

# Rekindling Economic Growth in Belize

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## **Abstract**

Rekindling faster, sustained economic growth is arguably the most important development challenge for Belize. Economic growth is crucial for improving living standards, reducing poverty and strengthening macroeconomic sustainability. What are the binding constraints to economic growth in Belize? This study updates a growth diagnostic prepared for Belize in 2007, by reviewing Belize's economic performance, applying the Hausmann, Rodrick, and Velasco methodology to Belize's economic context and also by taking into account the private sector's opinions on the constraints to private sector investment and growth.

JEL Codes: H21, H41, N16, O11, O24, O47, O54

Keywords: economic growth, growth diagnostic, Belize, investment, anti-export bias

## **ACRONYMS**

|          |                                                 |
|----------|-------------------------------------------------|
| BAHA     | Belize Agricultural Health Authority            |
| BELTRADE | Belize Trade and Investment Development Service |
| BPO      | Business process outsourcing                    |
| BTB      | Belize Tourism Board                            |
| CARICOM  | Caribbean Community                             |
| CBB      | Central Bank of Belize                          |
| CET      | Common external tariff                          |
| DFC      | Development Finance Corporation                 |
| EPZ      | Export processing zone                          |
| FDI      | Foreign direct investment                       |
| GCI      | Global Competitiveness Index                    |
| GDM      | Growth diagnostics methodology                  |
| GDP      | Gross domestic product                          |
| IDB      | Inter-American Development Bank                 |
| IMF      | International Monetary Fund                     |
| MFN      | Most favored nation                             |
| NPL      | Non-performing loan                             |
| NSTMP    | National Sustainable Tourism Masterplan         |
| RCA      | Revealed comparative advantage                  |
| SIB      | Statistical Institute of Belize                 |
| WEF      | World Economic Forum                            |

## **EXECUTIVE SUMMARY**

Belize needs to accelerate its economic growth. Between 2004 and 2014, real GDP growth averaged 2.65 percent. Since this rate barely kept pace with population growth, living standards stagnated. Belize's ability to achieve faster economic growth over the medium term will be the principal determinant of its ability to lower the poverty rate and could contribute to greater fiscal sustainability.

Fixed capital formation—particularly by the domestic private sector—is currently too low to support a faster rate of growth. In addition, an acceleration of economic growth depends on faster export growth. More than half of all economic growth between 2004 and 2013 was generated in non-government services. However, tourism grew at a slower rate than in earlier periods. Non-traditional agricultural exports failed to grow at a significant pace.

Hausmann and Klinger (2007) prepared a growth diagnostic for Belize in 2007, which the Inter-American Development Bank (IDB) later published in a broader study in 2010 (Hausmann and Klinger, 2010). The 2007 growth diagnostic (Hausmann and Klinger, 2007), referred to hereafter as HK 2007, concluded that high cost finance was the binding constraint to economic growth in Belize. The diagnostic attributed the high cost to a combination of low national savings and weak access to external saving.

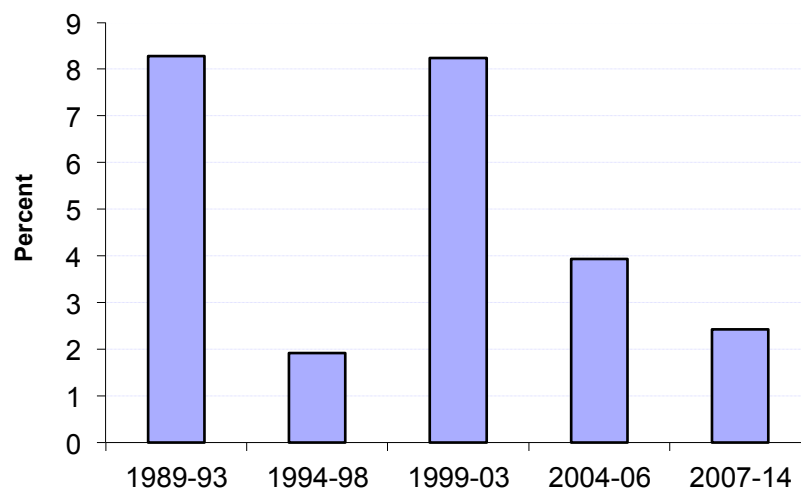
This update of HK 2007 finds a more diversified set of constraints on economic growth than in 2007. The situation with regard to high cost finance has improved, with lending interest rates declining by 4.5 percentage points from 2007 to 2014. In contrast, the situation with some of the factors that were discarded as binding constraints in 2007—such as taxes, transport, and crime—have deteriorated since then.

This update concludes that the binding constraint to economic growth in Belize is a longstanding and unintentional, anti-export bias of public policies. The tax and trade policy framework skews incentives against exports and is the most important aspect of the anti-export bias. However, it is reinforced by the under-provision of key public goods that would support exports (notably in sanitary and phytosanitary control and in transport infrastructure, and by indirect public support for consumption and investment in nontradable sectors). The cost of finance remains high, is a key concern of the private sector, and may represent a second binding constraint to growth. It is unclear to what extent low human capital is a constraint to economic growth. All other potential factors are not considered binding constraints to economic growth.

## 1. FASTER GROWTH FOR PROSPERITY AND SUSTAINABILITY

Belize needs to accelerate its economic growth. Since the initiation of more sustainable fiscal policies in 2004, economic growth has been subdued. Between 2004 and 2014 real GDP growth averaged 2.65 percent, and between 2007 and 2014 real GDP growth averaged only 2.4 percent (Figure 1).

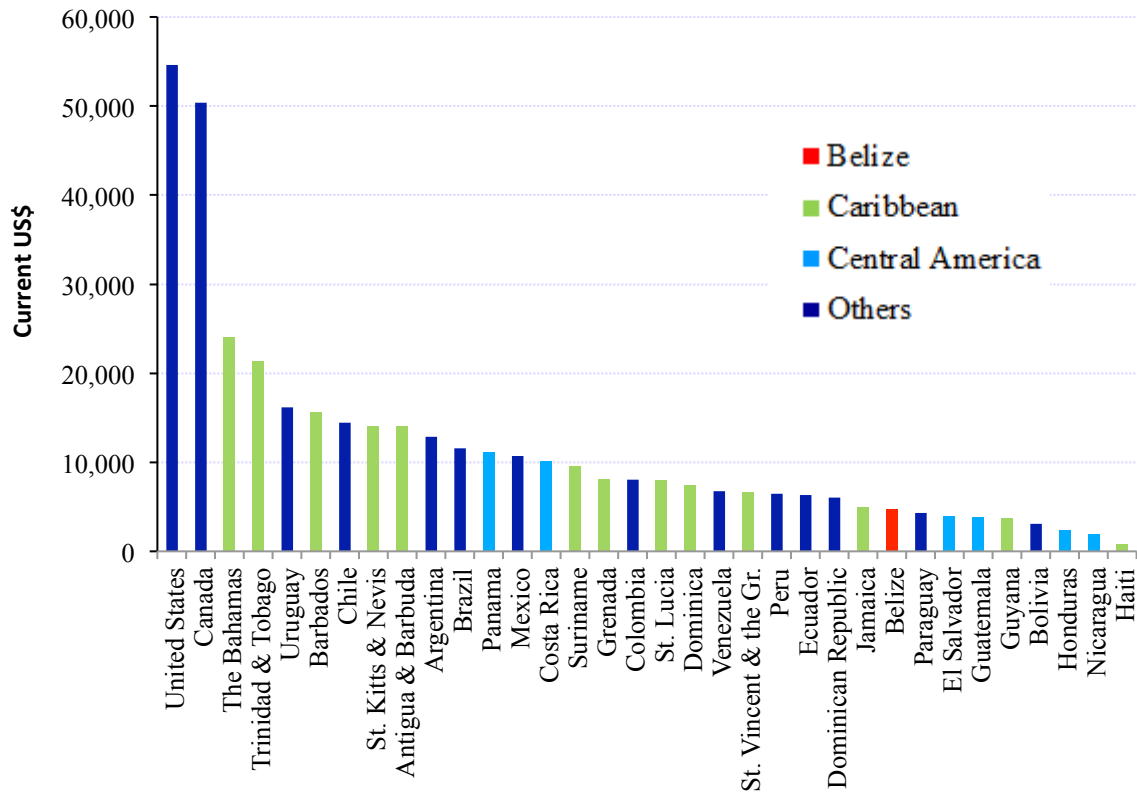
**Figure 1. Average Real Growth by Period in Belize, 1989–2014**



Source: SIB (2015).

