195	42.99	***
Female*Primary	0.004	0.49		(0.008)	(0.95)		(0.013)	(1.40)	
Secondary	0.356	58.28	***	0.343	54.44	***	0.338	47.99	***
Female*Secondary	0.041	3.96	***	0.014	1.32		0.005	0.40	
Some College	0.527	60.54	***	0.509	56.62	***	0.502	49.92	***
Female*Some College	0.122	9.22	***	0.075	5.35	***	0.059	3.23	***
College	0.997	119.59	***	0.979	112.89	***	0.973	104.71	***
Female*College	0.139	11.53	***	0.065	4.63	***	0.040	1.70	*
Graduate	1.430	58.14	***	1.410	56.91	***	1.402	55.30	***
Female*Graduate	0.181	5.16	***	0.091	2.50	**	0.060	1.38	
<b>Marital Status and HH variables</b>									
Married	0.201	39.01	***	0.201	38.83	***	0.201	41.95	***
Female*Married	(0.051)	(5.97)	***	(0.047)	(5.44)	***	(0.046)	(5.54)	***
Divorced	(0.047)	(7.32)	***	(0.039)	(5.95)	***	(0.036)	(5.37)	***
Female*Divorced	0.064	7.19	***	0.028	2.86	***	0.015	1.14	
Widow	(0.018)	(0.86)		0.000	-		0.006	0.32	
Female*Widow	0.037	1.47		0.004	0.16		(0.007)	(0.30)	
No. HH Members	(0.005)	(5.89)	***	(0.003)	(3.44)	***	(0.002)	(2.31)	**
Female*No. HH Members	(0.000)	(0.08)		0.000	0.29		0.001	0.41	
<b>Job Information</b>									
Full Time Job	(0.350)	(97.82)	***	(0.351)	(98.10)	***	(0.351)	(107.79)	***
Formal Sector	(0.001)	(0.24)		(0.001)	(0.21)		(0.001)	(0.26)	
Public job	(0.046)	(10.26)	***	(0.045)	(10.11)	***	(0.045)	(9.18)	***
Permanent job	0.046	8.49	***	0.045	8.45	***	0.045	7.40	***
Missing type of contract	0.006	1.00		0.006	0.98		0.006	0.88	
<b>Other Control Variables</b>									
Yearly dummies	Yes			Yes			Yes		
Province Dummies	Yes			Yes			Yes		
No. Observations (Uncensored)	231,135			231,135			231,135		
No. Observations (Censored)				193,378			193,378		
R2	0.333								

(\*\*\*) Indicates statistical significance at the 1% level

(\*\*) Indicates statistical significance at the 5% level

(\*) Indicates statistical significance at the 10% level

### *Interpretation of the Returns to Education Estimations*

The coefficient estimations are largely robust across the three specifications. Analysis of work force survey data in the Dominican Republic over the period 2000-2011 reveals:

- Women earn less than men, even when education, geographic location, experience and marital status are held constant.
- Both men and women in rural areas earn less than their counterparts in urban centers.
- Completion of educational cycles is correlated with noteworthy wage increases, both in statistical significance and coefficient magnitude, as theory predicts. Nevertheless,
- Married men and women earn more than unmarried workers.
- Jobs in the public sector pay slightly lower wages than jobs in the private sector.
- The coefficient for formal sector jobs is not statistically different from zero; in other words, there is no statistical difference in wages earned in the formal or informal sector, when all other factors are held constant. This result is further evidence that informal sector work is not primarily a residual employer in the Dominican Republic, but often a proactive choice on the part of micro-entrepreneurs and the self-employed. The incentives to remain informal are explored in other chapters of this analysis.
- Women earn less and are less likely to find employment than their male counterparts across all levels of educational attainment, yet because they start from such a lower wage base their returns to education measured in wage premium are higher than that of men at the secondary and tertiary levels.

One curious result is the negative coefficient for full time jobs. This category also had a large number of missing responses, as noted at the bottom of each regression with a “missing type of contract” dummy that although not statistically significant, improved the significance of other coefficient estimations.

Table 2-2 provides a comparison of the wage price signals to education and the unemployment rate by level of educational attainment and gender. The comparison provided below is an approximation, as the unemployment rate calculated by the Central Bank is constructed by *any* years of educational attainment in each category, not the *completion* of that educational cycle.<sup>61</sup>

The two graphs below illustrate the annual wages attributable to the variables included in the Heckman Correction two step regression by gender.

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<sup>61</sup> Reconstruction of the unemployment rate by educational cycle completed is a pending task for future research.

Figure 2-1 Annual Wages by Gender & Level of Education, Married & Unmarried<sup>62</sup>

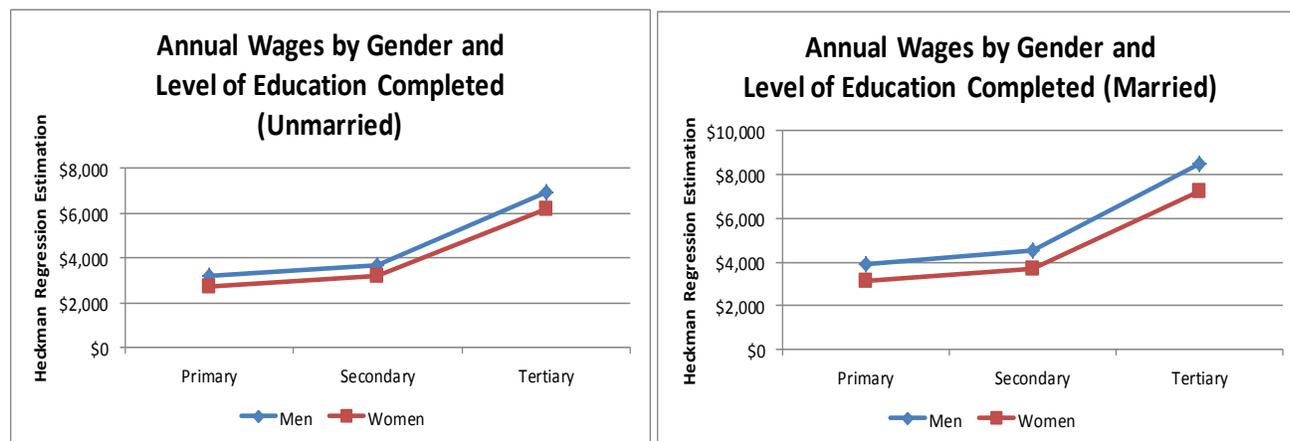


Table 2-2 Returns to Education and Unemployment

Returns to Education in the Dominican Republic

By Level of Education Completed, and Gender // Heckman Correction Two Step Estimation Results

Maximum Level of Education Completed	In (hrly peso wage) attributable to this status <sup>(1)</sup>	\$/yr	Gender Gap <sup>(2)</sup>	Education Premium <sup>(3)</sup>	Gender Gap % of Wage	Education Premium % of Wage	Unemployment Rate 2010
<i>Primary</i>	Unmarried men - primary	4.06	\$3,185				
	Married men - primary	4.26	\$3,894				
	Unmarried women - primary	3.90	\$2,712	\$473		17%	
	Married women - primary	4.06	\$3,168	\$726		23%	
	<i>All men - primary</i>						8.0%
	<i>All women - primary</i>						20.9%
<i>Secondary</i>	Unmarried men - secondary	4.21	\$3,675	\$490		15%	
	Married men - secondary	4.41	\$4,493	\$599		15%	
	Unmarried women - secondary	4.06	\$3,169	\$506	\$457	16%	17%
	Married women - secondary	4.21	\$3,702	\$791	\$534	21%	17%
	<i>All men - secondary</i>						13.1%
	<i>All women - secondary</i>						27.5%
<i>Bachelor's degree</i>	Unmarried men - college	4.84	\$6,931	\$3,256		89%	
	Married men - college	5.04	\$8,473	\$3,980		89%	
	Unmarried women - college	4.73	\$6,218	\$713	\$3,048	11%	96%
	Married women - college	4.89	\$7,262	\$1,210	\$3,561	17%	96%
	<i>All men - college</i>						10.9%
	<i>All women - college</i>						14.3%
<i>Post Grad degree</i>	Unmarried men - postgrad	5.27	\$10,653	\$3,722		54%	
	Married men - postgrad	5.47	\$13,022	\$4,550		54%	
	Unmarried women - postgrad	5.12	\$9,186	\$1,467	\$2,968	16%	48%
	Married women - postgrad	5.28	\$10,729	\$2,293	\$3,467	21%	48%

(1): Sum of relevant coefficients from Heckman correction wage-education regression, in natural logarithms

(2): How much more a man earns than a woman, given the same level of education

(3): How much more the person earns with the next higher level of education completed

<sup>62</sup> The annual USD wage salary is calculated as  $=(\text{EXP}(\ln \text{ hrly peso wage}) * 40 * 52) / 38$ .

It is striking that women receive lower wage premiums for educational cycle completion in absolute terms, while also experiencing far greater unemployment, yet as Table 2-2 shows below female enrollment in secondary is greater than male enrollment. Although absolute returns (education premium) are lower for women than for men, the relative returns measured by education premium *as a percentage of wage* are greater. This may be part of the incentive leading to higher female enrollment rates in the Dominican Republic.

### *Basic Education*

According to latest figures, 6.9% of the workforce has no education and 40.2% have only primary school education. About three quarters of workers at these educational levels are working in the informal sector. To make matters worse, the Dominican Republic has very low quality of primary education for those who receive any at all. A 2009 study comparing regional achievements in education (using 2006 data) showed the DR ranking dead last in standardized testing for math, reading and science in both the third and sixth grade levels.<sup>63</sup> Therefore the limited years of schooling that much of the workforce does receive, is of poor quality, which may make it difficult for managers to find workers with basic skills.

On a positive note, the next generation Dominican workforce may well be more educated. Primary school net enrollment is 87%, slightly higher than in Jamaica but less than Costa Rica and El Salvador which have 96% and 94% respectively.<sup>64</sup> The following Table 2-3 and Figure 2-2 look at outcomes of primary education. The Dominican Republic has average literacy rates though slightly lower completion rates than most of its comparators. Notably, the Dominican Republic spends significantly less on education than other countries. While funding rose from 1% to 2% of GDP in the mid-1990s, education has stayed roughly the same the last 15 years.<sup>65</sup> Similarly, in 2008 the Dominican Republic spent 7.2% of GDP per capita per student, lower than all comparison countries and the LAC developing country average of 12.4%. Expenditure increased to 7.5% of GDP per capita per student in 2010, still half of Costa Rica and less than half of Jamaica.<sup>66</sup>

This low spending is a serious impediment to improved educational outcomes as across countries there is a strongly positive relationship between expenditure per student and improved reading scores among third graders. While headline literacy and primary school completion rates are fairly high considering the low level of government expenditure, in terms of basic educational achievement the Dominican Republic performs much lower than could be expected for the amount it does spend. As shown in Figure 2-2 below, five of fourteen countries in Latin America and the Caribbean spend less per student per year than the Dominican Republic. Each of these countries (Nicaragua, Guatemala, Peru, Paraguay and El Salvador) show significantly higher achievement outcomes than the Dominican Republic, while spending less. Achievement scores should be approximately 15% higher in the Dominican

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<sup>63</sup> *Cuánto están aprendiendo los niños en América Latina?* Programa de Promoción de la Reforma Educativa en América Latina y el Caribe. 2009.

<sup>64</sup> Net primary enrollment is the ratio of children of the official primary school age who are enrolled in primary school level, to the population of the official primary school age. Gross enrollment ratio is the ratio of total enrollment, regardless of age, to the population of the age group that officially corresponds to the level of education shown.

<sup>65</sup> EADS

<sup>66</sup> World Bank World Development Indicators

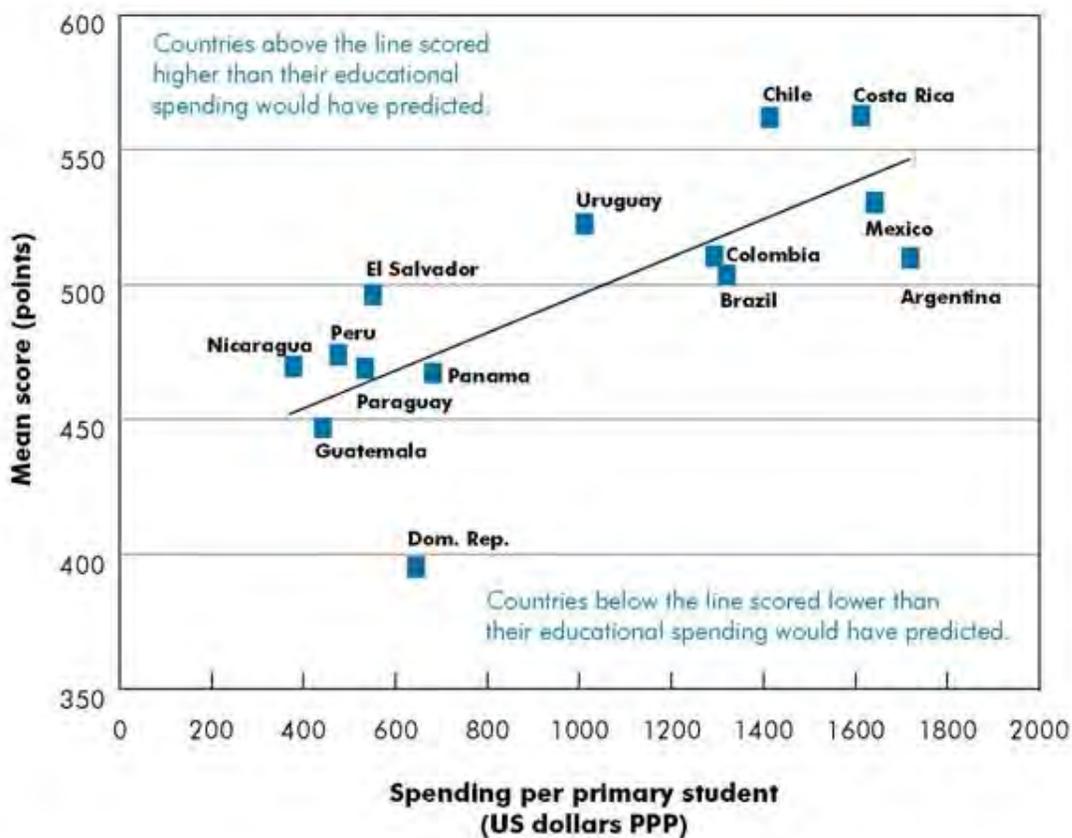
Republic given the level of existing public expenditure; the question is why achievement is so extraordinarily low?

**Table 2-3 Select Education Data for Dominican Republic and Comparison Countries**

	Literacy			Primary School Completion Rates			Public Expenditure on Education (% GDP)
	Total	Male	Female	Total	Male	Female	
Dominican Rep.	88.2	88.2	88.3	92.1	92.7	91.5	2.2
Costa Rica	96.1	95.9	96.3	96.3	95.3	97.4	6.3
El Salvador	84.1	86.8	81.8	96.1	96.5	95.7	3.6
Jamaica	86.4	81.2	91.1	73.4	73.9	73	6.2
LAC Developing Avg.	91.1	91.9	90.3	101.6	101	102.1	4.4

Avg.  
Source: USAID 2011 LAC Data Sheet

**Figure 2-2 Average 3<sup>rd</sup> grade reading score and primary school spending per student, 2006**



Source: For SERCE scores, SERCE (2008). *Primer Reporte*, Table A.4.1, p. 193. For spending data, UNESCO (2008). *Global Education Digest 2008*, Table 13 in the annex, pp. 146-155.

Note: Cuba and Ecuador were not included in the graph because no comparable information on spending per primary school student for these countries was available.

### Secondary Education

As previously noted, the current workforce is roughly divided with 47% having no or only primary education and 53% with secondary, vocational or higher education. Adding to the hope that there is a generational shift towards more education, in 1971 gross secondary enrollment was a mere 20.1% with current gross enrollment of 76.4%. While a dramatic improvement, it is still well below comparison countries including the LAC developing country average of 90%.

**Table 2-4 Secondary and Tertiary Education Data for DR and Comparison Countries**

	Secondary Enrollment (Gross %)			Vocational Enrollment (% of Secondary Students)			Tertiary Enrollment (% Gross, 2004)		
	Total	Male	Female	Total	Male	Female	Total	Male (%)	Female (%)
Dominican Rep.	76.4	72	81	4.4	38.2	61.8	34	26.3	41.7
Costa Rica	99.7	97	102.5	17.5	49.7	50.3	25.7	22.9	28.7
El Salvador	65.0	64.5	65.5	22.3	48.2	51.8	21.3	19.8	22.6
Jamaica	92.7	91.3	94.2	-	-	-	-	-	-
LAC Developing	89.6	86.1	93.1	-	46.7	53.3	29	26.4	31.5
Avg.									

Source: World Development Indicators

Expenditure on secondary education is low in the Dominican Republic. In 2008 the nation spent a mere 6.3% of GDP per capita per student, half of Costa Rica and the LAC developing country average and a fraction of the 27% spent by Jamaica.<sup>67</sup>

The return to education analysis offers an intriguing explanation for why secondary and vocational enrollment continues to lag<sup>68</sup>. Compared to the wage of a worker with only primary school graduation, a secondary school graduate earns on average and all else equal only 15% (unmarried men) to 17% more (unmarried women). This may explain why female enrollment in secondary school is 5 percentage points higher than male enrollment. As a further disincentive to pursue secondary education as a terminal degree, unemployment is higher among workers with a secondary education than any other degree category.

### Tertiary Education

In 2010 some 21% of the Dominican labor force had a college or graduate degree though unemployment among this demographic was nearly 13%, just lower than the economy wide unemployment rate. Referring back to the returns to education results in Table 2-1.b, the wage premiums of a college degree over a secondary degree and a postgraduate degree over a college degree were substantial, 89% and 54% respectively for men. Unmarried female college graduates earned a wage premium on average of 96% over their secondary educated cohort,

<sup>67</sup> World Bank World Development Indicators

<sup>68</sup> Vocational education is included in the Dominican Republic's secondary education category.

and married woman earned a premium of 48% over their secondary educated female cohort. In both cases the wage premium for a postgraduate degree was around 50% over and above the wage of a college graduate. The relatively strong returns to higher education, particularly for women, may explain the 34% overall enrollment rate and 41.7% enrollment rate for women, both higher than in comparison nations.

**Table 2-5 Plans to Emigrate in the Next Year and Reasons for Emigration (%)**

	Honduras	Nicaragua	Dominican Republic	Cuba	Paraguay
<b>Plans to migrate</b>	<b>15</b>	<b>24</b>	<b>29</b>	<b>39</b>	<b>31</b>
Family reunification	13	11	8	38	
Too high cost of living/ One cannot live here	64	23	61	35	
No jobs	17	57	15	4	
Other conditions	4	7	0	23	

*Source: Orozco, 2008.*

### *Why Don't Students Pursue Further Education?*

Labor market survey data included in the following table provides important evidence as to why students at each educational level do not pursue further schooling. Broken down by gender we see that females appear are twice as likely as males to have never been matriculated in school, though other evidence points to higher enrollment rates for women. Males particularly at the primary and secondary levels are much less likely to attend school because of "work", and females are much less likely to attend for "family reasons". Also, males are more likely to not be matriculated because of "do not want to/do not like it" than females, particularly for those with less than a completed secondary education. Finally, it appears that about 12% of the population is not pursuing further education due to being "too old". Important for the policy decision about funding of education, it is reported that education being too expensive is mostly cited as a reason for not being enrolled for men and women thinking of moving into and through college.

**Table 2-6 Reported Reasons For Not Attending School**

Reason for not Attending School by Completed Educational Level and Gender																			
Reason	Male Educational Level										Female Educational Level								
	None	Some primary	Primary	Some secondary	Secondary	Some college	College	Post-Graduate	Total	None	Some primary	Primary	Some secondary	Secondary	Some college	College	Post-Graduate	Total	
<b>Bad previous performance</b>	725	3,608	780	798	291	86	18	-	<b>6,306</b>	725	3,611	700	822	314	88	15	-	<b>6,275</b>	
%	3.80	5.38	3.76	3.62	1.29	1.94	0.17	-	<b>3.77</b>	3.99	5.59	4.08	4.08	1.28	1.64	0.11	-	<b>3.81</b>	
<b>Do not have documents</b>	2,291	1,624	475	559	339	71	16	2	<b>5,377</b>	2,184	1,231	358	398	345	87	23	2	<b>4,628</b>	
%	12.01	2.42	2.29	2.54	1.51	1.60	0.15	0.28	<b>3.21</b>	12.01	1.91	2.09	1.98	1.41	1.62	0.17	0.30	<b>2.81</b>	
<b>Do not want to/like it</b>	1,529	7,280	2,080	2,267	1,474	174	30	5	<b>14,839</b>	1,011	4,604	1,269	1,403	1,184	117	32	4	<b>9,624</b>	
%	8.01	10.86	10.04	10.30	6.55	3.93	0.28	0.71	<b>8.86</b>	5.56	7.13	7.40	6.97	4.84	2.18	0.23	0.59	<b>5.85</b>	
<b>Family reasons</b>	1,956	6,670	2,047	2,211	1,788	416	99	5	<b>15,192</b>	3,190	22,454	6,669	7,804	6,806	1,387	295	9	<b>48,614</b>	
%	10.25	9.95	9.88	10.04	7.94	9.40	0.91	0.71	<b>9.08</b>	17.54	34.75	38.88	38.76	27.82	25.80	2.12	1.33	<b>29.55</b>	
<b>Finalized studies</b>	3	50	14	100	208	327	9,658	636	<b>10,996</b>	6	71	11	170	273	769	12,483	620	<b>14,403</b>	
%	0.02	0.07	0.07	0.45	0.92	7.39	88.61	90.08	<b>6.57</b>	0.03	0.11	0.06	0.84	1.12	14.30	89.80	91.72	<b>8.76</b>	
<b>Never matriculated</b>	5,751	914	279	293	199	59	16	-	<b>7,511</b>	5,832	4,151	1,309	1,445	1,225	279	40	-	<b>14,281</b>	
%	30.14	1.36	1.35	1.33	0.88	1.33	0.15	-	<b>4.49</b>	32.07	6.43	7.63	7.18	5.01	5.19	0.29	-	<b>8.68</b>	
<b>Other</b>	33	101	30	63	78	21	6	-	<b>332</b>	36	139	27	48	77	64	6	-	<b>397</b>	
%	0.17	0.15	0.14	0.29	0.35	0.47	0.06	-	<b>0.20</b>	0.20	0.22	0.16	0.24	0.31	1.19	0.04	-	<b>0.24</b>	
<b>Physical/Mental incapacity</b>	1,220	1,310	311	260	207	47	14	3	<b>3,372</b>	1,069	1,165	207	239	201	70	22	1	<b>2,974</b>	
%	6.39	1.95	1.50	1.18	0.92	1.06	0.13	0.42	<b>2.01</b>	5.88	1.80	1.21	1.19	0.82	1.30	0.16	0.15	<b>1.81</b>	
<b>Too expensive</b>	136	1,283	446	633	2,005	537	89	8	<b>5,137</b>	129	1,266	378	595	2,740	697	125	6	<b>5,936</b>	
%	0.71	1.91	2.15	2.88	8.91	12.13	0.82	1.13	<b>3.07</b>	0.71	1.96	2.20	2.96	11.20	12.97	0.90	0.89	<b>3.61</b>	
<b>Too far</b>	152	876	214	143	108	25	9	1	<b>1,528</b>	229	1,402	231	196	139	32	9	-	<b>2,238</b>	
%	0.80	1.31	1.03	0.65	0.48	0.56	0.08	0.14	<b>0.91</b>	1.26	2.17	1.35	0.97	0.57	0.60	0.06	-	<b>1.36</b>	
<b>Too old</b>	2,331	11,651	2,124	1,126	1,094	139	84	4	<b>18,553</b>	3,181	15,615	2,212	1,392	1,320	123	109	6	<b>23,958</b>	
%	12.22	17.38	10.25	5.11	4.86	3.14	0.77	0.57	<b>11.08</b>	17.49	24.17	12.89	6.91	5.40	2.29	0.78	0.89	<b>14.56</b>	
<b>Waiting for new school period to begin</b>	36	960	557	1,023	4,398	467	117	6	<b>7,564</b>	57	1,471	750	1,671	5,444	774	215	11	<b>10,393</b>	
%	0.19	1.43	2.69	4.65	19.54	10.55	1.07	0.85	<b>4.52</b>	0.31	2.28	4.37	8.30	22.26	14.40	1.55	1.63	<b>6.32</b>	
<b>Work</b>	2,920	30,708	11,363	12,541	10,317	2,058	743	36	<b>70,686</b>	534	7,427	3,033	3,950	4,393	889	527	17	<b>20,770</b>	
%	15.30	45.81	54.84	56.96	45.84	46.49	6.82	5.10	<b>42.23</b>	2.94	11.50	17.68	19.62	17.96	16.54	3.79	2.51	<b>12.63</b>	
<b>Total</b>	19,083	67,035	20,720	22,017	22,506	4,427	10,899	706	<b>167,393</b>	18,183	64,607	17,154	20,133	24,461	5,376	13,901	676	<b>164,491</b>	
%	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	<b>100.00</b>	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	<b>100.00</b>	

Source: Author's calculations, based on Dominican Republic Central Bank labor market surveys from 2000-2011.

### *Brain Drain*

According to the World Bank *Migration and Remittances 2011 Fact book* the Dominican Republic has roughly 1 million citizens overseas or 10% of its population. This is compared to a LAC average of 5.2% of the population. In 2000, 22% of the university educated population had emigrated (no regional comparison) and 30% of physicians had emigrated compared to 5% regional average. It seems that there may not be many firms recruiting skilled labor. Those that do, have a limited pool to hire from. The fact that there are few educated workers and that many emigrate may mean there is a lack of demand for skilled workers in the Dominican Republic, or it may mean that large firms who do demand skilled workers cannot compete with U.S. salaries. The high enrollment rate in higher education may reflect the investment decisions of Dominicans expecting to build their skills before emigrating.

Statistics on overall Dominican emigration paint a complex picture. The survey results below suggest people can find some work in the domestic jobs market, unlike Nicaragua. However, the wages offered by the work available may pay below the reservation wage rate and not be commiserate with the overall cost of living in the country. Economic motivations are cited as the primary cause of Dominicans leaving their country.

### *Conclusion*

Looking at the current educational structure of the workforce, unemployment rates, enrollment and wages, what story can be told? First, although the government underinvests in education, and the quality of the education provided is poor, the workforce is slowly becoming more educated. However, high unemployment rates across the board, but particularly for those with a secondary degree, coupled with low wage returns to secondary education may provide a disincentive for further education, especially for those that do not expect to go on to college. For example, the relatively weak returns to secondary education match the relatively low enrollment rates in the Dominican Republic next to comparator countries. However, for those who do go on to college and graduate school, and if they can find employment afterwards, they can expect a significant increase in earnings. This is especially true for unmarried women, compared with the baseline of average earnings with only a primary school education.

Earnings are not the only factor that influences a student's decision to continue studying. Social prestige, professional interest and family encouragement are also significant factors that have not been quantified in the current study. This may explain why many students continue their education through a tertiary degree, and then ultimately emigrate to work outside of the country. Competition in the domestic job market for well-paying employment commiserate with a university degree is fierce.

The data shows a mixed story about women overall. At all education levels they have a higher rate of unemployment though they outnumber men in secondary and tertiary school enrollment. Unfortunately the primary education that especially married women do get is not of great financial benefit as shown in Table 2-1.b. Married women with just a primary education have a 20% unemployment rate and make 23% less than married men with the same level of

qualifications all other things being equal. While at each employment level they make relatively less than men— in almost all cases substantially so— those women with secondary and tertiary degrees experience a higher pay bump in percentage terms vis-à-vis their cohort at the lower degree level than do men. This may explain their higher enrollment rates. If so, this would suggest that wage information is sufficiently fed through the system to allow rational decision making by students whether to continue education or enter the workforce.

Finally, the high and similar unemployment rates across the board suggest that the supply of labor is sufficient to meet demand. However, the higher returns to tertiary education may either suggest a shortage of skilled labor or a significant jump in labor productivity as a result of the university training. The high emigration rate of the university educated despite these high returns may reflect non-monetary factors, the relative ease of acquiring a visa for the more educated or yet higher returns to education in the United States. Without the escape value of emigration, domestic unemployment rates with the Dominican Republic would be even higher and wage rates further depressed.

### **Health Status of Workforce**

The effective supply of labor in an economy may be seriously degraded due to poor health, which reduces worker productivity and reliability. Such a blow to large portions of the workforce may impact education decisions and reduce hiring by firms.

#### *Current Health Status*

Life expectancy at birth in 2011 was 77 years (80 for females and 75 for males). This is broadly similar to comparison countries and roughly a year less than the Latin American average of 75.<sup>69</sup> Malnutrition data is spottier, but in 2007 child malnutrition by height was 10.1% in the Dominican Republic compared to 20.6% in El Salvador, 5.7% in Jamaica and 5.6% in Costa Rica. Undernourishment in the general population was 24% in 2008, strikingly higher than comparator countries (Ecuador 15%, El Salvador 9%, Jamaica and Costa Rica 5.6%, LAC developing country average of 9%)<sup>70</sup> A report by the UN Economic Commission for Latin America and the Caribbean estimated that in 2004, under nutrition cost the Dominican Republic \$672 million, or 3.6% of GDP in lost productivity due to missed schooling or early death. Anemia is prevalent among 34% of working age women and 28% of children under five.<sup>71</sup> Therefore, given that childhood malnutrition reduces lifelong productivity, and general under nutrition is high, this is an area that may be reducing workforce productivity, particularly in labor intensive industries that require high energy expenditure.

In terms of Millennium Development Goal health indicators, infant mortality rates, incidence of tuberculosis and prevalence of HIV are reported above most comparison countries. At 22.2 per 1000, infant mortality is above all comparison countries as is under-5 mortality. Tuberculosis incidence at 43.4 cases per 10,000 habitants is much higher than El Salvador

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<sup>69</sup> USAID 2011 LAC Data Sheet. [http://pdf.usaid.gov/pdf\\_docs/PNADW777.pdf](http://pdf.usaid.gov/pdf_docs/PNADW777.pdf)

<sup>70</sup> World Bank World Development Indicators

<sup>71</sup> Paulino, Amarilis Then Paulino, MSP. 2011. 2009-Micronutrient Survey

(27.4), Costa Rica (9.6) or Jamaica (5.1).<sup>72</sup> AIDS affected less than 1% of the adult population in 2009, identical to the LAC average. In 2008, 22% of deaths in the Dominican Republic were caused by communicable diseases, maternal, prenatal and nutrition conditions. This is noticeably worse than some comparator countries (Jamaica 21%, El Salvador 17%, Costa Rica 7%, LAC developing country average 16%).<sup>73</sup>

### *Adequacy of Health Services*

In 2010 health expenditure per capita was \$323, more than in El Salvador and Jamaica but much less than in Costa Rica or the LAC developing country average of \$670. In terms of public provision of health care, as a percent of overall government expenditure the Dominican Republic spent 14% of its budget on health (up from 9.6% in 2008) similar to El Salvador, double that of Jamaica but only half that of Costa Rica. As a percentage of GDP in 2010 the Dominican Republic spent 6.2% on health care similar to its comparison countries and just under the LAC average of 7.7%. The Dominican Republic also has more hospital beds per capita than Costa Rica and El Salvador.<sup>74</sup> According to the Pan-American Health Organization however, it had fewer doctors per 10,000 habitants (14.3) than El Salvador (20) or Costa Rica (18.6) but more than Jamaica (10.4).

These data indicate that health may be a drag on the employability of the labor force, most importantly through early childhood malnutrition which inhibits cognitive development and reduces long run productivity. While the Dominican Republic could benefit from higher health expenditure the most notable feature is that the current expenditure is inefficient, with the country getting worse health outcomes than its comparison countries for a similar amount of expenditure.

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<sup>72</sup> Pan-American Health Organization, *Health Situation in the Americas: Basic Health Indicators 2011*

<sup>73</sup> USAID LAC Databook 2011

<sup>74</sup> World Bank World Development Indicators

Figure 2-3 Government Health Spending and Maternal Mortality in LAC

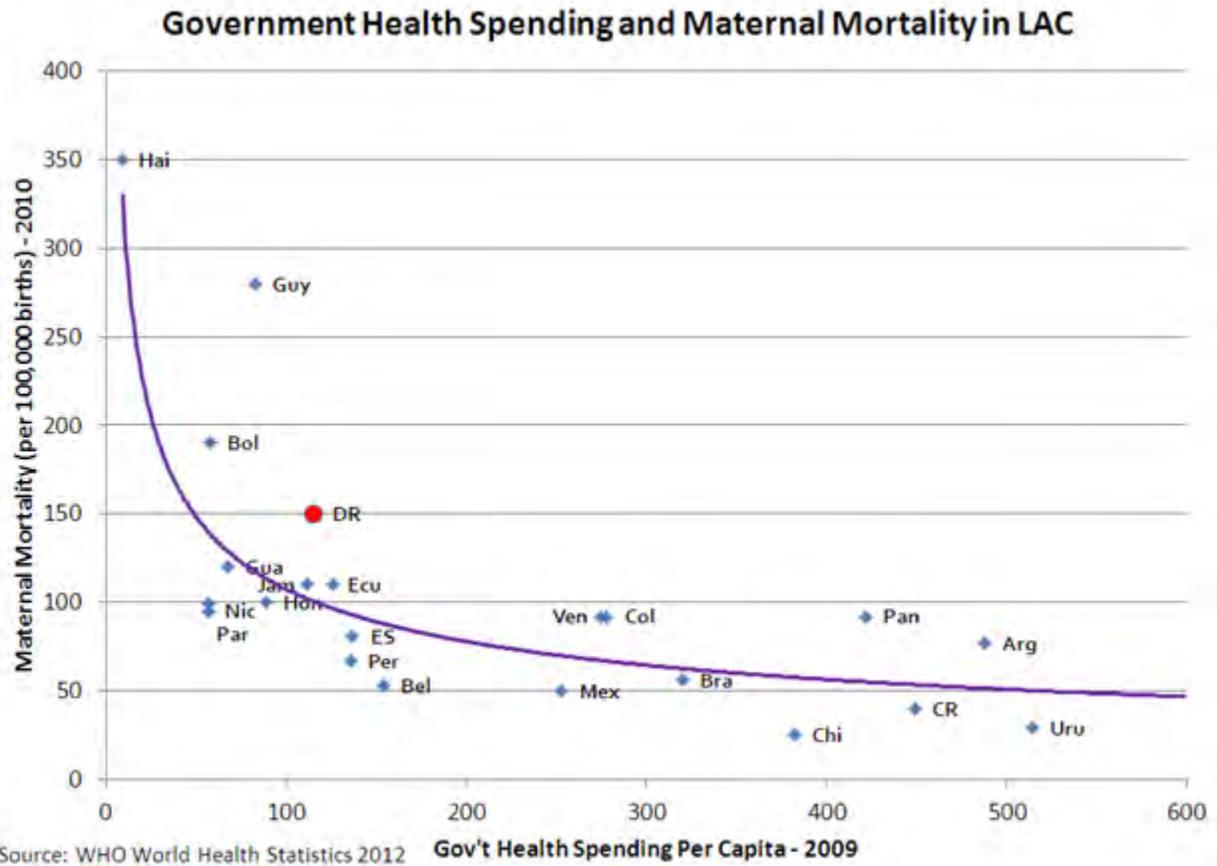
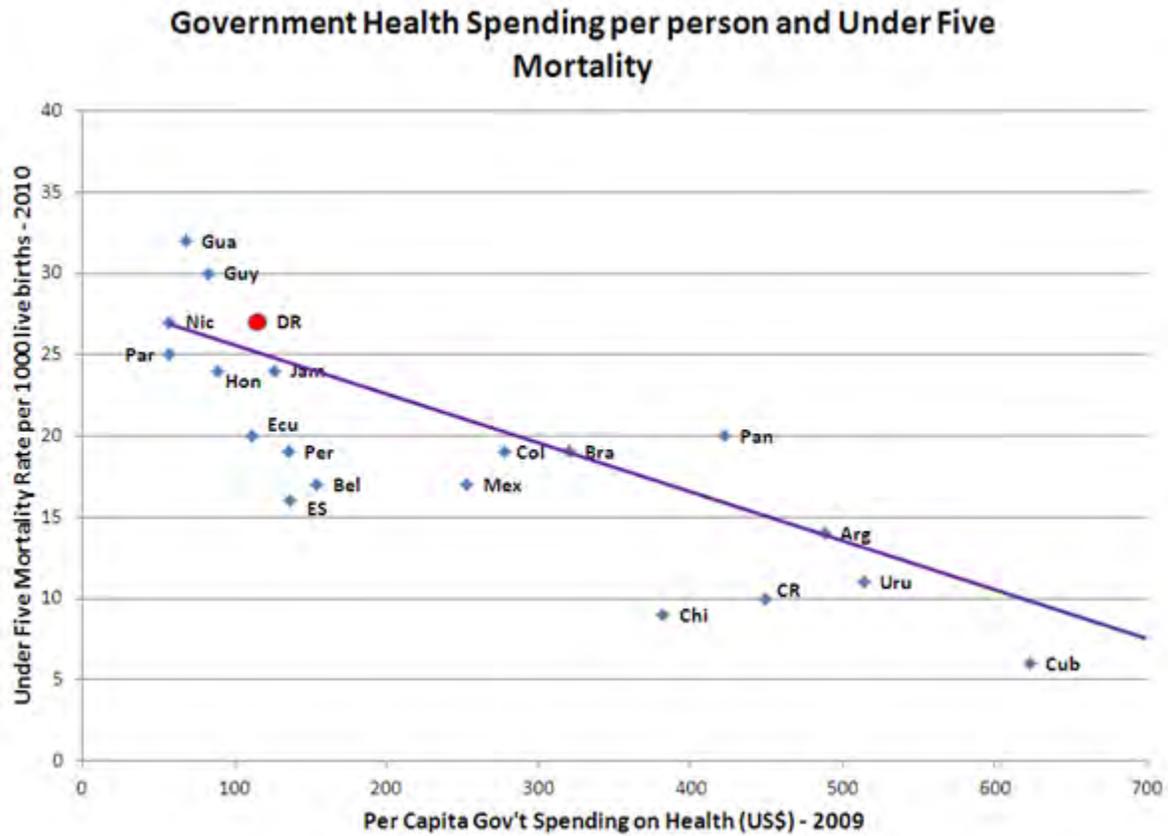


Figure 2-4 Government Health Spending per Person and Under Five Mortality



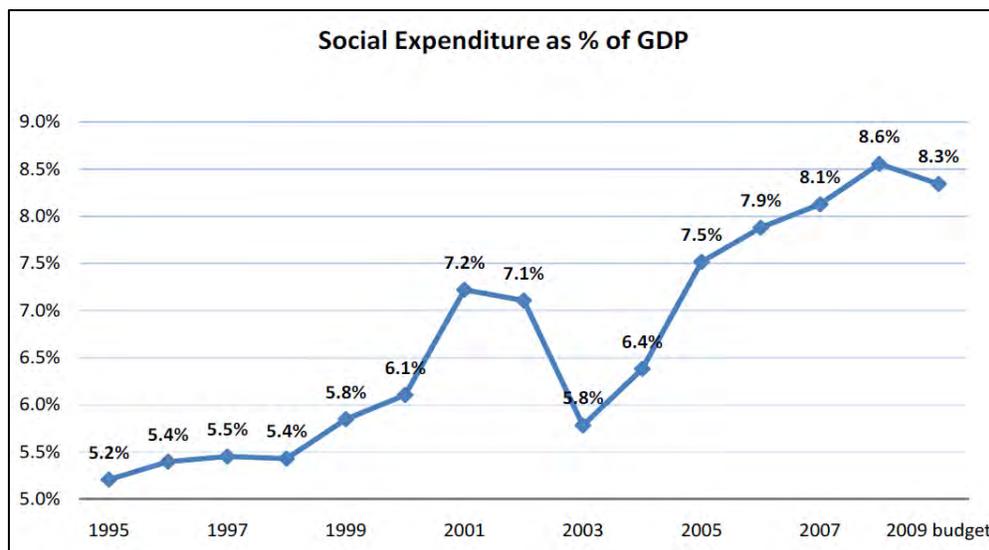
Source: WHO World Health Statistics 2012

### Social Safety Nets

Absolute social expenditure may be weak as well as targeting. In 2000 the government's tax intake was a relatively small 12.5% of GDP of which 40% was from trade, 30% taxes on goods and services and 30% on income. In 2007 the tax haul was nearly unchanged at 12.9% of GDP but the structure had changed to 10% from trade, 50% from goods and services and 30% from incomes.<sup>75</sup>

With these funds, government social expenditure was steady from the 1970s through the 1990s but increased from \$55 per capita to \$168 per capita between 1997 and 2007. This increase is from a combination of GDP growth which increased overall government spending, an increase in the ratio of government spending to GDP, and in an increase in the share of government spending on social services.<sup>76</sup> Overall, the Dominican Republic invests less than other countries in the region in social services, spending 8.1% of GDP in 2010 compared to the regional average of 15%.<sup>77</sup> Looking ahead, the impact of changing demographics cuts both ways. The age dependency ratio, the percent of the population that is working age, was roughly 60% in 2011, continuing a long decline since 1970.<sup>78</sup> This result of lower fertility and lower population growth will over time reduce the need to provide basic education and maternal child healthcare, but increases the need for adult training opportunities, pensions and elderly healthcare.

**Figure 2-5 Social Services Expenditure in the Dominican Republic**



<sup>75</sup> World Bank Policy Note and Central Bank of Dominican Republic. Tax revenue calculations by Luis Gonzalez.

<sup>76</sup> Here social services are defined as health, education, social security and welfare from the central government

<sup>77</sup> *Access and Availability: Improving Food Security in the Dominican Republic in the Context of CAFTA-DR*. Orco-Zerpa. 2012.

<sup>78</sup> World Bank World Development Indicators

**Table 2-7 Social Expenditure among DR and Comparator Countries**

	1975 <sup>(2)</sup>				1985 <sup>(2)</sup>				1995 <sup>(2)</sup>				2007 <sup>(3)</sup>			
	GDP / head <sup>(1)</sup>	total exp. / GDP	social exp. / total exp.	social exp./head <sup>(1)</sup>	GDP / head <sup>(1)</sup>	total exp. / GDP	social exp. / total exp.	social exp./head <sup>(1)</sup>	GDP / head <sup>(1)</sup>	total exp. / GDP	social exp. / total exp.	social exp./head <sup>(1)</sup>	GDP / head <sup>(1)</sup>	total exp. / GDP	social exp. / total exp.	social exp./head <sup>(1)</sup>
Colombia	1399	..	..	..	1627	0.141	0.481	110	2091	0.133	0.416	116	2460	0.324	0.440	350
Costa Rica	2822	0.206	0.553	322	2772	0.181	0.553	277	3608	0.224	0.574	464	5120	0.229	0.680	797
Dominican Republic <sup>(5)</sup>	1289	0.173	0.235	52	1459	0.129	0.281	53	1694	0.115	0.282	55	2889	0.198	0.294	168
Guatemala <sup>(4)</sup>	1442	0.096	0.341	47	1407	..	..	..	1588	..	..	..	1868	0.146	0.358	97
Jamaica	2983	0.310	0.324	299	2246	..	..	..	3241	0.347	0.201	226	3091	..	..	..
Panama	3014	0.316	0.410	390	3371	0.292	0.343	338	3470	0.247	0.635	544	5200	0.181	0.427	403
Peru	2303	0.129	0.314	93	2035	0.111	0.447	101	1976	..	..	..	2751	0.177	0.480	234

**Notes**  
(1) constant 2000 US\$ (World Development Indicators) (4) Data for 2003 is Central Government budget only  
(2) data from IMF's IFS (5) Data from Dominican Republic Ministry of Planning  
(3) data from CEPALSTAT  
(..) Data not available at IFS or at CEPALSTAT

Source: Long Run Economic Growth in the Dominican Republic: A Policy Note. World Bank.