With economic growth slightly below the population growth rate of 2.65 percent, living standards have stagnated in absolute terms. In relative terms, Belize remains poor—particularly when compared with other Caribbean countries—and its income advantage over its poorer Central American neighbors has been diminishing (Figure 2).

**Figure 2. GDP per capita in the Western Hemisphere, 2014**

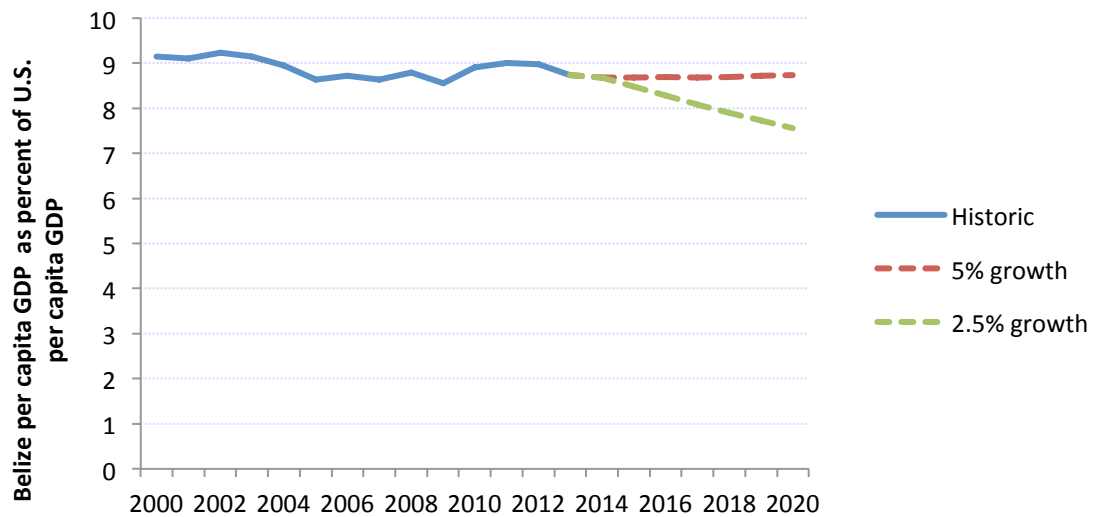


Source: IDB based on IMF (2015).

Belize has ceased to close the income gap with more advanced economies. Belize's per capita of US\$4,747 (in nominal USD) was 8.7 percent of the U.S. level in 2014, down from 9.1 percent in 2000. Belize's economy must grow by at least 5 percent in real terms per annum to stabilize living standards at 8.7 percent of the U.S. level (Figure 3). If economic growth were to continue at a rate of 2.5 percent, Belizean GDP per capita would decline to 7.6 percent of the U.S. level by 2020.



**Figure 3. Belize's GDP Per Capita Versus the U.S. GDP Per Capita**



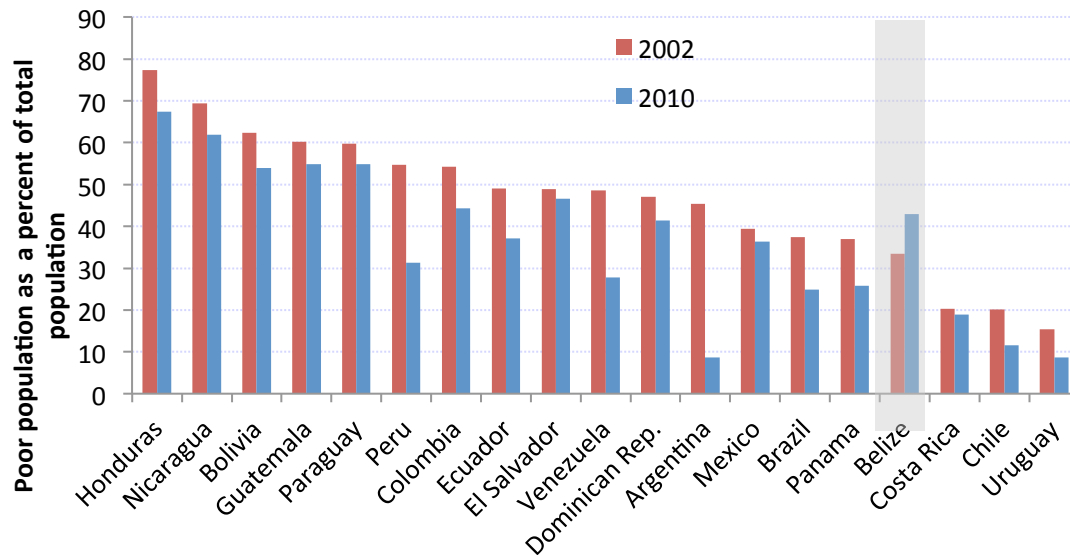
Source: IDB based on SIB and IMF (2014).

Low economic growth and the resulting stagnation in living standards caused an increase in the poverty rate in Belize during the 2000s, while most other Latin American and Caribbean (LAC) countries managed to reduce poverty (Figure 4) during this time period. The poverty rate in Belize rose from 34.0 percent in 2002 to 41.3 percent in 2009 (Government of Belize, 2010). Although efforts were made to ensure methodological comparability between these two assessments, 2009 was an unusually bad year to measure poverty. First, inflation-adjusted income per capita reached a nadir in 2009 due to the global recession and heavy crop losses due to floods in 2008. Real income per capita in 2009 was 3.9 percent lower than in 2002. Second, high international prices for food likely contributed to inflating the estimated cost of a minimum food basket (a key determinant of the poverty line cutoff).<sup>1</sup> Both factors changed quickly after 2009. The food component index of the consumer price index (CPI) declined by 2.5 percent by 2010, and real per capita increased by 6.8 percent higher in 2012 compared to 2002. Consequently, if Belize had measured poverty in 2012, it would likely have shown a population poverty rate considerably below the 41 percent registered in 2009, although likely still above the 34 percent registered in 2002.

<sup>1</sup> The minimum food basket rose by 58 percent between May 2002 and May 2009, whereas the general consumer price index rose by only 22.5 percent over the same period.

<sup>2</sup> IMF (2013b) discusses various linkages between growth and fiscal policies in addition to the two powerful effects outlined above.

**Figure 4. Poverty Rates in Selected LAC Countries**



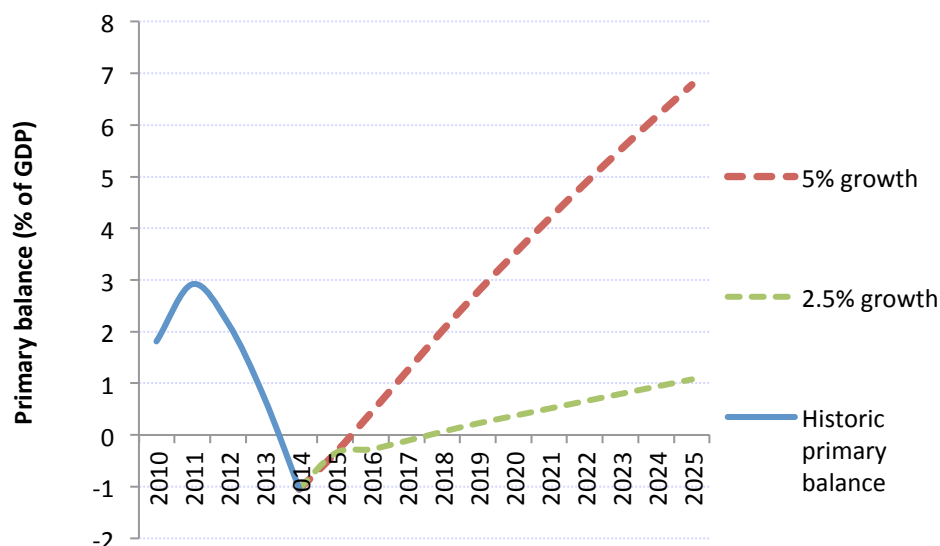
Source: IDB based on ECLAC (2011); GOB (2010).