In 2005 the Dominican Republic began a donor supported conditional cash transfer program called *Solidaridad*. As discussed in detail in the Employment, Poverty and Inequality Trends portion of Chapter 1, the program is estimated to have good coverage. The program is reported to have a small but positive impact on school attendance, child malnutrition and income. However, given the long term gains to productivity and wages of early childhood education and nutrition, the full impacts of the program may not be seen for some years. The Family Health Insurance coverage increased from 37,000 to 700,000 recipients from 2002-2007 but given that extreme poor are 1.1 million this is insufficient.<sup>79</sup>

However, the risk in increasing social expenditure is that this reallocation of federal money may come at the expense of investments which induce higher growth. Since growth itself at best directly improves the incomes of the poor and at worst provides more resources to transfer to the poor, reducing long term growth by an increase in short term social expenditure may or may not lead to optimal long run outcomes for the poor. But the relationship is murky. Faster growth may raise wages and prices which could increase the cost of education and health expenditure by the government. However, increased social expenditure can raise worker productivity and increase growth.<sup>80</sup>

As in many developing countries, remittances from abroad form an important source of budget support for families of emigrants. Historically over 80% of remittances have been used by recipients as food.<sup>81</sup> Remittances from Dominicans living overseas are down to 6.5% of GDP from 8% in 2005 even though in absolute terms remittances have increased from \$2.4 to \$3.2 billion from 2005 to 2011. Similarly, the Central Bank reports that since 2005 the amount of remittances received has increased from \$2.4 billion to \$3.2 billion in 2011. This means that

<sup>79</sup> World Bank Policy Note p.11

<sup>80</sup> World Bank Policy Note, p.17 and 18

<sup>81</sup> Determinants of remittances transfers: The Case of the Dominican Republic, January 1999 to September 2003; Manuel Orozco, Inter-American Dialogue, Was. DC, January 02, 2004. Draft research notes on determinants of remittances project.

remittances are increasingly playing less of a role supplementing or supplanting government social safety net programs.

### *Conclusion*

Though improving, the Dominican Republic has a relatively meager revenue stream and low expenditure on health, education and social safety nets. However, the challenge is not simply to increase social spending across the board. In education it appears that education spending would benefit from more resources and efficiency while health expenditure appears to achieve relatively poor returns for the level invested, so that improved quality expenditure is the priority. In any case, neither health nor education seems to be in and of themselves binding constraints to growth and employment generation. Given that increased social expenditure comes at a tradeoff on growth enhancing investment, the focus should be on improving quality of expenditure and increasing revenues across the board rather than substituting increased social expenditure for things like infrastructure investments.

### **Mobility of Workforce**

Restrictions on the internal flow of labor can be a major barrier to functioning and clearing labor markets. However, data shows that unemployment rates in the Dominican Republic are similar nationwide which would not be the case if barriers to movement existed. Per the Central Bank's 2010 labor market survey, total labor force participation rates by region vary from 60% in Ozama and Metropolitana to 52% in Norte o Cibao and Este. Female labor force participation rates are highly variable from the 42% national average. Women in Ozama and Metropolitana have a 52% rate while women in Norte O Cibao have a 36% participation rate and women in Este a 39% participation rate. However, men have the highest unemployment rate in Ozama y Metropolitana while women have the highest unemployment rate in Sure and Este. Ozama and Metropolitana has a notably higher unemployment rate than other regions of the country (16.9%) which can partly be explained by its higher labor force participation rate. The employment picture is best in Norte y Cibao (11% unemployment). According to the World Economic Forum, the Dominican Republic has a relatively high proportion of paved roads and few firms report transportation as a major constraint. Physical infrastructure therefore seems unlikely to restrict free flow of workers.

## Chapter 3 INFRASTRUCTURE

The broadest indicator of infrastructure quality is the subjective Global Competitiveness Index of executive perceptions compiled by the World Economic Forum. For 2011-2012, the score for the Dominican Republic on the infrastructure pillar is 3.0 out of 7, which is below that of all the comparator countries. The DR ranked 106 out of 142 countries, while Costa Rica ranked 83, El Salvador 65 and Jamaica 79. The Dominican Republic's low score for infrastructure seems to be due mostly to the neglect of its electricity supply, for which it scored a very low 1.9 and ranked 129, far below any of the comparator countries.

### Electricity

In the 2010 World Bank Enterprise Survey 20.1% of firms identified electricity as their biggest obstacle, compared to only 4.0% for Costa Rica firms, 1.7% in El Salvador and 12.4% in Jamaica. Some 63% of Dominican firms interviewed cited electricity as a major constraint (among their top five constraints) equal to those in Costa Rica but almost double those in the other two comparison countries. (See Figure 3-1 and Table 3-4 below.) The report notes that 18 power outages occurred in a typical month, compared to no more than 3 in the comparators, and the average duration of an outage was 4.5 hours. Firms that experienced outages estimated that 4.4% of the value of sales was lost due to these outages. Some 49% of the firms interviewed either owned or shared a generator, lower than in Jamaica (55%) but double the experience in Costa Rica and El Salvador; and those that used generators said they provided a striking 45% of their electric power needs— far, far more than in the comparator countries.

A report for the International Commission for the Strategic Development of the Dominican Republic succinctly summarized the energy constraint: “According to the World Bank, about 80 percent of company directors considered the electricity question as an important brake on development and further, half of them indicated that it is the most important obstacle to their activities.”<sup>82</sup> This corroborates the World Bank Enterprise Survey, despite different point estimates. The report also observed that the recurring interruptions of electric service have blocked numerous industrial investments. Moreover, costs were significantly increased for investments already made by the need to purchase equipment to generate electric power.<sup>83</sup>

The two technical problems with the electric system in the DR are the large volume of lost or stolen energy and the lack of capacity in the transmission system.<sup>84</sup> As of 2009, the loss rate had risen to 38 percent, at least partly a result of the renationalization of the distribution companies.<sup>85</sup> (See Figure 3-2 below.) This implies that only about 62 percent of the energy purchased by the distribution companies is actually paid for by consumers. In the Caribbean sub-region, the levels of absolute distribution losses are comparable to the Southern Cone and Central America, with the exception of the Dominican Republic, where losses are about 10

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<sup>82</sup> Jacques Attali, “República Dominicana 2010– 020”, Santo Domingo, November 2010.

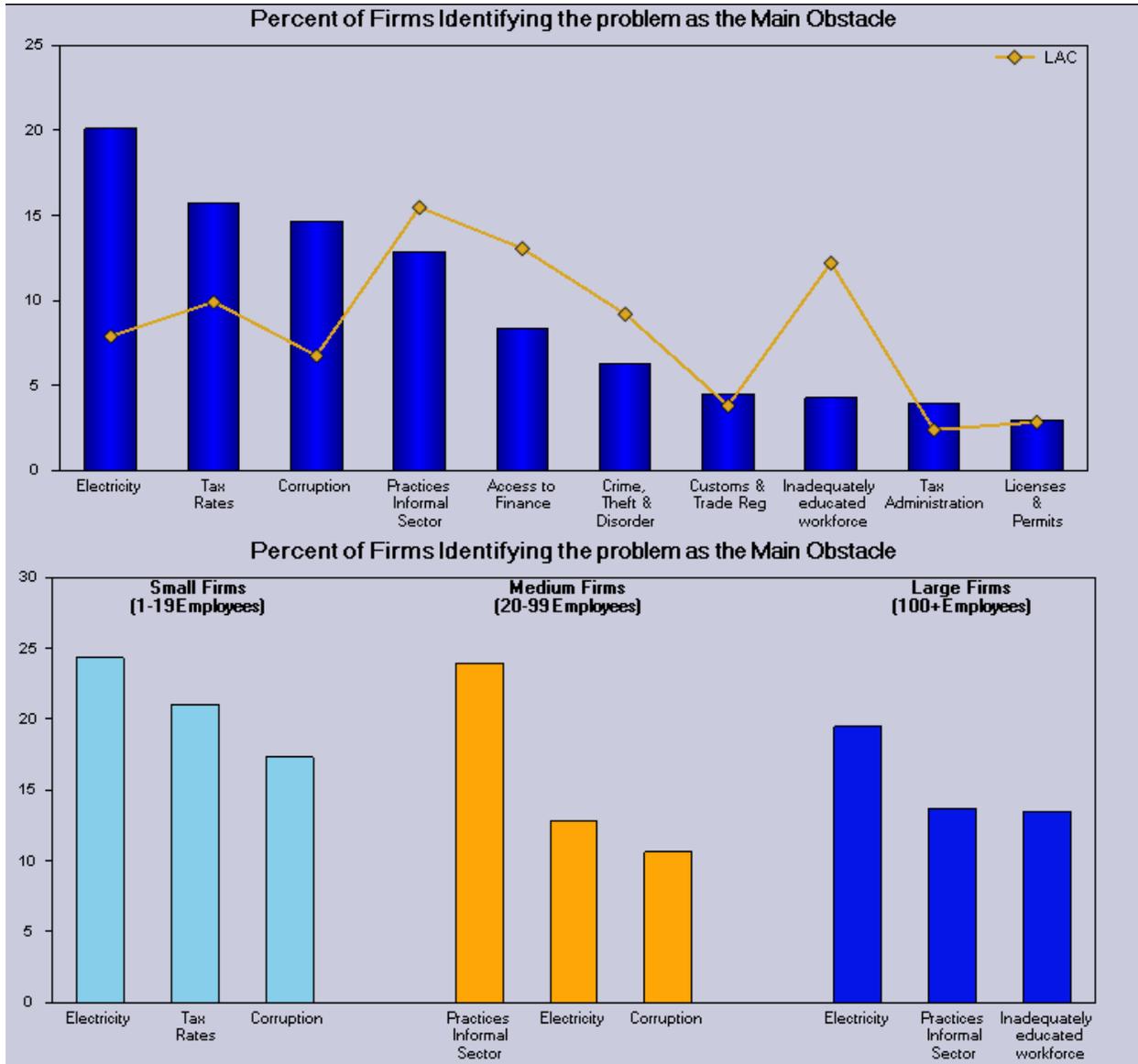
<sup>83</sup> USAID, “Doing Agribusiness in Latin America and the Caribbean – Dominican Republic,” Final Draft, December 2011, p. 60

<sup>84</sup> *Ibid.*, p. 62, interview with Osvaldo Irueta, General Manager of the Organismo Coordinador del Sistema Eléctrico Nacional Interconectado de la República Dominicana, July 29, 2011

<sup>85</sup> *Ibid.*, p. 62, interview with Marco de la Rosa, President, AES Dominicana (The company was originally founded as Applied Energy Services, which was later contracted to AES. Today the company's legal name is The AES Corporation)

percent higher than in the rest of the region, and have been increasing in recent years for which data is available.<sup>86</sup>

**Figure 3-1 Primary Obstacles Faced by Dominican Firms**



Source: World Bank/IFC Enterprise Survey, Dominican Republic Country Profile 2010, p. 4

The high cost of electric power results in part from the heavy reliance on imported fossil fuels. As seen in Table 3-1 below, the Dominican Republic has the highest priced energy in the region.<sup>87</sup>

<sup>86</sup> World Bank, "Meeting the Electricity Supply/Demand Balance in Latin America & the Caribbean," September 2010, p. 89

<sup>87</sup> *Ibid.*, p. 62, interview with Marco de la Rosa, loc.cit.

**Table 3-1 Energy Costs in Central America and the Dominican Republic  
(Cents per KWh)**

<b>COUNTRY</b>	<b>GRID GENERATION COST</b>	<b>DISTRIBUTION COST</b>	<b>TOTAL COST</b>
Dominican Republic	12.98	6.82	19.80
Panama	13.10	6.20	19.30
El Salvador	13.94	4.89	18.83
Guatemala	11.42	5.56	16.98
Nicaragua	10.60	5.72	16.32
Honduras	10.89	4.11	15.00

Source: USAID, "Doing Agribusiness in Latin America and the Caribbean – Dominican Republic," Final Draft, December 2011, p. 62, citing an interview with Marco de la Rosa, loc.cit.

These high costs negatively impact the competitiveness of DR export products, including agricultural products. Despite the growing expenses, the GODR does not have an energy policy that promotes diversification of power generation into lower cost, locally produced renewable sources, such as additional hydroelectric power, wind power, or solar energy.<sup>88</sup> Since the mid-2000s, the GODR has promoted increased use of coal and natural gas for power generation because they are less expensive than fuel oil. However, both are imported fuel sources.<sup>89</sup>

The legal framework for the electric power sector appears to be adequate. The current government policy is to lower the cost of energy to the final consumer, which is being accomplished through subsidies rather than through a plan to diversify energy sources with greater dependence on local renewable sources.<sup>90</sup> A system was introduced in 1999 to privatize generation and distribution assets, while leaving transmission in the public domain; this approach did not work efficiently because of a flawed regulatory framework and lack of market-oriented pricing mechanisms.<sup>91</sup>

Despite no overarching policies to support alternative energy, individual initiatives have been launched in the DR to introduce the use of wind power as well as bio-combustibles and solar energy for power generation, but these have experienced implementation difficulties. The National Energy Commission has granted several concessions for wind, solar, and bio-combustible energy generation, but none has been completed and at least nine concessions have been suspended due to noncompliance with the renewable energy law.<sup>92</sup> The GODR has also recently invested in an expansion of the transmission network resulting in the 2011 inauguration of a new "electric highway" that will enable more stable and better coverage of electric services in the Cibao agricultural region.<sup>93</sup>

<sup>88</sup> *Ibid.*, p. 63, "Memoria Anual 2009," loc. cit.

<sup>89</sup> *Ibid.*, p. 63

<sup>90</sup> *Ibid.*, p. 66

<sup>91</sup> USAID, "Dominican Republic Economic Performance Assessment," April 2006, p. 24

<sup>92</sup> *Ibid.*, p. 63, Enrique Ramírez, "Política Energética en la República Dominicana," Presentation made at the Instituto de las Américas, January 19, 2010.

<sup>93</sup> USAID, "Doing Agribusiness in Latin America and the Caribbean – Dominican Republic," Final Draft, December 2011, p. 62, "Inaugurarán la Autopista Eléctrica une Stgo. y SD," *DiarioLibre*, July 20, 2011.

## Roads, Transport and Telecommunications

With regard to the quality of roads the DR scored and ranked higher in the WEF GCI 2011 than Costa Rica and Jamaica, but lower than El Salvador. According to the most recent WB WDI figures for each country, almost 50% of DR roads were reportedly paved in 2001, lower than the 2005 figure (73%) reported for Jamaica, but almost double the 26% for Costa Rica reported in 2009 and well above El Salvador's 20% in 2001. Only 1.5% of the WB 2010 Enterprise Survey respondents identified transportation as a major constraint. However, according to the Inter-American Development Bank

*“The condition of the highways has deteriorated as a result of poor maintenance, cutting their lifetime in half, increasing the cost of future road reconditioning efforts, and making it more expensive to transport goods and services. Institutional weakness has translated to a lack of effective planning and a failure to integrate infrastructure works such as the Santo Domingo subway system with other modes of transportation, thus compromising the efficiency of investment spending in the sector.”<sup>94</sup>*

The Executive Director of the National Confederation of Dominican Cocoa Producers (CONACADO), while recognizing significant improvements in primary roads, observed that rural access roads “are terrible” and the energy supply “is a total disaster.”<sup>95</sup> Rural and access roads are in a state of disrepair and result in additional costs to small producers, who suffer delays in getting their crops to local markets and exporters on a timely basis.<sup>96</sup> An IDB study in 2006 found that only 39% of the highways and 20% of the rural access roads were in good condition, whereas the remainder of the network was in fair to poor condition.<sup>97</sup> The IDB Country Strategy for 2010 – 2013 noted poor road maintenance translates into a 12 to 18% increase in the cost of transporting goods and services.<sup>98</sup> However, since the main trunk line roads are in fairly good shape and agriculture constitutes relatively small shares of employment and GDP, the poor condition of rural roads is not considered a binding constraint to economic growth.

In the 2011 WEF GCI the DR was deemed to have much better railroads than the three comparator countries, better ports than all but Jamaica, and better airports than Costa Rica but slightly worse than the other two. In telecommunications, counting both landlines and mobile phones, the DR scored about the same as Costa Rica but again worse than the other two. It had higher internet usage per 100 population than any of the comparators. None of these are considered a major constraint to doing business in the DR. (See Tables 3-2 and 3-3.)

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<sup>94</sup> IDB “Country Strategy 2010-2013 for Dominican Republic,” p. 7 of Annex X, Country Context.

<sup>95</sup> USAID, “Doing Agribusiness in Latin America and the Caribbean – Dominican Republic,” Final Draft, December 2011, p. 60, interview with Isidoro de la Rosa, Executive Director of Grupo CONACADO, June 22, 2011.

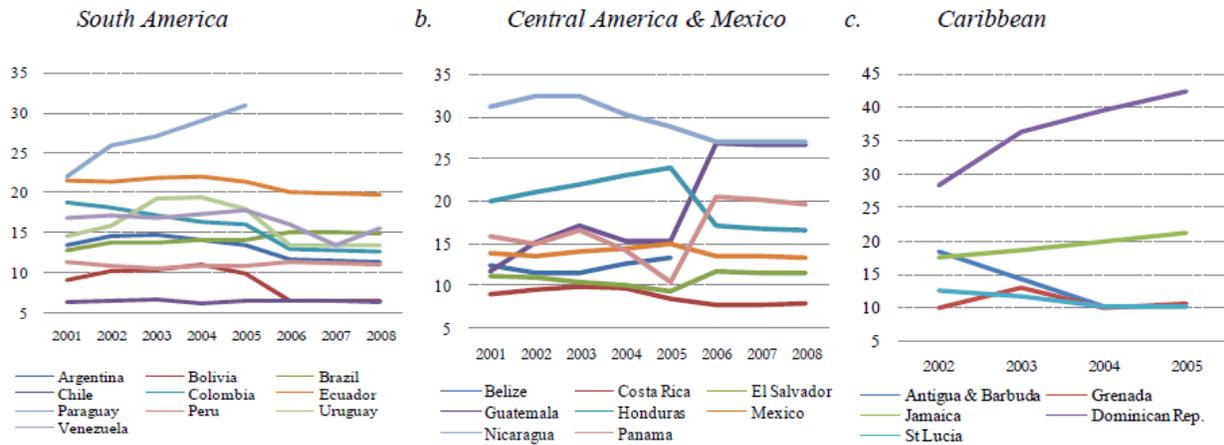
<sup>96</sup> USAID, “Doing Agribusiness in Latin America and the Caribbean – Dominican Republic,” Final Draft, December 2011, p. 9

<sup>97</sup> *Ibid.*, p. 64, “Documento Conceptual de Proyecto: República Dominicana Multifase de Rehabilitación y Mantenimiento de Infraestructura Vial,” loc. cit.

<sup>98</sup> *Ibid.*, p. 64, “Dominican Republic: IDB Country Strategy 2010–2013,” The Inter-American Development Bank, 2009.

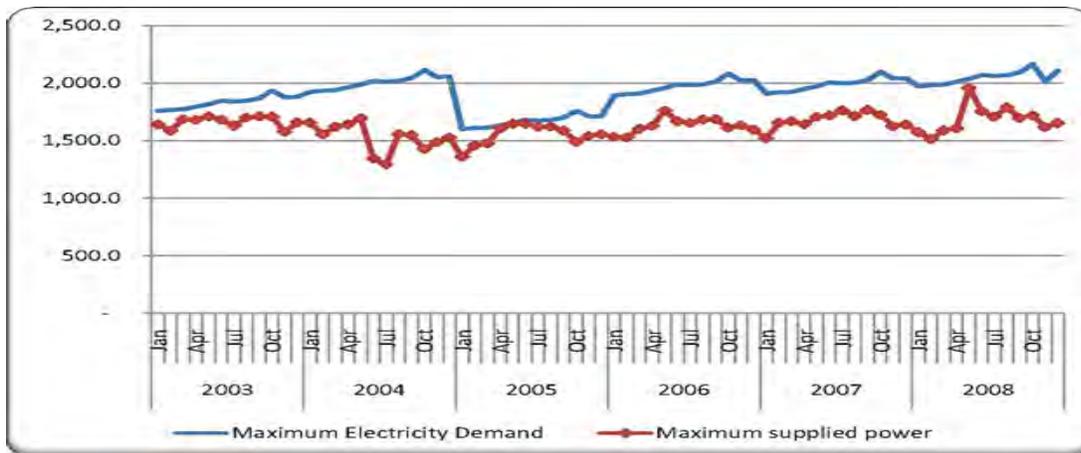
**Figure 3-2 Total Distributional Electricity Losses in LAC**

**Figure 35. Total Distributional Electricity Losses in the LAC, %**



Sources: Own calculations based on OLADE 2009 (for years 2006-2008); World Bank, *Benchmarking Data of the Electricity Distribution Sector in the Latin America and Caribbean Region 1995 – 2005* (for years 2001-2005)  
 Source: World Bank, *Meeting the Electricity Supply/Demand Balance in Latin America & the Caribbean*, September 2010, p. 89

**Figure 3-3 Electric power supply gap in the Dominican Republic**



Source: National Interconnected Electric System Coordinating Organism, published at the [www.sie.gov.do](http://www.sie.gov.do)

**Table 3-2 Infrastructure Component of Global Competitiveness Index, 2011**

	<b>Dominican Republic</b>		<b>Costa Rica</b>		<b>El Salvador</b>		<b>Jamaica</b>	
	Score (1–7)	Rank	Score (1–7)	Rank	Score (1–7)	Rank	Score (1–7)	Rank
GCI 2011–2012 (out of 142)	3.7	<b>110</b>	4.3	61	3.9	91	3.8	107
<b>Basic requirements</b>	<b>3.9</b>	<b>110</b>	<b>4.5</b>	<b>70</b>	<b>4.3</b>	<b>87</b>	<b>3.8</b>	<b>116</b>
of which:								
Infrastructure	3.0	<b>106</b>	3.7	83	4.0	65	3.7	79
2.01 Quality of overall infrastructure	3.5	<b>110</b>	3.6	<b>101</b>	4.6	58	4.2	67
2.02 Quality of roads	3.9	70	2.5	<b>124</b>	4.8	41	3.8	75
2.03 Quality of railroad infrastructure	2.5	72	1.7	<b>100</b>	1.4	<b>111</b>	1.3	<b>113</b>
2.04 Quality of port infrastructure	4.4	58	2.3	<b>137</b>	3.8	89	5.3	30
2.05 Quality of air transport infrastructure	5.2	53	4.7	68	5.5	44	5.5	41
2.06 Available airline seat kms/week, millions*	314.3	50	125.7	75	85.9	83	130.5	74
2.07 Quality of electricity supply	1.9	<b>129</b>	5.6	46	4.8	70	4.3	81
2.08 Fixed telephone lines/100 pop.*	10.2	93	31.8	37	16.2	77	9.6	96
2.09 Mobile telephone subscriptions/100 pop.*	89.6	88	65.1	<b>111</b>	124.3	35	113.2	62
Note: Values are on a 1-to-7 scale unless otherwise annotated with an asterisk (*).								

Source: World Economic Forum, Global Competitiveness Report 2011-2012

**Table 3-3 Infrastructure Comparisons**

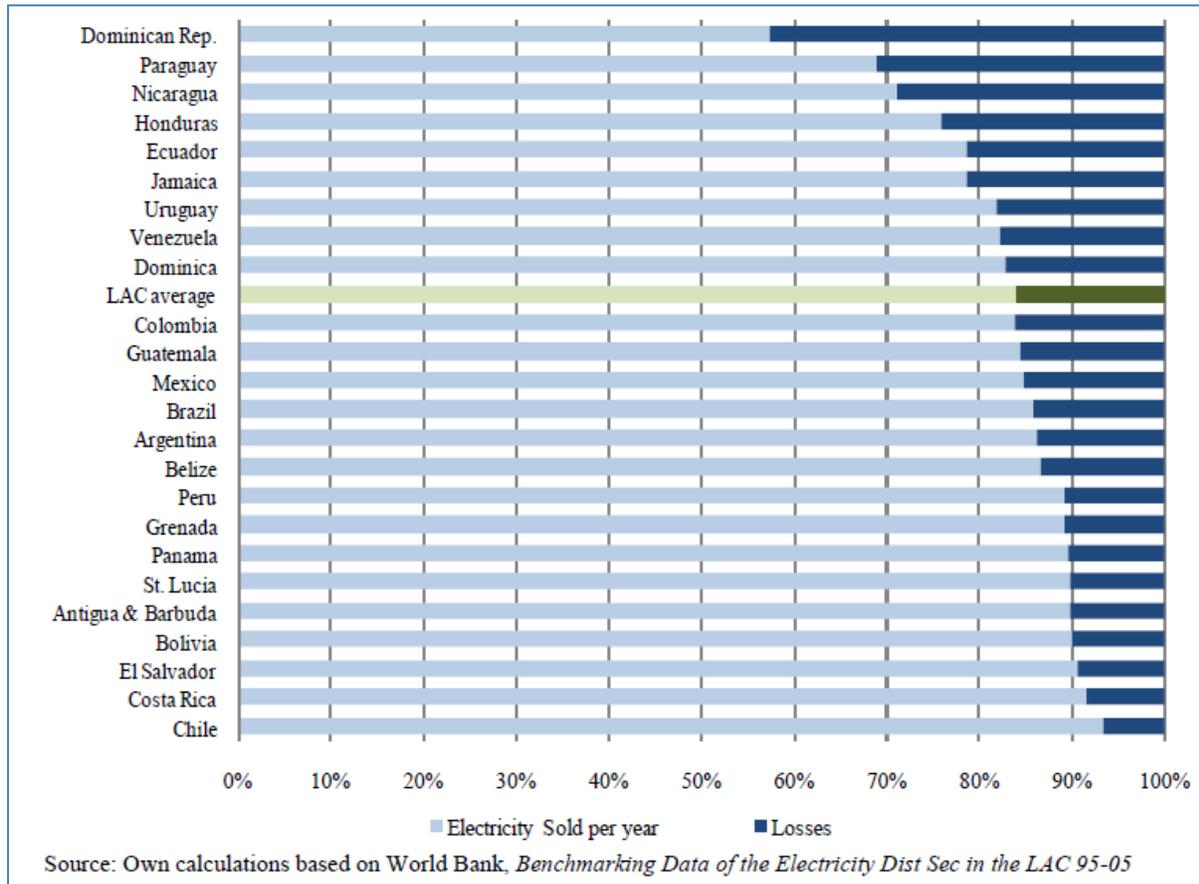
	<b>Costa Rica</b>	<b>Dominican Republic</b>	<b>El Salvador</b>	<b>Jamaica</b>
Percent of firms choosing electricity as their biggest obstacle (2010)*	4.0	<b>20.1</b>	1.7	12.4
Percent of Firms Identifying Electricity as a Major Constraint (2010)*	63.2	<b>63.1</b>	34.3	33.7
Number of Power Outages in a Typical Month (2010)*	3	<b>26</b>	2	3
If there were outages, average duration of a typical electrical outage (hours)(2010)*	2	<b>5</b>	3	2
Value Lost Due to Power Outages (Percent of Sales)(2010)*	1.7	<b>4.4</b>	7.0	0.2
Percent of Firms Owning or Sharing a Generator (2010)*	24.2	<b>49.0</b>	24.5	55.5
If a generator is used, average proportion of electricity from a generator (Percent)(2010)*	5.5	<b>45.0</b>	8.4	2.5
Electricity from Generator (Percent)(2010)*	0.2	<b>8.6</b>	0.4	0.3
Roads, paved (% of total roads)(2001-2009)**	26.0	49.4	19.8	73.3
Percent of Firms Identifying Transportation as a Major Constraint (2010)*	2.1	1.5	0.4	0.2
Internet users per 100 population (2010)***	36.5	39.5	15.0	26.1

\* Source: World Bank, Enterprise Surveys

\*\* Source: World Bank, World Development Indicators. The figures are: for Costa Rica 2009, DR and El Salvador 2001, Jamaica 2005, the latest available.

\*\*\*Source: United Nations, Millennium Development Goals Indicators

**Figure 3-4 Annual Electricity Sales and Distributional Losses, 2005**



Source: World Bank, *Meeting the Electricity Supply/Demand Balance in Latin America & the Caribbean*, September 2010, p. 90

## Chapter 4 LABOR INTENSITY OF PRODUCTION

**T**he labor intensity of production affects the overall level of productive employment by determining to what degree production makes use of the country's labor. This can be affected by whether or not an effective competition law is enforced so new, small firms can compete with larger more established firms (larger numbers of small firms tend to employ more workers than a few, protected large firms), whether the domestic cost structure is biased against hiring more labor vs. capital equipment and whether the country is open to international trade.

The domestic factor cost structure analysis should look at exchange rate distortions and whether the local currency is deliberately overvalued (to keep imported equipment and other inputs artificially cheap) or whether an overvaluation is protected by high tariffs and non-tariff barriers (NTBs) to trade. High effective rates of protection and NTBs on finished goods are usually inimical to more employment generation, by protecting high profits of inefficient and potentially capital-intensive industries. Labor laws and regulations that increase the cost of hiring labor clearly discourage formal sector employment generation, as does anything that reduces the relative cost of capital equipment (through interest rate or other subsidies, tariff exemptions, etc.). Some labor laws and/or regulations place unnecessary restrictions on the employment of women.

Engaging in international trade plays to a country's comparative advantage, better using its relatively more abundant factors of production, which in the case of the Dominican Republic like many developing countries, includes its labor force. So in those countries where labor is relatively abundant, any physical (like poor transportation infrastructure) or policy (red tape) constraints on such trade will further reduce productive employment generation. The World Bank/IFS *Doing Business* indicators with respect to trade are relevant here. Analysis of how to deal with the "Dutch disease" implications of large inflows of foreign exchange in those countries with large mineral exports, remittance receipts, or foreign aid, is especially important, as the resulting revaluation of the country's exchange rate negatively affects its export and import substitution industries, which tend to be more labor intensive. Appropriate remedies will depend in part on whether those inflows are expected to be temporary or long-lasting.

The standard Heckscher-Ohlin model predicts that in an open economy, countries will produce goods and services intensive in the economy's relatively abundant factor of production, in the case of the Dominican Republic, unskilled labor. In an undistorted market, the abundant supply of unemployed workers would create a price incentive for investment and expansion of sectors that are labor intensive. In general this could happen through any combination of an increase in the number of firms and an expansion of existing firms. As these processes take hold, unemployment would be expected to recede towards the economy's natural level of unemployment. However, as the nation's high unemployment rate despite rapid and sustained growth shows, this has not happened in the Dominican Republic. A variety of distortions may explain why.

The World Bank's 2010 Enterprise Survey found the three main obstacles to doing business to be electricity, taxes and corruption, all above the regional average. Supporting this conclusion, the WEF *Global Competitiveness Report 2011-2012* also reports a list of the most problematic factors identified by survey respondents for doing business in the Dominican Republic. The top three on the list are corruption, tax rates and inefficient government bureaucracy. Notably these three issues can be largely avoided by operating an informal business, which helps to explain why so many citizens are either employed or set up small businesses in the informal sector. This choice is made as informal employment is preferred to a more bureaucratically difficult employment in the formal sector. These three problems also are directly caused by the government, indicating that it is acting as an obstacle to business prosperity.

### Competition and Entry of New Firms

Abundant surplus labor in the Dominican economy could be absorbed through the entry of new firms into the economy. However, established monopolies or oligopolies in large segments of the economy may severely restrict entry of new firms. As a preliminary sign of problems with barriers to entry, the World Economic Forum's Global Competitiveness Index places the Dominican Republic an extremely low ranking of 137 out of 142 countries in dominance of a few corporate groups and 122 in effectiveness of anti-monopoly rules. (See Table 4.2) This indicates that large, monopolistic or oligarchic firms tend to dominate at least a few industries, and the government either fails to try or is ineffective in promoting competition.<sup>99</sup> Likewise, the World Bank's *Doing Business 2012* shows the Dominican Republic 108 of 183 countries in overall business environment. (See Table 4-1.) As indicators of the barriers facing would be new firms, the country ranks low in starting a business (140), registering a property (105) and dealing with construction permits (105). Within the category of 'starting a business' the number of days has dropped significantly since 2004 from 77 to 19 days and the 'cost of starting a business in terms of income per capita' from 28 to 18%, both significantly better than the Latin American average. However, the amount of capital required at startup is a percent of income per capita is a stunning 56%, compared to the Latin American average of 4.3%.<sup>100</sup> This requirement poses a particular barrier to entrepreneurs who lack personal financing or have poor access to commercial loans.

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<sup>99</sup> The rank of 60<sup>th</sup> for intensity of local competition is surprising given the low ranks related to monopolies. A possible explanation for the inconsistency is that business owners find the non-tradables domestic market to be competitive, but the tradables sector non-competitive and dominated by large firms.

<sup>100</sup> The paid-in minimum capital requirement reflects the amount that the entrepreneur needs to deposit in a bank or with a notary before registration and up to 3 months following incorporation and is recorded as a percentage of the economy's income per capita. The amount is typically specified in the commercial code or the company law. Many economies require minimum capital but allow businesses to pay only a part of it before registration, with the rest to be paid after the first year of operation. In Italy in June 2011 the minimum capital requirement for limited liability companies was €10,000, of which at least €2,500 was payable before registration. The paid-in minimum capital recorded for Italy is therefore €2,500, or 9.9% of income per capita. In Mexico the minimum capital requirement was 50,000 pesos, of which one-fifth needed to be paid before registration. The paid-in minimum capital recorded for Mexico is therefore 10,000 pesos, or 8.4% of income per capita.

**Table 4-1 Comparison Rankings on Barriers to Starting a New Business**

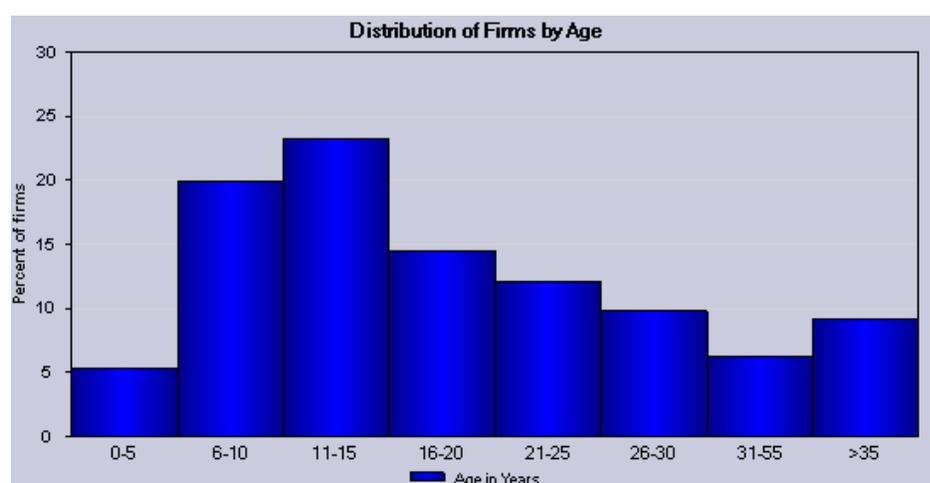
	<b>COSTA</b>	<b>DOMINICAN</b>	<b>EL</b>		<b>LAC</b>
<b>Doing Business 2012, World Bank/IFC</b>	<b>RICA</b>	<b>REPUBLIC</b>	<b>SALVADOR</b>	<b>JAMAICA</b>	<b>Region</b>
GNI per capita (US\$)	6,580	<b>4,860</b>	3,360	4,750	
Population (m)	4.6	<b>10.2</b>	6.2	2.7	
Ease of doing business (rank)	121	<b>108</b>	112	88	95
Starting a business (rank)	122	<b>140</b>	136	23	45
Procedures (number)	12	<b>7</b>	8	6	
Time (days)	60	<b>19</b>	17	7	
Cost (% of income per capita)	11.1	<b>18.2</b>	45.1	7.2	
Minimum capital (% of income per capita)	0	<b>55.7</b>	3	0	
Dealing with construction permits (rank)	141	<b>105</b>	144	49	40
Procedures (number)	20	<b>14</b>	33	8	
Time (days)	188	<b>216</b>	157	145	
Cost (% of income per capita)	164.5	<b>82.1</b>	168.3	227.5	
Getting electricity (rank)	43	<b>123</b>	130	112	72
Procedures (number)	5	<b>7</b>	7	6	
Time (days)	62	<b>87</b>	78	96	
Cost (% of income per capita)	299.5	<b>356.7</b>	533.3	354.6	
Registering property (rank)	46	<b>105</b>	54	103	50
Procedures (number)	5	<b>7</b>	5	6	
Time (days)	20	<b>60</b>	31	37	
Cost (% of property value)	3.4	<b>3.7</b>	3.7	7.5	
Getting credit (rank)	98	<b>78</b>	48	98	84
Protecting investors (rank)	166	<b>65</b>	166	79	85
Paying taxes (rank)	138	<b>94</b>	146	172	72
Trading across borders (rank)	73	<b>45</b>	69	97	87
Enforcing contracts (rank)	129	<b>83</b>	66	126	51
Resolving insolvency (rank)	121	<b>154</b>	88	26	100
Time (years)	3.5	<b>3.5</b>	4	1.1	
Cost (% of estate)	15	<b>38</b>	9	18	
Recovery rate (cents on the dollar)	22.2	<b>9.5</b>	31.5	65.3	

Source: World Bank Doing Business 2012

**Table 4-2 DR Problems with Competition**

	<u>Indicator</u>	<u>Score</u>	<u>Rank/142</u>
	<b>Goods market efficiency</b>	3.9	<b>111</b>
6.02	Extent of market dominance	2.5	<b>137</b>
6.16	Buyer sophistication	2.7	<b>126</b>
6.04	Extent and effect of taxation	2.8	<b>125</b>
6.03	Effectiveness of anti-monopoly policy	3.2	<b>122</b>
6.09	Prevalence of trade barriers	3.9	<b>121</b>
6.14	Imports as a percentage of GDP*	34.2	100
6.15	Degree of customer orientation	4.4	91
6.10	Trade tariffs, % duty*	7.3	85
6.08	Agricultural policy costs	3.7	83
6.06	No. procedures to start a business*	8	78
6.05	Total tax rate, % profits*	40.7	74
6.07	No. days to start a business*	19	74
6.01	Intensity of local competition	5.0	60
6.13	Burden of customs procedures	4.4	57
6.11	Prevalence of foreign ownership	5.2	41
6.12	Business impact of rules on FDI	5.0	41
Notes: Values are on a 1-to-7 scale unless otherwise annotated with an asterisk (*).			
*Hard data as opposed to opinion surveys			
SOURCE: World Economic Forum, <i>Global Competitiveness Report 2011-2012</i>			

In the Dominican Republic only 5% of firms are less than five years old as seen in Figure 4-1 below. This compares with Costa Rica at 12%, El Salvador at 17%, Jamaica at 9% and may indicate that there are significant barriers to entry of new firms.<sup>101</sup> This conclusion is strengthened by the fact that firms report an average of 140 days to obtain an operating license, more than double the LAC average and three times more than the lower middle income country average.<sup>102</sup>

**Figure 4-1 Distribution of Firms by Age**

Source: World Bank/IFC Enterprise Survey, Dominican Republic Country Profile 2010

<sup>101</sup> World Bank Enterprise Survey 2010

<sup>102</sup> World Bank Enterprise Survey 2010

In January 2008 Law 42-08 was signed creating a new competition promotion commission, Pro-Competencia. However, the board of directors was not appointed until June 2011. While the board has authority to investigate cases of competition violations, underfunding has restricted the functioning of the commission. Given the slow start to starting Pro-Competencia, national funding was dramatically reduced in 2010 and 2011 from the levels of 2008 and 2009. The 2012 budget of roughly \$2 million is at the lower level of what the commission sees as minimum funding. With funding for Pro-Competencia occurring under the Ministry of Industry and Commerce, the situation was made worse by failure to submit its investment plan to the National System of Public Investment which is the clearing house for international donor funding. While the funding situation has yet to be resolved, Pro-Competencia is reaching out to mostly European donors to provide direct technical assistance in order to jumpstart operations. It has yet to be seen how effective Pro-Competencia will ultimately be able to be in promoting competition, particularly in very rigid sectors such as cement, medical and transportation.<sup>103</sup>

### *Market-Based Competition*<sup>104</sup>

Competition in the market economy remains, to some degree, severely over-regulated, and in practice there are often no rules that apply uniformly to all market participants; however, the government promotes market-based competition. The Fernández Administration passed a series of laws to promote and regulate free-market competition, such as the General Law of the Defense of Competition in 2008 and an Industrial Competitiveness and Innovation Law in 2007, designed to strengthen the institutional framework of market competition. The executive branch, nevertheless, still exercises patronage-based control over the economy. There are still price controls on some products (including gas for private households, gasoline, sugar and agricultural products).

### *Anti-Monopoly Policy and Sectoral Examples*

Monopolies and oligopolies encounter resistance only in some cases. The General Act for the Reform of Public Enterprises of 24 June 1997, which includes antimonopoly provisions and guarantees equal opportunities for domestic and foreign investors, lacks effectiveness. The trucking / transport sector is one of the most visible monopolies in the Dominican Republic. According to a statement by the President of the Dominican Industrial Association, Ligia Bonetti de Valiente, 80 percent of overland cargo transport is provided by the Dominican Transport Federation.<sup>105</sup> The Federation is composed of 35,000 transporters and 89 syndicates and associations, with the remaining 20 percent provided by private companies moving their own merchandise. A deeper look at the costs and benefits of the trucking / transport federation is beyond the scope of the current analysis, as it does not rise to the level of a binding constraint to inclusive growth in the country. It is suggested that future analysis delve into the nuances of this possible constraint to business activities in the country.

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<sup>103</sup> Interview

<sup>104</sup> This section draws on analysis from the Bertelsman Stiftung Transformation Index “BTI 2012 | Dominican Republic Country Report”

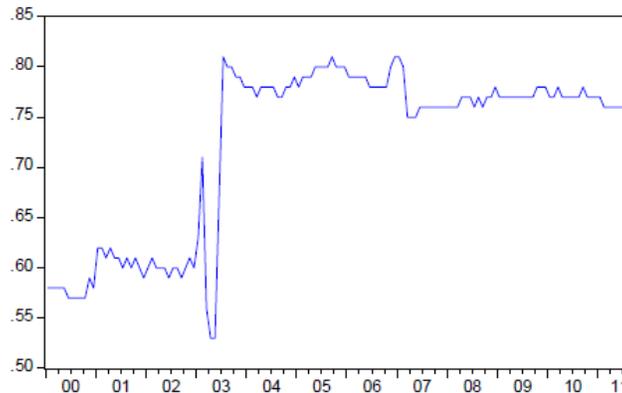
<sup>105</sup> As published at <http://cnc.gov.do/cnc/?p=8304>, from public statements made in October 2011.

A recent study calculated the concentration ratio for the DR's banking sector based on assets, both before and after the financial crisis of 2003. The sector is approaching oligopoly, according to the concentration ratio, and the consolidation in the sector following the banking crisis of 2003 has reduced competition measurably.