There is little evidence to suggest that the poverty elasticity to economic growth is low in Belize. By international standards, Belize's income inequality is moderate and changed little over the 2000s; the population-based Gini coefficient was 0.4 in 2002 and 0.42 in 2009. This suggests that the poverty rate is in fact quite sensitive to changes in real income per capita. Consequently, Belize's ability to achieve faster economic growth over the medium term will be the principal determinant of its ability to lower poverty.

Faster GDP growth would greatly assist efforts in Belize to raise the government's primary (non-interest) surplus and strengthen fiscal sustainability. The International Monetary Fund (IMF) has underlined the importance of economic growth in assisting fiscal consolidations and sustained reductions in debt-to-GDP ratios (Cottarelli and Jaramillo, 2012). It is difficult to increase the primary surplus in the context of low or negative economic growth. Demands arising from population growth, compensation for inflation, and some built-in mechanisms—such as inertial increases in some aspects of the wage bill—make it difficult to restrain the nominal growth of government expenditure in Belize below 4 percent per annum. Government revenues, by contrast, tend to rise in line with nominal GDP (i.e., the tax burden is constant). With a real GDP growth rate of only 2.5 percent and an inflation rate of approximately 1.5 percent per annum, nominal GDP increases by 4 percent per annum, a rate that is roughly similar to the floor in the growth in expenditures. It is difficult to increase the primary surplus

under those conditions. By contrast, if real GDP growth is 5 percent per annum instead of 2.5 percent, and if fiscal policy is unchanged, the gap between revenues and non-interest expenditures (the primary surplus) would quickly widen (Figure 5). Although this is a mechanical and illustrative exercise, the central point is worth highlighting: fiscal outcomes can be very different even under apparently identical tax and expenditure policies.

**Figure 5. Primary Surplus Under Different Growth Scenarios (2010–2025)**

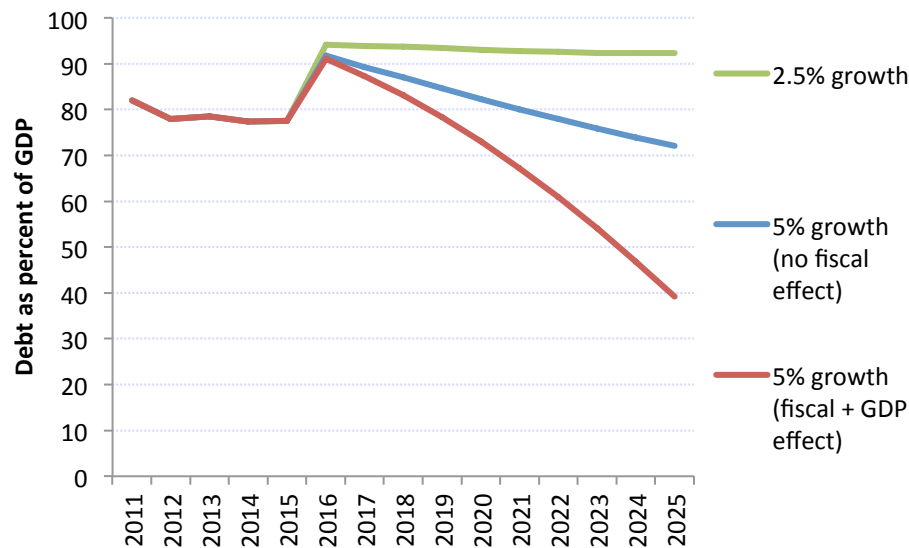


Source: IDB, Government of Belize, Budget Speech for Fiscal Year 2015/2016, and SIB.

Economic growth is decisive for debt sustainability. Under the fiscal stance projected in the Budget Speech for 2015/16 and real GDP growth at current levels—2.5 percent per annum—the debt-to-GDP ratio would barely decline over the medium term. However, if GDP growth instead averages 5 percent per annum, purely the denominator effect of dividing debt by a larger GDP would cut the debt-to-GDP ratio to 72 percent by 2025 instead of 92 percent. If, in addition, all the benefits of a faster growth of government revenues are saved and translate into a higher primary surplus (as in Figure 5), the debt-to-GDP ratio would be only 39 percent by 2025 (Figure 6).<sup>2</sup> The impact of raising the GDP growth rate by 2.5 percentage points is powerful: a difference of 50 percentage points in the debt-to-GDP ratio in only 10 years.

<sup>2</sup> IMF (2013b) discusses various linkages between growth and fiscal policies in addition to the two powerful effects outlined above.

**Figure 6. Debt-to-GDP Ratio Under Different Growth Scenarios**



Source: Central Bank of Belize, annual reports and monthly economic highlights, IDB projections.

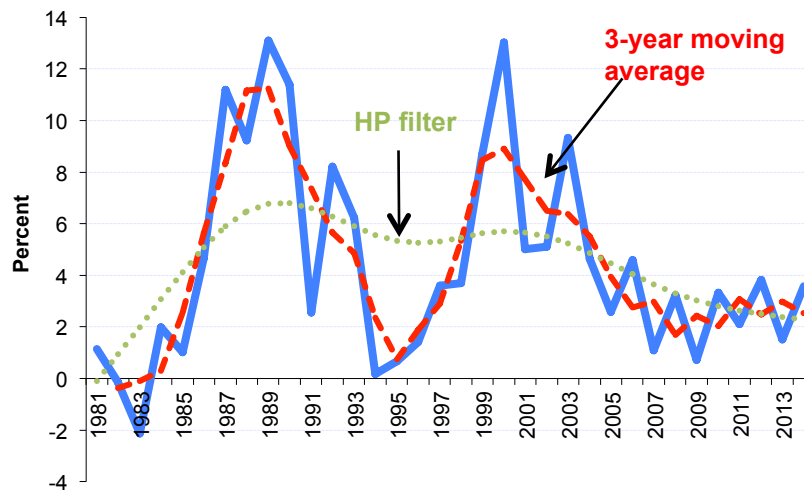
Note: The scenarios assume that additional liabilities are incorporated into public debt by December 2016.

## 2. ECONOMIC GROWTH PERFORMANCE AND CHARACTERISTICS

### 2.1. Economic Growth Performance

Since independence in 1981, Belize's economic growth has shown two marked cycles of fast and three cycles of slow growth (Figure 7). The last high growth period ended in 2003 and, following the initiation of macroeconomic adjustment policies in 2004, economic growth decelerated to a plateau of 2 to 3 percent per annum. In the transition from a high to low growth phase, economic growth averaged 3.9 percent from 2004 to 2006 and 2.4 percent from 2007 to 2014. Since 2004, growth has also followed a zigzag pattern around the average, whereby relatively slow growth years alternate with relatively fast years.

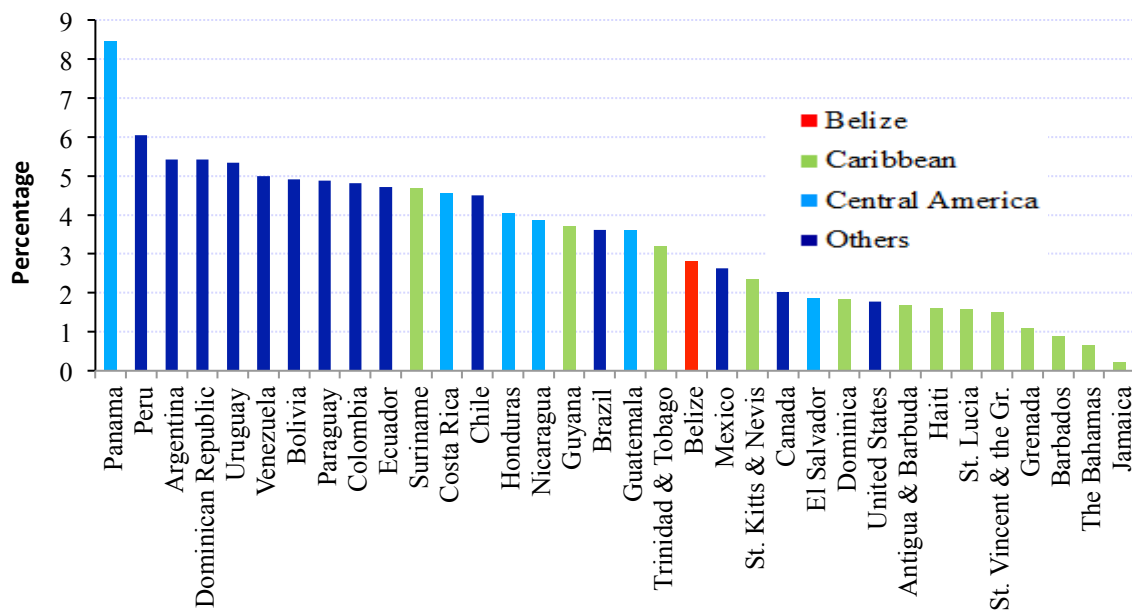
**Figure 7. Real Economic Growth in Belize, 1981–2014**



Source: IDB based on SIB.