*“The four firm concentration ratio (CR4), is the proportion of total assets in the banking sector that is held by the four major banks; it is commonly used to indicate the degree to which an industry is oligopolistic. The CR4 is calculated as follows: where is the value of the assets held by an individual bank, and is the value of total assets in the banking sector. The closer the value of the ratio to one, the higher the degree of concentration in the banking industry. The CR4 has a couple of drawbacks; first, it does not take into account the total distribution of banks in the industry, and second, the choice of the number of banks to include in the numerator is arbitrary.”<sup>106</sup>*

As shown in Figure 4-2, prior to the banking crisis in 2003 between 55 and 50% of all bank assets were held by the top four banks. In the consolidation following the crisis, this ratio rose to about 80% of total assets. This situation only slightly improved in 2007, falling to 75% and holding steady through latest estimates.

**Figure 4-2 Four Firm Concentration Ratio 2000-2011**



Source: Rivas.

### Labor Laws and Regulations

By raising the cost of hiring and firing, labor laws and regulations intended to protect workers can have an unintended consequence of hurting the most vulnerable workers, the unemployed. While the World Bank does gather information on the difficulty of employing workers, it does not aggregate and rank countries. However, labor restrictions do not appear to be a major problem.<sup>107</sup> In a similar vein according to the World Economic Forum's labor market efficiency category, the Dominican Republic has several bright spots. Labor-employer cooperation is

<sup>106</sup> Rivas, pg 35.

<sup>107</sup> World Bank *Doing Business Employing Workers* data

smooth, ranked 37 of 142. Flexibility of wage determination and rigidity of employment are both relatively impressive as well, ranked at 45 and 52 respectively. However, redundancy costs (the costs of firing a permanent worker) are high, averaging 88 weeks of severance pay and reliance on professional management is ranked 128. Finally, the ratio of women to men in the labor force, 0.65, is notably unequal, indicating the existence of an untapped potential source of labor in the economy.

**Table 4-3 DR Labor Market Efficiency**

<b>7th pillar: Labor market efficiency</b>		<u>Value</u>	<u>Rank/142</u>
7.01	Cooperation in labor-employer relations	4.8	37
7.02	Flexibility of wage determination	5.4	45
7.03	Rigidity of employment index, 0–100 (worst)*	21.0	52
7.04	Hiring and firing practices	3.9	78
7.05	Redundancy costs, weeks of salary*	88.0	<b>114</b>
7.06	Pay and productivity	3.3	<b>111</b>
7.07	Reliance on professional management	3.3	<b>128</b>
7.08	Brain drain	3.4	68
7.09	Women in labor force, ratio to men*	0.65	<b>101</b>
Notes: Values are on a 1-to-7 scale unless otherwise annotated with an asterisk (*). For further details and explanation, please refer to the section "How to Read the Country/Economy Profiles" on page 89.			

Source: World Economic Forum, *Global Competitiveness Index*

### *Minimum Wage*

There is not one minimum wage established by the government in the Dominican Republic; a series of wage floors are established on a periodic basis through a complex set of ministerial resolutions. The most current minimum wages are summarized in the following Table 4-4.

How does this minimum wage matrix affect the private sector, for both business and labor? As discussed previously, there do not appear to be sufficient jobs on the market to satisfy job seekers. This is evidenced by high and sustained unemployment rates across levels of educational attainment, and by the numbers of emigrants who intend to leave the country each year (See Tables 1-9 and 2-5 in Chapters 1 and 2).

The Mincerian equations discussed in Chapter 2 find there is no discernible difference in actual real wages in the formal and informal sector once all other factors are held constant. In other words, a worker in the formal sector and a worker in the informal sector would make the same wage if they had the same personal attributes (gender, location, level of educational attainment, marital status). This result suggests the minimum wage matrix does not impose undo restrictions upon formal sector employment; it does not distort actual real wages. This may be because wage floors are reasonably established with the goal of eliminating only exploitative behavior.

The national poverty line in the Dominican Republic is estimated by the government as RD\$ 2,602/month. The lowest minimum wage established in Table 4-4 is for field workers in the sugar industry, with a floor of RD\$ 3,074.07/month which is 18% above the poverty line. The second-lowest minimum wage is for workers in the tourism sector (hotels, restaurants and related service industries) in smaller establishments at RD\$ 4,554 which is 75% greater than the national poverty line. These floors do not appear exceptionally distortive, but it would be more straightforward for workers and employers to understand and abide by minimum wage regulations if a unified minimum wage was established for entry-level workers across sectors.

According to World Bank *Doing Business Employing Workers* data the Dominican Republic has a minimum wage (\$215.8/month) that is less than that of Costa Rica (\$387.7/month), similar to that of Jamaica (\$215.0) and much greater than that of El Salvador (\$80.8). The minimum wage/value added ratio that is similar to other LACs at 0.33. There are restrictions on working at night. Dominicans get two more days of paid annual leave than the next LAC shown, with 14 days per year. There are significant benefits for workers who have been laid off. The notice period is 4 weeks, and upon being laid off, the severance pay is on average for 22.2 weeks, much higher than in Costa Rica (14.4 weeks) and Jamaica (10.0 weeks), and similar to El Salvador (22.9 weeks).<sup>108</sup> As can be seen in the following Table 4-4 and Figures 4-3 and 4-4, the legal minimum wage and average hourly real wage have maintained steady or even declined since the late 1990s. Therefore, minimum wage laws do not seem to be high enough to be a major drag on employment.

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<sup>108</sup> *Ibid*

Table 4-4 2011-2012 Minimum Wage Matrix for the Dominican Republic

**Dominican Republic**  
**Minimum Wage based on Ministry of Labor Approved Resolutions**

Sectors	Res. #	Date	Wages In DR Pesos			Wages In US Dollars		
			Daily	Monthly	Yearly	Daily	Monthly	Yearly
<b>1 Construction</b>								
<b>Construction Sector Workers &amp; Related *</b>	11-2011	Dec-08-11						
a) Non Qualified Worker			433.00	9,526.00	114,312.00	11.06	243.32	2,919.85
b) Qualified Worker			474.00	10,428.00	125,136.00	12.11	266.36	3,196.32
c) Assistant			557.00	12,254.00	147,048.00	14.23	313.00	3,756.02
d) 3rd Category Operator			723.00	15,906.00	190,872.00	18.47	406.28	4,875.40
e) 2nd Category Operator			825.00	18,150.00	217,800.00	21.07	463.60	5,563.22
f) 1st Category Operator			1,032.00	22,704.00	272,448.00	26.36	579.92	6,959.08
g) Each Area Master			1,300.00	28,600.00	343,200.00	33.21	730.52	8,766.28
<b>Average</b>			<b>763.43</b>	<b>16,795.43</b>	<b>201,545.14</b>	<b>19.50</b>	<b>429.00</b>	<b>5,148.02</b>
<b>2 Non sectored Enterprises &amp; Farm Workers in...</b>	5-2011	May-18-11						
a) Industrial/Commercial/Services Enterprises w/buildings a/o inventories worth DR\$4.0 M or above (monthly rates)			415.65	9,905.00	118,860.00	10.62	253.00	3,036.02
b) Industrial/Commercial/Services Enterprises w/buildings a/o inventories worth DR\$2.0 M or above (monthly rates)			285.77	6,810.00	81,720.00	7.30	173.95	2,087.36
c) Industrial/Commercial/Services Enterprises w/buildings a/o inventories up to DR\$2.0 M (monthly rates)			253.25	6,035.00	72,420.00	6.47	154.15	1,849.81
d) For Field Workers in a 10-hour work-day to be adjusted if the work-day is below or above 10 hours (daily rates)			205.00	4,885.15	58,621.80	5.24	124.78	1,497.36
e) For all workers hired as watchman in private watchman enterprises (monthly rates)			350.65	8,356.00	100,272.00	8.96	213.44	2,561.23
<b>Average</b>			<b>302.07</b>	<b>7,198.23</b>	<b>86,378.76</b>	<b>7.72</b>	<b>183.86</b>	<b>2,206.35</b>
<b>3 NGOs</b>	6-2011	Jun-01-11	294.59	7,020.00	84,240.00	7.52	179.31	2,151.72
<b>4 Hotels, restaurants, casinos, bars, night clubs, etc.</b>	9-2011	Jun-29-11						
a) Above stated enterprises w/buildings a/o inventories worth DR\$4.0 M or above (monthly rates)			295.97	7,053.00	84,636.00	7.56	180.15	2,161.84
b) Above stated enterprises w/buildings a/o inventories worth DR\$2.0 M or above (monthly rates)			212.34	5,060.00	60,720.00	5.42	129.25	1,550.96
c) Above stated enterprises w/buildings a/o inventories up to DR\$2.0 M (monthly rates)			191.10	4,554.00	54,648.00	4.88	116.32	1,395.86
<b>Average</b>			<b>233.14</b>	<b>5,555.67</b>	<b>66,668.00</b>	<b>5.95</b>	<b>141.91</b>	<b>1,702.89</b>
<b>5 Industrial Free Trade Zones</b>	10-2011	Sep-07-11	265.21	6,320.00	75,840.00	6.77	161.43	1,937.16
<b>6 Sugar Industry</b>	1-2012	Feb-24-12						
a) All sugar industry workers except for the Field Workers			209.82	5,000.00	60,000.00	5.36	127.71	1,532.57
b) For Field Workers in a 8-hour work-day to be adjusted if the work-day is below or above 8 hours (daily rates)			129.00	3,074.07	36,888.84	3.30	78.52	942.24
<b>7 Agriculture Heavy Machine Operators * *</b>	3-2010	Oct-01-10	293.75	7,000.00	84,000.00	7.50	178.80	2,145.59

Source: DR Ministry of Labor (MoL)/Observatorio del Mercado Laboral Dominicano (OMLAD)/Resoluciones Webpage

<http://www.omlad.gob.do/ResolucionesSalariales.aspx>

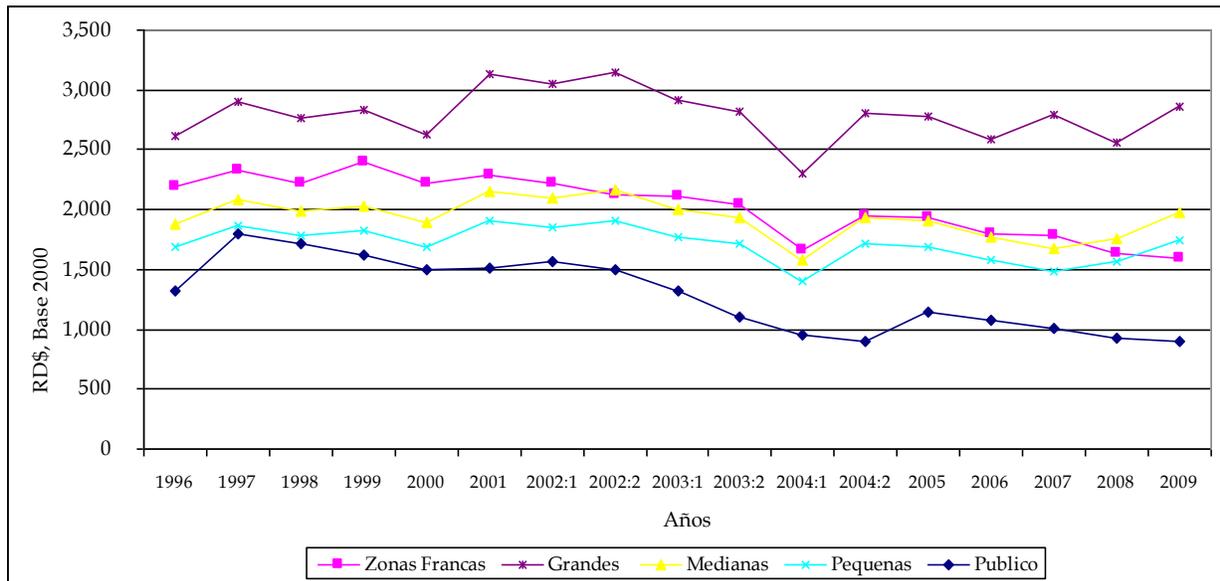
Note 1: Exc. Rate: DR\$39.15 x US\$1.00

Note 2: The rates are per hour; so, to arrive to such per-hour rate you should take the monthly salary/wage, divide it by 23.83 and then divide again the result by 8 (i.e. hours). However, in this table I had to calculate daily wages depending upon how the Resolution was approved; i.e. in some cases the rates were established daily and in other cases as monthly rates; so, I had to adjust my calculations accordingly.

\* There are other seven(7) Resolutions for rods, bricklayers, carpenters, plumbers, electricians, painters, and heavy machine operator pieceworkers besides these categories with many other rates (low paid) which for simplicity were not listed here.

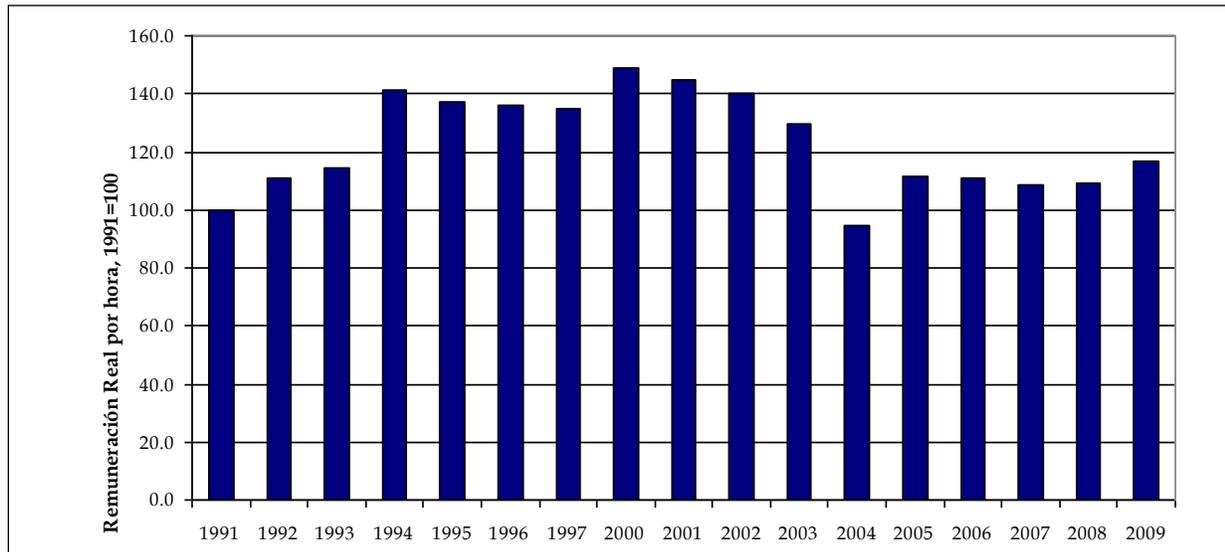
\*\* In this Resolution, besides this rate for Operators, there twenty three (23) different rates depending upon the type o task but it'll make the table too cumbersome and difficult to work with; there are salaries per bag, per hole and per "tarea", i.e. 1 Tarea = 627.27 Mt<sup>2</sup>

**Figure 4-3 Legal Minimum Wage by Sector, 2000 = base, 2000-2009**



Source: Author's calculations based on the Labor Force National Survey (ENFT)

**Figure 4-4 Hourly Wage Evolution 1991-2009 (1991= 100)**



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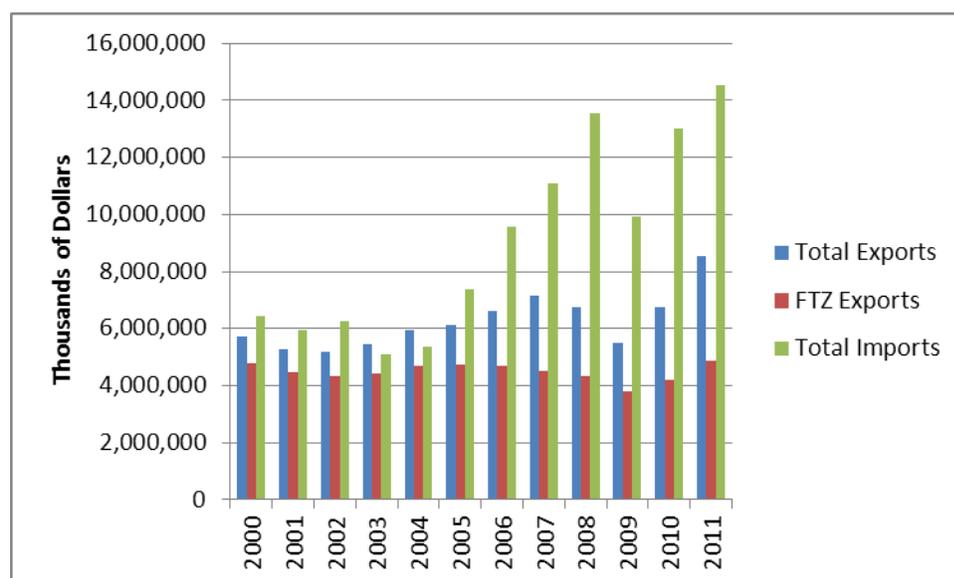
### Ease and Cost of International Trade

Engaging in international trade allows an economy to make better use of its relatively abundant factors of production which in the Dominican Republic is its labor force. High tariffs and non-tariff barriers as well as distorted exchange rates may sufficiently distort factor prices, in the case of the Dominican Republic the cost of labor, to the point where the abundant factor is more expensive than the scarce factor of production. High effective rates of protection and

non-tariff barriers on finished goods not only protect inefficient industries but reducing real wages of consumers which lowers aggregate demand and growth.

The Dominican Republic is a relatively open economy with a trade (imports plus exports) to GDP ratio of 56% in 2010. While this is down from 66% in 2005, the absolute value of imports and exports has increased 36% over the same time period.<sup>109</sup> A signatory to the CAFTA-DR free trade agreement with the United States, the Dominican Republic has an average applied tariff of 8.3%.<sup>110</sup> While the nation has a low *Doing Business* rank overall it performs much higher on the *trading across borders* sub-category (45<sup>th</sup>). This is better than comparator countries (El Salvador at 69, Jamaica at 97, LAC at 87).<sup>111</sup> Since the turn of the millennium the Dominican Republic has experienced a fairly steady increase in trade interrupted by the recession of 2001 and more substantially the global financial crisis in 2008 and 2009. In the last two years the country has seen a strong rebound in both its free trade zone exports and exports writ large with an increase of 18% for the former and 26% for the latter in 2011.

**Figure 4-5 Evolution of Trade Flows**



Source: Banco Central de la República Dominicana, 2012.

### Exchange Rates

Distorted exchange rates impact the competitiveness of the export sector, which impacts the level of employment in the tradable sector. Since the world market is many times larger than the domestic market, production and employment in the tradable sector is a key source of overall employment opportunities in small economies like the Dominican Republic. The financial crisis of 2003 resulted in an extremely high rate of domestic inflation that year and in 2004 (43% and 29% respectively) causing a significant nominal depreciation of the peso. In trade-weighted, real terms, the peso had recovered its pre-crisis value by 2005 and has

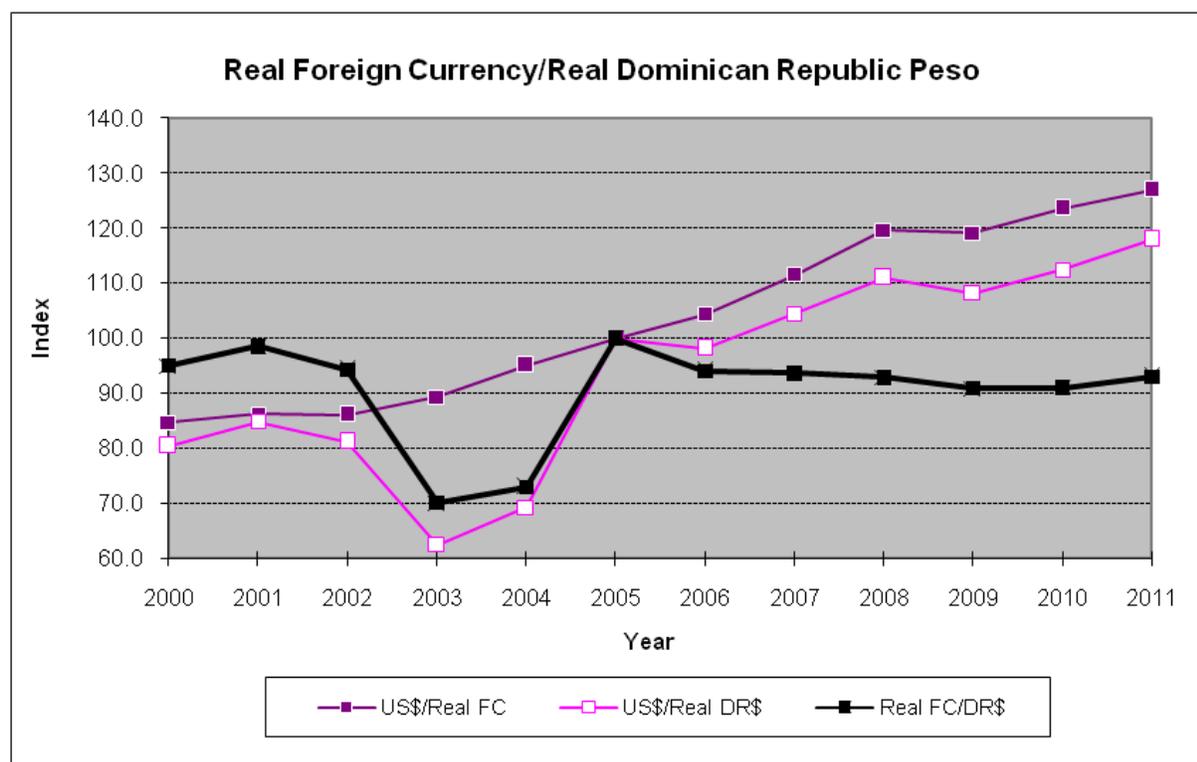
<sup>109</sup> Author's calculations, World Development Indicators

<sup>110</sup> World Development Indicators

<sup>111</sup> <http://www.doingbusiness.org/data/exploreconomies/dominican-republic>

undergone a modest depreciation since then, 9% by 2010, but rising by 2% in 2011 to 7% below its 2005 level. While the nominal value of the peso depreciated by 20% against the dollar between 2005 and 2011, peso prices increased by nearly 48%, resulting in a real appreciation of the peso against the dollar of 18%. However, a trade-weighted geometric average of the consumer price indices of the Dominican Republic's 13 major trading partners indicates that they increased by 28%, so that the real, trade-weighted average peso value actually depreciated by 7%. Therefore, the peso has been fairly stable since 2005 and has not appreciated in real terms. (See Figure 4-6.)

**Figure 4-6 Exchange Rate Trends in the Dominican Republic**



Source: Author's calculations using IMF data

### Effective Rates of Tariff Protection

High import tariffs have a pernicious effect on an economy and are a particular drag on broad-based growth. High tariffs hurt output by protecting inefficient companies which reduces productivity, raising costs of imported inputs which makes downstream producers less competitive and distorts price signals which would allow resources to flow to their most productive use. Tariffs reduce access to foreign R&D and technology embodied in imports which is particularly detrimental to developing countries which have little ability to innovate but have great growth potential by moving to the technology frontier. Taxes on imports also act as effective taxes on exports by drawing resources into the protected sector, therefore raising costs for firms in the export sector. Beyond the impact on producers, tariffs can entrench corruption by raising rents able to be extracted by customs agencies, and in environments with import quotas encourage firms to invest in lobbying rather than productivity. Of course the

biggest challenge that tariffs provide to broad-based economic growth is they rob all consumers, but particularly the most poor and vulnerable in an economy, of desperately needed real wages by raising costs.

On August 5, 2004, the United States signed the Dominican Republic-Central America-United States Free Trade Agreement with five Central American countries (Costa Rica, El Salvador, Guatemala, Honduras, and Nicaragua) and the Dominican Republic. Under the treaty the parties are significantly liberalizing trade in goods and services. In addition, signatories have agreed to improve customs administration and trade facilitation; technical barriers to trade; government procurement; investment; telecommunications; electronic commerce; intellectual property rights; transparency; and labor and environmental protection. CAFTA-DR entered into force for the United States, El Salvador, Guatemala, Honduras, and Nicaragua in 2006, for Costa Rica in 2009 and the Dominican Republic in 2007.<sup>112</sup>

To gauge the level of tariffs it is possible to view the weighted or simple mean. The simple mean is the average of the sum of all applied tariffs divided by the number of product lines. This can provide an overall sense of protectionism but as not all products are of equal importance to total imports, it can be misleading. The weighted tariff corrects by adjusting for the intensity of a given product in the composition of overall imports. By both measures on the aggregate the Dominican Republic, while having marginally higher applied tariffs than comparators, is not heavily protected overall or in manufactured goods.

The only notably high tariff is on primary goods (simple mean of 11.8%) which can raise costs to consumers, especially the poor. In fact the simple mean for primary products hides much higher values for a number of them, particularly the staple crop of rice, at nearly 20%.<sup>113</sup> Protection remains for sensitive products includes rolled meat and swine, onion, garlic, corn, kidney beans, cassava, sweet potato, guandules, and concentrated tomato. Poultry has 15 years to level import tariffs. For chickens quotas are created of around 500 tons and minimum quotas for pork, cheese, beef and veal, among others. However, these tariffs are to be eliminated according to a negotiated schedule, with the elimination of all tariffs taking place within 15 years.<sup>114</sup>

Combining the two metrics, we see that goods imported over \$100,000,000 per year (primarily petroleum) have simple average tariff of 5.5% at SITC 4 digit level. Goods imported over \$50,000,000 have simple average tariff of 7.2% at SITC 4 digit level. Goods imported over \$20,000,000 have simple average tariff 7.9% at SITC 4 digit level.<sup>115</sup> While the benefits of unilateral trade liberalization suggest that the Dominican Republic imposes self-harm by maintain variable tariff rates, the overall levels are relatively low and the CAFTA-DR accords that took effect in 2007 will eventually further liberalize trade. Tariff protection is not a constraint to broad-based growth in the Dominican Republic.

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<sup>112</sup> USTR, *Foreign Trade Barriers*, 2010

<sup>113</sup> UNCTAD TRAINS database

<sup>114</sup> "Fact Sheet on the Dominican Republic – Central America – United States Free Trade Agreement," USDA Foreign Agricultural Service, September 2009 and USAID, "Doing Agribusiness in Latin America and the Caribbean – Dominican Republic," Final Draft, December 2011, p. 30

<sup>115</sup> UNCTAD TRAINS database

**Table 4-5 Comparison of Tariff Rates in 2010**

<b>Country Name</b>	<b>Indicator Name</b>	<b>2010</b>
Dominican Republic	Applied, simple mean, all products (%)	8.3
El Salvador	Applied, simple mean, all products (%)	5.1
Jamaica	Applied, simple mean, all products (%)	8.4
Latin America & Caribbean (developing only)	Applied, simple mean, all products (%)	8.7
Dominican Republic	Applied, weighted mean, all products (%)	6.1
El Salvador	Applied, weighted mean, all products (%)	5.5
Jamaica	Applied, weighted mean, all products (%)	7.5
Latin America & Caribbean (developing only)	Applied, weighted mean, all products (%)	4.8
Dominican Republic	Applied, simple mean, manufactures (%)	7.8
El Salvador	Applied, simple mean, manufactures (%)	4.7
Jamaica	Applied, simple mean, manufactures (%)	7.7
Latin America & Caribbean (developing only)	Applied, simple mean, manufactures (%)	8.7
Dominican Republic	Applied, weighted mean, manufactures (%)	6.9
El Salvador	Applied, weighted mean, manufactures (%)	4.3
Jamaica	Applied, weighted mean, manufactures (%)	8.9
Latin America & Caribbean (developing only)	Applied, weighted mean, manufactures (%)	5.5
Dominican Republic	Applied, simple mean, primary products (%)	11.8
El Salvador	Applied, simple mean, primary products (%)	8.4
Jamaica	Applied, simple mean, primary products (%)	13.9
Latin America & Caribbean (developing only)	Applied, simple mean, primary products (%)	8.8
Dominican Republic	Applied, weighted mean, primary products (%)	4.6
El Salvador	Applied, weighted mean, primary products (%)	7.4
Jamaica	Applied, weighted mean, primary products (%)	6.1
Latin America & Caribbean (developing only)	Applied, weighted mean, primary products (%)	2.8

Source: World Development Indicators 2011

### *Non-Tariff Barriers to Trade*

The Dominican Republic appears to have a mixed record on non-tariff barriers to trade, ranking 121 on the World Economic Forum's prevalence of trade barriers but a satisfactory 57 in burden of customs procedures. The nation does not have export promotion schemes other than the tariff exemptions for inputs given to firms in the free trade zones. Under CAFTA-DR, the Dominican Republic may not adopt new duty waivers or expand existing duty waivers that are conditioned on the fulfillment of a performance requirement (e.g., the export of a given level or percentage of goods).<sup>116</sup> The treaty also provides for improved standards for the protection and enforcement of a broad range of intellectual property rights, including protections for patents, trademarks, undisclosed test and other data submitted to obtain marketing approval for pharmaceuticals and agricultural chemicals, and digital copyrighted products such as software, music, text, and videos; and further deterrence of piracy and counterfeiting. To implement its CAFTA-DR intellectual property rights obligations, the Dominican Republic undertook legislative reforms providing for stronger protection and enforcement.<sup>117</sup>

### *Trade Infrastructure*

While the steady (yet slow) increase of exports shows that the Dominican Republic does not suffer prohibitive barriers to international trade, the export sector is not totally without constraints, particularly trade facilitation infrastructure. As noted in the chapter on infrastructure, the condition of roads in many rural areas are poor and a lack of reliable electric power affects cold chain facilities and production schedules, all of which raises the cost of export production. The IDB Country Strategy 2010-2013 notes that poor road maintenance lead to 12-18% increase in cost of transporting goods and services.<sup>118</sup> However, by most counts road infrastructure between the major urban areas is in good condition. According the World Economic Forum's infrastructure index below, ports and airports work well. There are a multitude of government agents at the ports, but Port of Caucedo is working to develop a single window for approval of agricultural trade.

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<sup>116</sup> USTR, *Foreign Trade Barriers*, 2010

<sup>117</sup> USTR, *Foreign Trade Barriers*, 2010

<sup>118</sup> "Dominican Republic: IDB Country Strategy 2010-2103", IDB, 2009.

## Chapter 5 WOMEN ENTREPRENEURS

**B**ased on the World Bank's 2010 Enterprise Survey, completed in September 2011, women's ownership and management of firms in the Dominican Republic lags behind that of LAC and to a lesser extent the rest of the world. In DR as well as the rest of the world, it is more common to find a firm with a female co-owner than one with a female manager. A universal question for women's asset ownership is whether the woman can actually make decisions about those assets, or whether other owners or even her family members exercise effective control.

An important caveat is that the Enterprise Survey only sampled from manufacturing and services firms with five or more employees, and that the sample size for data disaggregated by gender of owners and managers may not be large enough for externally valid interpretations. In such case, the data was not discussed below. Because the gender of managers was only a question in this most recent round of Enterprise Surveys in the DR, analysis over time is not possible.

**Table 5-1 Female Entrepreneurship and Employment in Different Countries**

Indicator	Dominican Republic	Latin America & Caribbean	World
Percent of firms with female participation in ownership	30.0	40.4	35.3
Percent of firms with a female top manager	11.0	20.8	18.4
Proportion of permanent full-time workers that are female (%)	36.0	37.9	30.9
Proportion of permanent full-time non-production workers that are female (%)*	11.1	13.8	9.9

Source: World Bank Enterprise Survey for the DR, 2010

## Chapter 5: Women Entrepreneurs

Looking at gender patterns in firm ownership, we see that there is a fairly even distribution of female owners and managers across firm size, and that female top managers are scarcer than female owners.

**Table 5-2 Female Ownership and Management by Firm Size**

Firm size (number of employees)	Percent of firms with female participation in ownership	Percent of firms with a female top manager
Small (5-19)	25.7	10.0
Medium (20-99)	38.8	13.2
Large (100+)	28.5	9.6

Source: World Bank Enterprise Survey for the DR, 2010

As for sectoral distribution, female co-owners are less common in “other services”, and female managers are most common in retail. In a more detailed breakdown, no other sector came close to retail, which was the sector for about 31% of female owners, and an even higher 41% of female top managers. Notably, there is no clear gender segmentation pattern of ownership, since about 30% of male managers are also in retail as the dominant sector, although only about 30% of male top managers were in retail. Also, a high proportion of female workers in the firm does not mean that the manager is necessarily likely to be a woman as well.

**Table 5-3 Female Leadership in Private Sector**

Economy	Subgroup Level	Percent of firms with female participation in ownership	Percent of firms with a female top manager	Proportion of permanent full-time workers that are female (%)
All		35.3	18.4	30.9
Latin America & Caribbean		40.4	20.8	37.9
Dominican Republic		30.0	11.0	36.0
Dominican Republic		33.9	8.1	21.8
Dominican Republic	Retail	32.2	15.9	38.1
Dominican Republic	Other Services	27.1	10.1	42.3

Source: World Bank Enterprise Survey for the DR, 2010

Looking at firm age, the average age of firms managed by both men and women was very similar, around 20 years. As for performance, in this survey women-managed firms outperformed men-managed firms in real annual sales growth and labor productivity growth, but not employment growth.

**Table 5-4 Female Ownership by Sector**

Industry sector	Percentage of female-owned firms that are in that sector (%)	Percentage of female-managed firms that are in that sector (%)	Percentage of firms without female owners that are in that sector (%)
Other manufacturing	12.2	5.9	9.4
Food	4.1	5.9	6.4
Textiles	2.4	5.9	3.0
Garments	2.4	0	1.7
Chemicals	4.1	5.9	4.7
Plastics & rubber	2.4	0	0.4
Non-metallic mineral products	2.4	3.9	2.6
Basic metals	0	0	2.2
Fabricated metal products	1.6	2.0	2.6
Machinery and equipment	1.6	0	0.4
Electronics	0	0	1.3
Construction	4.1	0	4.3
Motor vehicle services	8.1	3.9	6.4
Wholesale	5.7	11.8	4.3
Retail	35.8	41.2	31.3
Hotel and restaurants	5.7	5.9	6.9
Transport	6.5	7.8	10.7
IT	0.8	0	1.3

Source: World Bank Enterprise Survey for the DR, 2010

**Table 5-5 Firm Performance by Gender of Top Manager**

Economy	Subgroup Level	Real annual sales growth (%)	Annual employment growth (%)	Annual labor productivity growth (%)
All		5.7	6.4	0.1
Latin America & Caribbean		3.7	5.3	-1.0
Dominican Republic		2.2	6.8	-5.7
Dominican Republic	Top manager is female	5.3	3.2	-4.1
Dominican Republic	Top manager is male	1.8	7.3	-6.0

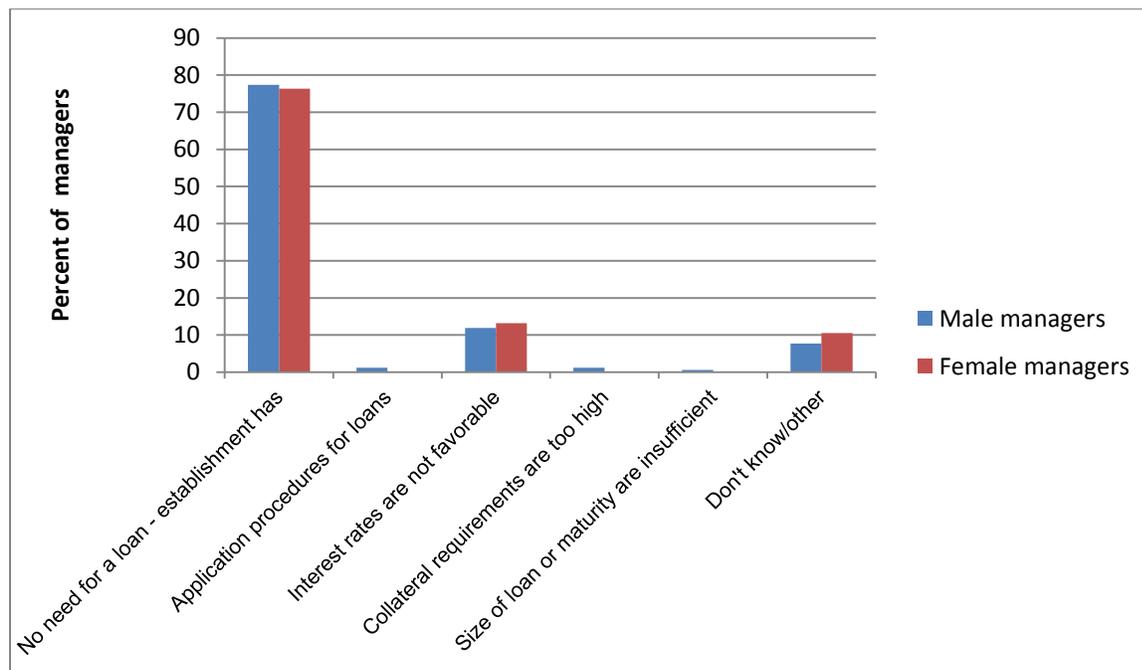
Source: World Bank Enterprise Survey for the DR, 2010

## Potential Constraints for Investment in Firms with Women Co-owners and Managers

### Finance

Interest rates for female entrepreneurs' borrowing would be the most direct measure of potential constraints, but they are not available. From self-reporting, 12% of women-managed firms reported access to financing as a major constraint, much less than the 27% of men-managed firms who reported the same. However, women-managed firms are about 15 percentage points less likely to have a bank loan than men-managed counterparts. Overall, 58% of firms did not apply for new loans in the past fiscal year, whereas 75% of female managed-firms did not do so. The reasons for not applying for new loans among female managers were very similar to men.

Figure 5-1 Main Reason for Not Applying for New Loans



Source: World Bank Enterprise Survey for the DR, 2010

Interestingly, of those women-managed firms who did have loans, less than 30% needed collateral, compared to over 60% for men-managed firms.

**Table 5-6 Access to Finance by Gender of Manager**

Economy	Subgroup Level	Percent of firms with a bank loan/line of credit	Proportion of loans requiring collateral (%)	Value of collateral needed for a loan (% of the loan amount)	Percent of firms not needing a loan
All		35.9	78.0	163.3	39.4
Latin America & Caribbean		47.6	72.4	197.3	42.1
Dominican Republic		56.9	60.0	234.4	38.3
Dominican Republic	Top manager is female	45.5	28.5	170.4	50.3
Dominican Republic	Top manager is male	58.1	63.5	237.4	36.6

Source: World Bank Enterprise Survey for the DR, 2010

Since only 19 women-managed firms discussed financing for fixed capital investments, the numbers from that question are not very useful for national representation. However, women-managed firms are about 10 percentage points less likely to use bank financing for working capital, and rely slightly more on internal financing for working capital.

**Table 5-7 Finance and Gender**

Economy	Subgroup Level	Percent of firms using banks to finance working capital	Proportion of working capital financed by banks (%)	Proportion of working capital financed by supplier credit (%)	Proportion of working capital financed internally (%)
All		30.0	12.4	12.0	
Latin America & Caribbean		43.0	16.0	18.1	
Dominican Republic		72.4	22.2	23.8	47.8
Dominican Republic	Top manager is female	63.5	20.5	19.5	50.4
Dominican Republic	Top manager is male	73.4	22.4	24.3	47.5

Source: World Bank Enterprise Survey for the DR, 2010

In sum, there is no evidence that costly finance in itself is a binding constraint to women entrepreneurs. We can then turn to investment demand.

## Chapter 5: Women Entrepreneurs

### *Social Returns: Infrastructure*

Infrastructure may be more or less important for women-owned and managed firms by virtue of the sector in which they operate. The table below shows that women-managed firms are slightly less involved in exports and imports, and so are less dependent on infrastructure for international trade, than men-managed firms.

**Table 5-8 Gender and Infrastructure**

Economy	Subgroup Level	Percent of firms exporting directly or indirectly (at least 1% of sales)	Percent of firms exporting directly (at least 1% of sales)	Proportion of total sales that are domestic sales (%)	Proportion of total sales that are exported directly (%)	Proportion of total sales that are exported indirectly (%)	Percent of firms using material inputs and/or supplies of foreign origin*	Proportion of total inputs that are of domestic origin (%)*	Proportion of total inputs that are of foreign origin (%)*
All		17.2	13.0	92.5	5.4	2.1	62.1	61.9	38.1
Latin America & Caribbean		18.4	13.4	92.4	5.0	2.6	71.1	61.8	38.2
Dominican Republic		12.8	6.8	95.3	2.6	2.1	83.7	45.3	54.7
Dominican Republic	Top manager is female	5.4	3.3	99.0	0.5	0.5	77.7	74.2	25.8
Dominican Republic	Top manager is male	13.3	7.2	94.8	2.9	2.3	84.8	42.3	57.7

Source: World Bank Enterprise Survey for the DR, 2010

### *Government Failures: Corruption, Regulation and Taxes*

The Enterprise Survey data with sufficient responses from female managers shows a clear and significantly higher burden of corruption on them. Female managers were about three times more likely than their male counterparts to be expected to give gifts to get things done, to be asked for bribes across different types of transactions. And while about 10 percentage points more female managers identified corruption as a major constraint than their male counterparts, nearly 30 percentage points more and a majority said that the courts system was a major constraint.

Table 5-9 Gender and Corruption

Economy	Subgroup Level	Percent of firms expected to give gifts to public officials "to get things done"	Bribery depth (% of public transactions where a gift or informal payment was requested)	Percent of firms experiencing at least one bribe payment request	Percent of firms identifying corruption as a major constraint	Percent of firms identifying the courts system as a major constraint
Latin America & Caribbean		10.9	6.5	9.6	39.9	25.0
Dominican Republic		10.1	12.3	16.3	65.2	43.8
Dominican Republic	Top manager is female	25.5	31.2	37.3	73.0	68.7
Dominican Republic	Top manager is male	8.3	9.6	13.3	64.1	40.8

Source: World Bank Enterprise Survey for the DR, 2010

As for official taxation and regulation, there is no significant difference between the amount of time and number of visits that female and male managers spend dealing with regulation or meeting with tax officials. However, nearly 20 percentage points more female managers—making the majority of them—said that tax rates were a major constraints, whereas about 10 percentage points more said that tax administration was a major constraint. (It is not clear why this is the case, e.g. if there are different tax rates depending on the gender of the manager, or because women-managed firms are more likely to be formal, as described below.) While about 10 percentage points more female managers identified business licensing and permits as a major constraint, this represented only about a quarter of women-managed firms.

Table 5-10 Gender and Regulation

Economy	Subgroup Level	Senior management time spent dealing with the requirements of government regulation (%)	Number of visits or required meetings with tax officials	Percent of firms identifying tax rates as a major constraint	Percent of firms identifying tax administration as a major constraint	Percent of firms identifying business licensing and permits as a major constraint
Latin America & Caribbean		12.7	1.6	35.1	22.7	15.9
Dominican Republic		11.7	1.0	50.3	33.7	15.9
Dominican Republic	Top manager is female	8.6	1.7	64.2	43.2	25.6
Dominican Republic	Top manager is male	12.1	0.9	48.3	32.5	14.8

Source: World Bank Enterprise Survey for the DR, 2010  
*Informality and Gender*

Women-managed firms are both more likely to be formal, and less likely to face competition from informal firms. This suggests that such firms may be more efficient or operate in scale industries, for example, and rely less on cost savings from informality for their competitiveness. Because of these same traits, they may look for the most effective talent, and be more open to have women as top managers.