Between 2004 and 2014, real GDP growth averaged 2.65 percent in Belize. This was faster than that of the median Caribbean country, but below the medians for Central America and the LAC region as a whole during the same time period (Figure 8).

**Figure 8. Average Real Growth in Belize, 2004–2014**



Source: IDB based on IMF (2015).

## 2.2. Growth Accounting

This study uses a growth accounting exercise to estimate the contributions to the growth of GDP from the accumulation of factors of production (labor and capital) and more efficient use of those factors. The growth of employment has been the most stable source of growth in Belize, contributing approximately two percentage points a year on average (Table 1). Capital accumulation through investment has been somewhat more volatile, contributing over two percentage points during the high growth phase of 1999–2003 and only half a percentage point of growth during 2007–2014. The residual or component of economic growth that is not explained by the accumulation of factors of production, and which is commonly ascribed to the growth of productivity of all factors (total factor productivity), has been very volatile in Belize. Increased productivity ostensibly contributed to economic growth in the two accelerated growth phases, but essentially stopped contributing after 2004.

**Table 1. Contributions to Growth in Belize, 1986–2014 (in percentage points)**

|                                                | 1986–<br>1993 | 1994–<br>1998 | 1999–<br>2003 | 2004–<br>2006 | 2007–<br>2014 |
|------------------------------------------------|---------------|---------------|---------------|---------------|---------------|
| Real GDP growth                                | 8.3           | 1.9           | 8.2           | 3.9           | 2.4           |
| Employment growth                              | 1.8           | 2.1           | 2.4           | 2.8           | 2.3           |
| Capital accumulation                           | 1.0           | 1.4           | 2.2           | 0.7           | 0.5           |
| Unexplained residual/total factor productivity | 5.6           | -1.5          | 3.6           | 0.4           | -0.4          |

Source: IDB based on SIB.

Note: Assumes that the labor share of income is 60 percent, the capital share is 40 percent, and the depreciation of the capital stock is 10 percent per year.

These estimates need to be treated with caution. The underlying data have weaknesses, the assumed income shares of labor and capital are arbitrary, and the large swings in growth are largely unexplained. Although the exercise likely underestimates the importance of capital accumulation in Belize’s economic growth (see below), it does suggest some initial conclusions. The estimation that employment growth has provided a stable “floor” to economic growth, broadly in line with population growth, appears reasonable. While the role of capital accumulation might be understated in general, the estimates show the highest capital accumulation in the accelerated growth periods and lowest capital accumulation in the recessionary periods. Although the component of growth apparently not explained by factor accumulation may be overstated, the variations in productivity growth that it implies probably are true to a degree. As explained below, both periods of apparent high productivity growth were associated with rapid export growth and the development of “new” exports. Given that a country’s exports almost by definition are in sectors of the country’s greatest productivity and

efficiency and that, on the margin, new exports usually have higher productivity than older exports, rapid growth of new exports would likely be associated with increases in overall productivity in the economy. Similarly, the apparent lack of productivity growth since 2004 coincides with the weakest period of export growth.

In terms of the sectoral contribution to economic growth, most economic growth in Belize between 2004 and 2013 was generated in non-government services (Table 2). While such a pattern is common on a global level, given the heavy weight of services in most economies, in Belize's case it also reflects the relative dynamism of its fundamental international service exports, particularly tourism and business process outsourcing (BPO). Tourism is by far the largest earner of foreign exchange, with travel earnings accounting for 41 percent of total exports of goods and services from 2008 to 2013.<sup>3</sup> Tourist expenditures were equivalent to 18.4 percent of GDP during the same time period. Although official statistics do not estimate the direct contributions of tourism and travel to GDP, because Belize does not currently produce a tourism satellite account, the World Tourism and Tourism Council (WTTC, 2013) has estimated that this sector directly contributed 12.5 percent of GDP in 2012 and that its total contribution, when including indirect and induced effects, was around 32 percent of GDP. Given tourism's key role, the condition of Belize's economy is closely related to the health of the tourism industry. Thacker et al. (2012) found that in the Caribbean, the number of tourism arrivals and, to a lesser extent, receipts per tourist have had an important impact on economic growth, including by strengthening factor accumulation and productivity. For the Caribbean as a whole, tourist arrivals have added 4.1 percentage points to growth and receipts per tourist have added another 0.1 percentage points. In Belize, the slowdown in overall economic growth since 2004 mirrors a deceleration in the growth of overnight arrivals. The number of overnight visitors—who accounted for more than four-fifths of total tourist expenditure from 2008 to 2012 (IDB, 2014)—grew by 9.6 percent per annum from 1988 to 2004, but only 3.1 percent per annum from 2004 to 2013 (CTO, 2014).

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<sup>3</sup> Central Bank of Belize balance of payments data (see <https://www.centralbank.org.bz/>).

**Table 2. Contributions to GDP Growth in Belize by Industry, 2004–2013**

| Industry                     | Contribution to<br>GDP growth<br>(2004–2013) | Share of GDP<br>in 2004 |
|------------------------------|----------------------------------------------|-------------------------|
| Non-government services      | 104.8%                                       | 54.0%                   |
| Petroleum                    | 28.5%                                        | 0.0%                    |
| Electricity and water supply | 22.0%                                        | 3.6%                    |
| General government services  | 11.5%                                        | 11.8%                   |
| Agriculture and forestry     | 3.3%                                         | 11.5%                   |
| Mining and quarrying         | 1.0%                                         | 0.5%                    |
| Fishing                      | -4.1%                                        | 5.1%                    |
| Construction                 | -4.3%                                        | 4.5%                    |
| Manufacturing                | -62.9%                                       | 9.0%                    |
| TOTAL                        | 100.0%                                       | 100.0%                  |

Source: IDB based on SIB (2014).

Although the BPO industry is much smaller than the tourism industry, it is surprisingly competitive and growing fast. By 2012, the industry had 15 firms and 1,425 employees (BELTRAIDE, 2013). One company, Ready Call Center, grew from 25 employees in 2005 to close to 1,000 in 2013 (Lindauer, 2013). The Belize Trade and Investment Development Service (BELTRAIDE) projects that total BPO employment will reach 2,500 by the end of 2015 (based on email communication with BELTRAIDE). Belize has long been regarded as having a revealed comparative advantage (RCA) in natural resource-based activities, including tourism. Thus, its success in an industry that has very low natural resource intensity is, at first glance, surprising. The industry's rapid growth in a context of stagnation in other sectors provides further clues to the binding constraints to growth in Belize, which will be taken up in the conclusions of this paper.

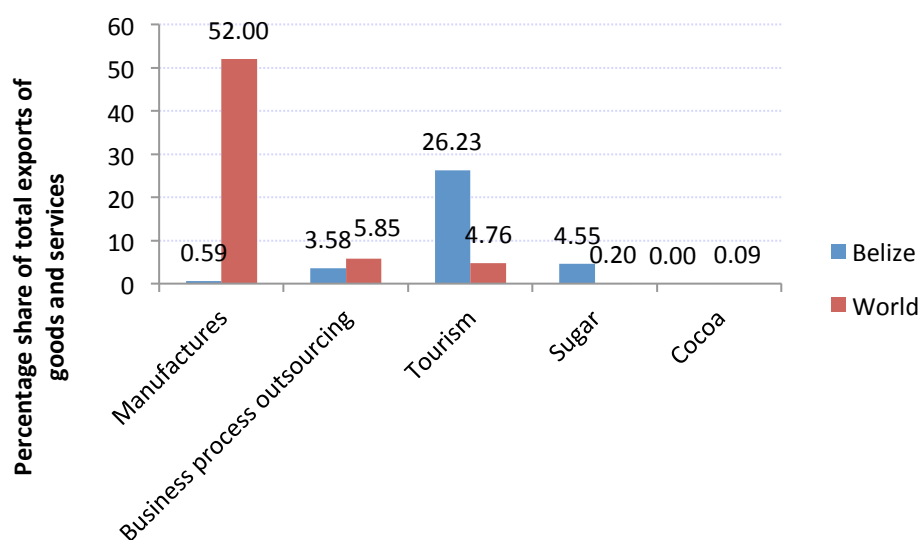
Petroleum, electricity production, and government services were the only other significant contributors to growth from 2004 to 2013. During that time period, the discovery of commercially exploitable quantities of petroleum in late 2005 and the subsequent rapid growth of the industry resulted in the petroleum industry contributing roughly one-fourth of all GDP growth. In the future, unless new petroleum reserves are discovered, petroleum production will decline and become a drag on overall economic growth. Between 2004 and 2013, electricity production grew by 9.3 percent per annum. Production in this case was able to grow much



faster than consumption and GDP growth because Belize had the scope to substitute domestic electricity production for imports. In 2004, Belize produced only 38 percent of its electricity consumption; by 2013 this share had risen to 58 percent.

By contrast, all other industries in Belize contributed less than their weight in GDP in 2004, or they experienced an outright contraction. For example, agriculture and forestry, which is Belize's second most important economic base after tourism, contributed only 3 percent of the growth between 2004 and 2013. Belize is regarded as having an RCA in many tropical agricultural products, and assessments indicate that agriculture is indeed one of Belize's strongest RCAs, followed by tourism (Figure 9).<sup>4</sup> Belize appears to have an emerging comparative advantage in BPOs, but not in most categories of manufacturing. The relative lack of dynamism in one of Belize's strongest sectors has contributed to low overall economic growth and, like the growth of BPOs, provides clues about the binding constraints to growth. Overall, there is a marked pattern of growth in the non-tradable sectors and a decline in the tradable goods sectors, which is indicative of a generalized competitiveness problem (Rajan, and Subramanian, 2005).

**Figure 9. Revealed Comparative Advantage of Exports in Belize**



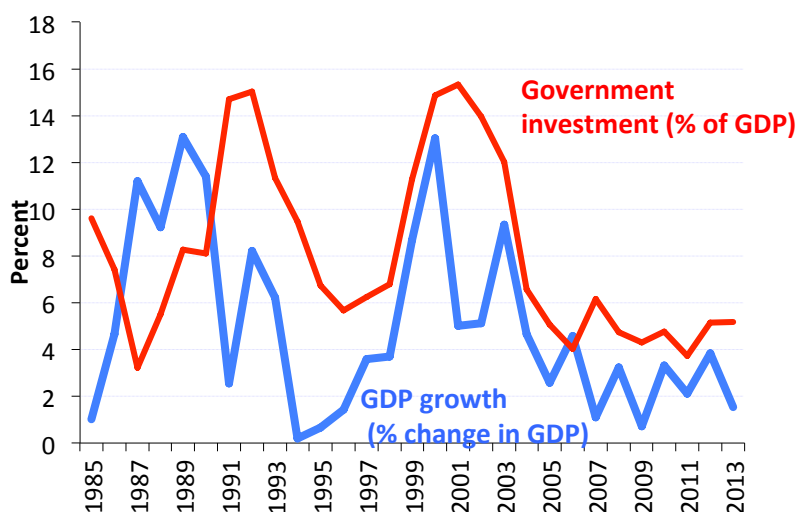
Source: IDB based on SIB and CBB.

<sup>4</sup> The measure of revealed comparative advantage compares the share of a product in a country's export basket with the average share of the same product in the export basket of all countries. A ratio of greater than 1 indicates that the country has an RCA in producing that product, while a ratio of less than 1 indicates a lack of RCA.

### 2.3. Echoes of the “Two-gap” Model

The 2007 growth diagnostic showed that since the mid-1980s Belize’s economic cycles have been driven primarily by macroeconomic policy. Between 1985 and 2013, expansionary fiscal and monetary policies propelled rapid economic growth for several years, after which growth decelerated significantly in periods of macroeconomic adjustment. Notably, public investment surged to approximately 15 percent of GDP in both the high growth phases (Figure 10).<sup>5</sup> These surges produced large fiscal deficits that were unsustainable and when public investment was cut back sharply, economic growth collapsed.

**Figure 10. Public Investment and Real GDP Growth in Belize**



Source: IDB based on SIB and Ministry of Finance, various years.

Contrary to the impression given by the aforementioned growth accounting exercise, swings in investment played a central role in these high growth–low growth cycles. Total investment averaged 25 percent of GDP in the high growth periods of 1986–1993 and 1999–2003, and was far less in the low growth periods. In the first boom, private sector investment initially led the way, including through high foreign direct investment in 1988 to 1990. However, when private sector investment subsided after 1990, public investment was stepped up (HK, 2007).<sup>6</sup> The second boom was more dependent on public investment, although sharply higher

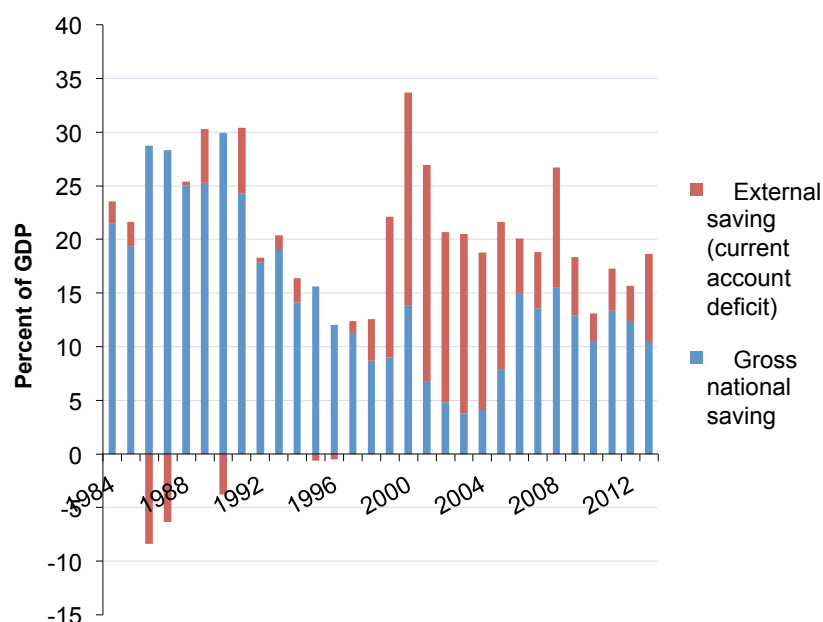
<sup>5</sup> Historically, not all government expenditures classified as capital expenditures were gross fixed capital formation because they included also current expenditures and transfers to government agencies. Belli (2010) estimated that approximately 12 percent of capital expenditures were in fact current expenditures. The government has sought to correct the classification of expenditures over time (for example in the 2009/2010 Budget).

<sup>6</sup> Belize’s national income accounts (in current prices) do not disaggregate investment into private investment and public investment. Nevertheless, IMF staff estimated private investment and public

lending to certain private sector activities, such as shrimp and banana farming, suggests that private investment also rose during the period.

Both high-growth periods ultimately ran into a binding constraint of saving. High levels of national saving between 1986 and 1990 (averaging 27.5 percent of GDP) financed the initial part of first boom in investment and growth almost without recourse to external saving. However, national saving dropped sharply thereafter to 24 percent in 1991 and 18 percent in 1992. Investment continued at high levels in 1991 (leading to a sizeable current account deficit in that year), but declined significantly in 1992 and then again in 1994. The level of national saving continued to decline during the 1990s, mirrored by low levels of investment until 1998. When investment levels rose again during the 1999–2003 high growth period, the scarcity of national saving led to a heavy dependence on external saving (Figure 11).<sup>7</sup>

**Figure 11. National and External Saving in Belize, 1984–2013**



Source: IDB based on SIB national accounts data.