**Table 5-11 Gender and Informality**

<b>Economy</b>	<b>Subgroup Level</b>	<b>Percent of firms competing against unregistered or informal firms</b>	<b>Percent of firms formally registered when they started operations in the country</b>	<b>Number of years firm operated without formal registration</b>	<b>Percent of firms identifying practices of competitors in the informal sector as a major constraint</b>
All		56.3	87.7	0.9	31.6
Latin America & Caribbean		62.3	86.8	1.1	30.2
Dominican Republic		75.8	80.3	1.2	42.6
Dominican Republic	Top manager is female	62.9	88.3	0.3	28.8
Dominican Republic	Top manager is male	77.3	79.4	1.3	44.3

Source: World Bank Enterprise Survey for the DR, 2010

## Chapter 6 SMALLHOLDER AGRICULTURE AND AGRIBUSINESS

### Future Potential for Small-Holder Agricultural Production and Rural Income

The growth of agricultural production in the Dominican Republic has been slower than that of industry or services, so that its share of GDP was only 6.2% in 2010.<sup>119</sup> Only 14.5% of total employment was in agriculture, although 31% of the population lived in rural areas.<sup>120</sup> Given the preponderance of sugar cane production, 71% of total agriculture value added in 2009, mostly on large plantations, an even smaller percentage of total employment is engaged in small-holder agricultural production.<sup>121</sup> Only one third of the rural labor force is in agriculture and that more than two-thirds (70%) of rural workers are in the informal sector with low productivity.<sup>122</sup> Nationwide, around half of total employment is in the formal sector, half in the informal sector, with the latter concentrated in services, commerce and transport.<sup>123</sup> 56% of all workers are in the informal sector.<sup>124</sup>

Dominican cereal yields were reportedly improving rapidly in the early 2000s, reaching 4,855 kg/ha., which was more than double the LAC lower middle income average.<sup>125</sup> The value added per worker in agriculture increased from a low point of \$2,502 in 1997 to \$3,933 in 2007 (in constant 2000 US\$), an increase of 57% over a ten-year period. This value per worker in agriculture is about the same as for El Salvador, 41% higher than in Jamaica, but only a little more than half that of Costa Rica, which reached \$6,948 in 2007. (See Figure 6-1) This implies there is still room for improvement.

There is much potential for switching to horticulture. The agriculture sector's strong performance between the 1990s and 2005 was attributed to diversification into higher value crops such as pineapples, mangos, avocados, specialty coffees, bananas, oranges, vegetables and flowers and to a more efficient agroindustry. But much of the increase in production was due to an expansion in the area under cultivation and not to improved yields, indicating a lack of farmer access to improved technology for reasons discussed below.<sup>126</sup>

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<sup>119</sup> WB WDI figures. DR Central Bank GDP figures say it was only 5.7% in 2010.

<sup>120</sup> USAID/EADS data. This is a dramatic decline from the 54.7% agricultural proportion of total employment in 1970. --From "Inputs for the Elaboration of the Strategy of National Development," Chapters submitted by SEEPYD/CONARE for discussion, Chapter on Agriculture, p.1

<sup>121</sup> Ministerio de Agricultura, Departamentos de Economía Agropecuaria y Seguimiento Control y Evaluación. Datos pecuarios del CONAPROPE, CONALECHE y de la Dirección General de Ganadería (EIGEGA). Elaborado por el Departamento Economía Agropecuaria.--*Informaciones Estadísticas del Sector Agropecuario 2000-2009*, Ministerio de Agricultura, República Dominicana, Cuadro 6

<sup>122</sup> Translated from "Inputs for the Elaboration of the Strategy of National Development," Chapters submitted by SEEPYD/CONARE for discussion, Chapter on Employment and Labour Market.

<http://www.camaradediputados.gov.do/masterlex/MLX/docs/2F/1B0/1B1/1C5/1D2/1D8.pdf>

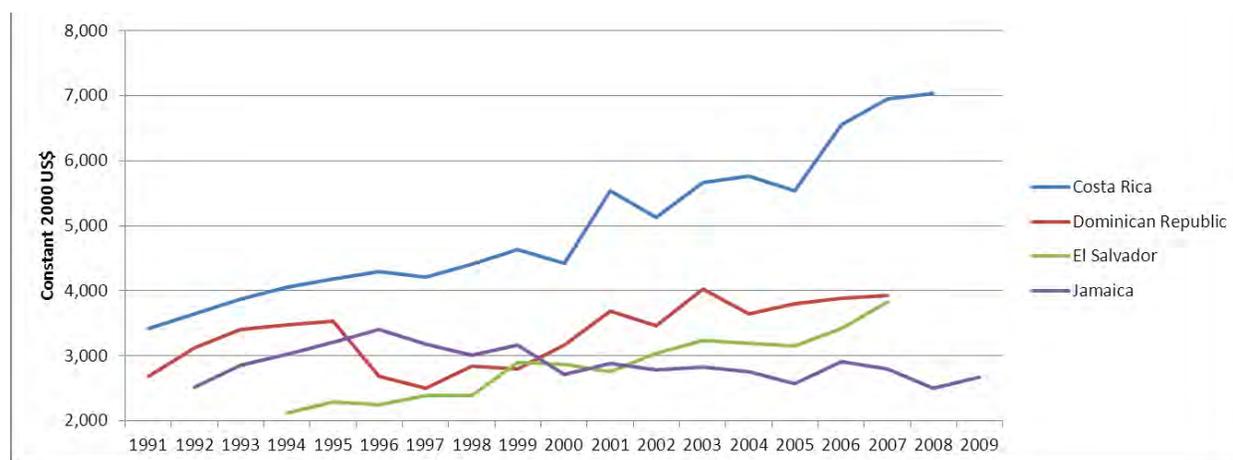
<sup>123</sup> Translated from Inter-American Development Bank (IDB), *La ruta hacia el crecimiento sostenible en la República Dominicana* (The path to sustainable growth in the Dominican Republic), Chapter 14. Labor markets and social protection, September 2009, pp. 269-270

<sup>124</sup> Informe de la Comisión Internacional para el Desarrollo Estratégico de la República Dominicana, 2010-2020, Bajo la dirección de Jacques Attali (Report of the International Commission for the Strategic Development of the Dominican Republic, 2010-2020, under the direction of Jacques Attali) p. 18

<sup>125</sup> USAID, "Dominican Republic Economic Performance Assessment," April 2006, p. 34

<sup>126</sup> *Ibid.*, and IDB, "Country Strategy 2010-2013 for the Dominican Republic," p. 8

Figure 6-1 Value Added per Worker, Agriculture



Source: Calculated from World Bank, World Development Indicators

In spite of the improvements obtained in terms of production in some areas (rice, fruit and vegetables, livestock products) the agricultural sector is characterized by low productivity, low-value added<sup>127</sup> and low product differentiation associated with low quality management in post-harvest, packaging and labeling, high fragmentation of farms, limited financing and costly, ineffective management, high levels of commercial intermediation, little rural infrastructure, low investment in research.<sup>128</sup> In particular, deficiencies in the traceability of residues, post-harvest handling, packaging and labeling place the Dominican Republic at a disadvantage when competing in International markets, at times incurring large losses for rejected shipments. This establishes the need for an effort to improve quality standards compliance.<sup>129</sup>

In conclusion, the portion of the labor force still directly engaged in small-holder agriculture is fairly small, as is its contribution to GDP. While there are continued opportunities for improved yields and diversified agricultural production, greater potentials for growth in productive employment appear to lie elsewhere, including the improved processing and marketing of agricultural products—commercial agribusiness and value chain development—for both domestic and international markets.

### Key constraints facing agribusiness in the Dominican Republic

It appears from the analytical literature summarized below and in other chapters of this report, that the main problems facing the marketing and processing of farm products and the generation of more productive employment in that sector, can be grouped into three categories of key constraints: I) poor business climate for small, labor-intensive activities, II) inadequate education and technical training, and III) poor governance, including insecurity and corruption. Each of these includes several contributory sub-constraints.

<sup>127</sup>Classification, washing, packing of products aimed at the domestic market.

<sup>128</sup> BE 2005.

<sup>129</sup>Translated from "Inputs for the Elaboration of the Strategy of National Development," Chapters submitted by SEEPYD/CONARE for discussion, Chapter on Agriculture, p. 3

## Chapter 6: Smallholder Agriculture and Agribusiness

### *Poor Business Climate*

- 1) The lack of access to credit for micro and small entrepreneurs is a constraint to all small business, but is particularly serious to those in the informal sector which, as noted includes over 50% of the labor force nationwide and 70% of those in rural areas. The level of informality in the DR agribusiness environment thus becomes a key sub-constraint to access to credit. The lack of land titles and secure land tenure, along with the difficulty of registering property (evident in the low DR *Doing Business* ranking for this indicator), are also key sub-constraints to credit access.
- 2) Inefficient and costly infrastructure refers mainly to a) poor rural roads, which makes in more costly for agribusinesses to market their products, and b) unreliable electric power, which is thought to be responsible for the lack of cold storage facilities and cold chains for perishable products in particular, as well as for the higher cost or impossibility of operating any activity requiring continuous electric power.
- 3) Ineffective anti-monopoly policies and/or their enforcement inhibit small and medium sized enterprises (SMEs) from competing with larger firms, which often enjoy profitable operations with less efficient production technology that employ fewer workers than SMEs would.
- 4) Corruption at points of export raises the cost of exports directly. For example, Haiti is a large if informal market for DR agricultural products. The border area is governed by the military that has been found by many to be corrupt, adding to transaction costs. Logistics are difficult and costly and there is widespread theft of products.<sup>130</sup> Together these factors reduce the competitiveness of DR agricultural exports and potential export products.

### *Inadequate Education and Technical Training*

Agribusiness in the DR suffers from workers with inadequate primary education and technical training with 81% of workers without any education being stuck in the informal sector on the farms or in rural agribusiness of low productivity. The lack of adequate education and training opportunities prevents small producers from acquiring a range of critical skills, including improved productions techniques, elementary, management, on the one hand, to developing a more entrepreneurial mentality on the other. Basic education and training for agricultural workers limits greater productivity for small and large producers. The severe lack of agricultural extension services except from input suppliers (which offer biased advice and in any case reach only a small percentage of small farmers) results in low yields and poor quality products. For example, the overuse of pesticides and agro-chemicals by small and medium size producers may be attributed to the fact that much extension support is provided by fertilizer and agro-chemical providers rather than by the government.<sup>131</sup>

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<sup>130</sup>USAID, "Doing Agribusiness in Latin America and the Caribbean – Dominican Republic," Final Draft, December 2011, p. 9

<sup>131</sup> *Ibid.*, p. 8

## Chapter 6: Smallholder Agriculture and Agribusiness

### Poor Governance

Poor governance is largely responsible for the public policies, or the lack of them, that have created the first two constraint categories listed above. In particular, the wastefulness of government spending and diversion of public funds partly explains the neglect of basic education, agricultural extension, rural roads and lack of reliable electric power. Low rankings in favoritism in decisions of government officials, ethical behavior of firms, judicial independence and the efficiency of legal framework in challenging regulations partly explain the ineffective anti-monopoly policies. Low rankings in business costs of crime and violence, organized crime, business costs of terrorism and irregular payments and bribes point to serious problems of corruption and a lack of security. In the search for binding constraints affecting the whole economy, electric power and roads are dealt with in Chapter 3 on infrastructure and the informal vs. formal dichotomy is dealt with in some detail in Chapter 7. The lack of clear land titles falls under government failures in Chapter 9 in dealing with property rights.

Several respondents to interviews complained of corruption. This was characterized basically as the arbitrary application of the law and regulations (*discrecionalidad*), especially the Dominican Ports Authority (APORDOM), which oversees the sea ports through which most agricultural exports and imported inputs pass. This is not surprising as it is consistent with practices in other countries in the region. In contrast, there was agreement that the Customs Agency, where corruption is frequently found, was operating relatively efficiently and free of *discrecionalidad*. The most pervasive and notable corruption appears to exist in the border area with Haiti. Both public officials and private sector entrepreneurs cited several instances of corrupt public officials especially in the military.<sup>132</sup> Haiti is a large if informal market for DR agricultural products. The border area is governed by the military that has been found by many to be corrupt, adding to transaction costs. Logistics are difficult and costly and there is widespread theft of products.<sup>133</sup>

## Processing and Marketing of Agricultural Products

### Market and Pricing Policies

A handful of crops receive the greatest attention from the government: rice, beans, and bananas. Rice and beans are Dominican staples and are for domestic consumption. Bananas are too, although there is also a large export trade. Successive governments have been concerned that prices remain low enough to meet consumer needs but high enough for small producers in particular to generate sufficient income. One way this has been made possible is through price controls. In 1969, the GODR created the Price Stabilization Institute (INESPRE) with the stated objective to “regulate agricultural products and the basic food basket.”<sup>134</sup> INESPRES mission is to improve small producer profitability and competitiveness in the market place at the same time protecting the ability of low-income consumers to buy food at affordable prices. INESPRES has a small chain of stores throughout the country to provide low cost food products. It purchases its stock from small producers through associations, but also directly

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<sup>132</sup> USAID, 2011, *op. cit.*, p. 19

<sup>133</sup> USAID, 2011, *op. cit.*, p. 9

<sup>134</sup> [www.inespre.gov.do](http://www.inespre.gov.do), August 24, 2011.

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from some individuals.<sup>135</sup> However, the CAFTA-DR accords that took effect in 2007 include several phase-in years that allow for the continuation of tariffs on some agricultural products. These tariffs are to be eliminated according to a negotiated schedule, with the elimination of all tariffs taking place within 15 years.<sup>136137</sup>

As regards information concerning costs and markets, the sector shows a remarkable asymmetry. A significant proportion of the agricultural producers does not have access to and take into account the information needed for timely decision-making. Although the Ministry of Agriculture (MOA) and some private entities provide technical information and advice from the market, they do not cover most agricultural producers, least of all small property owners. The need to facilitate access to information requires more investment in telephone services and the internet.<sup>138</sup>

### *Availability of Information on Export Opportunities*

The international market provides greater opportunities for satisfying a diverse demand at better prices than local markets. However, the international market is more exacting in its requirements for quality products in sufficient volume. That requires greater technical assistance and training, more modern and innovative technology, improved management and entrepreneurial skills, affordable and adequate infrastructure, and sufficient human capital. It also requires adequate investment and access to credit.<sup>139</sup> A majority of respondents surveyed for the referenced USAID study cited individual factors related to market access as a problem. This was especially the case with respect to small producers and exports. Some notable exceptions exist, in particular among those small producers who are associated with specific clusters and/or chains, such as cacao, bananas, and coffee, and cooperatives showing the benefits of associativity.<sup>140</sup>

Most small producers do not belong to associations, cooperatives, or clusters/chains. This has been cited as a problem, particularly by exporters who depend on reliable product quality, volume, and traceability that are made possible through associations of producers such as cooperatives, as well as clusters and chains.<sup>141</sup> As part of their range of services, associations provide much greater access to market information than individual small producers can acquire on their own. This is especially the case with respect to exports.<sup>142</sup>

The Ministry of Agriculture (MOA) is responsible for extension services and sanitary and phytosanitary (SPS) certification, but it does not have the institutional capacity or budget to carry out these responsibilities. While it does have a Vice Ministry for Extension Services, no unit in the MOA is clearly responsible for SPS inspection and certification. The MOA conducts SPS inspections only in the major ports, due to the lack of the budget necessary to enable

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<sup>135</sup>USAID, 2011, *op. cit.*, p. 24

<sup>136</sup> "Fact Sheet on the Dominican Republic – Central America – United States Free Trade Agreement," USDA Foreign Agricultural Service, September 2009.

<sup>137</sup>USAID, 2011, *op. cit.*, p. 30

<sup>138</sup>Translated from "Inputs for the Elaboration of the Strategy of National Development," Chapters submitted by SEEPYD/CONARE for discussion, Chapter on Agriculture, p. 6

<sup>139</sup> *Ibid.*, p. 20

<sup>140</sup> *Ibid.*, p. 20

<sup>141</sup> *Ibid.*, p. 21

<sup>142</sup> *Ibid.*, p. 23

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inspections on farms. Due largely to a lack of MOA resources relatively little government extension support is provided to small and medium size producers through clusters and value chains, although that is partially offset by USAID's Rural Economic Diversification project that has been working successfully with an increasing number of clusters.<sup>143</sup> The MOA is roundly criticized as being generally non-functional. Indeed, its extension service, for example, is so limited that the private sector, especially international companies, has taken up the slack, working with small producers to assist them in getting SPS certification for their export crops.<sup>144</sup>

While the Global Good Agricultural Practices (GAP), Fairtrade, and Organic certifications have assisted certain sectors of Dominican agriculture to export bananas, coffee, and cacao, the majority of agricultural production does not benefit from these certifications. This production depends upon MOA certifications. Many shipments are exported with certifications based on inadequate inspections. This has resulted in shipments being rejected by the importer, directly impacting the income of the exporting company as well as the producers. But the larger issue is that such rejections also damage the image of Dominican agriculture, which impacts all exporters and producers.<sup>145</sup>

The weaknesses in the agricultural extension, research, and certification systems in the DR significantly impact producers as well as companies and investors. The principal problem of agricultural research is the lack of extension services to disseminate the research results. The research itself seems to be well focused, but underfunded. Another impact of the lack of extension services, as well as the absence of MOA sanitary and phyto-sanitary (SPS) certification, on small producers is that many have limited or no access to modern agricultural technologies and improved seed varieties. Nor do they have access to technical assistance when specific problems occur. For these producers, crop yields may be lower and the quality may not meet international market standards. Thus, these producers must sell their crops in local markets, generally at lower prices.<sup>146</sup>

Private companies have assumed many of the key activities that the public sector has few to no capabilities to provide. The private sector is conducting agricultural research on specific crops as well as on production and post-harvest processing, and providing agricultural extension services to producers. While these activities are added costs in the overall operations of these companies, they nevertheless open opportunities for the development of new products and markets, often resulting in increased profitability.<sup>147</sup>

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<sup>143</sup> *Ibid.*, p. 7

<sup>144</sup> *Ibid.*, p. 18

<sup>145</sup> *Ibid.*, p. 32

<sup>146</sup> *Ibid.*, p. 37

<sup>147</sup> *Ibid.*, p. 38

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The limited availability of government support services for agriculture has impeded modernization and development of the agricultural sector in the DR, especially for small producers who grow crops using traditional techniques and sell their yields largely for local consumption. When CAFTA-DR is fully implemented, these producers will not be able to compete in their own markets with imported products.<sup>148</sup>

### *Rural Infrastructure*

Historically, the Dominican Republic has always suffered from intermittent and expensive energy as well as a road network that was marginal at best. While the current situation shows significant improvement in energy supply and main trunk roads, constraints still exist that impede agricultural competitiveness in the international market. Indeed, the Executive Vice President of the Dominican Agribusiness Board identified the lack of energy in most agricultural regions as well as poor rural access roads and insufficient cold storage facilities as key problems.<sup>149</sup> As noted in Chapter 3, the Executive Director of CONACADO, while recognizing significant improvements in primary roads, observed that rural access roads “are terrible” and the energy supply “is a total disaster.”<sup>150</sup>

Rural and access roads are in a state of disrepair and result in additional costs to small producers, who suffer delays in getting their crops to local markets and exporters on a timely basis. An IDB study in 2006 found that only 39 percent of the highways and 20 percent of the rural access roads were in good condition, whereas the remainder of the network was in fair to poor condition.<sup>151</sup> The IDB Country Strategy for 2010 to 2013 noted poor road maintenance translates into a 12% to 18% increase in the cost of transporting goods and services.<sup>152</sup> Rural access roads are critically important for the transport of agricultural commodities from farms to market and processing plants. The condition of these roads makes it difficult and expensive to bring fertilizers and agrochemicals to the farms as well. The poor state of the road network, especially the rural access roads, also exacerbates the damages to commodity shipments caused by poor packaging and overloading trucks.<sup>153</sup> While the road network has improved, most of the upgrade has been on the major inter-urban routes as well as those that go to the leading tourist areas, highlighting the low priority assigned to agriculture and agribusiness by the GODR and the subsequent negative impact on competitiveness, income, and profitability.<sup>154</sup>

Other infrastructure constraints that have been identified include the lack of cold storage facilities and the absence of access to irrigation systems. Both of these are related to energy access. The consensus on ports and airports is that they function well and do not impede agribusiness.<sup>155</sup> The main constraint at the ports, aside from the lack of cold storage, is the large number of GODR institutions involved in processing and approving agricultural trade. These include the MOA, the Customs Directorate, the Ministry of Public Health and Social Assistance, the Ministry of Environment and Natural Resources, among others. In order to improve

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<sup>148</sup> *Ibid.*, p. 39

<sup>149</sup> *Ibid.*, p. 60, interview with Osmar Benítez, Executive Vice President of the Junta Agroempresarial Dominicana, June 21, 2011.

<sup>150</sup> *Ibid.*, p. 60, interview with Isidoro de la Rosa, Executive Director of Grupo CONACADO, June 22, 2011.

<sup>151</sup> *Ibid.*, p. 64, “Documento Conceptual de Proyecto: República Dominicana Multifase de Rehabilitación y Mantenimiento de Infraestructura Vial,” loc. cit.

<sup>152</sup> *Ibid.*, p. 64, “Dominican Republic: IDB Country Strategy 2010–2013,” The Inter-American Development Bank, 2009.

<sup>153</sup> *Ibid.*, pp. 63–64

<sup>154</sup> *Ibid.*, p. 75, and “Inputs for the Elaboration of the Strategy of National Development,” Chapters submitted by SEEPYD/CONARE for discussion, Chapter on Agriculture, p. 6

<sup>155</sup> *Ibid.*, p. 60

## Chapter 6: Smallholder Agriculture and Agribusiness

efficiency in operations, the Port of Caucedo is working on developing a “single window” to coordinate all the institutions and streamline the authorization process. Thus far, only Customs is reforming its processes to function under a single window approach. Interestingly, airports were not considered to be a constraint for agricultural trade.<sup>156</sup>

The quality of agricultural products for export is reduced by the lack of cold storage facilities. In turn, this diminishes the competitiveness of Dominican agricultural products in the international market, curbing income and profitability.<sup>157</sup> As a result, many agricultural commodities deteriorate en route from the farms to processing plants and ports, resulting in their failure to meet export quality standards.<sup>158</sup> Some of the larger producers have acquired their own cold storage facilities, but these are mostly operated with privately owned power generation equipment that significantly increases the cost of cold storage and reduces competitiveness.<sup>159</sup> Others use refrigerated trucks in the ports for cold storage services.<sup>160</sup><sup>161</sup> In order to alleviate this situation, in the early 2000s the GODR acquired six cold storage units that were to be used to provide public cold storage services in the agricultural regions of the country. However, these units were never installed and have subsequently been abandoned.<sup>162</sup> While it is not known why they were not installed, it is possible that the lack of reliable and stable energy made installation economically unviable.<sup>163</sup>

The low priority given to agriculture and agribusiness by the GODR has impacted the competitiveness and profitability of companies and cooperatives. The lack of adequate public infrastructure, financing, research, and other government investments and services has served to undermine the potential of agriculture and agribusiness, with particular impact on small producers.<sup>164</sup> Large-scale urban migration has resulted in the large influx of unskilled and illiterate Haitians whose itinerant lifestyle and lack of basic education makes it all the more difficult to train workers. While many small producers have access to training, most do not. This has resulted in a still pervasive lack of an entrepreneurial mindset that limits their production and income potential.<sup>165</sup> The great internal migration that characterizes the domestic labor market has as its main cause the lack of job opportunities in rural areas, hastened by the decline of agriculture and the poor development of non-agricultural activities in these areas; this emigrant population contributes to the growth of the informal sector and unemployment in urban areas, where it cannot find employment in the formal sector. Economic activity in rural areas has become increasingly non-agricultural, so that agriculture only comprises one-third of the (rural) labor force. But more than two-thirds (70%) of workers in

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<sup>156</sup> *Ibid.*, p. 65

<sup>157</sup> *Ibid.*, p. 75

<sup>158</sup> *Ibid.*, p. 64

<sup>159</sup> *Ibid.*, p. 65, interview with Dr. Bolivar Toribio Veras, Executive Director of the Asociación Dominicana de Hacendados y Agricultores, July 26, 2011.

<sup>160</sup> *Ibid.*, p. 65, Interview with Acelis Angeles Vargas, Deputy Director, Centro de Exportación e Inversión de la República Dominicana, June 22, 2011.

<sup>161</sup> *Ibid.*, p. 65

<sup>162</sup> *Ibid.*, p. 65, interview with Osmar Benítez, Executive Vice President of the Junta Agroempresarial Dominicana (JAD), June 21, 2011.

<sup>163</sup> *Ibid.*, pp. 64-65

<sup>164</sup> USAID, “Doing Agribusiness in Latin America and the Caribbean – Dominican Republic,” Final Draft, December 2011, p. 29

<sup>165</sup> *Ibid.*, p. 45

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rural areas are in the informal sector, which indicates that even non-farm activities are low productivity; however, their level of remuneration is greater than from agricultural activities.<sup>166</sup>

### *Access to Credit*

Commercial banks have very little interest in lending to the agriculture sector due to the high market and climate risks, significantly constraining access to credit for small producers. Small producers have very limited access to credit which is available only at high interest rates that can reach up to 30%. Although a network of micro banks provides some credit to small producers, the demand far outstrips the supply. The legal and regulatory framework for credit and insurance operations in the DR is well established and adequately covers most important issues. The one area that is not well defined is the regulatory framework for microfinance, which is the segment of banking and finance that is most active in the agribusiness sector.<sup>167</sup> Agricultural insurance, which is subsidized by the GODR, is not widely available but is effective when used.<sup>168</sup>

During several of the interviews conducted for USAID's *Doing Agribusiness* study, comments were made that the Banco Agrícola had good intentions but not enough resources to meet demand. According to one expert, it finances only about 10 percent to 12 percent of the demand, with much of the financing being provided by supplier credits.<sup>169</sup> Among the problems that the Banco Agrícola faces is a very high uncollectable loan rate. It has been estimated that the rate is between 26 percent and 40 percent of the portfolio, and this is exacerbated by the fact that, unlike its private sector competitors, the Banco Agrícola cannot legally take the land pledged to cover the loan.<sup>170</sup> As a public institution, the Banco Agrícola is subject to political interference that also limits its ability to collect loan repayments.

The Superintendency of Banks requires that loans to the agricultural sector not exceed 30% of the value of the guarantees pledged for the loans. The Bank usually charges 26% interest on loans to the agriculture sector with repayment periods of six months up to five or six years, depending on the purpose of the loan (working capital or investment in equipment or infrastructure). Banco ADEMI (Association for the Development of Microenterprise) does not require land title but does accept vehicles or equipment as a loan guarantee.<sup>171</sup>

Many small producers are unable to acquire credit for the inputs and technology required to enhance the quality and quantity of their output, limiting the markets to which they can sell their crops. For those producers that do have access to credit, the overall impact is that they incur high borrowing costs for very small loans (due to the required loan-collateral ratio). When the producers cannot access credit, they are limited in the investment that can be made in productive infrastructure and equipment, as well as their ability to renew their crops and acquire inputs, fertilizers, and improved seeds.<sup>172</sup> Supplier credits, while financing some working

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<sup>166</sup> Translated from "Inputs for the Elaboration of the Strategy of National Development," Chapters submitted by SEEPYD/CONARE for discussion, Chapter on Employment and Labour Market, pp. 4-5, citing UNDP, (2008). *Situación Social en RD y elementos para una política social*

<sup>167</sup> *Ibid.*, p. 51

<sup>168</sup> *Ibid.*, p. 9

<sup>169</sup> *Ibid.*, p. 53, Interview with Marcial Najri, Executive Vice President of Ferquido, June 24, 2011.

<sup>170</sup> *Ibid.*, p. 53

<sup>171</sup> *Ibid.*, p. 55-56, interview with Víctor Reynoso, loc cit.

<sup>172</sup> *Ibid.*, pp. 57-58

## Chapter 6: Smallholder Agriculture and Agribusiness

capital expenses, do not provide the cash that producers need to finance services or inputs from other suppliers, thereby reducing their production and income. Small producers that do not have access to credit from banking microfinance institutions, value chains, or suppliers are forced to obtain financing through the sale of portions of their output to intermediaries (*coyotes*). As such, sales are often based on the need for cash flow and may not be timed to obtain the optimum price for the crop, which results in reduced incomes and food security.<sup>173</sup>

Another barrier is that the risks and costs associated with agricultural sector financing are not yet attractive to private investors. While agricultural insurance programs like Agrodosa (*Aseguradora Agropecuaria Dominicana*) have helped to mitigate the climate risks associated with agricultural financing, significant market, policy, and social risks continue to exist. Until these issues are mitigated, equity capital focused on agriculture sector financing will be limited.<sup>174</sup>

### *Land Titling and Tenure*

Land titling is considered the most significant constraint to conducting agribusiness in the DR. A study by Oxfam found that 81 percent of farmers illegally occupy 22 percent of farmlands.<sup>175</sup> The absence of clear title significantly impedes the ability of small producers to acquire credit. The existence of two land titling systems—Napoleonic and Torrens—has complicated acquisition of clear title. Acquiring clear title is a lengthy and, for the small producer, expensive process and, as a consequence, acts as a significant disincentive for seeking the same. The lack of the ability or knowledge on how to acquire clear title makes access to credit for small producers all the more difficult. Although the GODR is taking effective steps to make acquisition and registration of clear title much quicker and efficient, the fact that legal counsel is required throughout all phases of the process acts as a significant disincentive to small producers to register their property.<sup>176</sup>

The issue of land titling was felt to be the most important as it cuts across many other key areas, especially credit and outmigration of young and relatively skilled workers from farm areas. The difficulty in obtaining title for small producers has resulted to some degree in encouraging young people in particular to migrate to urban areas in search of economic opportunities, especially those who have inherited very small parcels of land. It is not only a problem for small producers, but a national challenge as well. For example, commercial banks in particular are loath to make loans to producers who do not have title to their land, and most simply do not extend credit. Microfinance institutions, such as ADEMI, do make “character loans” and will extend credit guaranteed by production, but these loans are relatively rare. In addition, loans that are made without using land as collateral tend to be more expensive.<sup>177</sup>

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<sup>173</sup> *Ibid.*, p. 59

<sup>174</sup> *Ibid.*, p. 59

<sup>175</sup> *Ibid.*, p. 45, [www.hoy.com.do](http://www.hoy.com.do), August 14, 2011.

<sup>176</sup> *Ibid.*, p. 8

<sup>177</sup> *Ibid.*, p. 49

## Chapter 7 FORMAL/INFORMAL SECTOR DICHOTOMY

### Introduction

With better access to markets, legal processes and credit, formal sector firms can more easily expand, access better technology, increase their productivity and hire more workers than informal firms. Because of this, if the total set of incentives that the governance environment provides encourages firms to stay informal, increasing more productive employment will be slower than it would otherwise be. (See Figures ES-1 in the Executive Summary and 7-2 below.) From the evidence presented below it appears that there are insufficient incentives for informal sector entrepreneurs to register and join the formal sector in the Dominican Republic. Disincentives include social safety net benefits for which they would be ineligible as a registered business, profit taxes they would have to pay and labor laws and other regulations they would have to follow. Many informal firms report the cost and trouble associated with registration and the hassles with government bureaucrats they can avoid by remaining unregistered. The binding constraint limiting conversion from informal to formal sector activities appears therefore to be the ineffectiveness of government institutions and public policies in creating a supportive business environment.

### Extent of the Informal Sector in the Dominican Republic

In a paper done for the International Monetary Fund Guillermo Vuletin writes,

*"The measurement of the size of the informal economy has evoked considerable interest in both academic environments and policy circles, especially given its importance for emerging markets and developing countries. At the same time, measuring the informal economy is not an easy task. The greatest challenge arises from the lack of a clear definition of the informal economy. A wide range of similar terms are used in the literature, such as hidden economy, shadow economy, clandestine economy, parallel economy, subterranean economy, unreported economy, cash economy and black economy. However, as a result of recent comprehensive publications and handbooks, there seems to exist some level of consensus regarding some terms....*

*The informal economy comprises those economic activities that circumvent the costs and are excluded from the benefits and rights incorporated in the laws and administrative rules covering property relationships, commercial licensing, labor contracts, torts, financial credit and social systems. A summary measure of the informal economy is the income generated by economic agents who operate informally. Similarly, Portes et al. (1989) defines the informal economy as "a process of income-generation characterized by one central feature: it is unregulated by the institutions of society, in a legal and social environment in which similar activities are regulated."<sup>178</sup>*

<sup>178</sup> IMF Working Paper, "Measuring the Informal Economy in Latin America and the Caribbean," by Guillermo Vuletin, April 2008.

## Chapter 7: Formal/Informal Sector Dichotomy

Vuletin estimates the size of the informal economy across Latin American in the early 2000s. He finds that in the case of the Dominican Republic, the informal economy is just less than half of GDP, equal to 44.8% of GDP, the eighth largest percentage of the 32 LAC countries studied. The most recent data shows that in 2010, 56.5% of all employed labor was in the informal sector, a rate which has not varied much over the Dominican Republic's decade of growth. Overall, the levels of informality in the Dominican Republic are significantly above the regional average.<sup>179</sup> International comparisons of informality show that the DR has a relatively high rate of informality given its income level. (See Table 7-1 and Figures S7-1 to 7-3.)

**Table 7-1 Estimated Size of the Informal Economy in Early 2000's**

<b>Country</b>	<b>Standardized value</b>	<b>Absolute value (% of GDP)</b>
The Bahamas	-1.766	15.9
Cyprus	-1.496	19.3
Grenada	-1.244	22.5
St. Kitts and Nevis	-1.108	24.2
Trinidad and Tobago	-1.092	24.4
Barbados	-1.087	24.5
Mexico	-0.797	28.2
Brazil	-0.779	28.4
Malta	-0.752	28.7
Antigua and Barbuda	-0.562	31.2
Chile	-0.486	32.1
Argentina	-0.428	32.9
Dominica	-0.322	34.2
Jamaica	-0.259	35.0
Uruguay	-0.161	36.2
El Salvador	-0.150	36.4
Guyana	-0.122	36.7
Peru	-0.017	38.1
St. Lucia	0.251	41.5
Costa Rica	0.274	41.8
Guatemala	0.318	42.3
Venezuela	0.369	43.0
Colombia	0.410	43.5
Panama	0.480	44.4
<b>Dominican Republic</b>	<b>0.515</b>	<b>44.8</b>
Belize	0.673	46.8
St. Vincent and the Grenadines	0.974	50.6

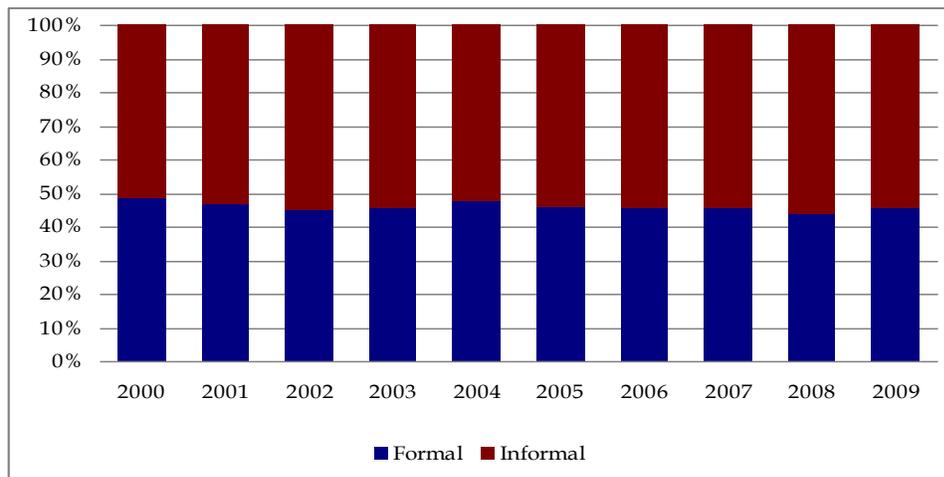
<sup>179</sup> Translated from BID, 2009, *op.cit.*, pp. 269-270

## Chapter 7: Formal/Informal Sector Dichotomy

Ecuador	0.980	50.7
Honduras	1.247	54.1
Fiji	1.719	60.1
Nicaragua	2.061	64.4
Paraguay	2.357	68.2
Mean	0.0000	38.3
Standard deviation	1.0000	12.7

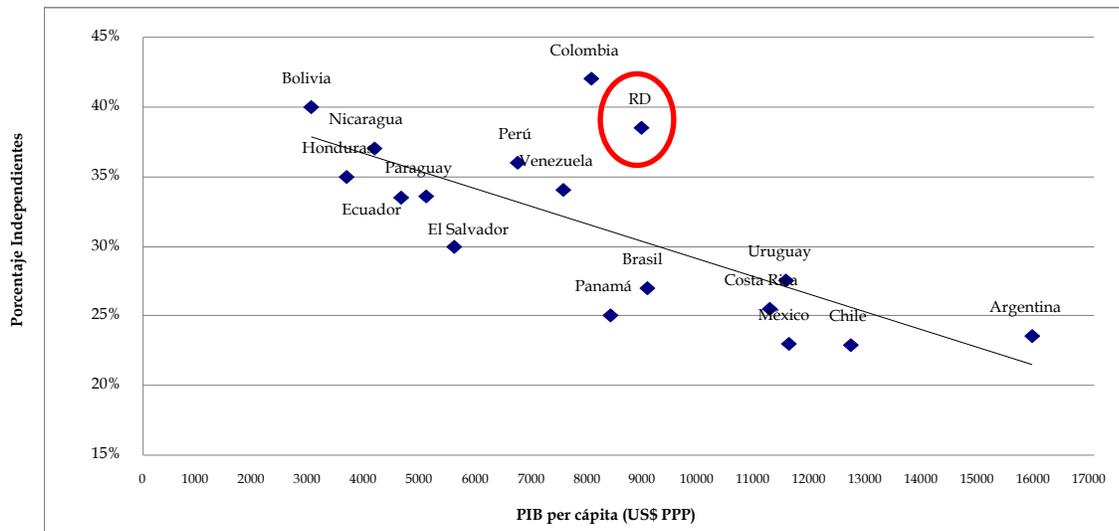
Source: Vuletin's calculations based on Model I MIMIC results and Vuletin 2008.

**Figure 7-1 Informal vs. Formal Sector Employment in the Dominican Republic**



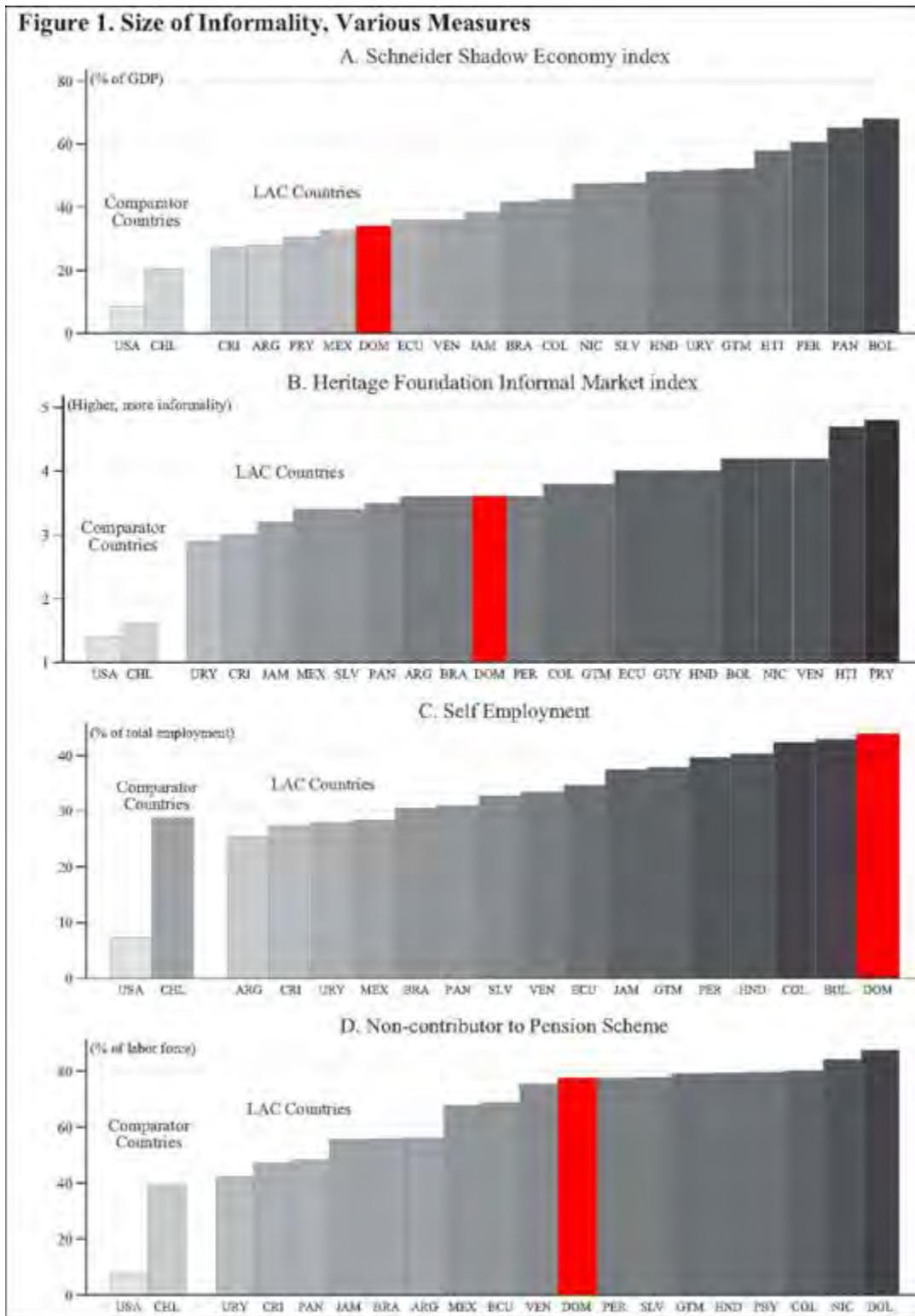
Source: Calculations by Labor Force National Survey (ENFT)

**Figure 7-2 Relationship Between Informality and Income, 2006**



Source: Betranou, 2009.

Figure 7-3 Size of Informality, Various Measures



Source: Loayza, Norman et al (2009) "Informality in Latin America and the Caribbean" World Bank Working Paper 4888

## Chapter 7: Formal/Informal Sector Dichotomy

While the informal sector of the DR economy already employs a sizable proportion of the labor force it is growing as three out of four jobs created in the in the last 10 years have been informal. In a recent document the DR Secretary of State for Economy, Planning and Development (SEEPyD) and the National Council of State Reform (CONARE) said, “The bulk of the jobs in micro-enterprises involve subsistence activities. In most cases they involve working conditions that leave workers unprotected, without the adequate coverage of labor legislation, social protection and employment benefits, such as compensation for dismissal, vacations and illness, among others.”<sup>180</sup>

*“Informal workers are concentrated in the sectors of commerce, other services, agriculture, construction, transport and communications, in that order of importance; the sectors with the highest levels of informality are agriculture and construction, with rates exceeding 80% in 2006, followed by transportation and commerce. In 2006, around 40 per cent of those employed worked in single-person micro-enterprises (self-employed), while another 16% did so in micro-enterprises from 2 to 4 people, and 7% in micro-enterprises from 5 to 10 people, for a total of 63 per cent of labor demand originating in this type of enterprise.”<sup>181</sup>*

Improving and facilitating the transition to the formal sector could generate considerable investment in micro-enterprises found in the informal sector and that consider becoming formal, but do not due to the high cost they would have to incur. In the same way, micro-enterprises, both formal and informal, suffer difficulties in financing from lack of natural or legal persons who may act as a "guarantor". Improving access to credit by small and medium sized enterprises and supporting their access to technical support services and training appropriate to their needs, could have strong impacts on the demand for labor.<sup>182</sup>

### Characteristics of Informality

Participation in the informal economy varies by education level of the workforce, notably declining for workers with more advanced schooling. Some of activity in the informal sector may be voluntary and transitory as business start informal and become formal as they grow.