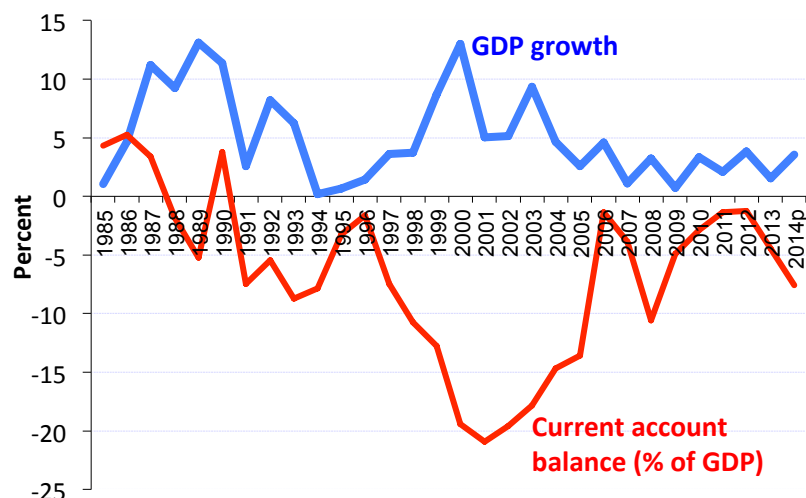
The external current account deficit—by identity equal to external saving—averaged 16 percent of GDP during 1998–2003, a level that was clearly unsustainable. Much of the external saving came in the form of public borrowing from external commercial sources. Public and publicly guaranteed external debt more than quadrupled between 1998 and 2003, leading to

investment for 1980–1990 and central government capital expenditures from the fiscal accounts provide an indication of public investment levels.

<sup>7</sup> IMF (2001) analyzed the increased reliance on external saving in the second high growth period.

increased market concerns about sovereign creditworthiness, high financing costs, and deteriorating access to external finance. By 2004, the government embarked on a significant structural adjustment program, tightening fiscal policy considerably. The external current account deficit declined to 9.9 percent of GDP between 2004 and 2006 and to 4.6 percent between 2007 and 2014 (Figure 12).

**Figure 12. Real Growth and Current Account Balance in Belize, 1985–2014**

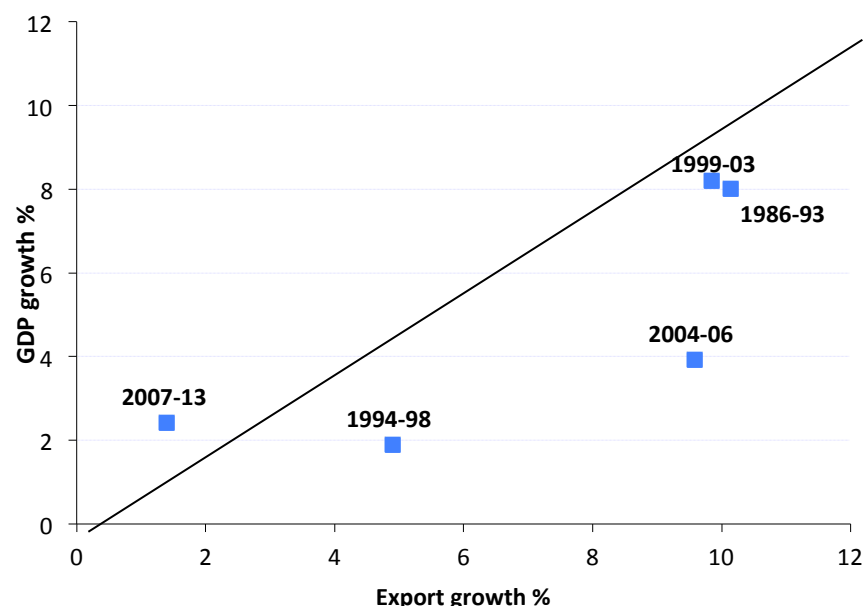


Source: IDB based on SIB national accounts data and CBB balance of payments data.

In addition to high levels of investment, another characteristic of Belize's high growth–low growth cycles is the association with export growth. The two recessionary periods of 2007–2014 and 1994–1998 were the periods of lowest growth in exports in Belize (Figure 13). In contrast, the two periods of 8 percent economic growth were periods when exports increased on average by 10 percent a year in real terms. The period 2004–2006 is somewhat of an outlier, recording strong export growth (10 percent real growth per annum) but comparatively modest economic growth (4 percent per annum). During these three years, a drastic, homegrown structural adjustment program was implemented, causing a period of transition between the high growth–high imbalance period of 1999–2003 and the low growth–low imbalance period of 2007–2012. The fiscal deficit peaked at 10.8 percent of GDP in 2003, and the government initiated a program of fiscal retrenchment the following year. A primary deficit of 6.9 percent of GDP in 2003 was converted into a primary surplus of 3.9 percent by 2006. This fiscal adjustment of nearly 11 percentage points of GDP in the space of 3 years (over 3 percentage points per year) fell predominantly on the public investment program, which was cut back from

9.5 percent of GDP in 2003 to 3.8 percent in 2006. Consequently, the slower but still respectable economic growth in this period was a product of contradictory forces: rapidly growing exports versus the abrupt withdrawal of strong fiscal stimulus.

**Figure 13. Belize: Economic Growth and Export Growth in Belize, 1986–2013**



Source: IDB based on SIB national accounts data.

The first growth acceleration period (1986–1993) was associated with the “discovery” of the tourism industry. Between 1985 and 1993, the number of overnight tourists grew by nearly 20 percent per year. Visitor expenditure was estimated at only US\$7 million as late as 1984 but had multiplied tenfold to US\$70 million by 1993. Tourism accounted for more than one-half of total export growth in 1994–1998, 1999–2003, and 2004–2006. Citrus exports took off after Belize was included among the Caribbean Basin Initiative (CBI) beneficiary countries, which provided duty-free access to the U.S. market and an improved competitive position vis-à-vis Brazil and Mexico (IDB, 1993). The value of citrus exports increased 21 percent per annum between 1985 and 1993, firmly establishing it as one of Belize’s major export products. Lobster and shrimp exports grew by 38 percent in volume and 50 percent in value from 1988 to 1992. Similarly, banana exports trebled in value between 1985 and 1990.

In the second period (1999–2003), although the growth in the number of overnight visitors slowed to 4.6 percent, exports of non-tourism services accelerated and new merchandise exports grew in importance. The value of marine exports trebled between 1997

and 2003, by which time it had overtaken sugar, citrus, and bananas as the largest export product. A brand new export product—papayas—emerged in 2000 and grew quickly, although it has never surpassed a peak of 2.7 percent of exports in 2004.

Since 2003, export growth has generally been lackluster. The important exception was the development of petroleum exports between 2006 and 2011. By 2011, petroleum accounted for one-fifth of all exports of goods and services. However, production and exports subsequently declined and by 2014, the value of petroleum exports was again less than that of marine products and sugar. It is expected to decline over the medium term unless new exploitable reserves are discovered. Exports of animal feed, corn meal, and red kidney beans grew significantly after 2009, but in general the development of new export products has not been sufficient to offset stagnation in traditional exports.

Although, based on Easterly (1997), naïve use of the “two-gap” model has fallen into disrepute in the development economics profession, the important role of both saving and exports to Belize’s economic growth over the last three decades suggests that the model is in some respects still a useful way for viewing Belize’s economy.<sup>8</sup> The very small, highly open economy undoubtedly runs up against a foreign exchange constraint whenever the supply of foreign exchange is constrained by slow growth in export revenues and a lack of access to external borrowing. The foreign exchange constraint likely does not work exactly through the channel envisaged in the two-gap model—that of a shortage of foreign exchange constraining imports of investment goods. More probably, given the exchange rate peg, declines in the level of international reserves prompt the Central Bank of Belize (CBB) to tighten monetary policy, causing declines in commercial bank lending, while a scarcity of financing prompts Belize’s Ministry of Finance to cut public investment.