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<sup>180</sup> Translated from “Inputs for the Elaboration of the Strategy of National Development,” Chapters submitted by SEEPYD/CONARE for discussion, Chapter on Employment and Labour Market, pp. 3-4, citing UNDP (2008). *Situación Social en RD y elementos para una política social*. [http://www.bancentral.gov.do/estadisticas.asp?a=Mercado\\_de\\_Trabajo](http://www.bancentral.gov.do/estadisticas.asp?a=Mercado_de_Trabajo)

<sup>181</sup> Translated from “Inputs for the Elaboration of the Strategy of National Development,” Chapters submitted by SEEPYD/CONARE for discussion, Chapter on Employment and Labor Market, pp. 3-4, citing Banco Central de la República Dominicana (2008<sup>a</sup>). *Estadísticas del Mercadode Trabajo*. [http://www.bancentral.gov.do/estadisticas.asp?a=Mercado\\_de\\_Trabajo](http://www.bancentral.gov.do/estadisticas.asp?a=Mercado_de_Trabajo)

<sup>182</sup> Translated from BID, 2009, *op.cit.*, p. 264

**Table 7-2 Characteristics of Dominican Workforce by Education Level**

Education Level	Number in Workforce	% of Workforce	Unemployment Rate	% Informally Employed
None	303,972	6.9	10.3	79.9
Primary	1,759,758	40.2	12.0	73.7
Secondary and Vocational	1,408,894	32.2	19.0	53.0
University and Post Grad	906,242	20.7	12.8	19.9

Source: Dominican Republic Central Bank, Labor Market 2010, p. 133 and 168.

*Productivity and Incomes in the Informal Sector*

In the Dominican Republic, informal employment is concentrated in workers who are self-employed. As shown below, about 33% of employment is informal self-employed, whose wages are, on average, lower than those of formal sector employees. Informal workers are in the base of the pay pyramid, while informal employers earn nearly twice as much as formal employees. However, as estimated in the Mincerian equations presented in Chapter 2, the difference in wages for workers in the informal sector seems to be determined by personal characteristics of these workers rather than simply the fact that they are employed in the informal sector. In other words, all things being equal working in the informal sector does not cause a statistically significant drop in wages in and of itself.

**Table 7-3 Wage Differences According to Type of Contract**<sup>183</sup>

	Average hourly wage (DR pesos)	% of Total Employment	% of Payroll
Informal wage earners	38	7.5	4.6
Self-employed informal	53	39.4	33.4
Formal wage earners	66	47.4	49.8
Informal employers	118	3.1	5.8
Self-employed formal	140	1.8	4.0

Source: Author's calculations, based on the Dominican Republic Central Bank's labor market surveys.

We can make two rough estimates of the relative productivity of the DR formal and informal sectors. First, based on the IMF estimate of the percentage of DR GDP contributed by the informal sector, 44.8%, as reported in Table 7-4 below, we can estimate the informal sector GDP in 2011 as DR\$887,137 million and formal sector GDP as DR\$ 1,093,080 million (not

<sup>183</sup>Translated from BID, 2009, *op.cit.*, p. 270

## Chapter 7: Formal/Informal Sector Dichotomy

counting taxes less subsidies). Divide these numbers by the informal and formal sector labor force for that year, from DR Central Bank labor survey data (2,226,189 informal workers vs. 1,686,216 formal workers) and we get productivity estimates of DR\$398,500 per informal sector worker and DR\$648,244 per formal sector worker. So the latter are 63% more productive than the former.<sup>184</sup>

**Table 7-4 Estimated GDP per worker in formal and informal sectors**

<b>Real GDP 2011, current DR\$ millions</b>	<b>1,980,216.6</b>		
Percent of GDP from informal sector	44.8%	(IMF estimate early 2000s)	
Informal sector GDP	887,137.0		
Formal sector GDP	1,093,079.6		
		Percent	
Informal sector labor force 2011	2226189	56.90%	
Formal sector labor force 2011	1686216	43.10%	
GDP per worker in informal sector	398,500	61.5%	
GDP per worker in formal sector	648,244	162.7%	

Second, we can look at four important sectors of the DR economy with relatively low productivity per worker: agriculture, construction, wholesale and retail commerce and other services, which in 2011 provided 68% of total employment and employed 78% of informal sector workers (and 54% of formal sector workers). The value-added (GDP) contributed by these sectors averaged DR\$332,529 per worker. The other sectors combined provided 32% of total employment, employed 22% of informal workers (46% of formal workers), and averaged DR\$874,012 value-added per worker, 73% more than the first four sectors. The higher levels of output per worker in these latter subsectors indicate a higher level of labor productivity than in most of the subsectors dominated by informal employment (with the transport and communication subsector an exception). This is most likely due to the use of more capital equipment per worker (as in transportation and communication) as well as more efficient technology. (See Table 7-5.)

<sup>184</sup> Note (from Central Bank): The informal sector includes (1) all salaried workers in businesses with less than 5 employees, (2) self-employed workers, and (3) workers in the following occupation groups: farmers, operators and drivers, handicrafts, traders and sellers and unskilled workers. Also included are domestic workers and unpaid workers.

## Chapter 7: Formal/Informal Sector Dichotomy

**Table 7-5 Formal & Informal Employment by Sector and Sector Contributions to GDP per Worker**

Formal & Informal Employment by Sector and Sector Contributions to GDP per Worker								Total GDP	GDP per	% of ave.
	% Growth of	Formal	Informal	Total				DR\$millions	Employee	% of ave.
	Total Empl.	Employment	Employment	Employment	% Formal	% Informal	% of Total			2011 GDP
Sector	2011/2000	2011	2011	2011	Empl 2011	Empl 2011	Empl 2011	2011	2011	per worker
Agriculture	18.9%	73,730	500,351	574,081	12.8%	87.2%	14.7%	118,040.3	205,616	40.6%
Construction	27.9%	35,938	208,288	244,226	14.7%	85.3%	6.2%	115,921.2	474,647	93.8%
Wholesale and Retail Commerce	29.7%	254,030	603,492	857,522	29.6%	70.4%	21.9%	194,212.6	226,481	44.7%
Other Services	57.3%	552,274	429,917	982,191	56.2%	43.8%	25.1%	455,695.5	463,958	91.7%
Subtotals		915,972	1,742,048	2,658,020	34.5%	65.5%	67.9%	883,869.6	332,529	<b>65.7%</b>
Percent of Total		54.3%	78.3%	67.9%				44.6%	65.7%	
Mining	211.6%	15,545	3,220	18,765	82.8%	17.2%	0.5%	7,528.4	401,194	79.3%
Manufacturing Industries	-23.4%	277,208	120,708	397,916	69.7%	30.3%	10.2%	487,207.0	1,224,397	241.9%
Electricity, Gas and Water	29.7%	31,145	0	31,145	100.0%	0.0%	0.8%	44,375.6	1,424,807	281.5%
Hotels, Bars and Restaurants	45.7%	117,394	115,121	232,515	50.5%	49.5%	5.9%	192,250.7	826,831	163.4%
Transport and Communications	53.6%	67,549	220,402	287,951	23.5%	76.5%	7.4%	230,316.6	799,847	158.0%
Financial Intermediation and Insurance	68.8%	72,016	24,690	96,706	74.5%	25.5%	2.5%	75,002.0	775,567	153.2%
Public Administration	48.0%	189,387	0	189,387	100.0%	0.0%	4.8%	59,666.7	315,052	62.2%
Subtotals		770,244	484,141	1,254,385	61.4%	38.6%	32.1%	1,096,347.0	874,012	<b>172.7%</b>
Percent of Total		45.7%	21.7%	32.1%				55.4%	172.7%	
<b>Total</b>	<b>28.7%</b>	<b>1,686,216</b>	<b>2,226,189</b>	<b>3,912,405</b>	<b>43.1%</b>	<b>56.9%</b>	<b>100.0%</b>	<b>1,980,216.6</b>	<b>506,138</b>	

Source: Central Bank of the Dominican Republic,

[http://www.bancentral.gov.do/estadisticas\\_economicas/Mercado\\_de\\_Trabajo/pob\\_informal\\_rama.xls](http://www.bancentral.gov.do/estadisticas_economicas/Mercado_de_Trabajo/pob_informal_rama.xls)

### Causes of Informality

Vuletin estimates not only the size of the informal economy but the relative contribution of each factor contributing to the existence of the informal economy in 32 mainly Latin American and Caribbean countries in the early 2000s. He found that a stringent tax system and regulatory environment, higher inflation, dominance of the agriculture sector, and weakness in governance are the key factors underlying the informal economy. The evidence obtained also confirms that a higher degree of informality reduces labor unionization, the number of contributors to social security schemes, and enrollment rates in intermediate education. He concluded that the labor rigidity (minimum wage laws, severance pay requirements and other restrictions on reducing a firm's workforce, etc.) was the most important factor in the DR, contributing 44.4% to the size of its informal sector, compared with only 26.3% from the importance of agriculture and 23.9% from the tax burden. However, as discussed in Chapter 4, more recent data from the World Bank suggests that the minimum wage and labor rigidity are not major restrictions to formal sector employment. Even so, the labor code has certain restrictions on temporary contracts or on dismissals, which is an incentive for some SMEs to stay in informality.<sup>185</sup>

<sup>185</sup> Translated from BID, 2009, *op.cit.*, pp. 269-270

Table 7-6 Relative Contribution of Casual Variable to Size of Informal Economy

<b>Country</b>	<b>Tax burden</b>	<b>Labor rigidity index</b>	<b>Importance of agriculture</b>	<b>Inflation</b>
The Bahamas	0.0	54.6	42.3	3.1
Cyprus	32.2	0.0	63.5	4.3
Grenada	57.1	0.0	40.9	2.0
St. Kitts and Nevis	34.0	32.4	28.1	5.5
Trinidad and Tobago	61.4	26.5	6.5	5.6
Barbados	65.6	0.0	31.2	3.2
Mexico	52.4	14.4	5.4	27.8
Brazil	31.1	19.6	27.5	21.8
Malta	52.2	42.1	2.6	3.1
Antigua and Barbuda	60.5	31.3	6.1	2.1
Chile	36.1	27.6	30.2	6.0
Argentina	45.6	15.3	38.3	0.7
Dominica	43.2	24.7	30.7	1.4
Jamaica	36.2	33.3	17.6	12.9
Uruguay	22.8	15.4	43.0	18.9
El Salvador	32.1	30.3	32.8	4.8
Guyana	46.3	0.0	47.6	6.1
Peru	31.9	36.7	24.4	7.0
St. Lucia	32.9	16.4	48.7	2.0
Costa Rica	30.8	35.6	22.0	11.6
Guatemala	31.4	23.0	39.5	6.1
Venezuela	33.9	24.9	1.1	40.1
Colombia	36.4	35.3	15.2	13.1
Panama	29.0	23.1	47.1	0.8
Dominican Republic	23.9	44.4	26.3	5.4
Belize	22.9	26.7	49.3	1.1
St. Vincent and the Grenadines	33.8	23.9	41.0	1.2
Ecuador	21.1	35.7	22.2	21.0
Honduras	19.8	31.2	37.4	11.7
Fiji	22.8	29.6	45.8	1.7
Nicaragua	18.5	37.1	38.9	5.6
Paraguay	10.4	52.4	32.7	4.5
<i>Mean</i>	<i>34.6</i>	<i>26.4</i>	<i>30.8</i>	<i>8.2</i>

Source: Vuletin's calculations based on Model 1 MIMIC results and Vuletin 2008.

## Chapter 7: Formal/Informal Sector Dichotomy

The World Bank analyzed the results of informal worker surveys conducted in several LAC countries in the mid '00s and found the characteristics most strongly correlated with informal employment to be: firm size (10 employees or fewer), education (completion of schooling below the secondary level), industry sector (construction, agriculture, retail, and transport), tenure (less than one year), age (youth predominantly informal salaried, self-employed mostly older workers), and women's household status (married women with children).<sup>186</sup>

### *Informality in the Urban Labor Market Survey*

In a 2007 study of the urban informal sector jointly sponsored by the World Bank, the Central Bank of the DR, and the Secretary of State for the Economy, Planning, Communication and Development, it was found that about 44 per cent of informal business owners (mostly small companies) state that it is "not worthwhile" or they "do not believe it necessary" to register a business as small as theirs or that it is not considered necessary, and this could be interpreted as an implicit appreciation of an imbalance between the costs and benefits of registering in the case of small business. Also, almost 20% state that the social norm ("no business like this gets license") as main reason. With these reasons, the "trouble" and the "cost" involved in the action of registering appear as choices more noteworthy.<sup>187</sup>

**Table 7-7 Main Reasons for Not Registering a Business**

Main Reasons for Not Registering a Business in the DR (2007)	
It is a small business and not worth it	34.1
No business like this takes out a license	19.2
It takes too much work to get the license and permits	10.3
It is not necessary to get a license	9.4
Getting the license and permits is costly	9.1
To avoid paying more taxes	4.5
The business owner doesn't know how to get a license	3.9
To lower the costs of hiring workers	3.1
Other	6.4
<b>Total</b>	<b>100</b>

Source: Secretary of the Economy, Planning and Development, Central Bank of Dominican Republic, and International Bank for Reconstruction and Development (IDB)/World Bank (WB), "Informality in the Urban Labor Market in the Dominican Republic", 2007

Very few of the owners of informal establishments consider that being informal harmed them (around 8%), and more than one-third (38%) believes that it has benefited them. The ways they can be harmed by not formally registering are diverse, although among them stands out the difficulties of doing business with other companies and the government, to engage in legal defense if there is a problem, and to access bank credit; on the other hand, the benefits of

<sup>186</sup> World Bank, "Informality: Exit and Exclusion," @ <http://siteresources.worldbank.org/INTLAC/Resources/CH0.pdf>

<sup>187</sup> Translated from Secretaria de Estado de Economía, Planificación y Desarrollo (SEEPYD), Banco Central de la República Dominicana (BCRD), y Banco Internacional de Reconstrucción y Fomento/Banco Mundial (BM), *La Informalidad en el Mercado Laboral Urbano de la República Dominicana* (Secretary of State of the Economy, Planning and Development, Central Bank of Dominican Republic, and International Bank for Reconstruction and Development/World Bank (WB), *Informality in the Urban Labor Market in the Dominican Republic*), 2007, p. 71

## Chapter 7: Formal/Informal Sector Dichotomy

informality are concentrated in the fact of not having to pay taxes and the ability to make business decisions without government restrictions.<sup>188</sup>

**Table 7-8 Principal Ways in Which the Business Has Benefited by Not Being Formally Registered**

It frees you from paying taxes	51.3
You can make decisions without having to struggle with Government	28.1
Avoid having to pay bribes to inspectors of Government	8.4
It reduces the expenses on wages	8.2
It allows you to change your employees without severance pay	2.0
It allows you to operate or expand without getting permissions	2.0
<b>Total</b>	<b>100.0</b>

**Table 7-9 Principal Ways in Which the Business Has Been Harmed by Not Being Formally Registered**

It makes it difficult to do business with other large companies	30.4
It makes it difficult to legally defend yourself if you have a problem	25.5
It makes it difficult to do business with the Government	15.5
It makes it difficult to have access to credit from banks	15.1
It forces him to pay bribes to the government inspectors	13.6
<b>Total</b>	<b>100.0</b>

The results of the survey show that a high percentage (between a third and slightly less than half) of formal and informal workers, both among self-employed workers and among wage employees, believe that the main reason they are in their activity is that it is "the only thing I know." However, more than half of self-employed informal workers reveal voluntary factors as the principal motivation, the possibility of obtaining higher incomes than as an employee, flexibility and independence and custom being the main reasons cited. Moreover, when asked for the second most important reason for working freelance, very few declared a lack of options and factors of a voluntary nature are predominant. At the same time, among the main reasons cited for being wage-employed (formal or informal) is a rejection of the risk of independent activity and a value placed on the possibility of making progress and benefits of being formal, while less than 5% cite the possibility of higher incomes. In addition, about 20% attribute their current condition mainly to the inability to obtain resources to start work on their own and 30% cited it as the second most important reason. This could be indicative of an implicit preference for independent labor *vis-a-vis* wage labor to which workers could aspire given their qualifications.<sup>189</sup>

Remuneration as a main motivating factor of self-employed activity is higher among men than among women, who, on the other hand, value relatively more the flexibility of schedules and cite more personal reasons. However, self-employment is perceived as the only possible

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<sup>188</sup>Ibid., p. 72

<sup>189</sup>Ibid., pp. 67-68

## Chapter 7: Formal/Informal Sector Dichotomy

option in similar proportions of both men and women (around 44%), and predominantly among very young workers encountered in these jobs.<sup>190</sup> In terms of educational levels, the least educated reveal to a greater extent that self-employment is the only available option, while a higher level of income and flexibility are reasons with greater relative weight among workers with more schooling. Finally, a higher percentage of workers in the Metropolitan Santo Domingo and Eastern States areas gave to earn more income than as wage employees as the main reason.<sup>191</sup>

**Table 7-10 Principal Reasons for Self-Employment**

	<u>Men</u>	<u>Women</u>	<u>Total</u>
It is the only thing I know	43.9	44.0	43.9
Earn more than as an employee	16.0	10.3	14.4
I am accustomed to it	9.2	6.0	8.3
You have more flexibility	6.1	12.9	7.9
Don't want to have a boss	7.3	5.4	6.8
It is less risky	4.4	5.2	4.7
He learned this trade by family tradition	4.4	2.1	3.8
More possibilities to make progress	3.4	2.6	3.2
Less responsibility	1.9	3.5	2.3
Want to start his own business	0.9	1.2	1.0
Other	2.5	6.7	3.6
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

*SOURCE: Translated from Secretaria de Estado de Economía, Planificación y Desarrollo (SEEPYD), Banco Central de la República Dominicana (BCRD), y Banco Internacional de Reconstrucción y Fomento/Banco Mundial (BM), La Informalidad en el Mercado Laboral Urbano de la República Dominicana (Secretary of State of the Economy, Planning and Development, Central Bank of Dominican Republic, and International Bank for Reconstruction and Development/World Bank (WB), Informality in the Urban Labor Market in the Dominican Republic), 2007, p. 69*

The survey revealed a high degree of mobility of workers between formal and informal status. For example, of the employed persons who were currently contributing to pensions around 23 percent were previously in a job without pension contributions. Of those employees who were currently not contributing to a pension plan, around 12% declared being previously in some employment where they were contributing to a pension. The analysis also investigated the extent to which workers pass from one employment category to another. In that regard, it showed that 17% of current salaried employees had been self-employed workers or owners of an unincorporated enterprise; about 30% of current self-employed workers had previously been owners of unincorporated companies or wage employees, and about 48% of the current business owners had previously been salaried or self-employed workers.<sup>192</sup>

<sup>190</sup>It is worth noting that the incidence of self-employment is quite low among young workers, who tend to be predominantly informal wage employees.

<sup>191</sup>Ibid., pp. 68-69

<sup>192</sup>Ibid., p. 98

## Chapter 7: Formal/Informal Sector Dichotomy

The findings demonstrate that the whole informal worker scene constitutes a complex universe, with very different motivations and performance. In this universe they coexist, e.g., employees with very precarious working conditions, together with self-employed persons who voluntarily opt for independent work. In both cases, informal work offers for many a source of work comparable with employment in the formal sector to which workers could aspire given their levels of qualification. Also, the informal world encompasses business owners who refrain from registering their activities formally for very different reasons, which range from a majority that believes registration is not at all necessary, to a significant percentage that simply believes the action of registration is too costly or cumbersome.<sup>193</sup> To reduce informality public policies must create incentives so that companies and workers find an incentive to join the formal economy.<sup>194</sup>

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<sup>193</sup>Ibid., pp. 98-99

<sup>194</sup>Ibid., p. 99

## Chapter 8 COST OF FINANCE AND THE FINANCIAL SECTOR

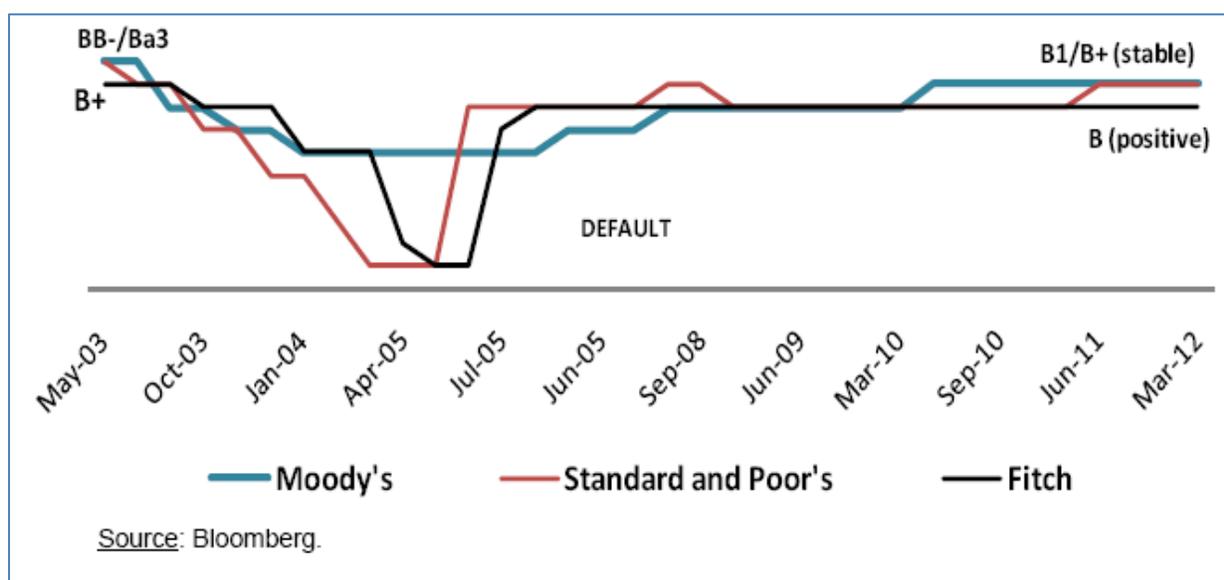
Following the 2003 domestic financial crisis in the Dominican Republic which caused substantial losses in production, improved financial regulation and supervision have resulted in generally sound financial institutions. Banks have sufficient assets and liquidity to accelerate lending to the private sector, but caution acquired from the 2003 crisis combined with attractive alternate investments including government debt have contributed to slower than expected credit expansion. A significant factor limiting the expansion of credit to the business sector is the large number of unregistered (informal) businesses, relative to the number of registered (formal) businesses. The average interest rates applied to commercial credit are not grievously high in real terms, suggesting more credit would be available to businesses that satisfied lending requirements including government registry. The current accelerated expansion of consumer credit corroborates this finding, as personal lines of credit are independent of the government business registry. We therefore conclude that lending to the private sector would be accelerated by increasing the number of formal firms and thereby expanding the formal sector's demand for credit. Access to finance has issues that can be addressed individually, but the cost of finance does not rise to the level of a binding constraint to inclusive growth in the Dominican Republic.

### Access to International Investment and Finance

The evidence suggests access to international capital is not greatly hindered by public policy, and efforts by the authorities to maintain macroeconomic stability and access international capital markets have led to improvements in the sovereign risk rating. These efforts have in turn increased the attractiveness of investments in the DR to foreign investors. Foreign direct investment has been robust with only short-lived contractions caused by the global recession and recent figures show significant new inflows into a wide range of sectors.

Generally speaking, the sovereign risk rating is a ceiling for risk ratings for the private commercial sector. When sovereign ratings improve, the private sector should also face improved terms for their international borrowing. Figure 8-1 shows the evolution in the sovereign risk ratings for recent years. The ratings from Moody's and Standard and Poor's have improved over the past two years, with stable outlooks. This is good news for private sector access to international funding sources.

Figure 8-1 Credit Rating Evolution



Limitations to international investment in the Dominican economy appear to be slight. After falling to US\$1.9 billion in 2010, FDI grew sharply in 2011, to US\$2.4 billion (the highest since a record US\$2.9 billion in 2008). The Economist Intelligence Unit expects FDI inflows to average US\$1.8 billion in 2012-13, and to average around 2.7% of GDP annually in the 2012-16 period, covering an average 47% of the forecasted current-account deficit in the period. The government has traditionally counted on foreign direct investment to finance the wide current-account deficit, which was 8% of GDP in 2011.

Table 8-1 Foreign Direct Investment to the Dominican Republic

(US\$ m, unless otherwise indicated)			
	2010	2011	% change
Tourism	94.6	103.6	9.5
Commerce/industry	465.7	304.5	-34.6
Telecommunications	500.2	149.4	-70.1
Energy	108.0	345.5	219.9
Financial	93.6	202.7	116.6
Free zones	71.8	151.2	110.6
Mining	298.3	964.9	223.5
Real estate	264.1	149.3	-43.5
<b>Total</b>	<b>1,896.3</b>	<b>2,371.1</b>	<b>25.0</b>

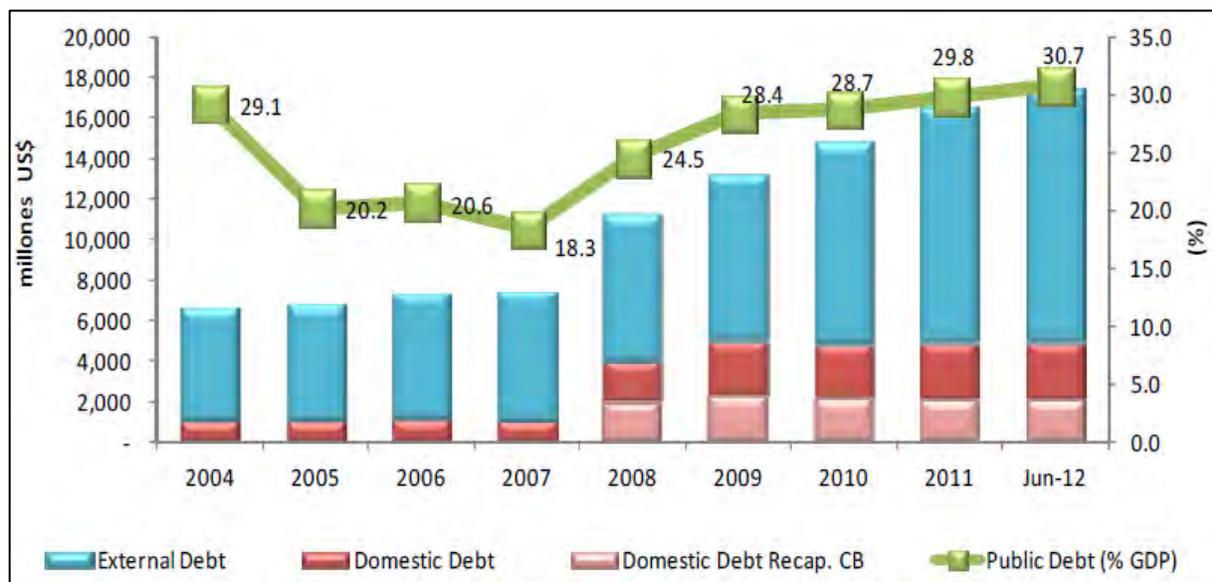
Source: The Economist Intelligence Unit, based on data from the Central Bank of the Dominican Republic.

Public sector access to international sources of financing has expanded in recent years, with the most recent international commercial bond issuance taking place in April 2011. As of March 31, 2012, government external debt totaled US\$12,147 million, equivalent to 21.8% of GDP.

## Chapter 8: Cost of Finance and the Financial Sector

Of the external debt stock, official creditors make up 76.9%, of which 35.1% is debt contracted with multilateral institutions and 41.8% is bilateral debt. Private creditors hold 23.1% of the total external debt, of which 2.8% is commercial banks debt and 20.3% is bonds (sovereign and Brady's).

**Figure 8-2 Public Debt Stock (NFPS) and as a Percentage of GDP**  
(Figures in US\$ millions and %)



Source: Dominican Republic's Quarterly Public Debt Report April – June 2012, Dominican Ministry of Finance.

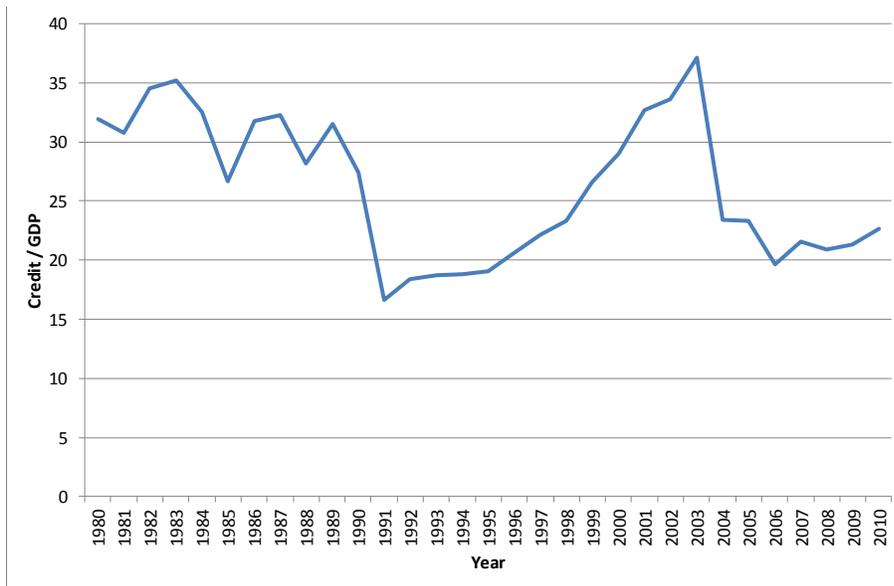
The terms of international borrowing are relatively favorable, but the rates applied to domestic financing suggest crowding out of bank lending to the private sector may eventually become a concern, with nominal internal debt rates ranging from 13.9% to 15.2% in local currency. The financial sector's weighted average nominal lending interest rate to the commercial sector was 17.43% in local currency in December 2011. With commercial banks being offered 13.9% on government bonds with no risk (according to risk rating classifications) and therefore lower provisioning requirements, private sector lending may be less attractive than the purchase of government debt from a banking profitability perspective.

### Access to Domestic Finance and Credit

What is most worrisome is the relatively slow pace of domestic bank loan portfolio expansion to local borrowers. The domestic banking crisis of 2003 provoked a sharp contraction in lending to the private sector as a percentage of GDP, and over the past 8 years that ratio has not recovered.

**Chapter 8: Cost of Finance and the Financial Sector**

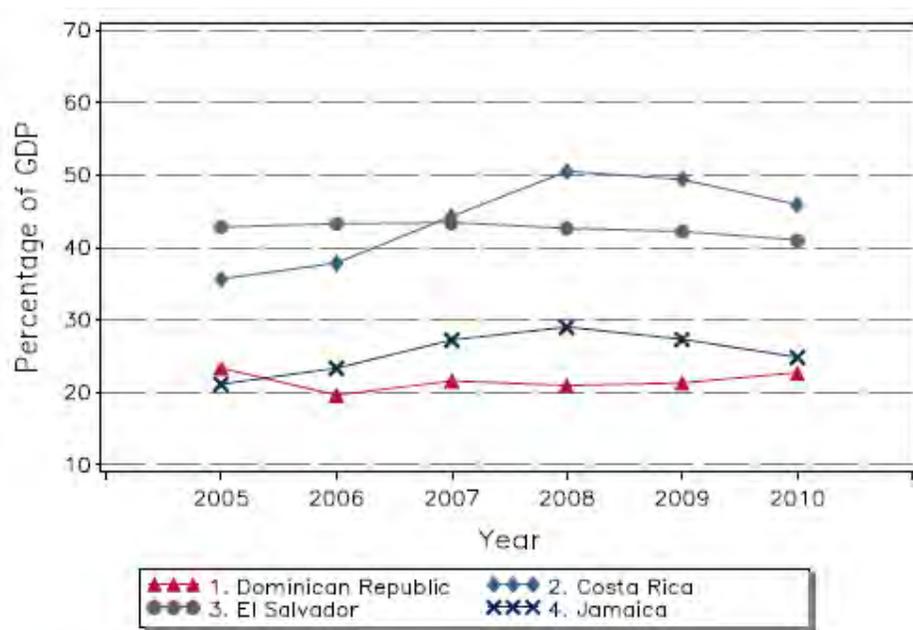
**Figure 8-3 Dominican Republic Domestic Credit to Private Sector (% of GDP)**



Source: USAID's Economic Analysis and Data Services EAD

If the financial crisis had not taken place and the strong trend in financial deepening observed over the period 1990-2003 had continued, the Dominican Republic would have had the highest rate of financial penetration among comparator countries. As of 2010, however, it had the lowest.

**Figure 8-4 Comparative Domestic Credit to Private Sector (% of GDP) 2005-2010**



Source: USAID's Economic Analysis and Data Services EAD

## Chapter 8: Cost of Finance and the Financial Sector

A review of banking regulations does not reveal obvious normative restrictions on credit expansion, and in fact the provisions allowing non-fixed assets to be used as loan collateral are pro-active steps to overcome collateral restrictions that would otherwise inhibit lending.

A possible damper on lending to the private sector would be a lack of liquidity in the financial sector to expand lending. However, evidence shows that banks are quite liquid which makes the conundrum of low lending even more glaring.

**Table 8-2 Bank Liquid Reserves to Bank Assets Ratio**

Bank liquid reserves to bank assets ratio (%)										
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
<b>Dominican Republic</b>	17%	16%	37%	52%	54%	47%	40%	39%	43%	46%
<b>El Salvador</b>	28%	27%	27%	24%	20%	19%	22%	22%	24%	25%
<b>Costa Rica</b>	24%	27%	25%	28%	26%	28%	24%	18%	21%	19%
<b>Jamaica</b>	39%	31%	24%	26%	25%	25%	21%	23%	24%	26%

Source: USAID Economic and Social Database, EADS

It is likely that the trauma of the 2003 crash remains fresh in the minds of lenders, making them overly cautious in expanding credit to new market segments. Presented with the alternative of purchasing government debt with attractive rates of return, lenders have continued to operate profitably with a reduced clientele of familiar borrowers while completing their asset portfolio with government bonds. The fact that 52% of all businesses operating in the country are informal further reduces the pool of eligible borrowers. International experiences with financial crisis episodes suggest recovery of credit to the private sector takes years. According to one recent analysis,

“On average, it took 14.5 quarters, or 3.5 years, for credit to resume growing. In 8 out of 15 countries studied, the ratio of credit to GDP never recovered to the pre-crisis level. For example, in the United States, it took 60 quarters (15 years) for the ratio of credit to GDP to recover to the level preceding the second quarter of 1990, which was the last quarter of sustainable growth. The result seems to suggest that, if a country suffers a sustainable decline during the crisis period, then nominal credit is going to take many quarters or years to recover to the level prior to the crisis, and the time for the ratio of credit to GDP (depth) to recover will be even longer, if ever.”<sup>195</sup>

<sup>195</sup> Pomerleano, p. 20.

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**Table 8-3 Private Sector Credit in the Aftermath of a Crisis**

Country	Last Quarter with Positive Credit Growth	Credit to GDP of the Quarter (%)	First Quarter of Sustainable Credit Growth	Number of Quarters	Quarter with Nominal Value of Credit Exceeded Prior Crisis Credit Level (based on local currency value)	Quarter of Credit to GDP Exceeding the Prior Crisis Credit to GDP (%)	Number of Quarters for Credit to GDP to Recover
US	Q2-1990	54.8	Q2-1993	11	Q4-1994	Q2-2005	60
Argentina	Q4-1998	23.9	Q1-2004	20	Q2-2006	Not happened	34
Colombia	Q3-1998	142.2	Q2-2001	10	Q3-2002	Q2-2007	
Hong Kong, China	Q4-1997	649.5	Q4-2003	23	Q1-2008	Not happened	Not happened
Indonesia	Q2-2008	297.5	Q1-2000	6	Q3-2005	Not happened	
Japan	Q4-1998	198.9	Q3-2005	26			
Korea	No continuous decline in claim to private sector						
Malaysia	Q4-1997	565.7	Q1-2000	8	Q3-2000	Not happened	Not happened
Mexico	Q1-1995	36.2	Q1-1997	7	Q1-1997	Not happened	
Norway	No date for 1987, but the decline was very short, if any						
Philippines	Q2-1998	207.6	Q2-2000	7	Q2-2004	Not happened	
Spain	No continuous decline in claim to private sector						
Thailand	Q4-1997	639.3	Q3-2002	18	Q1-2008	Not happened	
Sweden	Q3-1991	221.7	Q3-1996	19	Q1-1999		
Finland	Q4-1991	371.5	Q2-1997	21	Q1-2002	Not happened	

Source: Pomerleano, based on calculations from the IMF International Financial Statistics.

Given that loans to the private sector appear unlikely to expand quickly in the short term due both to excessive risk aversion in the financial sector and the attractive government internal debt market, an alternate source of financing for local businesses would be the capital market. Unfortunately, the underdeveloped capital market in the Dominican Republic means this source of financing is not available at this time to many businesses. The nascent domestic capital market is a constraint, but not deemed a binding constraint, to inclusive growth in the country.

## Chapter 8: Cost of Finance and the Financial Sector

**Table 8-4 Financial Market Development Rankings, WEF 2011 I**

	<b>Dominican Republic</b>		<b>Costa Rica</b>		<b>El Salvador</b>		<b>Jamaica</b>	
	Score (1-7)	Rank	Score (1-7)	Rank	Score (1-7)	Rank	Score (1-7)	Rank
GCI 2011-2012 (out of 142)	3.7	<b>110</b>	4.3	61	3.9	91	3.8	<b>107</b>
<b>Efficiency enhancers</b>	<u>3.7</u>	<u>93</u>	<u>4.1</u>	<u>61</u>	<u>3.7</u>	<u>96</u>	<u>3.8</u>	<u>85</u>
of which:								
<b>Financial market development</b>	3.6	<b>103</b>	3.8	91	4.0	72	4.3	52
Availability of financial services	4.6	66	4.5	76	5.1	44	4.6	63
Affordability of financial services	4.1	70	4.3	63	4.3	59	3.7	98
Financing through local equity market	2.5	<b>116</b>	2.4	<b>121</b>	3.0	<b>101</b>	4.1	39
Ease of access to loans	2.4	98	2.1	<b>119</b>	2.8	67	2.1	<b>124</b>
Venture capital availability	2.1	<b>113</b>	2.2	<b>102</b>	2.3	89	1.9	<b>127</b>
Soundness of banks	5.7	34	6.0	24	5.8	29	5.4	56
Regulation of securities exchanges	3.6	<b>109</b>	3.7	<b>104</b>	3.7	<b>103</b>	5.0	34
Legal rights index, 0-10 (best)*	3.0	<b>105</b>	5.0	76	5.0	76	8.0	20

Notes: Values are on a 1-to-7 scale unless otherwise annotated with an asterisk (\*).  
SOURCE: World Economic Forum, *Global Competitiveness Report 2011-2012*

### Interest Rates and Loan Portfolio Composition

An examination of lending by sector reveals large distinctions – consumer lending rates are high and double those for commercial lending, but the commercial loan portfolio is also twice as large as the consumer lending portfolio. Most loans are denominated in local currency (pesos).

**Table 8-5 Lending Interest Rates by Sector, 2006-2011 I**

Lending Interest Rate (weighted avg)	Dec-2006	Dec-2007	Dec-2008	Dec-2009	Dec-2010	Dec-2011
<b>Pesos</b>	23.36	20.65	25.54	20.02	18.34	21.34
Commercial	19.37	17.12	22.88	15.82	14.17	17.43
Consumer	35.91	31.64	36.67	33.94	31.73	35.29
Housing	16.23	14.08	17.16	13.81	12.13	13.71
<b>USD</b>	12.01	10.98	10.60	10.17	9.48	9.36
Commercial	8.56	8.29	8.65	8.06	7.68	7.52
Consumer	58.99	54.02	50.69	51.01	50.27	49.91
Housing	8.70	8.21	8.69	8.91	8.60	8.79

Source: DR Superintendency of Banks, “Cartera de Crédito por Tipo de Préstamo y Tipo de Entidad, Tasa de Interés Promedio Ponderada por Tipo de Moneda Informaciones al Cierre de Cada Mes”

Table 8-6 Loan Portfolio by Denomination and Sector, 2011

Loan Portfolio by Denomination, Type	Dec-2011	% of Total
<b>RD Pesos (millions)</b>	<b>408,136.29</b>	
Commercial	211,793.93	52%
Consumer	107,878.06	26%
Housing	88,464.30	22%
<b>USD (millions)</b>	<b>2,355.71</b>	
Commercial	2,195.63	93%
Consumer	99.92	4%
Housing	60.16	3%

Source: Superintendency of Banks

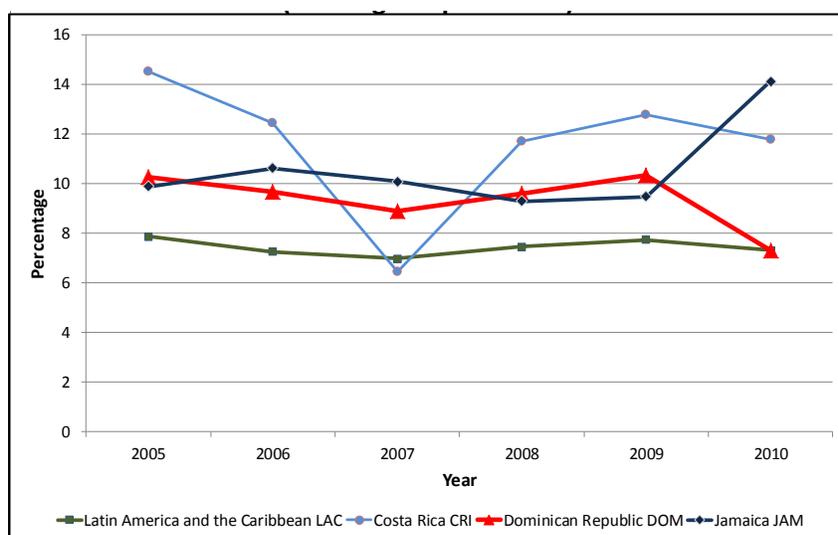
Source: DR Superintendency of Banks, “Cartera de Crédito por Tipo de Préstamo y Tipo de Entidad, Saldo Adeudado en Moneda Nacional y Moneda Extranjera, Informaciones al Cierre de Cada Mes”

With inflation rates in the range of 5-6% annually, the real lending rate to the commercial sector of 17.4% in 2011 does not appear to be prohibitively high. It should be noted that this interest rate is only extended to a relatively small number of businesses, however, as reflected in the low credit/GDP ratio.

### Interest Rate Spreads

Spreads between the retail lending and borrowing rates in the Dominican Republic hovered around 10% in the second half of last decade, falling in 2010 to 7.3% comparable to the LAC average and outperforming both Costa Rica and Jamaica. The spread is often used as a measure of operational efficiency within financial institutions, and while there is room for improvement, these spreads do not indicate large inefficiencies in Dominican banks.

Figure 8-5 Interest Rate Spreads

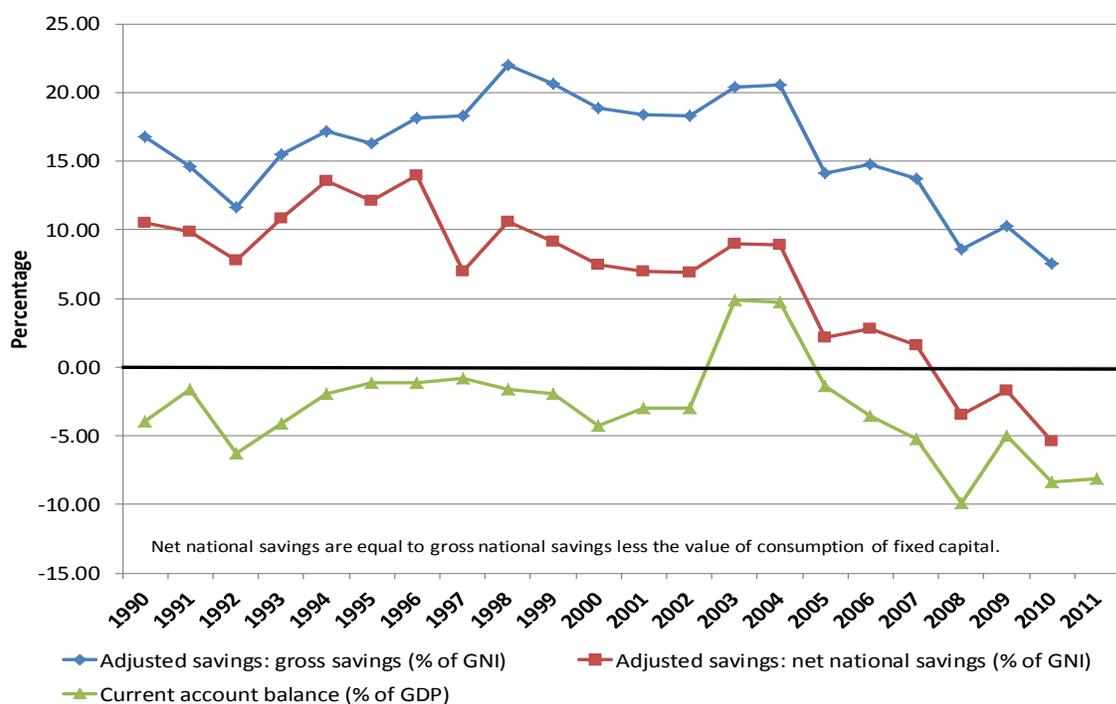


Source: USAID's Economic Analysis and Data Services EAD citing International Monetary Fund, International Financial Statistics and data files.

## Domestic Savings

Starting in 2005, all savings indicators in the Dominican Republic began a significant decline. The current account turned negative in 2005, with net domestic savings following suit in 2008. Both indicators have remained negative since then, with the current account balance averaging -7.3% of GDP over the period 2007 to 2011.

Figure 8-6 Gross and Net Savings, Current Account Balance

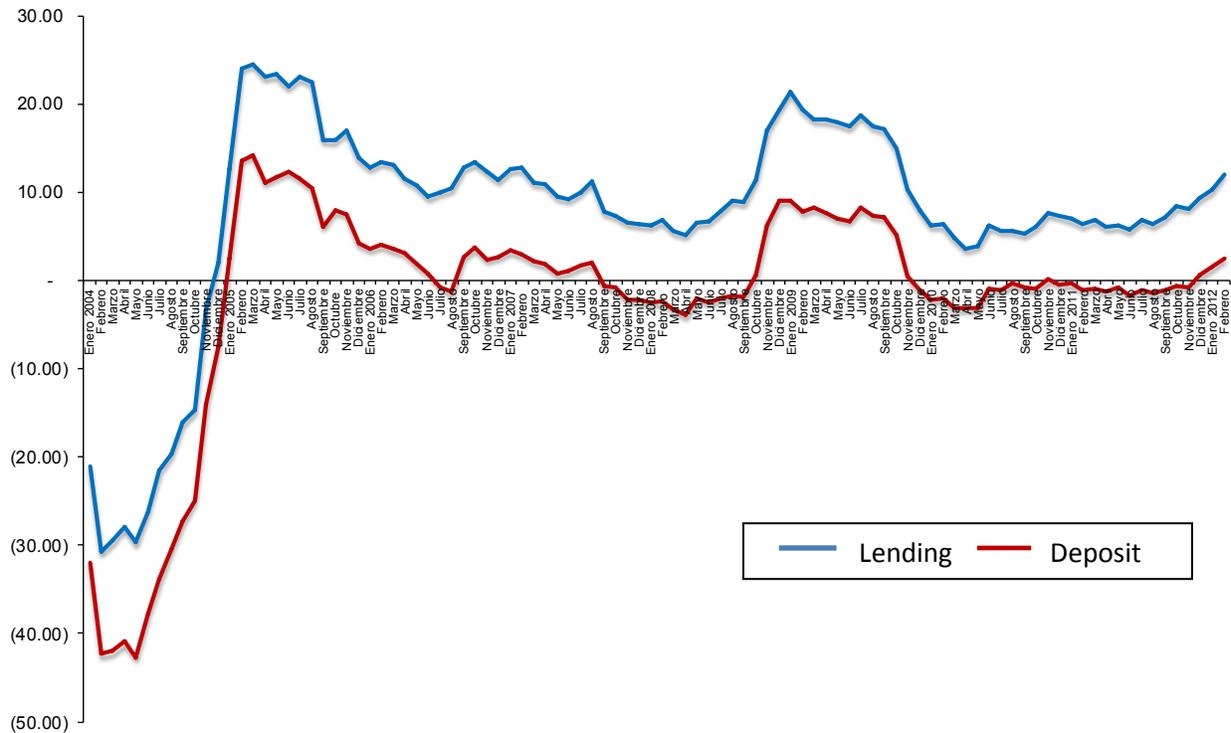


Source: World Bank, World Development Indicators.

The timing of these changes coincide with two major events affecting savings decisions: a domestic banking sector crisis in 2003-4 which sent the country into recession, followed by the end of the Multi-Fibre Arrangement (MFA) in 2005. Throughout the 1990s and early 2000s, garment assembly production led the Dominican Republic's impressive economic growth rate, but following the MFA expiration the sub-sector experienced a dramatic decline. Despite both of these challenges, GDP growth returned to robust rates averaging 5.8% from 2007-2011.

So given the evidence, has inclusive growth been limited by the availability of savings? To the extent that foreign sources of savings have been willing to step in, perhaps not. Gross savings as a percentage of national income are positive, and the country's sovereign credit rating remains investment grade. A key piece of evidence comes from the evolution of real deposit interest rates in the banking sector. Once they recovered from the financial sector crash in 2004, these rates have been low and frequently negative, only recently becoming positive in December 2012. According to their price evolution, savings are not in short supply. The more likely scenario is that effective demand for savings is weak. Since the end of the free trade zone-led manufacture exports era, the country has been challenged to find productive investments in which to deploy resources.

Figure 8-7 Real Lending and Deposit Interest Rates in the Banking Sector 2004-2012



Source: DR Superintendency of Banks

While there is little evidence to conclude growth has been constrained by domestic savings in the recent past, a word of caution should be added. Continued consumption of fixed capital stocks and weak domestic credit expansion will erode future growth potential. Although domestic savings are not identified at this time as a binding constraint to inclusive growth, the willingness of foreign investors to shore up gross savings may be tested if the global financial crisis continues or worsens.

## Chapter 9 GOVERNMENT FAILURES

### Introduction

The term 'good governance' is used in the development literature to describe how public institutions conduct public affairs and manage public resources in order to guarantee the realization of human rights.<sup>196</sup> Governance describes "the process of decision-making and the process by which decisions are implemented (or not implemented)".<sup>197</sup> The term governance can apply to corporate, international, national, local governance or to the interactions between other sectors of society.<sup>198</sup> The concept of "good governance" often emerges as a model to compare ineffective economies or political bodies with viable economies and political bodies.<sup>199</sup>

Government failure can impose a large number of *micro* and *macro* risks and extra costs that reduce the expected returns of private investment, and thus reduce more productive employment generation. These include costly requirements for new entries and industries dominated by oligopolies (such as in transportation of both goods and people), monopolies or government owned enterprises for lack of enforceable competition laws, exceptionally high marginal or corporate tax rates, restrictive labor regulations (like severance payments) that increase the cost of labor and reduce management flexibility to hire and fire as needed, high levels of (or fear of) price inflation, fear of expropriation without just compensation, and bureaucratic requirements that increase the cost of doing business. They also include low regard for property rights, poor judicial enforcement of contracts, a high level of crime, social unrest, open conflict, corruption and high security and protection costs where law and order are problematic.

The governance environment in the Dominican Republic is complex and singled out by many as one of the country's main overarching obstacles for achieving a sustainable, equitable and inclusive growth. The latest USAID assessment on democracy and governance in the DR concluded that the country faces a problem of good governance, one of its main causes being an "overly powerful executive branch confronted by too few checks and balances."<sup>200</sup> In fact most of the Dominican Republic's indicators illustrate a difficult environment in which to do business. The culture of patronage and corruption has profoundly shaped Dominican public institutions and administrative practices have resulted in inefficient public resource use.

### Micro Risks

The overall scores of the DR and the comparator countries have not changed much in the World Economic Forum Global Competitiveness Index since 2007. However, eight more countries have been added to the index and some of the other countries have improved their scores since then, so the DR's overall ranking has dropped from 96 out of 134 countries to 110

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<sup>196</sup> What is Good Governance. UNESCAP, 2009. Accessed July 10, 2009

<sup>197</sup> *Ibid.*

<sup>198</sup> *Ibid.*

<sup>199</sup> Khan 16

<sup>200</sup> In April 2007 USAID financed a study titled "Corruption Costs in the Dominican Household Study" which was then followed with the study cited in the next footnote.

out of 142. For specific index categories in 2011-12, the DR's worst rankings were in Institutions (126); Innovation (122); Goods and Market Efficiency (111); Health & Primary Education (111), and Labor Market Efficiency (104). (See Table 9-1.)

**Table 9-1 Global Competitiveness Index (GCI) 2007 – 2012**

	GCI & Pillars	D. Republic		Costa Rica		El Salvador		Jamaica	
		Score (1-7)	Rank	Score (1-7)	Rank	Score (1-7)	Rank	Score (1-7)	Rank
1	GCI 2011-2012 (out of 142)	3.7	110	4.3	61	3.9	91	3.8	107
2	GCI 2010-2011 (out of 139)	3.7	101	4.3	56	4.0	82	3.9	95
3	GCI 2009-2010 (out of 133)	3.8	95	4.2	56	4.0	77	3.8	91
4	GCI 2008-2009 (out of 134)	3.7	98	4.2	59	4.0	79	3.9	86
5	GCI 2007-2008 (out of 134)	3.7	96	4.2	63	4.0	67	3.9	78
<b>GCI 2011-2012</b>									
	<b>Basic Requirements (40.0%)</b>	<b>3.9</b>	<b>110</b>	<b>4.5</b>	<b>70</b>	<b>4.3</b>	<b>87</b>	<b>3.8</b>	<b>116</b>
1	Institutions	3.1	126	4.1	53	3.2	118	3.6	86
2	Health and Primary Education	5.0	109	6.1	39	5.4	90	5.1	106
3	Infrastructure	3.0	106	3.7	83	4.0	65	3.7	79
4	Macroeconomic Environment	4.4	96	4.3	109	4.6	80	2.6	142
	<b>Efficiency Enhancers (50.0%)</b>	<b>3.7</b>	<b>93</b>	<b>4.1</b>	<b>61</b>	<b>3.7</b>	<b>96</b>	<b>3.8</b>	<b>85</b>
1	Goods Market Efficiency	3.9	111	4.3	57	4.2	69	4.1	78
2	Labor Market Efficiency	4.0	104	4.5	55	4.0	108	4.2	80
3	Financial Market Development	3.6	103	3.8	91	4.0	72	4.3	52
4	Higher Education and Training	3.6	99	4.7	47	3.5	105	3.9	85
5	Technological Readiness	3.6	70	3.9	56	3.4	90	3.6	72
6	Market Size	3.6	69	3.3	83	3.2	86	2.8	102
	<b>Innovation &amp; Sophistication Factors (10.0%)</b>	<b>3.1</b>	<b>109</b>	<b>4.0</b>	<b>36</b>	<b>3.1</b>	<b>106</b>	<b>3.4</b>	<b>84</b>
1	Innovation	2.6	122	3.6	35	2.5	127	2.9	94
2	Business Sophistication	3.7	89	4.4	35	3.8	74	3.8	75

Source: WEF Global Competitiveness Report 2011-2012

The DR's performance on Regulatory Quality in the World Bank WGI, with a score of -0.201 for 2010, indicates excessive regulation and a lack of market-friendly policies.

**Table 9-2 World Governance Indicators**

<b>World Governance Indicators, World Bank</b>				
<b>Series for 2010</b>	<b>Dominican Republic</b>	<b>Costa Rica</b>	<b>El Salvador</b>	<b>Jamaica</b>
<b>Control of Corruption Estimate (-2.5 to 2.5, higher is better)</b>	<b>-0.827</b>	0.668	-0.219	-0.370
<b>Government Effectiveness Estimate (-2.5 to 2.5, higher is better)</b>	<b>-0.626</b>	0.319	0.006	0.183
<b>Political Stability and Absence of Violence Estimate (-2.5 to 2.5, higher is better)</b>	0.023	0.643	0.068	<b>-0.404</b>
<b>Regulatory Quality Estimate (-2.5 to 2.5, higher is better)</b>	<b>-0.201</b>	0.506	0.372	0.296
<b>Rule of Law Estimate (-2.5 to 2.5, higher is better)</b>	-0.807	0.502	<b>-0.871</b>	-0.497
<b>Voice and Accountability Estimate (-2.5 to 2.5, higher is better)</b>	0.052	1.027	<b>0.038</b>	0.439

SOURCE: World Bank, Worldwide Governance Indicators.

CONTACT: The USAID Economic Analysis and Data Services (EADS) maintains statistical information collected from official international organizations, U.S. government agencies, and non-government institutions. This work is carried out for USAID by DevTech Systems, Inc. under contract RAN-M-00-07-00004-00.

(-2.5 to 2.5, higher is better) - Control of Corruption measures the extent of corruption, defined as the exercise of public power for private gain. It is based on scores of variables from polls of experts and surveys. Values range -2.5 to 2.5, with higher values corresponding to better governance outcomes.

(-2.5 to 2.5, higher is better) - Government Effectiveness combines quality of public service provision and of the bureaucracy, competence of civil servants, independence of the civil service from political pressures, and credibility of the government's commitment to policies. Values range from -2.5 to 2.5, with higher values corresponding to better governance outcomes.

(-2.5 to 2.5, higher is better) - Political Stability and Absence of Violence combines several indicators measuring perceptions that the government in power will be destabilized/overthrown by unconstitutional and/or violent means, including domestic violence and terrorism. Values range -2.5 to 2.5, with higher values corresponding to better governance outcomes.

(-2.5 to 2.5, higher is better) - Regulatory Quality focuses on policies e.g. measures of the incidence of market-unfriendly policies such as price controls or inadequate bank supervision, as well as perceptions of the burdens imposed by excessive regulation in areas such as foreign trade and business development. Values range -2.5 to 2.5, with higher values corresponding to better governance outcomes.

(-2.5 to 2.5, higher is better) - Rule of Law measures the extent to which agents have confidence in and abide by the rules of society. These include perceptions of the incidence of crime, effectiveness and predictability of the judiciary, and enforceability of contracts. Values range -2.5 to 2.5, with higher values corresponding to better governance outcomes.

(-2.5 to 2.5, higher is better) - Voice and Accountability combines indicators on various aspects of the political process, civil liberties, political and human rights, as well as citizens' ability to participate in the selection of governments. Values range -2.5 to 2.5, with higher values corresponding to better governance outcomes.

[Produced for USAID staff by USAID Economic Analysis and Data Services \(M/CIO/KM\) under contract RAN-M-00-07-00004-00.](#)

Likewise, the DR scored lower than the comparator countries in the Institutional Component of the World Economic Forum's 2011-2012 GC Index, ranking below 126 out of 142 overall and worse than 100 in 15 of the 21 items comprising that index.

**Table 9-3 Institutional Component of the GC Index 2011-2012**

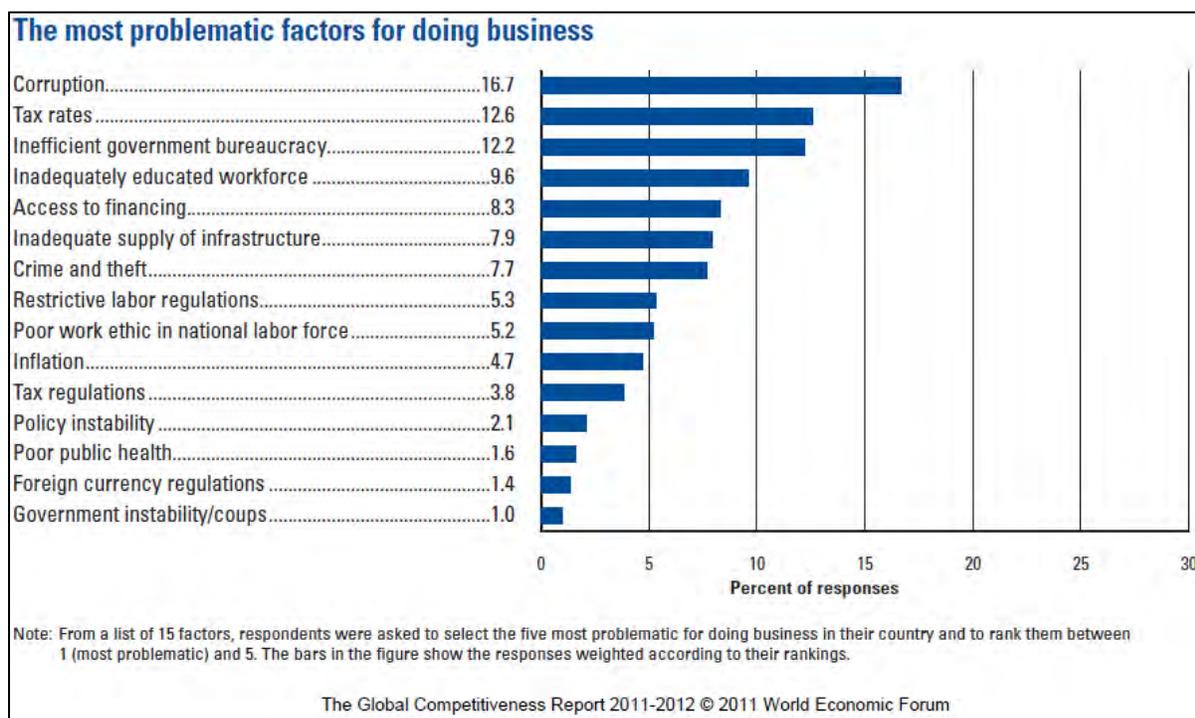
Institutional Component of the GC Index 2011-2012									
		D. Republic		Costa Rica		EI Salvador		Jamaica	
		Score (1-7)	Rank						
	<b>GCI 2011-2012 (out of 142)</b>	3.1	<b>126</b>	4.1	53	3.2	<b>118</b>	3.6	86
	<b>GCI 2010-2011 (out of 139)</b>	3.2	<b>117</b>	4.4	51	3.4	<b>101</b>	3.7	85
Institutions Components									
1	Wastefulness of Government Spending	1.7	<b>142</b>	3.0	83	2.8	99	2.9	92
2	Reliability of Police Services	2.0	<b>142</b>	4.7	50	3.1	<b>117</b>	3.5	<b>101</b>
3	Favoritism in Decisions of Government Officials	1.8	<b>141</b>	3.4	47	2.5	<b>109</b>	2.4	<b>121</b>
4	Diversion of Public Funds	1.8	<b>140</b>	3.9	49	2.9	90	3.2	73
5	Public Trust of Politicians	1.7	<b>135</b>	3.2	52	1.9	<b>125</b>	2.0	<b>112</b>
6	Intellectual Property Protection	2.5	<b>124</b>	3.5	70	2.6	<b>113</b>	3.4	75
7	Business Costs of Crime and Violence	3.4	<b>122</b>	3.6	<b>117</b>	1.9	<b>141</b>	1.9	<b>140</b>
8	Efficacy of Corporate Boards	4.1	<b>118</b>	4.8	43	4.8	44	4.5	72
9	Ethical Behavior of Firms	3.3	<b>116</b>	4.8	37	3.8	73	3.9	63
10	Judicial Independence	2.7	<b>115</b>	4.9	38	2.9	<b>106</b>	4.4	48
11	Organized Crime	4.1	<b>113</b>	4.1	<b>116</b>	1.9	<b>142</b>	3.1	<b>135</b>
12	Efficiency of Legal Framework in Challenging Regs.	2.9	<b>112</b>	4.0	47	2.9	<b>111</b>	3.3	82
13	Irregular Payments and Bribes	3.2	<b>107</b>	4.4	56	3.8	75	4.0	69
14	Business Costs of Terrorism	4.9	<b>107</b>	5.5	77	4.0	<b>132</b>	5.3	88
15	Burden of Government Regulation	2.9	<b>104</b>	3.1	85	3.4	62	2.6	<b>123</b>

Notes: Values are on a 1-to-7 scale unless otherwise annotated with an asterisk (\*).

SOURCE: World Economic Forum, *Global Competitiveness Report 2011-2012*

Corruption, tax rates, inefficient government bureaucracy, an inadequately educated workforce and access to financing were listed as the top five most problematic factors for doing business in the DR by the respondents to the surveys underlying that WEF index.

**Table 9-4 Impediments to business**



In the Heritage Foundation/Wall Street Journal 2012 Economic Freedom Index the DR was ranked 89 out of 184 countries, much lower than the comparator countries, and scored worse than any of the comparators in 6 of the 10 index components.

**Table 9-5 Heritage Foundation Economic Freedom Index 2012**

	Score				World Ranking (out of 184 countries)			
	Dominican Republic	Costa Rica	El Salvador	Jamaica	Dominican Republic	Costa Rica	El Salvador	Jamaica
World Rank					89	44	41	58
Regional Ranking*	18.0	7.0	5.0	12.0				
2012 Overall Score	60.2	68.0	68.7	65.1				
<b>RULE OF LAW</b>								
Property Rights	30.0	55.0	40.0	40.0	97	49	72	72
Freedom from Corruption	30.0	53.0	36.0	33.0	103	42	75	89
<b>LIMITED GOVERNMENT</b>								
Fiscal Freedom	85.8	82.8	85.5	75.5	41	60	42	109
Government Spending	91.4	90.8	91.1	58.7	10	16	12	106
<b>REGULATORY EFFICIENCY</b>								
Business Freedom	55.5	57.6	63.2	84.7	132	124	99	25
Labor Freedom	58.7	62.7	65.3	69.6	103	84	73	61
Monetary Freedom	75.1	73.4	82.1	72.4	97	118	22	129
<b>OPEN MARKETS</b>								
Trade Freedom	80.1	85.1	79.0	72.1	73	42	81	116
Investment Freedom	55.0	70.0	75.0	85.0	77	36	24	10
Financial Freedom	40.0	50.0	70.0	60.0	105	72	17	39

\*Regional ranking out of 29 countries in the South and Central America/Caribbean region  
SOURCE: Heritage Foundation Economic Freedom Index 1012

In the Fraser Institute's Economic Freedom of the World 2011 Annual Report, which published its 2009 index, the DR was ranked 72 out of 141 countries scored, again lower than the comparator countries. It scored lower than any of the other three in the Regulation of Credit, Labor and Business area and second lowest in all the other 4 areas rated.

**Table 9-6 Economic Freedom of the World Index 2011**

<b>Economic Freedom of the World Index, 2011 Annual Report</b>				
<b>(2009 Index)</b>				
	Dominican Republic	Costa Rica	El Salvador	Jamaica
Chain-Linked				
Summary Rating (Rank out of 141 countries)	<b>6.58 (72)</b>	7.08 (42)	7.29 (28)	6.86 (54)
Area 1. Size of Government	7.68 (19)	<b>7.35 (26)</b>	8.86 (4)	8.70 (6)
Area 2. Legal Structure and Security of Property Rights	4.86 (84)	6.53 (35)	<b>4.37 (96)</b>	5.01 (82)
Area 3. Access to Sound Money	8.12 (71)	<b>7.86 (78)</b>	9.28 (33)	8.22 (68)
Area 4. Freedom to Trade Internationally	6.02 (85)	7.26 (28)	6.55 (65)	<b>5.85 (91)</b>
Area 5. Regulation of Credit, Labor, and Business	<b>6.29 (82)</b>	6.36 (76)	7.49 (20)	6.56 (64)

SOURCE: Fraser Institute, Economic Freedom of the World: 2011 Annual Report

The detailed listing of the Economic Freedom of the World Index, Regulation of Credit, Labor and Business area indicates the DR scored particularly low in 'mandated cost of worker dismissal', 'extra payments/bribes/favoritism', 'price controls', 'hiring and firing regulations', 'ownership of banks' and 'foreign bank competition'. In the Freedom to Trade Internationally area it scored particularly low in size of trade sector relative to expected.

Given the poor DR performance in these indices, it should come as no surprise that it also scores relatively low in the World Bank *Doing Business Index*, ranking 108 out of 183 in 2012. This is actually a somewhat higher ranking than Costa Rica (122) and El Salvador (136), but is lower than Jamaica (88) and the LAC Region average (95). The DR ranked below all the comparators in 'starting a business' (140), 'registering property' (105), and 'resolving insolvency' (154). It was lower than all but El Salvador in 'getting electricity' (123). The average cost of resolving insolvency in the DR was 38% of the estate, and the average recovery rate was 9.5%. The low score for starting a business is mostly due to a minimum capital requirement equal to 55.7% of per capita income.

The DR second worst component ranking of the GC Index 2011-2012 was in 'innovation and sophistication factors' where the country ranks lower than 100 overall and in four out of seven components.

Table 9-7 Economic Freedom Index

<b>Economic Freedom of the World Index: 2011 Annual Report</b>				
<b>2009 Index</b>	<b>Dominican Republic</b>	<b>Costa Rica</b>	<b>El Salvador</b>	<b>Jamaica</b>
	Rating (Rank)	Rating (Rank)	Rating (Rank)	Rating (Rank)
Chain-Linked				
<b>Summary Rating (Rank)</b>	<b>6.58 (72)</b>	7.08 (42)	7.29 (28)	6.86 (54)
Area 1. Size of Government	7.68 (19)	7.35 (26)	8.86 (4)	8.70 (6)
Area 2. Legal Structure and Security of Property Rights	4.86 (84)	6.53 (35)	4.37 (96)	5.01 (82)
Area 3. Access to Sound Money	8.12 (71)	7.86 (78)	9.28 (33)	8.22 (68)
Area 4. Freedom to Trade Internationally	6.02 (85)	7.26 (28)	6.55 (65)	5.85 (91)
Area 5. Regulation of Credit, Labor, and Business	6.29 (82)	6.36 (76)	7.49 (20)	6.56 (64)
Unadjusted				
Summary Rating (Rank)	6.68 (78)	7.17 (41)	7.15 (43)	7.07 (49)
Rating (Data)	Rating (Data)	Rating (Data)	Rating (Data)	Rating (Data)
<b>1. Size of Government</b>	<b>7.68</b>	<b>7.35</b>	<b>8.86</b>	<b>8.70</b>
A. Government consumption	9.29 (8.41)	5.97 (19.70)	8.76 (10.22)	7.02 (16.12)
B. Transfers and subsidies	8.91 (4.50)	9.44 (2.54)	9.20 (3.44)	9.79 (1.27)
C. Government enterprises and investment	6.00 (25.10)	6.00	10.00 (1.86)	10.00 (6.10)
D. Top marginal tax rate	6.50	8.00	7.50	8.00
(i) Top marginal income tax rate	9.00 (25)	9.00 (25)	8.00 (30)	9.00 (25)
(ii) Top marginal income and payroll tax rates	4.00 (41)	7.00 (34)	7.00 (34)	7.00 (33)
<b>2. Legal Structure and Security of Property Rights</b>	<b>4.75</b>	<b>6.53</b>	<b>4.37</b>	<b>5.43</b>
A. Judicial independence	3.44	7.13	3.31	5.76
B. Impartial courts	3.53	5.16	3.47	3.91
C. Protection of property rights	4.97	5.59	5.12	5.45
D. Military interference in rule of law and politics	5.00	10.00	4.17	10.00
E. Integrity of the legal system	4.17	5.83	2.50	3.33
F. Legal enforcement of contracts	4.51	3.52	3.83	2.76
G. Regulatory restrictions on sale of real property	7.65	8.49	8.17	6.84
<b>3. Access to Sound Money</b>	<b>8.12</b>	<b>7.86</b>	<b>9.28</b>	<b>8.22</b>
A. Money growth	8.85 (5.75)	8.50 (7.51)	8.41 (7.94)	8.60 (7.00)
B. Standard deviation of inflation	8.91 (2.72)	9.50 (1.26)	8.90 (2.75)	6.18 (9.55)
C. Inflation: most recent year	9.71 (1.44)	8.43 (7.84)	9.79 (1.06)	8.09 (9.57)
D. Freedom to own foreign currency bank accounts	5.00	5.00	10.00	10.00
<b>4. Freedom to Trade Internationally</b>	<b>6.35</b>	<b>7.26</b>	<b>6.55</b>	<b>6.10</b>
A. Taxes on international trade	7.80	8.15	8.17	7.59
(i) Revenues from trade taxes (% of trade sector)	8.38 (2.43)	9.23 (1.16)	9.03 (1.46)	8.52 (2.22)
(ii) Mean tariff rate	8.58 (7.10)	8.92 (5.40)	8.82 (5.90)	8.50 (7.50)
(iii) Standard deviation of tariff rates	6.45 (8.88)	6.31 (9.23)	6.67 (8.32)	5.74 (10.65)
B. Regulatory trade barriers	6.75	6.73	7.34	6.58
(i) Non-tariff trade barriers	4.71	5.32	6.31	6.13
(ii) Compliance cost of importing and exporting	8.79	8.14	8.37	7.03
C. Size of trade sector relative to expected	1.56	4.37	1.43	3.05
D. Black-market exchange rates	10.00	10.00	10.00	10.00
E. International capital market controls	5.65	7.05	5.78	3.29
(i) Foreign ownership / investment restrictions	6.68	6.41	6.95	6.59
(ii) Capital controls	4.62	7.69	4.62	0.00

Table 9-7 (cont.)

<b>Economic Freedom of the World Index: 2011 Annual Report (Cont.)</b>				
<b>2009 Index</b>	<b>Dominican Republic</b>	<b>Costa Rica</b>	<b>El Salvador</b>	<b>Jamaica</b>
	Rating (Rank)	Rating (Rank)	Rating (Rank)	Rating (Rank)
Chain-Linked				
<b>5. Regulation of Credit, Labor, and Business</b>	<b>6.50</b>	<b>6.87</b>	<b>6.72</b>	<b>6.88</b>
A. Credit market regulations	7.45	7.59	8.66	7.25
(i) Ownership of banks	5.00	5.00	10.00	10.00
(ii) Foreign bank competition	5.78	8.00	9.00	10.00
(iii) Private sector credit	10.00	8.35	5.62	0.00
(iv) Interest rate controls / negative real interest rates	9.00	9.00	10.00	9.00
B. Labor market regulations	6.25	6.66	4.99	7.74
(i) Hiring regulations and minimum wage	5.57	2.23	6.67	8.90
(ii) Hiring and firing regulations	4.52	5.41	6.51	5.15
(iii) Centralized collective bargaining	7.16	6.64	7.70	7.00
(iv) Hours regulations	8.00	8.00	6.00	10.00
(v) Mandated cost of worker dismissal	2.25	7.67	2.05	5.36
(vi) Conscription	10.00	10.00	1.00	10.00
C. Business regulations	5.80	6.36	6.53	5.66
(i) Price controls	4.00	8.00	8.00	4.00
(ii) Administrative requirements	3.54	3.83	4.06	2.84
(iii) Bureaucracy costs	6.54	4.35	5.30	5.11
(iv) Starting a business	8.98	7.97	8.97	9.69
(v) Extra payments / bribes / favoritism	3.93	5.89	4.87	4.72
(vi) Licensing restrictions	7.20	7.49	8.08	7.91
(vii) Cost of tax compliance	6.37	6.95	6.41	5.36

**Table 9-8 Innovation and Sophistication Factors of the 2011 GCI**

		D. Republic		Costa Rica		El Salvador		Jamaica	
		Score (1-7)	Rank	Score (1-7)	Rank	Score (1-7)	Rank	Score (1-7)	Rank
	<b>GCI 2011–2012 (out of 142)</b>	2.6	<b>122</b>	3.6	35	2.5	<b>127</b>	2.9	94
	<b>GCI 2010–2011 (out of 139)</b>	2.6	<b>118</b>	3.7	35	2.5	<b>126</b>	2.9	93
<b>Innovation Components</b>									
<b>1</b>	Availability of scientists and engineers	3.1	<b>129</b>	4.6	32	2.9	<b>132</b>	3.3	<b>121</b>
<b>2</b>	Capacity for innovation	2.3	<b>126</b>	3.4	40	2.5	<b>115</b>	2.7	97
<b>3</b>	Company spending on R&D	2.5	<b>125</b>	3.6	35	2.5	<b>122</b>	2.7	<b>101</b>
<b>4</b>	Quality of scientific research institutions	2.7	<b>123</b>	4.6	31	2.2	<b>133</b>	3.7	63

Notes: Values are on a 1-to-7 scale unless otherwise annotated with an asterisk (\*).

SOURCE: World Economic Forum, Global Competitiveness Report 2011-2012

The business environment indicators convey a consistent message: notwithstanding some areas of good performance, institutional and public policy constraints seriously impair private sector development. The DR lost two rank positions in the Goods Market Efficiency from the 2010-2011 (109) to the 2011–2012 (111) GCI rankings where the country ranked at or below the 100-level in six out of sixteen categories. The worst category was the ‘extent of market dominance’ (137) and five other categories.

**Table 9-9 Goods Market Efficiency Component of the 2011 Global Competitiveness Index (GCI)**

		Dominican Republic		Costa Rica		El Salvador		Jamaica	
		Score (1-7)	Rank	Score (1-7)	Rank	Score (1-7)	Rank	Score (1-7)	Rank
	<b>GCI 2011–2012 (out of 142)</b>	3.9	<b>111</b>	4.3	57	4.2	69	4.1	78
	<b>GCI 2010–2011 (out of 139)</b>	3.8	<b>109</b>	4.4	48	4.3	53	4.1	80
<b>Goods Market Efficiency Components</b>									
<b>1</b>	Extent of market dominance	2.5	<b>137</b>	4.4	34	3.0	<b>125</b>	3.5	85
<b>2</b>	Buyer sophistication	2.7	<b>126</b>	3.8	43	3.3	82	3.4	77
<b>3</b>	Extent and effect of taxation	2.8	<b>125</b>	3.5	59	3.1	<b>103</b>	2.9	<b>121</b>
<b>4</b>	Effectiveness of anti-monopoly policy	3.2	<b>122</b>	4.2	57	3.5	<b>102</b>	4.0	69
<b>5</b>	Prevalence of trade barriers	3.9	<b>121</b>	4.2	95	4.3	80	4.6	58
<b>6</b>	Imports as a percentage of GDP*	34.2	<b>100</b>	42.7	73	45.7	65	50.9	55

Notes: Values are on a 1-to-7 scale unless otherwise annotated with an asterisk (\*). SOURCE:

World Economic Forum, Global Competitiveness Report

More or less the same is happening in the very important and delicate social sectors of health and education where again the country is scoring poorly and below the comparator countries. The quality of primary education rank of 140 is of special concern because the DR is just two positions above the bottom (See Table 9-10, below). The private sector, which needs a well-educated and skilled labor force, would end up in a difficult situation in its attempt to increase productivity and competitiveness at least at the level of its foreign competitors.

The DR was ranked (99) higher than El Salvador but lower than Costa Rica and Jamaica in higher education and training, because the qualitative assessments of its education system as a whole and especially math and science education were very bad and ranked near the bottom (136 and 139, respectively). The DR also ranked very low in having internet access in its schools and on the extent of staff training. (Table 9-11)

**Table 9-10 Health and Primary Education Components of 2011 GCI**

<b>Health &amp; Primary Education Component of the Global Competitiveness Index 2011, World Economic Forum</b>									
	<b>Dominican</b>		<b>Costa Rica</b>		<b>El Salvador</b>		<b>Jamaica</b>		
	<u>Score (1-7)</u>	<u>Rank</u>	<u>Score (1-7)</u>	<u>Rank</u>	<u>Score (1-7)</u>	<u>Rank</u>	<u>Score (1-7)</u>	<u>Rank</u>	
GCI 2011-2012 (out of 142)	3.7	<b>110</b>	4.3	61	3.9	91	3.8	<b>107</b>	
<u>Basic requirements</u>	<u>3.9</u>	<u><b>110</b></u>	<u>4.5</u>	<u>70</u>	<u>4.3</u>	<u>87</u>	<u>3.8</u>	<u><b>116</b></u>	
of which:									
<b>Health &amp; Primary Education</b>	<b>5.0</b>	<b>109</b>	<b>6.1</b>	<b>39</b>	<b>5.4</b>	<b>90</b>	<b>5.1</b>	<b>106</b>	
4.09 Quality of primary education	1.8	<b>140</b>	4.8	29	2.5	<b>125</b>	3.1	<b>108</b>	
4.10 Primary education enrollment, net %*	87.0	<b>111</b>	91.5	83	94.0	62	80.2	<b>126</b>	
4.06 HIV prevalence, % adult pop.*	0.9	<b>103</b>	0.3	69	0.8	99	1.7	<b>118</b>	
4.07 Infant mortality, deaths/1,000 live births*	26.7	96	9.6	51	14.6	66	25.9	92	
4.02 Malaria cases/100,000 pop.*	88.9	92	210.9	97	1.3	72	14.2	83	
4.01 Business impact of malaria	5.6	90	6.3	74	5.7	86	6.1	76	
4.05 Business impact of HIV/AIDS	4.9	86	5.5	53	4.7	93	4.3	<b>107</b>	
4.04 Tuberculosis incidence/100,000 pop.*	70.0	80	10.0	28	30.0	56	6.6	18	
4.08 Life expectancy, years*	72.7	76	79.0	27	71.5	89	72.1	84	
4.03 Business impact of tuberculosis	5.2	74	6.2	31	5.2	77	6.0	41	
Notes: Values are on a 1-to-7 scale unless otherwise annotated with an asterisk (*).									
SOURCE: World Economic Forum, <i>Global Competitiveness Report 2011-2012</i>									

**Table 9-11 Higher Education and Training Component of 2011 GCI**

<b>Higher Education &amp; Training Component of the Global Competitiveness Index 2011, World Economic Forum</b>								
	<b>Dominican Republic</b>		<b>Costa Rica</b>		<b>El Salvador</b>		<b>Jamaica</b>	
	<u>Score (1–7)</u>	<u>Rank</u>	<u>Score (1–7)</u>	<u>Rank</u>	<u>Score (1–7)</u>	<u>Rank</u>	<u>Score (1–7)</u>	<u>Rank</u>
GCI 2011–2012 (out of 142)	3.7	<b>110</b>	4.3	61	3.9	91	3.8	<b>107</b>
<b>Efficiency enhancers</b>	<b>3.7</b>	<b>93</b>	<b>4.1</b>	<b>61</b>	<b>3.7</b>	<b>96</b>	<b>3.8</b>	<b>85</b>
of which:								
<b>Higher Education and Training</b>	<b>3.6</b>	<b>99</b>	<b>4.7</b>	<b>47</b>	<b>3.5</b>	<b>105</b>	<b>3.9</b>	<b>85</b>
5.04 Quality of math and science education	1.9	<b>139</b>	4.4	46	2.6	<b>129</b>	2.9	<b>120</b>
5.03 Quality of the educational system	2.3	<b>136</b>	4.8	23	2.7	<b>125</b>	3.2	<b>103</b>
5.06 Internet access in schools	3.3	<b>103</b>	4.2	66	3.1	<b>114</b>	3.8	84
5.08 Extent of staff training	3.6	99	4.6	29	3.9	77	4.2	48
5.01 Secondary education enrollment, gross %*	76.8	95	96.1	42	63.6	107	91.2	59
5.07 Availability of research and training services	3.7	92	4.8	32	3.9	84	3.5	<b>103</b>
5.05 Quality of management schools	3.9	89	5.2	20	3.9	88	4.2	63
5.02 Tertiary education enrollment, gross %*	33.3	70	25.3	83	24.6	84	24.2	86
Notes: Values are on a 1-to-7 scale unless otherwise annotated with an asterisk (*).								
SOURCE: World Economic Forum, <i>Global Competitiveness Report 2011-2012</i>								

Noting the potential constraints the labor market distortions place on the ability of the economy to absorb unemployed labor and move labor towards its most productive use, the DR not only has fallen fifteen positions in the GC Index rankings from the 2010-2011 (89) to the 2011-2012 (104) but it also ranks below 100 in four components out of nine. (Table 9-12)

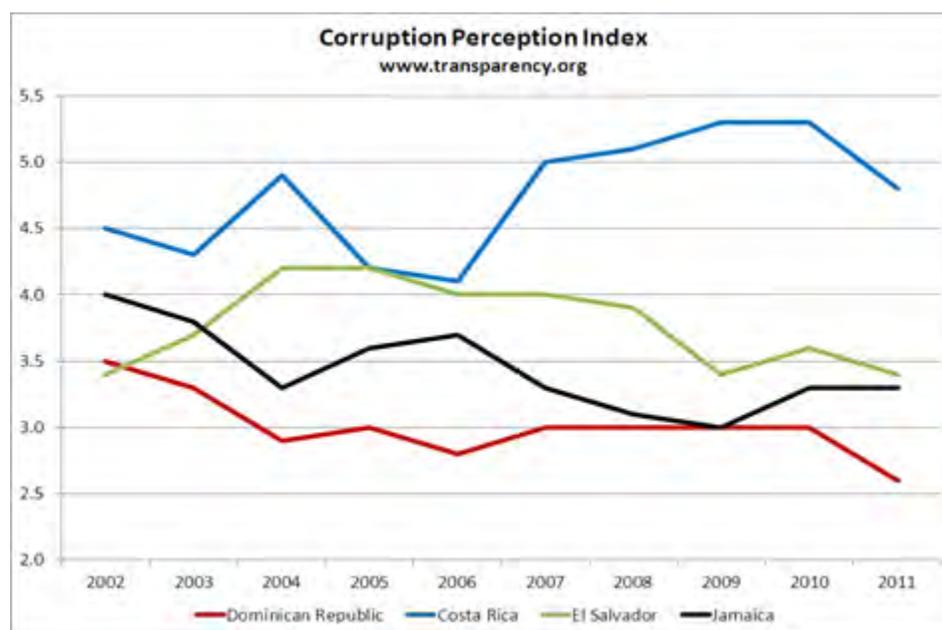
**Table 9-12 Labor Market Efficiency Component of 2011 GCI**

<b>Labor Market Efficiency Component of the Global Competitiveness Index 2011, World Economic Forum</b>								
	<b>Dominican Republic</b>		<b>Costa Rica</b>		<b>El Salvador</b>		<b>Jamaica</b>	
	<u>Score (1–7)</u>	<u>Rank</u>	<u>Score (1–7)</u>	<u>Rank</u>	<u>Score (1–7)</u>	<u>Rank</u>	<u>Score (1–7)</u>	<u>Rank</u>
GCI 2011–2012 (out of 142)	3.7	<b>110</b>	4.3	61	3.9	91	3.8	<b>107</b>
<b>Efficiency enhancers</b>	<b>3.7</b>	<b>93</b>	<b>4.1</b>	<b>61</b>	<b>3.7</b>	<b>96</b>	<b>3.8</b>	<b>85</b>
of which:								
<b>Labor market efficiency</b>	<b>4.0</b>	<b>104</b>	<b>4.5</b>	<b>55</b>	<b>4.0</b>	<b>108</b>	<b>4.2</b>	<b>80</b>
7.07 Reliance on professional management	3.3	<b>128</b>	4.6	49	3.5	<b>120</b>	4.4	57
7.05 Redundancy costs, weeks of salary*	88	<b>114</b>	29	61	86	<b>111</b>	62	99
7.06 Pay and productivity	3.3	<b>111</b>	4.0	59	3.5	<b>100</b>	3.2	<b>114</b>
7.09 Women in labor force, ratio to men*	0.65	<b>101</b>	0.58	<b>113</b>	0.61	<b>107</b>	0.79	66
7.04 Hiring and firing practices	3.9	78	4.2	49	4.5	31	3.9	69
7.08 Brain drain	3.4	68	4.8	20	2.6	<b>115</b>	3.0	95
7.03 Rigidity of employment index, 0–100 (worst)*	21	52	39	<b>100</b>	24	63	4	8
7.02 Flexibility of wage determination	5.4	45	4.6	99	5.7	23	4.9	84
7.01 Cooperation in labor-employer relations	4.8	37	5.5	11	4.8	38	3.7	<b>122</b>
Notes: Values are on a 1-to-7 scale unless otherwise annotated with an asterisk (*).								
SOURCE: World Economic Forum, <i>Global Competitiveness Report 2011-2012</i>								

### Corruption

Corruption, inefficient government bureaucracy and access to financing were listed as the top three most problematic factors for doing business in the DR by the respondents to the surveys underlying that WEF index. To get a sense of the scale of the problem, USAID has estimated that during 2006 Dominicans expended approximately DR\$6,000 million pesos (US\$179.1 M) in different type of briberies to obtain public services. Such an amount represented 0.3% of GDP, 2% of the total external debt, 38% of the DR's debt with the IMF, 27% of the health budget and 31% of the education budget.<sup>201</sup> Similar findings are underscored in the United Nations Development Programme's (UNDP) 2008 Dominican Republic Human Development Report, pointing to weaknesses in the rule of law, low levels of transparency and access to public information, access to opportunities determined by personal and group power and the predominance of patronage relations in politics and in Transparency International's Corruption Perception Index (See Figure 9-1). Unfortunately the DR has gone backwards on controlling corruption, as measured by the World Bank World Governance Indicators (WGI) Control of Corruption Index, falling from a score of minus 0.10 to -0.83 between 1996 and 2010. Similarly, in the WGI Government Effectiveness index the DR fell from an already low score of minus 0.37 to -0.63 during the same period<sup>202</sup> In 2010 the DR ranked in the 22<sup>nd</sup> percentile from the bottom of 213 countries in the Control of Corruption index and in the 32<sup>nd</sup> percentile in Government Effectiveness. (Table 9-13)

**Figure 9-1 Corruption Perception Index**



Source: [www.transparency.org](http://www.transparency.org) The Corruption Perceptions Index ranks countries/territories based on how corrupt their public sector is perceived to be. The CPI is based on 13 independent surveys. A country/territory's score indicates the perceived level of public sector corruption on a scale of 0 - 10, where 0 means that a country is perceived as highly corrupt and 10 means that a country is perceived as very clean.