#### ***2.4. Is the Problem the Quantity or Quality of Investment?***

The growth diagnostic methodology assumes that low levels of private domestic investment restrict economic growth, while the main problem might be the quality of investment rather than its quantity (Agosin, Fernández-Arias, and Jaramillo, 2009). In Belize’s case, the marked cycles of fast growth and low growth have been closely associated with the investment rate, suggesting that the quantity of investment has indeed been a decisive determinant of the growth rate. In addition, there is little anecdotal evidence or obvious recent examples of “white elephant” projects and inefficient private investment in the country. These factors suggest that a

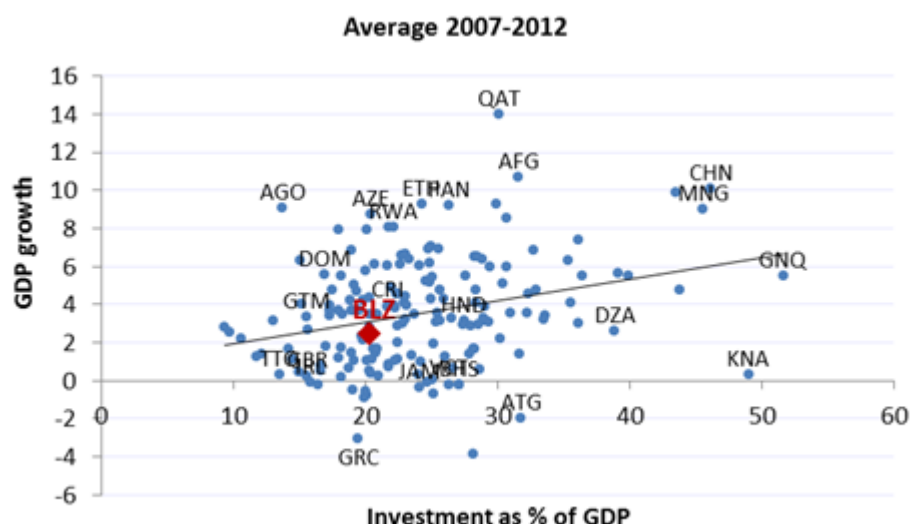
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<sup>8</sup> The two-gap model of Chenery and Strout (1966) suggests that an economy might be constrained by either the availability of saving to finance investment (investment-saving gap) or the availability of foreign exchange (import-export gap).

higher investment rate would indeed boost economic growth and that a focus on the constraints to the quantity of private investment is warranted. Nevertheless, based on international comparisons, the growth rate appears to be moderately below the level one would expect given its investment rate (Figure 14), suggesting that Belize could get a greater growth payoff from its national investment.

The growth accounting exercise above suggests that efficiency and productivity issues have played an important role in growth rate fluctuations. The idea that variations in productivity might be linked to the growth of exports and that public policies might drive wedges between the social rates of return and private rates of return from private investment is explored later herein. Moreover, various observers have suggested that public investment has not been as effective as it could have been in Belize, particularly during the high capital expenditure period of 1999–2003.<sup>9</sup> For example, Belli (2010) estimated that proper selection of Belize’s public capital expenditures might add between 0.5 to 0.7 percentage points to GDP growth.

**Figure 14. Investment Rate and Real GDP Growth in Belize**



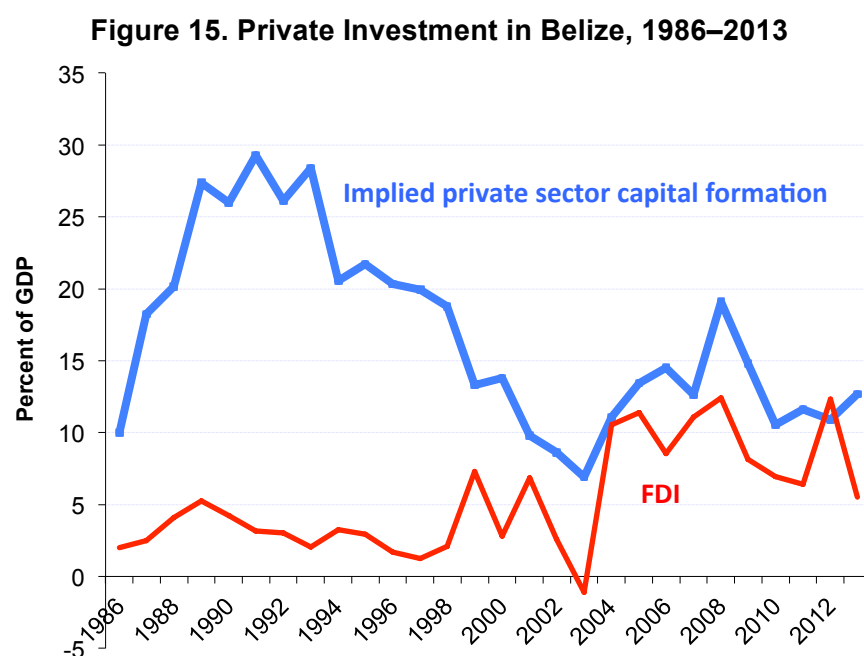
Source: IDB based on IMF (2013a).

As in most countries, investment fell sharply in Belize in 2009. It has not yet recovered to the levels prior to the global financial crisis.<sup>10</sup> Fixed capital formation (i.e., excluding changes in

<sup>9</sup> In the presentation of the 2008/2009 Budget, the Prime Minister and Minister of Finance, the Honorable Dean Barrow (2008) stated that “very large sums of money have been spent without much visible result in terms of developing the country.”

<sup>10</sup> Foreign direct investment (FDI) doubled to 12 percent of GDP in 2012. Part of the FDI may reflect asset transfers rather than additional accumulation of physical capital.

inventories) was only 17.5 percent of GDP on average from 2010 to 2013. Central government capital expenditures amounted to approximately 4.6 percent of GDP in that period, which implies that private sector investment was equivalent to 13 percent of GDP (Figure 15). Furthermore, since foreign direct investment (FDI) was equivalent to nearly 8 percent of GDP from 2010 to 2013, investment by the Belizean domestic private sector may have been as low as 5 to 10 percent of GDP.<sup>11</sup> This investment rate is too low to support a faster rate of economic growth and underlines the importance of identifying the constraints to private investment.



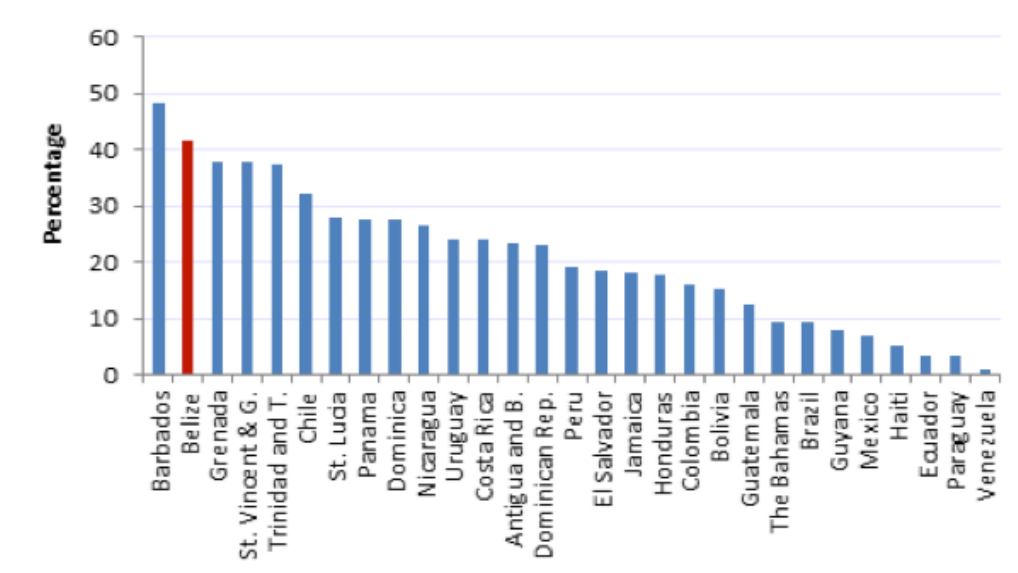
Source: IDB based on SIB (2015) and CBB (2014).

Given the apparent weakness in domestic private investment, FDI is unusually large compared to total investment in Belize (Figure 16). The respectable level of FDI in a context of a relatively low overall investment level suggests that there are one or more constraints that restrict domestic private investment but not FDI.

<sup>11</sup> In Belize, national income accounts do not disaggregate private and public investment. These approximations are derived using government capital expenditures from the fiscal accounts. Similarly, FDI is a balance of payments rather than national accounts concept. Since the definitions of these variables do not correspond completely to national accounts concepts, these derivations are approximations for illustrative and analytical purposes.



**Figure 16. FDI Relative to Total Investment (average 2007–2011)**



Source: IDB based on IMF (2012).

### 3. THE PRIVATE SECTOR'S PERCEPTIONS

An excellent starting point to analyze private investment and economic growth is to ask the opinion of the entrepreneurs (i.e., those who make the decision to invest or not). The private sector's opinion can often be found in surveys; however, such surveys can be biased. Indeed, since any survey of the currently existing private sector is a survey of “winners”—or at least “survivors”—firms that are most damaged by deficiencies in the business climate (and whose opinion is of most interest) are absent or under-represented in such surveys.