<sup>201</sup> USAID/Civil Action and Transparency Program, "Household Corruption Perception Study in the Dominican Republic", Santo Domingo; Dominican Republic, December 2008;

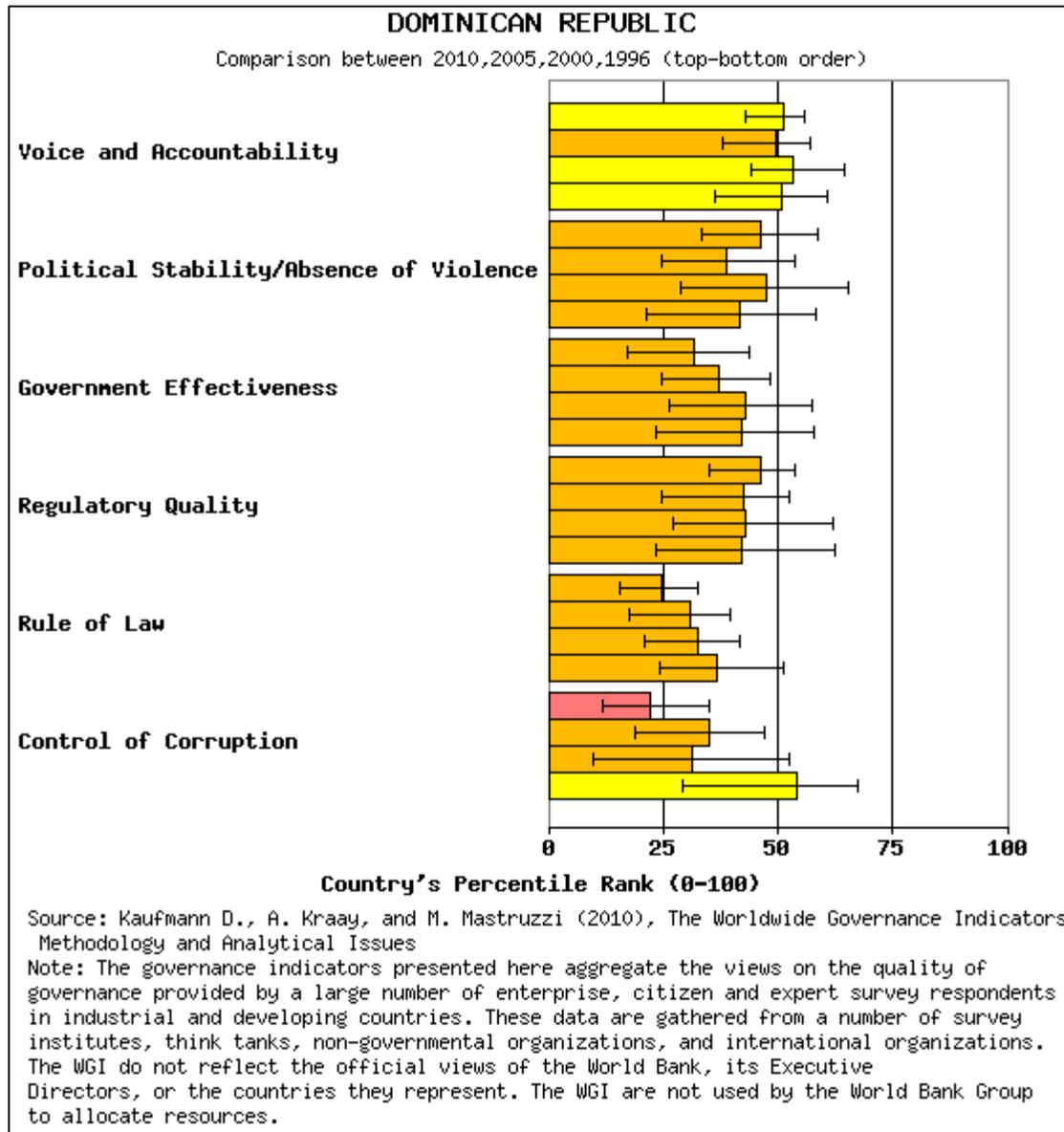
<sup>202</sup> These estimates range in value from -2.5 (for very poor) to 2.5 (for excellent), with zero as the international mean.

**Table 9-13 Governance Indicators for the Dominican Republic, 1996-2010**

Table 9A.1 World Bank Worldwide Governance Indicators for the Dominican Republic					
Governance Indicator	Sources	Year	Percentile Rank (0-100)	Governance Score (-2.5 to +2.5)	Standard Error
Voice and Accountability	14	2010	51.2	0.05	0.13
	11	2005	49.5	-0.03	0.17
	5	2000	53.4	0.16	0.22
	5	1996	51	-0.04	0.22
Political Stability/Absence of Violence	7	2010	46.2	0.02	0.23
	6	2005	38.9	-0.24	0.27
	4	2000	47.6	0	0.33
	4	1996	41.8	-0.18	0.36
Government Effectiveness	10	2010	31.6	-0.63	0.19
	8	2005	37.1	-0.5	0.17
	4	2000	42.9	-0.33	0.22
	3	1996	42	-0.37	0.25
Regulatory Quality	9	2010	46.4	-0.2	0.17
	8	2005	42.6	-0.38	0.17
	5	2000	43.1	-0.14	0.27
	4	1996	42.2	-0.22	0.32
Rule of Law	14	2010	24.6	-0.81	0.14
	12	2005	31.1	-0.71	0.16
	7	2000	32.5	-0.63	0.17
	5	1996	36.8	-0.45	0.22
Control of Corruption	11	2010	22	-0.83	0.17
	10	2005	35.1	-0.59	0.17
	4	2000	31.2	-0.63	0.25
	3	1996	54.1	-0.1	0.3

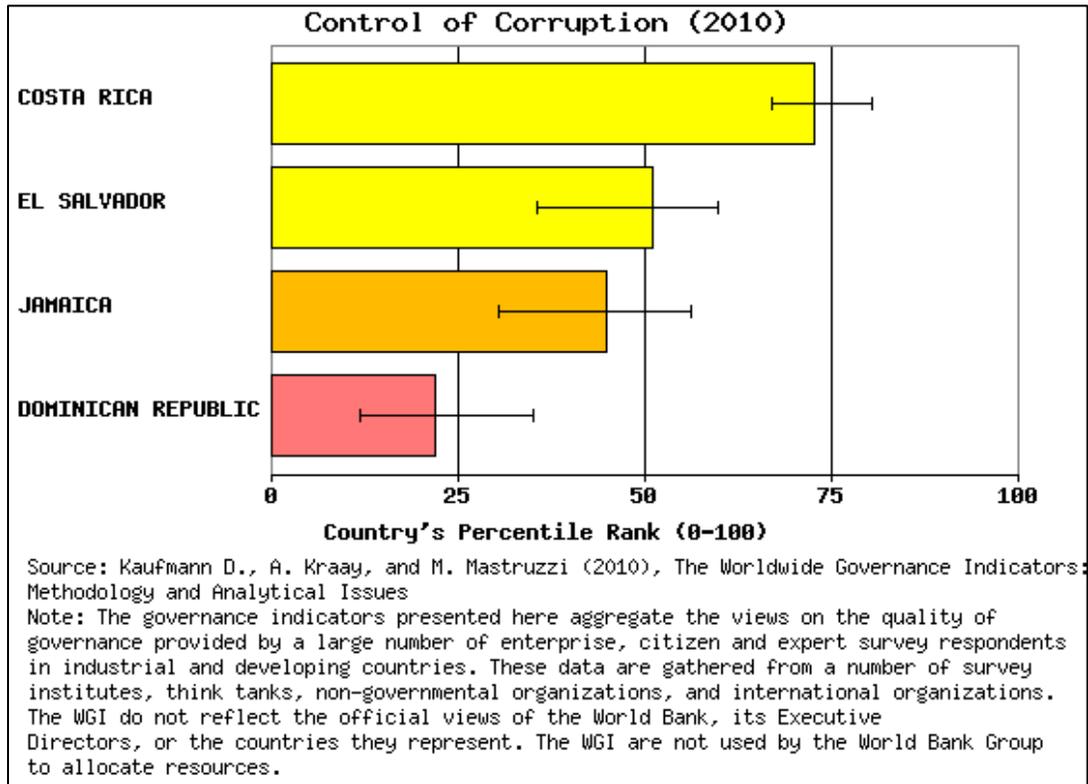
Source: World Bank Worldwide Governance Indicators

**Figure 9-2 Governance Indicators for the Dominican Republic, 1996-2010**

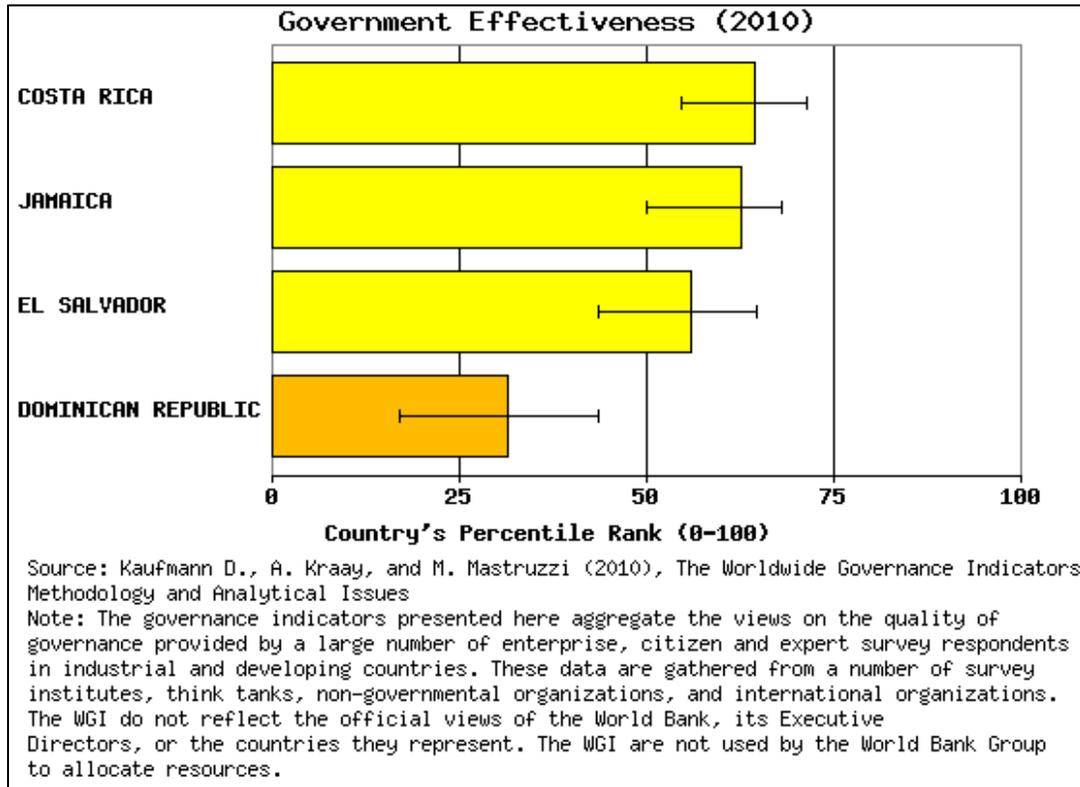


These scores were well below those of the comparator countries, as evident in Figures 9-3 and 9-4, and Table 9-14. Table 9-14 contains Transparency International Corruption Perceptions Indices from 2001 to 2011, in which the DR also scores and ranks well below the comparator countries.

**Figure 9-3 Control of Corruption, DR and Comparator Countries**



**Figure 9-4 Government Effectiveness, DR and Comparator Countries**



**Table 9-14 Comparator Countries Corruption Perception Index 2001-2011**

Year	No. of Countries	C. Rica		Dom. Rep.		El Salvador		Jamaica	
		CPI Score	Rank	CPI Score	Rank	CPI Score	Rank	CPI Score	Rank
2001	91	4.5	40	3.1	63	3.6	55	Not Included	
2002	102	4.5	40	3.5	59	3.4	62	4.0	45
2003	133	4.3	50	3.3	70	3.7	59	3.8	57
2004	145	4.9	41	2.9	87	4.2	51	3.3	74
2005	158	4.2	51	3.0	85	4.2	51	3.6	64
2006	163	4.1	55	2.8	99	4.0	57	3.7	61
2007	179	5.0	46	3.0	99	4.0	67	3.3	84
2008	180	5.1	47	3.0	102	3.9	67	3.0	102
2009	180	5.3	43	3.0	99	3.4	84	3.0	102
2010	178	5.3	41	3.0	101	3.6	73	3.3	87
2011	182	4.8	50	2.6	129	3.4	80	3.3	86

Score: **Highly Corrupt** 0 ---> **Very Clean** 10

Source: Transparency International (archives) <http://www.transparency.org>

Poor governance not only arising from purposeful corruption, but when public investments are not equally distributed among the different regions of the country as well as when there is no prioritization and such investments are either neglected or minimal for productive (manufacture, agriculture, tourism) and social (health, education) sectors. The most notable example in that regard has been lately (since 1999) the government lack of compliance to provide the 4% of GDP to the education sector despite being established by law (Law 66-97, dated Feb-04-1997) while the GODR has being able to execute seven (7) fiscal reforms and two amnesties from year 2000 to 2011 and it is now on the verge of call for another one either this year or in 2013.

## Macro Risks

The strong growth of the DR economy over the last decade is remarkable considering the 2003 collapse of three private sector banks (Banínter, Bancrédito and Banco Mercantil). The political stability of the country compared to other nations in the region contributed to this growth, in part by allowing structural reforms to take place.<sup>203</sup> In the mid-1980s the Government of the Dominican Republic changed its exchange rate regime from fixed to flexible which paved the way for the transformation of the tradable sector away from the more traditional agricultural

<sup>203</sup> Attali, Jacques, "Dominican Republic 2010-2020: International Commission for the Strategic Development of the Dominican Republic (República Dominicana 2010-2020, Informe de la Comisión Internacional para el Desarrollo Estratégico de la República Dominicana)", November 2010, p. 8.

based export sector (sugar, cacao, tobacco, coffee). Likewise, the country engaged in several structural market reforms during the 1990s including tariff and tax reform, privatization of state owned enterprises, health, education, labor and justice<sup>204</sup>. Fanelli and Guzmán stated that these structural reforms resulted in strong structural transformations in the productive sector of the economy but were insufficient to foster broad-based growth.

*“...the DR became a net exporter of labor-intensive products instead of a net exporter of tropical agriculture products...but the duality has not disappeared after three decades of growth. The difficulties of creating quality jobs and reducing informality in the labor market resulted from the fact that an important socio-economic segment found ways to take advantage of the growth such that despite the increase in per capita income, the proportion of people living below the poverty line remains high, the inequality significant and the unemployment rate and emigrant flows relevant.”<sup>205</sup>*

As a percent of GDP, remittances, tourism and net free trade zone exports decreased slightly over the last decade while foreign investment vacillated. On the other hand, focusing on the years after the 2003 crisis the table in dollar terms shows that the four categories increased in 2004 and 2005 and after that they show dissimilar up and down swings. However, when considered as a percentage of GDP it is clear that three out of four contributed less to the GDP in 2010 than in 2002, the year before the crisis. Only FDI contributed the same amount (3.7%) in 2002 and 2010.

As can be seen in Table 9-17 below, final consumption as a percentage of GDP reached 93% in 2010 with an average of 88.0% for the 2000-2010 period which is unusually high for most countries.

Additionally, from 2000 to 2010 the share of imports in the final and private consumption was on average 55.4% and 57.7%, respectively and on a declining trend, as measured by the import penetration indicator (IMP).

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<sup>204</sup> For a more detailed explanation on this process, see: Julio G. Andújar Scheker “Economic Reforms and Political Negotiations: Notes on the Dominican Experience of the 90s (Reformas Económicas y Negociaciones Políticas: Apuntes sobre la Experiencia Dominicana de los Noventa)”, Science and Society, January-March 2005/Vol. 30, No. 001; Instituto Tecnológico de Santo Domingo (INTEC), Sto. Dgo., Dominican Republic.

<sup>205</sup> Fanelli, José María and Rolando Guzmán, “Development Diagnosis for the Dominican Republic (Diagnóstico de Crecimiento para la República Dominicana)”, CEDES/PARETO Consulting Group; Inter-American Developing Bank (IDB), Working Document CSI-118, Sept. 2008, p. 13-16 & 24-25.

**Table 9-15 Selected DR Macroeconomic Indicators, 2000-2010**

<b>DR Selected Macroeconomic Indicators (2000 - 2010)</b>										
Year	Growth Rates (%)			Infl./ 12 Mo. Av. (%)	Curr. Acct. (Mil. of US\$)	Int'l Res. (Mil. of US\$)	Remitta nces (Mil. of US\$)	Tourism (Mil. of US\$)	FTZs Net (Mil. of US\$)	FDI (Mil. of US\$)
	Real GDP (DOP\$)	Curr. GDP (US\$)	GDP Per Cap (US\$)							
2000	5.7	10.3	8.4	7.7	(1,026.5)	441.9	1,689.0	2,860.2	1,708.1	952.9
2001	1.8	3.2	1.4	8.9	(740.8)	962.2	1,807.8	2,798.3	1,655.2	1,079.1
2002	5.8	1.7	-0.1	5.2	(797.9)	376.0	1,959.6	2,730.4	1,716.9	916.8
2003	-0.3	-18.2	-19.7	27.5	1,036.2	123.6	2,060.5	3,127.8	1,875.9	613.0
2004*	1.3	10.7	8.7	51.5	1,041.5	602.2	2,230.2	3,151.6	2,165.3	909.0
2005*	9.3	49.4	46.7	4.2	(473.0)	1,519.7	2,429.9	3,518.3	2,246.5	1,122.7
2006*	10.7	6.3	4.4	7.6	(1,287.4)	1,787.8	2,737.8	3,916.8	2,063.7	1,084.6
2007*	8.5	14.9	12.8	6.1	(2,166.3)	2,394.9	3,045.6	4,064.2	2,025.4	1,667.4
2008*	5.3	10.9	8.9	10.6	(4,518.6)	2,165.4	3,221.5	4,165.9	1,925.2	2,870.0
2009*	3.5	2.2	0.4	1.4	(2,330.9)	2,851.9	3,041.5	4,048.8	1,443.8	2,165.4
2010*	7.8	10.6	8.6	6.3	(4,329.5)	3,342.7	2,998.1	4,209.1	1,753.6	1,896.3
2011*	4.5	7.8	5.9	8.5	(4,499.0)	2,165.4	3,200.0	4,352.8	1,984.1	2,371.1
<b>Ave.</b>	<b>5.3</b>	<b>9.2</b>	<b>7.2</b>	<b>12.1</b>	<b>(1,674.4)</b>	<b>1,561.1</b>	<b>2,535.1</b>	<b>3,578.7</b>	<b>1,880.3</b>	<b>1,470.7</b>

\* Preliminary figures for GDP growth rates.

Source: Banco Central de la República Dominicana

**Table 9-16 DR Selected Macroeconomic Indicators as a % of GDP (2000 - 2011)**

Year	Current GDP (US\$)	Int'l Reserves	Remittances	Tourism	FTZs Net	FDI
2000	23,799.3	1.9	7.1	12.0	7.2	4.0
2001	24,561.0	3.9	7.4	11.4	6.7	4.4
2002	24,985.6	1.5	7.8	10.9	6.9	3.7
2003	20,432.1	0.6	10.1	15.3	9.2	3.0
2004*	22,608.7	2.7	9.9	13.9	9.6	4.0
2005*	33,774.7	4.5	7.2	10.4	6.7	3.3
2006*	35,897.2	5.0	7.6	10.9	5.7	3.0
2007*	41,228.1	5.8	7.4	9.9	4.9	4.0
2008*	45,717.6	4.7	7.0	9.1	4.2	6.3
2009*	46,711.6	6.1	6.5	8.7	3.1	4.6
2010*	51,657.6	6.5	5.8	8.1	3.4	3.7
2011*	55,666.0	3.9	5.7	7.8	3.6	4.3

\* Preliminary figures for GDP growth rates.

Source: DR Central Bank

**Table 9-17 Consumption, Exports and Imports as a % of GDP, 2000-2010**

Components	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Ave.
<b>Final Consumption (C)</b>	84.9	86.3	86.2	82.1	83.5	88.3	89.3	89.7	91.3	93.2	93.0	88.0
<b>Priv. Cons. (Cpriv)</b>	81.4	82.5	82.3	78.8	80.1	84.8	85.8	86.2	87.7	89.8	89.8	84.5
<b>Publ. Cons. (Cpub)</b>	3.5	3.7	3.8	3.3	3.4	3.5	3.5	3.5	3.6	3.4	3.2	3.5
<b>Exports (Xs)</b>	46.1	42.5	41.0	45.4	46.5	42.0	38.2	36.3	33.1	29.7	30.7	39.2
<b>Imports (IMs)</b>	58.7	55.0	52.8	46.1	47.9	48.7	47.7	46.9	46.6	40.7	43.2	48.6
<b>Gross Dom. Prod. (GDP)</b>	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: DR Central Bank

**Table 9-18 Dominican Republic Import Penetration Indicator (IMP), 2000 – 2010**

Components	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Ave.
<b>IMs/Final Consumption</b>	69.2	63.7	61.2	56.1	57.3	55.2	53.4	52.3	51.0	43.7	46.5	55.4
<b>IMs/Private Consumption</b>	72.2	66.6	64.1	58.5	59.7	57.5	55.5	54.5	53.1	45.3	48.1	57.7
<b>IMs/GDP</b>	58.7	55.0	52.8	46.1	47.9	48.7	47.7	46.9	46.6	40.7	43.2	48.6
<b>IMP = IMs/Final Domestic Supply</b>	52.1	48.9	47.2	45.8	47.2	45.7	43.5	42.4	41.1	36.6	38.4	44.4

Source: DR Central Bank

**Legend**

**Global Final Supply =**  
**GDP + IMs**

**Final Domestic Supply = GDP + IMs - Xs**

**Net Final Domestic Supply = (GDP + IMs - Xs) - Final Inventories Value**

**Import Penetration Indicator: IMP = (IMs/Final Domestic Supply)**

The DR is also showing a deterioration of its overall ranking in the World Economic Forum Global Competitiveness Index (WEF GCI), losing eight positions from 2010-2011 despite ranking higher than Costa Rica and Jamaica. The high share of consumption as a percentage of GDP (93% in 2010) explains why the country scored so low (138) in the “gross national savings, % of GDP” category. What this means is that if the GDP consumption component is so high and its investment component is 20.8% of real GDP (1991-2011), the country is not saving enough to finance its own investments, which then have been covered mostly with external debt. The country also ranked below the 100-level in the ‘inflation’ category (107), the second worst among the comparator countries except Jamaica, even though having only single digit (6.3%) inflation. (Table 9-19)

**Table 9-19 Macroeconomic Environment Component of the 2011 GCI**

<b>Macroeconomic Environment Component of the Global Competitiveness Index 2011, World Economic Forum</b>								
	<b>Dominican Republic</b>		<b>Costa Rica</b>		<b>El Salvador</b>		<b>Jamaica</b>	
	<b>Score (1-7)</b>	<b>Rank</b>	<b>Score (1-7)</b>	<b>Rank</b>	<b>Score (1-7)</b>	<b>Rank</b>	<b>Score (1-7)</b>	<b>Rank</b>
GCI 2011-2012 (out of 142)	3.7	<b>110</b>	4.3	61	3.9	91	3.8	<b>107</b>
<b>Basic requirements</b>	<b>3.9</b>	<b>110</b>	<b>4.5</b>	<b>70</b>	<b>4.3</b>	<b>87</b>	<b>3.8</b>	<b>116</b>
of which:								
<b>Macroeconomic environment</b>	<b>4.4</b>	<b>96</b>	<b>4.3</b>	<b>109</b>	<b>4.6</b>	<b>80</b>	<b>2.6</b>	<b>142</b>
3.02 Gross national savings, % GDP*	3.0	<b>138</b>	16.3	96	10.9	<b>123</b>	5.9	<b>133</b>
3.03 Inflation, annual % change*	6.3	<b>107</b>	5.7	<b>100</b>	1.2	1	12.6	<b>137</b>
3.04 Interest rate spread, %*	7.3	94	11.8	<b>122</b>	4.8	55	14.1	<b>127</b>
3.06 Country credit rating, 0-100 (best)*	38.0	84	55.1	60	47.6	74	31.2	<b>111</b>
3.01 Government budget balance, % GDP*	-2.3	45	-5.6	<b>103</b>	-4.4	83	-5.8	<b>106</b>
3.05 General government debt, % GDP*	29.0	41	39.4	67	50.8	96	139.7	<b>140</b>
Notes: Values are on a 1-to-7 scale unless otherwise annotated with an asterisk (*).								
SOURCE: World Economic Forum, <i>Global Competitiveness Report 2011-2012</i>								

Source: World Economic Forum, *Global Competitiveness Report 2011-2012*

### Monetary Policy Risks

The Central Bank's monetary policy has with rare exceptions been restrictive as a way to accommodate expansionary fiscal policy. From 2000 to through March 2012, the amount of money in circulation (M1) and the monetary issues/bills in circulation increased 103.4% and 92.9% respectively. Both are drivers of inflation, apply pressure to the exchange rate and distort relative prices in the economy. Therefore, a typical counterbalance measure of a restrictive monetary policy is shown as the Central Bank Certificates and Notes (Certificados y Notas del Banco Central), which increased 159.8% since January 2005 and Short Term Remunerated Deposits-Overnights (Depósitos Remunerados de Corto Plazo-Overnights), which are commercial bank excesses of legal reserve requirements deposited at the Central Bank. They increased 125.1% which reveals that the Central Bank has been controlling the currency in circulation very tightly ending up with an increase of the Central Bank's debt. In other words, all those funds are not circulating in the economy and therefore it is not possible to channel them to the productive sectors of the economy.

Additionally, it seems that the Central Bank open market operations were focused on compiling international reserves which increased approximately 300% with the final goal of anchoring the exchange rate to avoid a further depreciation of the peso.<sup>206</sup> If the peso depreciates it would be difficult not only for the government (since its debt will become more expensive in DR pesos) but also for the majority of the productive sectors of the economy with the exception mainly of exporters like free trade zones and tourism, in view of the former's high level of imported inputs. The anchoring of the exchange rate to prop up the value of the peso has

<sup>206</sup> Veloz, Apolinar, "The efficacy of monetary policy (La Eficacia de la Política Monetaria)", Opinion section, March 02 and 16, 2012, <http://www.acento.com.do/>.

different results for the economy. In general, it favors importers (as the imports are relatively less expensive) but hurts the export oriented sectors since their goods and services become relatively more expensive for foreigners.

Another sign of the restrictive monetary policy applied can be seen in the Central Bank interest rate levels for its overnight loans, which are five-day loans to multiple banks, savings and loans associations and development banks, and the Lombard Window loans are one- to five-day loans only to banks. The overnight interest rate has been increased by 1.75 percentage points since December 2010 to 6.75% by the end of December 2011. The Lombard Window interest rate however, has reduced from 9.5% in December 2010 to 9.0% by the end of December 2011 in an attempt to narrow the spread between the two rates.<sup>207</sup>

**Table 9-20 Banking and Monetary Indicators**

BANKING and MONETARY INDICATORS (DR\$ Million)										
INDICATORS	January 2005	Dec. 2005	Dec. 2006*	Dec. 2007*	Dec. 2008	Dec. (31) 2009*	Dec. 2010*	Dec (30) <sup>1</sup> 2011	Mar. (28) <sup>1</sup> 2012	% Inc.
<b>CENTRAL BANK</b>										
INT'L NET RESERVES IMF (US\$) <sup>1</sup>	758.6	1,519.7	1,787.8	2,394.9	2,149.4	2,851.9	3,342.7	3,637.9	3,032.0	299.7
<b>INTERNAL FINANCING</b>	<b>106,146.1</b>	<b>108,515.1</b>	<b>105,940.6</b>	<b>104,017.6</b>	<b>177,158.2</b>	<b>185,566.8</b>	<b>166,071.7</b>	<b>166,158.7</b>	<b>165,984.8</b>	56.4
Of which: Capitalization Bonds <sup>2</sup>	0.0	2,325.0	2,325.0	2,325.0	72,554.6	85,065.9	85,065.9	85,065.9	85,065.9	
INTERNAL FINANCING S/CAPITAL Bond	0.0	106,190.1	103,615.6	100,853.0	104,603.6	100,500.9	81,005.8	81,092.8	80,918.9	
<b>VALUES IN CIRCULATION<sup>3</sup></b>	<b>107,670.5</b>	<b>133,114.7</b>	<b>157,232.7</b>	<b>175,866.7</b>	<b>182,733.4</b>	<b>194,044.1</b>	<b>219,580.1</b>	<b>236,984.6</b>	<b>246,969.8</b>	129.4
CBk Notes & Certificates <sup>4</sup>	94,990.8	120,435.0	151,443.9	170,077.9	182,538.5	193,849.2	219,385.2	236,789.7	246,774.9	159.8
<b>Short Term Remunerated Deposits</b>	<b>8,597.6</b>	<b>7,089.4</b>	<b>5,882.0</b>	<b>14,631.8</b>	<b>15,491.0</b>	<b>23,232.3</b>	<b>16,299.0</b>	<b>18,608.4</b>	<b>19,352.8</b>	125.1
<b>MULTIPLE BANKS</b>										
INVESTMENT IN VALUES	44,276.4	38,657.1	29,154.0	32,361.9	37,009.1	65,284.8	87,395.3	105,440.5	113,059.4	155.3
<b>LOANS BY SECTOR</b>	<b>151,711.8</b>	<b>176,897.1</b>	<b>204,526.1</b>	<b>255,194.1</b>	<b>294,380.4</b>	<b>329,966.7</b>	<b>376,277.7</b>	<b>416,609.5</b>	<b>422,731.4</b>	178.6
PUBLIC SECTOR	23,184.8	24,467.6	27,644.8	22,779.1	42,379.6	56,824.7	38,929.2	32,826.9	38,868.2	67.6
PRIVATE SECTOR	128,527.0	152,429.5	176,881.3	219,629.0	252,000.8	273,142.0	337,348.5	383,782.6	383,863.2	198.7
<b>DEPOSITS TOTAL</b>	<b>235,359.6</b>	<b>269,274.8</b>	<b>300,156.2</b>	<b>356,302.2</b>	<b>386,720.8</b>	<b>447,871.0</b>	<b>508,569.8</b>	<b>572,780.6</b>	<b>593,753.5</b>	152.3
PUBLIC SECTOR	17,833.1	25,777.1	30,028.3	47,098.2	41,822.8	43,022.4	48,498.0	55,032.1	59,859.6	235.7
PRIVATE SECTOR	217,526.5	243,497.7	270,127.9	232,415.0	344,898.0	404,848.6	460,071.8	517,748.5	533,893.8	145.4
SAVINGS	53,853.7	75,281.0	90,920.2	108,361.2	114,355.5	130,975.9	153,010.9	170,558.3	174,345.3	223.7
BONDS & CERTIFICATES TO TERM	132,624.3	132,495.8	139,749.2	159,804.5	197,292.7	226,371.1	257,289.9	293,925.2	314,079.7	136.8
<b>MONEY IN CIRCULATION (M1)</b>	<b>78,936.0</b>	<b>100,156.3</b>	<b>113,652.0</b>	<b>139,539.0</b>	<b>126,818.9</b>	<b>146,967.7</b>	<b>159,210.6</b>	<b>171,051.2</b>	<b>160,523.0</b>	103.4
(M1) MULTIPLIER	1.05	1.09	1.06	1.15	0.95	1.07	1.10	1.11	1.09	3.4
PRIVATE SECTOR MONEY IN CIRCULATION	66,261.9	82,929.8	92,247.5	97,721.8	108,358.4	128,080.7	138,617.6	145,027.0	136,479.4	106.0
<b>OVERALL MONEY SUPPLY (M2)</b>	<b>265,414.0</b>	<b>307,933.1</b>	<b>344,321.4</b>	<b>407,704.7</b>	<b>438,467.1</b>	<b>504,314.7</b>	<b>569,511.4</b>	<b>635,534.7</b>	<b>648,948.1</b>	144.5
<b>TOTAL MONETARY ISSUES</b>	<b>75,857.2</b>	<b>92,389.7</b>	<b>107,289.4</b>	<b>121,939.2</b>	<b>133,799.9</b>	<b>138,081.4</b>	<b>144,912.9</b>	<b>155,064.4</b>	<b>148,346.0</b>	95.6
ISSUED BILLS	36,118.8	49,911.8	53,423.5	62,216.2	62,395.9	70,087.8	73,957.8	78,146.1	69,659.8	92.9
<b>EXCHANGE RATE</b>	<b>28.69</b>	<b>34.70</b>	<b>33.51</b>	<b>33.94</b>	<b>35.26</b>	<b>36.06</b>	<b>37.42</b>	<b>38.72</b>	<b>38.99</b>	35.9

Source: DR Central Bank

\* Preliminary data, subject to rectification

/1 Up to a less than 3 years deadline

/2 Beginning on 10/06/2005 it includes bonds issued by the Dominican State for the funding of the CBk., whose counterpart is an equal increase of the same amount in the CBk capital account in favor of the Dominican State.

/3 The presentation of the values in circulation was modified in accordance with the IMF Monetary & Financial Est. Manual and which excludes the balance of the Short term Paid Deposits (Overnights).

/4 Zero Coupon Certificates of investment are stated at purchase price, including the interest generated to date.

/5 A clearing of the Investment Coeff. resources programmed was initiated from 06/01/2006. according to the 4th. Res. the Monetary Board dated Feb-15-2006.

/6 Includes demand deposits in multiple banks, CBk management checks and the demand deposits of official entities in the Central Bank.

<sup>207</sup> Central Bank of the Dominican Republic, "Dominican Economy Report", January-December 2011, Values (bonds, certificates) in Circulation, p. 35

*Fiscal Policy Risks*



**Translation:**

**Crane:** Driver wanted

**DR Map:** Dominican Problems → Fiscal Deficit

**Diógenes (w/beard & sunglasses talking to two presidential candidates):** Which one of the two do you think has a “driver’s license” to drive this crane...?

Even before the past decade, the history of fiscal and monetary policies implemented in the Dominican Republic has been essentially one where the Central Bank has been counterbalancing the GODR expenditure excesses. The past decade was not an exception. The GODR fiscal situation has been qualified as critical by several Dominican economists. Their concerns are based on the fact that the government has run fiscal deficit in eight out of twelve years from 2000 to 2011 and the 2012 deficit was higher by April-June than in the entire year 2011. The average deficit for such period was DR\$19,788.3 million (US\$506.1 million). Total tax revenues increased 447% and 460.5% respectively while total expenditures increased 605.9% from which current expenditures increased 621.3% for the same period of 2000 to 2011.

Since the year 2000 the GODR has engaged in six tax reforms in addition to two fiscal amnesties in an effort to increase the amount of resources available to comply with its also increasing economic, social and political responsibilities.<sup>208</sup> Beginning in 2001 the DR engaged more aggressively in the international market with the issuance for the first time of a \$500 million sovereign bond.<sup>209</sup> These funds allowed the GODR to finance several infrastructure projects while applying at the same time a restriction on its expenditures including elimination of an electrical subsidy in an attempt to balance fiscal outlays. In 2003, the year of the banking

<sup>208</sup> 2000/Law 147-00; 2004/Law 288-04, 2005/Law 557-05; 2006/Law 495-06; 2007/Law 172-07, and 2011/Law 139-11 for tax reform and 2001/Law 11-01 & 2007/Law 183-07 for fiscal amnesty.

<sup>209</sup> The DR has issued a total of US\$3,300 million in Sovereign Bonds (2001, 2003, 2005, 2006, 2010 and 2011) from which there is a total of US\$2,466.6 million in circulation as of Dec-2011.

crisis the GODR was planning to tighten both fiscal and monetary policies in an attempt to contain the expansion of the aggregate demand and reduce inflationary pressures. In the fiscal side for that year the crisis was not as dramatic (the government had a surplus of 0.9% of GDP) as it was on the monetary side. The government was concerned at that time with Venezuelan political difficulties as well as an escalation in the Iraq conflict since both events could affect the international oil price and therefore negatively impact the whole DR economy (higher inflation, exchange rate deterioration, necessity of more pesos to pay the external debt, costlier imports and other domestic restrictions, etc.)

Given the decreasing tendency in both GDP growth rate (since 2007) and tax revenue collections (since 2008) the GODR has engaged in an expansionary fiscal policy which resulted in successive deficits (2008-2011; av. 3.3% of GDP) larger than the ones posted in the 2004-2006 period (avg. 0.4% of GDP). (See Table 9-21.) In 2010 the GDP growth rate was 7.8%, a significant recuperation from the 2009 rate of 3.5%. Such recuperation was mainly fueled by several sources of financing that again accelerated government expending resulting in increased inflation in 2011 (8.5% vs. 6.3% in 2010) and forced the Central Bank to continue applying a restrictive monetary policy.<sup>210</sup> Therefore, foreigners and Dominicans are both worried about the DR fiscal situation and expectations for the 2012 presidential election year.

**Table 9-21 DR Fiscal Balance: Revenues, Expenditures, Surplus and Deficit**  
Dominican Republic -- Fiscal Balance 2000-2011

Revenues, Expenditures, Surplus and Deficit (DR\$), As a % of GDP

Year	Total	Total	Surplus/Def	Tax	GDP (DR\$)	As % of GDP	
	Revenues	Expenditures		Revenues		Surplus/Def	Tax Rev.
	1	2	3 = (1-2)	4	5	6 = (3/5)*100	7 = (4/5)*100
2000	51,272	48,287	2,985	48,729	388,302	0.8	12.5
2001	59,856	58,863	993	58,058	415,521	0.2	14.0
2002	67,078	67,377	-299	63,867	463,624	-0.1	13.8
2003	79,685	73,993	5,692	74,248	617,989	0.9	12.0
2004	126,245	133,162	-6,917	117,298	909,037	-0.8	12.9
2005	157,585	161,597	-4,012	148,450	1,020,002	-0.4	14.6
2006	188,858	191,999	-3,141	177,812	1,189,802	-0.3	14.9
2007	236,007	233,117	2,889	217,965	1,364,210	0.2	16.0
2008	246,910	309,328	-62,417	236,166	1,576,163	-4.0	15.0
2009	226,213	282,369	-56,156	220,374	1,678,763	-3.3	13.1
2010	255,085	311,743	-56,657	243,943	1,901,897	-3.0	12.8
2011	280,457	340,876	-60,419	273,132	2,119,302	-2.9	12.9

Sources: www.bancentral.gov.do

Central Government Expenditures, Institutional-Economic Classification 2004-2011

Monthly Revenues by Collecting Offices 1998-2011

Ministry of Finance (Hacienda), General Budget Directorate, 2010 Budget Execution, 1990-2011 collected revenue classified by funds

<sup>210</sup> The GDP recovering was mainly due by the IMF, World Bank and the Inter-American Development Bank financing as well as the Venezuelan Petro-Caribe agreement (See USAID/DR Rural Economic Diversification Project (USAID/RED) "Rice Production Evaluation in the Dominican Republic and Total Support to Producers (Evaluación de la Producción de Arroz en la República Dominicana y Apoyo Total a los Productores), 2011" by Apolinar Veloz, PARETO Consulting Group Associate Consultant (not yet published))

As noted in the Economist Intelligence Unit's March 2012 report:

*"The main challenge facing policy makers will be to support economic growth while tightening fiscal policy in order to prevent a decline in confidence following expiry of the IMF stand-by agreement and as uncertainties generated by the transition to a new government growth"...Fiscal progress has been interrupted by pre-election spending, and poor management will remain an obstacle to eliminating the fiscal deficit...Despite recent fiscal measures to correct budget imbalances, weaker progress on fiscal consolidation than previously estimated and the early termination of the IMF arrangement in February have led us to slightly increase our fiscal deficit forecast for 2012 to 2.9% of GDP (up from a revised 2.8% deficit in 2011). The deficit reflects election-related spending and a rush to complete major infrastructure projects before the current presidential term ends in August."<sup>211</sup>*

Many economists in the DR are also concerned with the public debt level and the figures published by the Hacienda (Finance) Minister showing a level of US\$17,000 million. However, this does not include other government and Central Bank liabilities for which the GODR is acting as guarantor for loans issued by the state-owned commercial Reserve Bank (Banco de Reservas). Therefore, there are questions to be asked regarding not only the debt level but also the appropriateness of the debt GDP indicator.

A significant area of concern is the projected 36.6% increase of the published estimated non-financial public sector (NFPS) (including domestic debt) for the 2012 to 2016 period mainly because of the amortization increase of 46.7% and the 118.8% increase on interest payments and transfers for the Central Bank Recapitalization Plan.

**Table 9-22 Total DR NFPS + INTERNAL DEBT Service Projections, 2012-2016**

In US\$ Millions

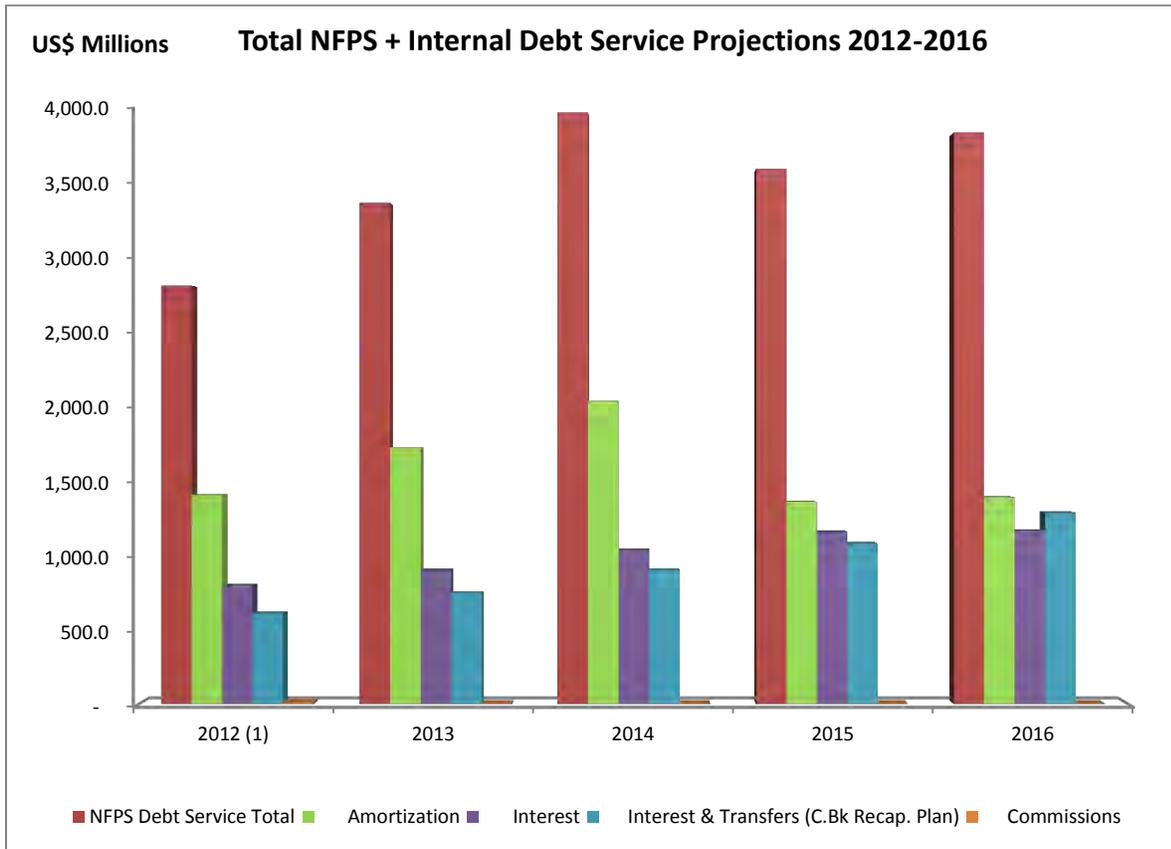
Concepts	2012 <sup>(1)</sup>	2013	2014	2015	2016	% Inc. 2012-2016
<b>NFPS Debt Service Total</b>	<b>2,822.9</b>	<b>3,382.0</b>	<b>3,989.4</b>	<b>3,608.7</b>	<b>3,855.8</b>	<b>36.6</b>
<i>Amortization</i>	<i>1,408.9</i>	<i>1,730.4</i>	<i>2,045.1</i>	<i>1,362.9</i>	<i>1,394.3</i>	<i>-1.0</i>
<i>Interest</i>	<i>797.2</i>	<i>903.7</i>	<i>1,040.1</i>	<i>1,161.8</i>	<i>1,169.5</i>	<i>46.7</i>
<i>Interest &amp; Transfers (C.Bk Recap. Plan)</i>	<i>609.6</i>	<i>746.3</i>	<i>901.8</i>	<i>1,082.2</i>	<i>1,291.3</i>	<b>111.8</b>
<i>Commissions</i>	<i>7.2</i>	<i>1.5</i>	<i>2.4</i>	<i>1.8</i>	<i>0.7</i>	<i>-90.6</i>

**Notes:**

(1) Amount approved in Public Debt Chapter of the "2012 Revenue Budget and Public Law Expenditures";  
NFPS = Non-Financial Public Sector

<sup>211</sup> The Economist Intelligence Unit (EIU), Dominican Republic Country Report March 2012.

**Figure 9-5 Total NFPS + Internal Debt Service Projections 2012-2016**



**Table 9-23 DR Central Government INTERNAL DEBT Service Projections, 2012-2016 & 2030****(In DR\$ Millions of Pesos)**

Concepts	2012 <sup>(1)</sup>	2013	2014	2015	2016	% Inc. 2012- 2016	2030	% Inc. 2012- 2030
<b>Total Central Gov.'s Service</b>	<b>66,444.8</b>	<b>57,612.3</b>	<b>65,253.9</b>	<b>80,912.2</b>	<b>91,855.9</b>	<b>38.2</b>	<b>161,831.1</b>	<b>143.6</b>
<b>Amortization</b>	<b>30,104.8</b>	<b>12,813.6</b>	<b>10,243.2</b>	<b>15,110.9</b>	<b>17,703.8</b>	<b>-41.2</b>	<b>9,149.6</b>	<b>-69.6</b>
<b>Interest</b>	<b>12,492.8</b>	<b>15,615.6</b>	<b>19,743.5</b>	<b>23,477.8</b>	<b>23,645.9</b>	<b>89.3</b>	<b>1,097.9</b>	<b>-91.2</b>
<b>Interest &amp; Transfers</b>	<b>23,834.3</b>	<b>29,180.3</b>	<b>35,261.4</b>	<b>42,314.0</b>	<b>50,490.4</b>	<b>111.8</b>	<b>151,578.4</b>	<b>536.0</b>
<b>Commissions</b>	<b>13.0</b>	<b>2.9</b>	<b>5.7</b>	<b>9.4</b>	<b>15.8</b>	<b>21.7</b>	<b>5.1</b>	<b>-60.5</b>
<b>Disbursed Internal Debt Contracted <sup>(2)</sup></b>	<b>35,343.7</b>	<b>19,734.3</b>	<b>15,956.1</b>	<b>18,541.9</b>	<b>9,815.5</b>	<b>-72.2</b>	-	
Amortization	25,962.4	10,543.6	7,973.2	11,588.7	3,695.5	-85.8	-	
Interest	9,369.6	9,190.7	7,982.9	6,953.2	6,120.0	-34.7	-	
Com. & Other Exp.	11.7	-	-	-	-	-100.0	-	
<b>New Internal Debt Contracts <sup>(3)</sup></b>	<b>3,124.4</b>	<b>8,697.7</b>	<b>14,036.3</b>	<b>20,056.2</b>	<b>31,549.9</b>	<b>909.8</b>	<b>10,252.6</b>	<b>228.1</b>
Amortization	-	2,270.0	2,270.0	3,522.2	14,008.3		9,149.6	
Interest	3,123.2	6,424.9	11,760.6	16,524.6	17,525.9	461.2	1,097.9	-64.8
Commissions & Other Expenditures	1.2	2.9	5.7	9.4	15.8	1,185.5	5.1	317.7
<b>C. Bank Recapitalization Plan <sup>(4)</sup></b>	<b>23,834.3</b>	<b>29,180.3</b>	<b>35,261.4</b>	<b>42,314.0</b>	<b>50,490.4</b>	<b>111.8</b>	<b>151,578.4</b>	<b>536.0</b>
Interest y Transfers	23,834.3	29,180.3	35,261.4	42,314.0	50,490.4	111.8	151,578.4	536.0
<b>Administrative Debt</b>	<b>4,142.4</b>					<b>-100.0</b>		
Providers S-Term Liabilities Reduction	4,142.4					-100.0		
Using General Fund Cash								
Using Domestic Bond Issues	4,142.4					-100.0		

Source: Min. of Finance/Hacienda

**Notes:**

(1) Amount approved in Public Debt Chapter of the "2012 Revenue Budget and Public Law Expenditures";

(2) Projections based on disbursed debt as of Dec-31-2011;

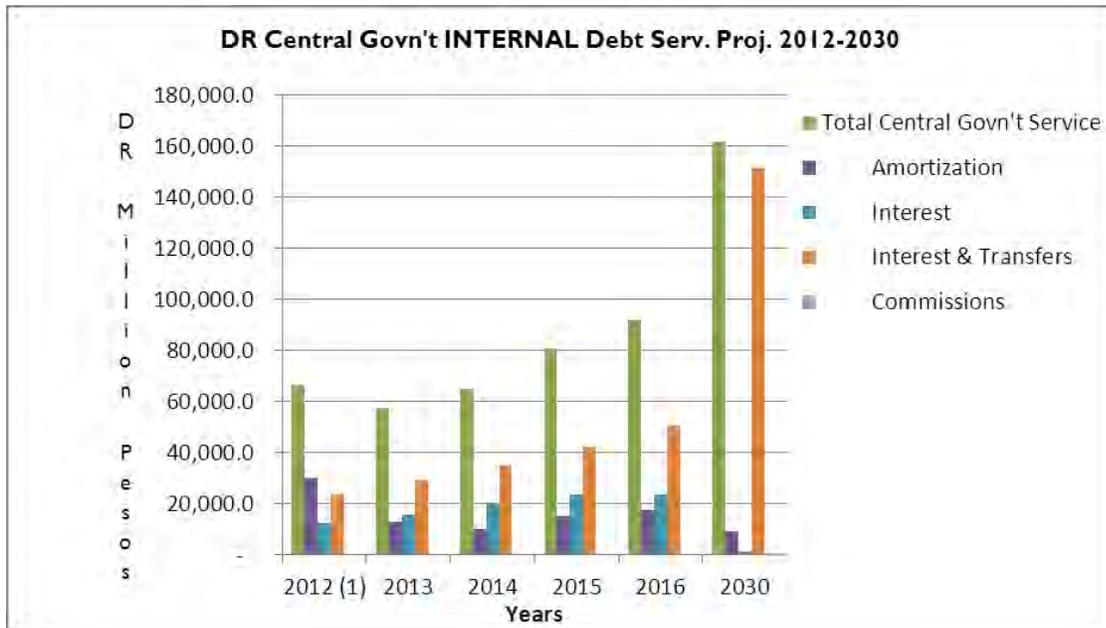
(3) Projections based on new disbursements and programmed contracted debt for the 2012-2015 period as stated in the Multiannual Financial Plan 2012-2015.

(4) Based on Law # 167-07 % of GDP scale. GDP growth in accordance with the 2012-2015 Macroeconomic Panorama developed and agreed upon by the MEPyD, MH and CBk. From 2016 on, the current GDP annual growth rate of 10.8% is maintained for the entire period.

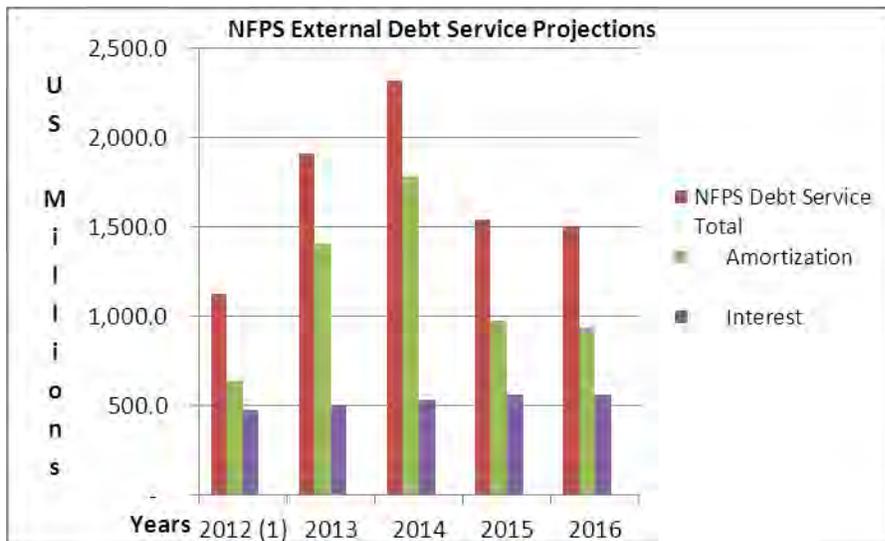
(5) The DR\$-US\$ exc. rate projections were developed and agreed upon with the MEPyD, MH and the CBk under the 2012-2015 Macroeconomic Panorama while domestic interest rates projections were developed by the Public Credit Gral. Directorate based on the current average active weighted interest rate and the domestic bond yields according to their maturity payment schedule.

MEPyD = Economy, Planning and Development Ministry

**Figure 9-6 DR Government Internal Debt Service Projections**



**Figure 9-7 Non-Financial Public Sector (NFPS) External Debt Service Projections**



**Table 9-24 Non-Financial Public Sector EXTERNAL DEBT Service Projections, 2012–2045**  
(US\$ Million)

Concepts	2012 <sup>(1)</sup>	2013	2014	2015	2016	% Inc. 2012- 2016
<b>NFPS Debt Service Total</b>	<b>1,123.6</b>	<b>1,908.5</b>	<b>2,320.6</b>	<b>1,539.3</b>	<b>1,506.5</b>	<b>34.1</b>
<i>Amortization</i>	<i>639.0</i>	<i>1,402.7</i>	<i>1,783.1</i>	<i>976.4</i>	<i>941.5</i>	<b>47.3</b>
<i>Interest</i>	<i>477.7</i>	<i>504.3</i>	<i>535.2</i>	<i>561.3</i>	<i>564.7</i>	<b>18.2</b>
<i>Commissions</i>	<i>6.9</i>	<i>1.4</i>	<i>2.3</i>	<i>1.6</i>	<i>0.3</i>	<b>-96.0</b>
<b>Disbursed External Debt Contracted <sup>(2)</sup></b>	<b>971.1</b>	<b>1,728.6</b>	<b>1,901.2</b>	<b>1,015.7</b>	<b>984.8</b>	<b>1.4</b>
<i>Amortization</i>	<i>608.4</i>	<i>1,324.2</i>	<i>1,542.6</i>	<i>702.1</i>	<i>700.3</i>	<b>15.1</b>
<i>Interest</i>	<i>359.2</i>	<i>404.4</i>	<i>358.7</i>	<i>313.6</i>	<i>284.5</i>	<b>-20.8</b>
<i>Commissions &amp; Other Exp.</i>	<i>3.5</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<b>-100.0</b>
<b>New External Debt Contracts <sup>(3)</sup></b>	<b>152.5</b>	<b>179.9</b>	<b>419.4</b>	<b>523.6</b>	<b>521.7</b>	<b>242.2</b>
<i>Amortization</i>	<i>30.6</i>	<i>78.5</i>	<i>240.6</i>	<i>274.3</i>	<i>241.2</i>	<b>689.1</b>
<i>Interest</i>	<i>118.5</i>	<i>99.9</i>	<i>176.6</i>	<i>247.7</i>	<i>280.2</i>	<b>136.5</b>
<i>Commissions &amp; Other Exp.</i>	<i>3.4</i>	<i>1.4</i>	<i>2.3</i>	<i>1.6</i>	<i>0.3</i>	<b>-92.0</b>

**Notes:**

(1) Amount approved in Public Debt Chapter of the "2012 Revenue Budget and Public Law Expenditures";

(2) Projections based on disbursed debt as of Dec-31-2011;

(3) Projections based on new disbursements and programmed contracted debt for the 2012-2015 period as stated in the Multiannual Financial Plan 2012-2015.

The yearly increase in fiscal commitments (current expenditures, servicing the debt, and energy sector subsidy among other subsidies and several tax exemptions) has constrained the government on fulfilling another by law commitment, i.e. the education funds requirement stated in Law # 66-97 which orders the government to transfer the equivalent of 4% of GDP for educational purposes. Therefore, the GODR has failed to transfer a total of DR\$274,087.5 million (US\$8,669.6 million) from year 1999 to 2011.

**Table 9-25 DR Public Expenditures in Education & Health 1999 - 2011**

Year	GDP (current)	Budgeted*		Executed		As a % of GDP				4% of GDP for Education by Law # 66- 97 **	
		Education	Health	Education	Health	Budgeted		Executed Budgets		Due	Missing
						Education	Health	Education	Health		
1	2	3	4	5	6 = (2/1)	7 = (3/1)	6 = (2/1)	7 = (3/1)	8 = (1*4)/100	9 = (4-8)	
1999	343,745.3	N.A.	N.A.	7,544.6	4,184.1	N.A.	N.A.	2.2	1.2	13,749.8	(6,205.2)
2000	388,301.9	N.A.	N.A.	8,522.4	5,845.6	N.A.	N.A.	2.2	1.5	15,532.1	(7,009.7)
2001	415,520.9	N.A.	N.A.	10,011.7	6,786.6	N.A.	N.A.	2.4	1.6	16,620.8	(6,609.1)
2002	463,624.3	N.A.	N.A.	11,772.4	7,777.2	N.A.	N.A.	2.5	1.7	18,545.0	(6,772.6)
2003	617,988.9	N.A.	N.A.	9,899.6	6,332.4	N.A.	N.A.	1.6	1.0	24,719.6	(14,820.0)
2004	909,036.8	N.A.	N.A.	11,779.9	9,633.6	N.A.	N.A.	1.3	1.1	36,361.5	(24,581.6)
2005	1,020,002.0	N.A.	N.A.	17,197.6	13,886.0	N.A.	N.A.	1.7	1.4	40,800.1	(23,602.5)
2006	1,189,801.9	N.A.	N.A.	21,462.4	15,762.8	N.A.	N.A.	1.8	1.3	47,592.1	(26,129.7)
2007	1,364,210.3	N.A.	N.A.	30,034.0	21,426.6	N.A.	N.A.	2.2	1.6	54,568.4	(24,534.4)
2008	1,576,162.8	34,347	22,679.8	34,295.1	22,623.6	2.2	1.4	2.2	1.4	63,046.5	(28,751.4)
2009	1,678,762.6	37,881	24,090.1	36,816.1	23,534.9	2.3	1.4	2.2	1.4	67,150.5	(30,334.4)
2010	1,901,896.7	42,288	33,588.5	41,854.2	33,369.1	2.2	1.8	2.2	1.8	76,075.9	(34,221.7)
2011	2,119,301.8	53,002	37,558.2	44,256.7	37,380.3	2.5	1.8	2.1	1.8	84,772.1	(40,515.4)
		<b>Total</b>	<b>285,446</b>	<b>208,542</b>			<b>Total</b>	<b>26.6</b>	<b>18.7</b>	<b>559,534</b>	<b>(274,087)</b>
		<b>Ave.</b>	<b>21,957</b>	<b>16,041</b>			<b>Ave.</b>	<b>2.0</b>	<b>1.4</b>	<b>43,041</b>	<b>(21,083)</b>

*Source:* Min. de Hacienda, Budget Gral. Dir., 2008-2011 Budget Executions.

\* It refers to the Functional Budget Classification. Both Education & Health are categorized as "Social Services".

\*\* General Education Law # 66-97, dated Feb-04-1997; the 4% of GDP for education should have started in Feb-1999.

The GODR has a total of ten specific and non-specific fiscal commitments for years 2013, 2014, 2015, and 2019 stated in National Development Strategy Law # 01-12 dated Jan-25-2012 (See a brief summary in Table 9-26). Therefore, the fiscal situation for the DR is a serious macro risk for the country. (See Table 9-27 and Figure 9-8.) In addition to the stringent domestic situation there other factors that may further complicate the GODR fiscal situation in the near future such as: a) the US slow recovering; b) the European crisis and its effects on tourism; c) international oil price projections; and d) the possibility of a new PetroCaribe structure if President Chávez health deteriorates further.

**Table 9-26 DR National Development Strategy Law No. 01-12, dated Jan-25-2012**

Specific Fiscal Commitments							
	Indicators	Baseline		Quinquennial Goals			
		Year	Value	2015	2020	2025	2030
<b>1</b>	Public Expenditures in Education, <i>As a % of GDP</i>	2009	2.2	5.0	6.0	6.5	7.0
<b>2</b>	Public Expenditures in Health, <i>As a % of GDP</i>	2009	1.4	2.8	4.0	4.5	5.0
<b>3</b>	Tributary Pressure, <i>As a % of GDP</i>	2010	13.0	16.0	19.0	21.5	24.0
<b>4</b>	Total Government Subsidies ( <i>US\$ Millions</i> )	2008	\$530.0	\$261.7	\$70.0	\$62.5	\$55.0
Other Non-Specific Fiscal Commitments							
<b>5</b>	Completing the Energy Sector Reform	→	To be done in one (1) year: <b>2013</b>				
<b>6</b>	Reviewing the Social Security Law No. 87-01 to complete its universalization	→	To be done in two (2) years: <b>2014</b>				
<b>7</b>	Completing the Health Sector Reform	→	To be done in two (2) years: <b>2014</b>				
<b>8</b>	Modification of the Labor Law to create an unemployment insurance & severance payments system	→	To be done in two (2) years: <b>2014</b>				
<b>9</b>	Fiscal Pact & Integral Fiscal Reform + Fiscal Responsibility Law <b>1/</b>	→	To be done in three (3) years: <b>2015</b>				
<b>10</b>	Transferring all pertinent tributes to the Municipalities	→	To be done in seven (7) years: <b>2019</b>				
<b>1/</b> It should include starting a process to: <b>a)</b> Reduce fiscal evasion; <b>b)</b> Increasing public expenditures quality, efficiency, and transparency; <b>c)</b> Increasing tributary structure equity, efficiency, and transparency; <b>d)</b> Incentive regimes consolidation in the Tributary Code; <b>e)</b> Public services fees rationalization; <b>f)</b> Increasing the Tributary Pressure to achieve the National Development Strategy 2030 goals; <b>g)</b> Complying with all fiscal commitments included in trade agreements; and <b>h)</b> Increasing the current saving and implementing counter cyclical policies.							

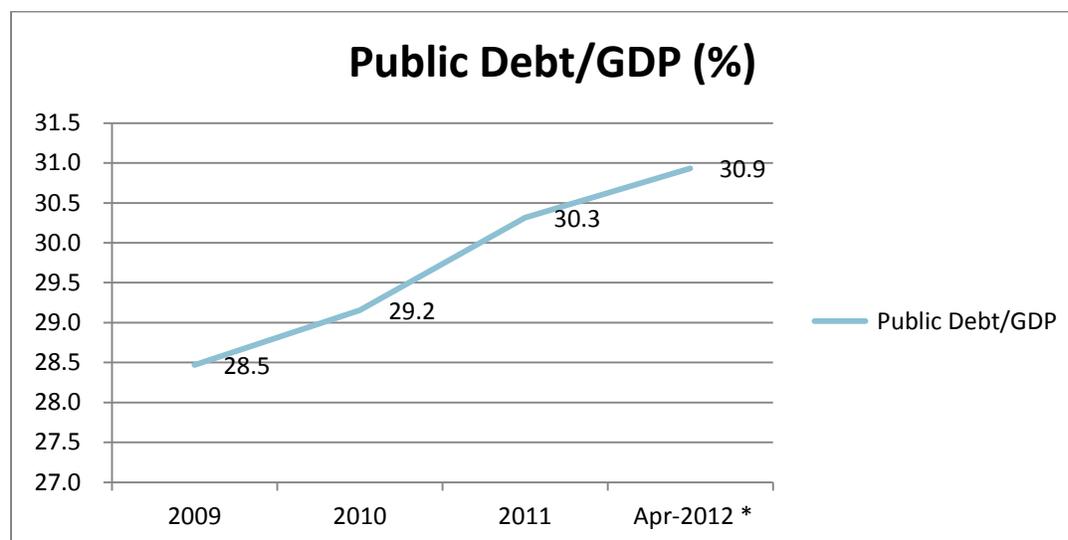
**Table 9-27 Dominican Republic Public Debt**

(In US\$ Million)

	Concepts	2009	2010	2011	Apr-2012 *
<b>1</b>	<b>Public Debt</b>	<b>13,254.0</b>	<b>14,818.0</b>	<b>16,593.0</b>	<b>17,331.1</b>
<b>2</b>	<b>External Debt</b>	<b>8,214.7</b>	<b>9,946.9</b>	<b>11,625.5</b>	<b>12,353.0</b>
	Central Government	8,208.7	9,940.9	11,619.5	12,347.0
	Rest of NFPS	6.0	6.0	6.0	6.0
<b>3</b>	<b>Domestic Debt</b>	<b>5,039.3</b>	<b>4,871.1</b>	<b>4,967.5</b>	<b>4,978.1</b>
	Central Government	2,424.9	2,413.4	2,624.5	2,534.5
	Rest of NFPS	255.2	184.6	142.4	263.1
	Inter-governmental	2,359.2	2,273.1	2,200.6	2,180.5
<b>4</b>	<b>GDP Current (DR\$ pesos)</b>	<b>1,678,762.6</b>	<b>1,901,896.7</b>	<b>2,119,301.8</b>	<b>2,193,477.4</b>
	GDP Current (US\$)	46,554.7	50,825.7	54,734.0	56,027.5
<b>5</b>	<b>Public Debt/GDP</b>	<b>28.5</b>	<b>29.2</b>	<b>30.3</b>	<b>30.9</b>

\* Preliminary data as of Apr-30-2012

Source: General Directorate of Public Credit and Reserve Bank, Ministry of Finance

**Figure 9-8 DR Public Debt as a Percent of GDP, 2009-2012**

## Chapter 10 MARKET FAILURES

**A**lthough the research found evidence of oligopolistic behavior and a lack of enforced competition regulations, particularly related several important cartels, the large and growing number of different products produced and exported by the country suggests coordination failures and information externalities do not pose the most serious limitations to the country's inclusive growth.<sup>212</sup> While perception survey responses suggest that market failures are an area of concern, they do not rise to the level of a binding constraint to inclusive growth when compared with the two identified primary constraints, inadequate electricity and ineffective governance.<sup>213</sup>

### Information Externalities

Coordination failures and information externalities may limit the existence or knowledge of profitable investment projects. Countries with a limited set of inputs or capabilities will have comparative advantage in few products exported by other poor countries (Hidalgo and Hausmann, 2008). By contrast, if a country has an ample set of these non-tradable inputs, it will have comparative advantage in more complex products. One measure of the sophistication of a country's comparative advantage is the GDP per capita of its competitors on a product-by-product basis.

As first described by Hausmann, Hwang and Rodrik (2006):

*"...the key novelty is a quantitative index that ranks traded goods in terms of their implied productivity. We construct this measure by taking a weighted average of the per-capita GDPs of the countries exporting a product, where the weights reflect the revealed comparative advantage of each country in that product. So for each good, we generate an associated income/productivity level (which we call PRODY). We then construct the income/productivity level that corresponds to a country's export basket (which we call EXPY), by calculating the export-weighted average of the PRODY for that country. EXPY is our measure of the productivity level associated with a country's specialization pattern."*

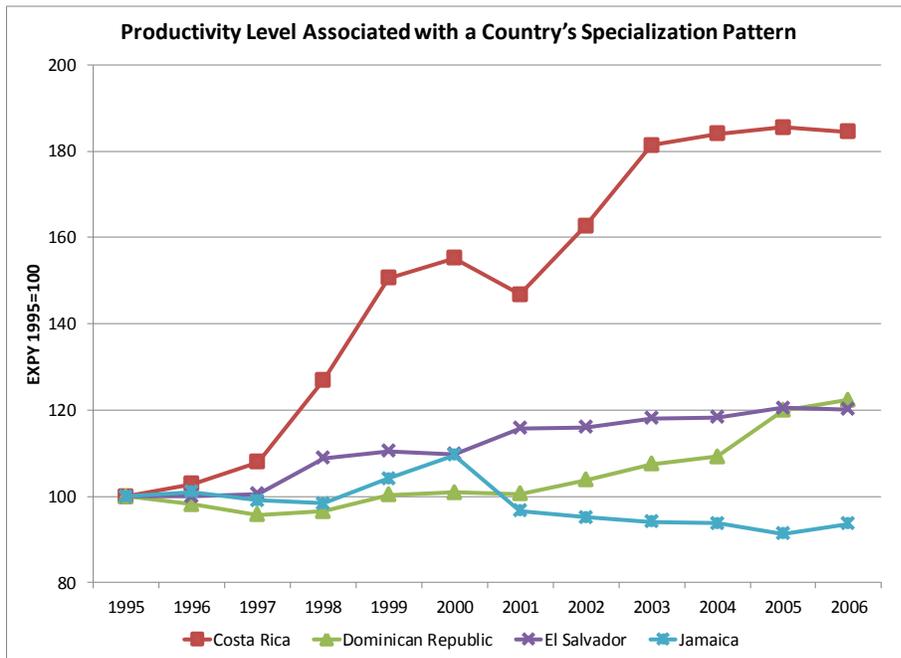
Hausmann, Hwang and Rodrik show that a country's GDP per capita tends to converge towards its EXPY. Countries with a low EXPY for a given level of income tend to grow more slowly. PRODY and EXPY are also referred to as the level of 'sophistication' of the product and the export package, respectively.

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<sup>212</sup> Competition policy and enforcement are covered in multiple branches of the inclusive growth diagnostic model. That analysis has been grouped in Chapter 4.

<sup>213</sup> Fanelli and Guzman.

**Figure 10-1 Export Package Specialization for the DR and Comparator Countries**  
(EXPY normalized to 1995=100)



Source: World Bank/PRMED's calculation based on Hausmann; Hwang and Rodrik (2006) and using UN Comtrade database.

Figure 10-1 shows that while the Dominican Republic has consistently improved the specialization of its export good basket from 1999-2006, so has El Salvador and of particular note are the tremendous improvements achieved by Costa Rica as part of the “Intel Effect.” Of the set of four comparator countries, only Jamaica has lagged behind in export basket sophistication in relation to the base year of 1995. This steady diversification is strong evidence that information market failures about new business opportunities are not severe.

## Chapter 11 CRITERIA FOR SELECTION OF COMPARATOR COUNTRIES

The Hausmann-Rodrik-Velasco growth diagnostics model contains international benchmarking as an essential part of the methodology. Most of the international comparisons originally envisioned by HRV were centered on international rankings, but also apply to comparative statistics.

*“The idea of measuring performance in a comparative manner is in principle very useful, as it provides feedback to a society about its performance relative to what seems feasible. As such, it can trigger social conversation around the topic at hand. Moreover, if properly interpreted and used, it can contribute evidence to a diagnostic effort. However, there are important aspects that condition its usefulness.”<sup>214</sup>*

The HRV extensions in the inclusive growth diagnostic models increase the importance of household and firm level survey data sets in the analysis, so selection of comparator countries early in the investigation is important to allow similar micro-data sets to be collected from other countries and analyzed as part of the research.

### *Criteria Recommended for IGD-DR Comparator Country Selection*

Criteria for the selection of comparator countries are not described in the methodology. In close consultation with USAID/Dominican Republic, the inclusive growth diagnostic team for the Dominican Republic developed the following joint criteria for comparator country selection:

- **Geographic Region:** Select countries within Latin America and the Caribbean, due to shared historical and cultural characteristics.
- **Per capita income:** Select countries with the most similar per capita income levels. The team used GNI per capita PPP in 2009.
- **Agriculture as a share of GDP:** Select countries with the most similar economic structure, using agriculture as the defining statistic.

Applying these three criteria, the three countries with the closest match to the Dominican Republic were:

Jamaica

Costa Rica

El Salvador

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<sup>214</sup> Hausmann, Klinger, Wagner, pp 11-12.

## Bibliography

- Andújar Scheker, Julio G., "Economic Reforms and Political Negotiations: Notes on the Dominican Experience of the 1990s (Reformas Económicas y Negociaciones Políticas: Apuntes sobre la Experiencia Dominicana de los Noventa)", *Science and Society*, January-March 2005/Vol. 30, No. 001; Instituto Tecnológico de Santo Domingo (INTEC), Sto. Dgo., Dominican Republic
- Attali, Jacques, "Dominican Republic 2010-2020: International Commission for the Strategic Development of the Dominican Republic (República Dominicana 2010-2020, Informe de la Comisión Internacional para el Desarrollo Estratégico de la República Dominicana)", November 2010, p. 8.
- Bertelsmann Stiftung Transformation Index "BTI 2012 | Dominican Republic Country Report" <http://www.bti-project.org/countryreports/lac/dom/2012/#chap7>
- Bussolo, Maurizio, Samuel Freije-Robríquez, Carolina Diaz-Bonilla and Calvin Zebaze Djiofack, "Long Run Economic Growth in the Dominican Republic: A Policy Note", World Bank , 2010.
- Callison, C. Stuart. 2012 "Growth Diagnostics Analytic Guide for Sustained, Broad-based Economic Growth" United States Agency for International Development (USAID), unpublished manuscript available from author at [ccallison@usaid.gov](mailto:ccallison@usaid.gov).
- Central Bank of the Dominican Republic, "Dominican Economy Report", January-December 2011, Values (bonds, certificates) in Circulation, p. 35; [www.bancentral.gov.do](http://www.bancentral.gov.do);
- Central Bank of the Dominican Republic, Labor Force National Survey
- Central Bank of the Dominican Republic, *Mercado de Trabajo 2010*.
- Cohen, Yinon and Yitchak Haberfeld. "Why Do Married Men Earn More than Unmarried Men?" *Social Science Research* 20, 29-44. 1991. <http://www.columbia.edu/~yc2444/Why%20Do%20Married%20Men%20Earn%20More%20than%20Unmarried%20Men.pdf>
- Dahlin, Brian G. "The Impact of Education on Economic Growth: Theory, Findings, and Policy Implications." Duke University, Mimeo, 2002. [www.ssc.wisc.edu/~munia/475/dahlin0202.pdf](http://www.ssc.wisc.edu/~munia/475/dahlin0202.pdf)
- Dominican Republic: Development Tools" (Informe Técnico, Construyendo un mejor futuro para la República Dominicana: Herramientas para el desarrollo"), Working Papers Center for International Development at Harvard University, March 2011;
- Dominican Republic General Education Law No. 66-97, dated February 04, 1997;

## Bibliography

Dominican Republic National Development Strategy Law No. 01-12, dated January 25, 2012;

The Economist Intelligence Unit, Dominican Republic Country Reports, various 2012.

*Economista Dominicana* blog. “La canasta familiar y el bienestar de la población dominicana.” February 16, 2011. <http://economistadominicano.wordpress.com/2011/02/16/la-canasta-familiar-y-el-bienestar-de-la-poblacion-dominicana/>

Espinoza, JJ “Education and Experience’s Impact on Wages: Heckman Correction for Non-Random Sampling” Quantitative and Applied Economics Blog page, 2010. <http://espin086.wordpress.com/2010/12/11/education-and-experiences-impact-on-wages-heckman-correction-for-non-random-sampling/>

Fanelli, José María and Rolando Guzmán, “Development Diagnosis for the Dominican Republic (Diagnóstico de Crecimiento para la República Dominicana)”, CEDES/PARETO Consulting Group; Inter-American Developing Bank (IDB), Working Document CSI-118, , p. 13-16 & 24-25, Sept. 2008.

Fraser Institute’s Economic Freedom of the World 2011 Annual Report;

Fuentes, Bernardo, “To Date (A la Fecha)”, <http://www.acento.com.do/>, December 8, 2011;

Gonzalez, José Antonio “Labor Market Flexibility in Thirteen Latin American Countries and the United States”, World Bank, 1999. <http://elibrary.worldbank.org/content/book/9780821344897>

Hausmann, Ricardo “Informe Tecnico: Construyendo un mejor future para la Republica Dominicana: Herramientas para el desarrollo” CID Working Paper, March 2011.

Hausmann, Ricardo and Bailey Klinger “Structural Transformation and Patterns of Comparative Advantage in the Product Space” Harvard University, Kennedy School of Government, Center for International Development. June 2006.

Hausmann, Ricardo, Baily Klinger and Rodrigo Wagner, “Doing Growth Diagnostics in Practice: A ‘Mindbook,’” Harvard University, Center for International Development, 2008.

Hausmann, Ricardo, Dani Rodrik and Andres Velasco. “Growth Diagnostics.” John F. Kennedy School of Government, Harvard University, 2005. [www.hks.harvard.edu/fs/drodrik/Research%20papers/barcelonafinalmarch2005.pdf](http://www.hks.harvard.edu/fs/drodrik/Research%20papers/barcelonafinalmarch2005.pdf)

Heritage Foundation/Wall Street Journal 2012 Economic Freedom Index

Hornbeck, J. F., “The Dominican Republic-Central America-United States Free Trade Agreement (CAFTA DR): Developments in Trade and Investment” Congressional Research Service, 7-5700. April 2012.

## Bibliography

- Inter-American Development Bank, *The path to sustainable growth in the Dominican Republic*, September 2009.
- Inter-American Development Bank, *Dominican Republic Country Strategy 2010-2013*. 2010.
- IMF Working Paper, "Measuring the Informal Economy in Latin America and the Caribbean," by Guillermo Vuletin, April 2008.
- Knotek, Edward S. II. "How Useful is Okun's Law?" The Federal Reserve Bank of Kansas City, 2008. <http://www.kc.frb.org/publicat/econrev/PDF/4q07Knotek.pdf>
- Lizardo, J. 2008. "Análisis del Desempeño Económico y Social de la República Dominicana, enero–junio 2007". Unpublished.
- Martinez, R. & Fernandez, A. Economic Commission for Latin American and the Caribbean. (2007). *El costo del hambre análisis del impacto social y económico de la desnutrición infantil en américa latina: Centroamérica y República Dominicana*. World Food Program: Santiago de Chile, Chile.
- Ministry of Finance, General Budget Directorate, 2008-2011 Budget Execution
- Ministry of Finance, General Directorate of Public Credit and Banco de Reservas
- Ministry of Finance, Dominican Republic's Quarterly Public Debt Report April – June 2012
- Orco-Zerpa, *Access and Availability: Improving Food Security in the Dominican Republic in the Context of CAFTA-DR*. 2012.
- Orozco, Manuel. "¿Están Cayendo las Remesas Hacia AL y el Caribe?" *Confidencial*. Oct 28, 2008. As cited in "Migration and remittances in times of recession: Effects on Latin American and Caribbean Economies" Manuel Orozco, Inter-American Dialogue SELA Permanent Secretariat, Caracas, Venezuela: May 2009, SP/Di N° 5-09.
- Orozco, Manuel. "Determinants of remittances transfers: The Case of the Dominican Republic, January 1999 to September 2003". Inter-American Dialogue. 2004.
- Pan-American Health Organization, *Health Situation in the Americas: Basic Health Indicators 2011*.
- Pomerleano, Michael. "What is the impact of the global financial crisis on the banking system in Asia?" August 2009. <http://www.bi.go.id/NR/rdonlyres/920972C5-9676-4DC3-A875-7FF6E1509A97/17196/4MPomerleanotext.pdf>
- Programa de Promoción de la Reforma Educativa en América Latina y el Caribe. *Cuánto están aprendiendo los niños en América Latina?*, 2009.

## Bibliography

- Rivas, Rafael. "The Pass-Through of Interest Rates: The Case of the Dominican Republic", Universidad Católica de Chile, Tesis de Magister., 2011. [http://www.economia.puc.cl/docs/tesis\\_rrivas.pdf](http://www.economia.puc.cl/docs/tesis_rrivas.pdf)
- Ronnås, Per and Miranda Kwong "Deriving Targets for Productive Employment from Poverty Targets" ILO Discussion Note (Draft). [http://www.ilo.org/wcmsp5/groups/public/@ed\\_emp/@ed\\_emp\\_msu/documents/briefingnote/wcms\\_155817.pdf](http://www.ilo.org/wcmsp5/groups/public/@ed_emp/@ed_emp_msu/documents/briefingnote/wcms_155817.pdf)
- Schnabel, Gert "Output trends and Okun's law" Bank for International Settlements, BIS Working Paper No 111, April 2002. <http://www.bis.org/publ/work111.pdf>
- Schneider, Friedrich "Size and Measurement of the Informal Economy in 110 Countries around the World" [http://rru.worldbank.org/Documents/PapersLinks/informal\\_economy.pdf](http://rru.worldbank.org/Documents/PapersLinks/informal_economy.pdf), July 2002.
- SEEPyD and CONARE. "Inputs for the Elaboration of the Strategy of National Development." <http://www.camaradediputados.gov.do/masterlex/MLX/docs/2F/1B0/1B1/1C5/1D2/1D8.pdf>
- Then Paulino, Amarilis, 2009 *Micronutrient Survey*. Ministerio de Salud Publico, 2011.
- USAID Economic Analysis and Data Services Database EADS
- USAID, "Doing Agribusiness in Latin America and the Caribbean – Dominican Republic," December 2011.
- USAID, "Dominican Republic Economic Performance Assessment." April 2006.
- USAID, *LAC Databook 2011*.
- USAID, "Pakistan Food and Agriculture Project: Report to USAID/Pakistan" by Weidemann Associates, Inc., March 2009. <http://egateg.usaid.gov/sites/default/files/Pakistan%20Food%20and%20Agriculture%20Project.pdf>
- USAID, *Securing the Future: A Strategy for Economic Growth*, April 2008.
- USDA Foreign Agricultural Service, "Fact Sheet on the Dominican Republic – Central America – United States Free Trade Agreement". September, 2009.
- USTR, *Foreign Trade Barriers*, 2010.
- Veloz, Apolinar, "Rice Production Evaluation in the Dominican Republic and Total Support to Producers (Evaluación de la Producción de Arroz en la República Dominicana y Apoyo

## Bibliography

- Total a los Productores), PARETO Consulting Group Associate, USAID/DR Rural Economic Diversification Project (USAID/RED), not published, 2011.
- Veloz, Apolinar, "The Efficacy of the Monetary Policy (La Eficacia de la Política Monetaria)", Opinion section, March 02 and 16, 2012, <http://www.acento.com.do/>;
- World Economic Forum, *Global Competitiveness Report, several reports*
- World Bank, "Migration and Remittances Factbook 2011", 2011.
- World Bank, "Dominican Republic Partnership and Country Assistance Strategy FY10-FY13," 2009.
- World Bank, "Meeting the Electricity Supply/Demand Balance in Latin America & the Caribbean," September 2010.
- World Bank, "Payments and Securities Clearance and Settlement Systems in the Dominican Republic." March, 2003.
- World Bank, World Development Indicators
- World Bank, World Governance Indicators
- World Bank/IFC Enterprise Survey, Dominican Republic Country Profile, 2010.

## Acronyms

ADEMI	Association for the Development of Microenterprise
AGRODOSA	Aseguradora Agropecuaria Dominicana
APORDAM	Dominican Port Authority
CAFTA-DR	Central America and Dominican Republic Free Trade Agreement
CONACADO	National Confederation of Dominican Cocoa Producers
CONARE	National Council of State Reform (Consejo Nacional de Reforma del Estado)
DR	Dominican Republic
EADS	USAID Economic Analysis and Data Services
ENFT	Dominican Labor Force National Survey
FDI	Foreign Direct Investment
FTZ	Free Trade Zone
GAP	Good Agricultural Practices
GCI	Global Competitiveness Index
GDP	Gross Domestic Product
GODR	Government of the Dominican Republic
HRV	Hausmann, Rodrik and Velasco
IGD	Inclusive Growth Diagnostics
ILO	International Labour Organization
IMF	International Monetary Fund
IMP	Import Penetration
INESPRE	Price Stabilization Institute
LAC	Latin America and Caribbean
MOA	Ministry of Agriculture
NFPS	Non-Financial Public Sector
SEEPyD	<i>Secretary of State for Economy, Planning and Development (Secretaría de Estado de Economía, Planificación y Desarrollo)</i>

## Acronyms

SME	Small and Medium Sized Enterprise
SPS	Sanitary and Phyto-Sanitary
UNDP	United Nations Development Programme
USAID	United States Agency for International Development
WDI	World Development Indicators
WEF	World Economic Forum
WGI	World Governance Indicators