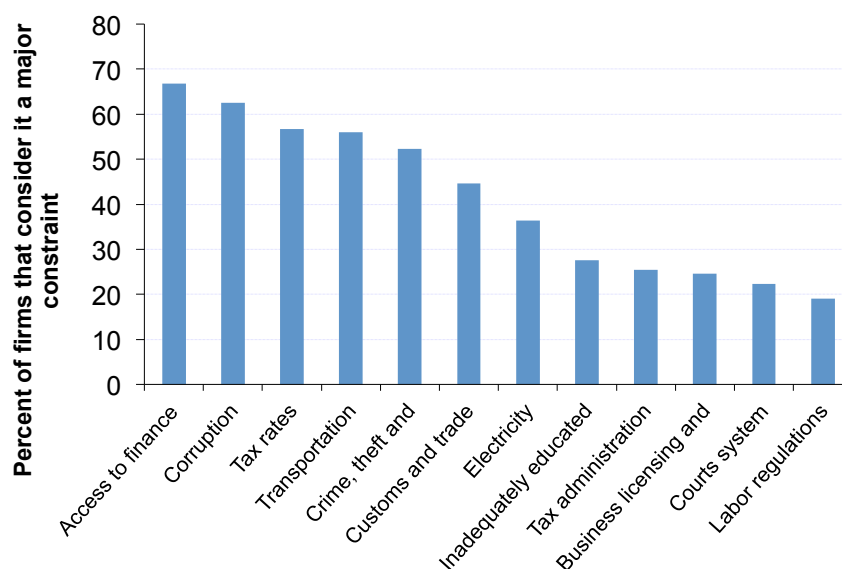
#### 3.1. The World Bank's Enterprise Survey<sup>12</sup>

In 2010, the World Bank undertook an enterprise survey of 150 enterprises in the manufacturing and services sectors (i.e., non-agricultural sectors) in Belize. The respondents included 79 small enterprises, 61 medium enterprises, and 10 large enterprises. When asked to identify the factors that they considered a major constraint to their businesses, the most frequent answers were (i) access to finance; (ii) corruption; (iii) tax rates; (iv) transportation; (v) crime, theft, and disorder; and (vi) customs and trade regulations (Figure 17). Labor regulations, the court system, tax administration and electricity were not considered important constraints, and only 28

<sup>12</sup> The World Bank Enterprise Surveys (<http://www.enterprisesurveys.org>) in the Caribbean are jointly funded by the IDB and Compete Caribbean.

percent of the firms regarded an inadequately educated labor force as a major constraint (which was lower than the LAC average of 36 percent).

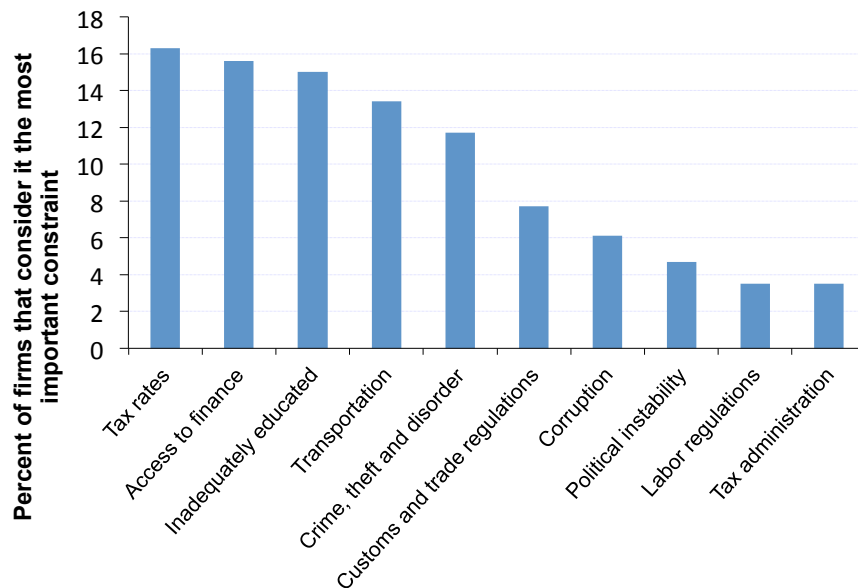
**Figure 17. Major Constraints to Doing Business in Belize**



Source: World Bank (2010a).

When asked to identify one factor as the most important constraint to their business (i.e., only one choice), the ranking of constraints was similar but with three changes (Figure 18). First, corruption dropped out of the top six, with only six percent of firms rating it as the major constraint. This is consistent with the more specific and objective questions on the subject where, for example, only 6.2 percent of firms reported experiencing at least one bribe request, compared with 9.6 percent in the region as a whole and 19.5 percent worldwide. Second, an inadequately educated workforce jumped from 8th place into 3rd place, with 15 percent of firms identifying it as the main constraint to doing business. This indicates that an inadequately educated workforce is not a concern for most firms; but it is the most important concern for half of all firms that express some concern about it. Last, tax rates were rated slightly higher than access to finance.

**Figure 18. The Most Important Constraint to Doing Business in Belize**



Source: World Bank (2010a).

### **3.2. The World Economic Forum's 2011–2012 Survey**

The World Economic Forum (WEF) formally included Belize in its Global Competitiveness Index (GCI) rankings for the first time in 2011–2012. The GCI provides a useful perspective that can inform public policy, and it is especially helpful at a time that Belize's private sector is voicing heightened concern about the business environment.

For 2011–2012, Belize ranked 123 out of 142 countries—only 13 percent of the countries in the survey had a lower ranking. Only two IDB member countries ranked below Belize: Venezuela at 124 and Haiti at 141. The ranking in competitiveness stood far below Belize's income level; 39 percent of the 142 countries were below Belize in per capita income.

Belize ranked higher in health and primary education than 63 percent of the countries surveyed. This was based on a high net primary education enrolment, a relatively high life expectancy, and a low incidence of tuberculosis. Similarly, its ranking for labor market efficiency was better than one would expect for its income level and well above its overall ranking. In spite of a high public debt level, Belize scored well with respect to the macroeconomic environment, largely due to a small fiscal deficit and low inflation rate.

Belize had a mediocre score in the financial market development pillar, but the overall score hides a bipolar scoring on the indicators. On the one hand, Belize ranked 20 regarding the

legal protection of lenders and borrowers rights. On the other, it ranked 128 in terms of the availability of financial services and 131st in terms of the affordability of financial services.

Belize's weakest rankings came in the pillars of (i) market size, (ii) innovation, (iii) institutions, and (iv) and goods market efficiency (Table 3). Having the second smallest population size, Belize cannot do much to affect its ranking of 141 in terms of domestic market size. Similarly, the low ranking in innovation was unsurprising for such a small country with abundant land and a longstanding comparative advantage in natural resource exploitation. In contrast, the latter two pillars—institutions and goods market efficiency—are eminently amenable to public policy. Only one percent of countries (the Dominican Republic and Yemen) were worse than Belize in the category of favoritism in decisions of government officials. Belize also scored very poorly in protection of minority shareholders' interests, transparency of government spending, and public trust of politicians. Only seven percent of countries scored below Belize in business costs of crime and violence, which indicates the importance of security in the country. In goods markets efficiency, two issues stood out: trade and taxation. Only two percent of countries (Argentina, Ecuador, and Venezuela) were worse than Belize in the extent to which tariff and non-tariff barriers limit the ability of imported goods to compete in the domestic market. Similarly, only 12 percent of countries had more burdensome customs procedures.

**Table 3. Belize in the Global Competitiveness Index**

| Selected indicators                             | Rank in 2011–2012 | Percentage of countries ranked below Belize (2011–2012) |
|-------------------------------------------------|-------------------|---------------------------------------------------------|
| Health and primary education                    | 53                | 63                                                      |
| Labor market efficiency                         | 82                | 42                                                      |
| GDP per capita                                  | 86                | 39                                                      |
| Macroeconomic environment                       | 88                | 38                                                      |
| Infrastructure                                  | 100               | 30                                                      |
| Financial market development                    | 111               | 22                                                      |
| Higher education and training                   | 112               | 21                                                      |
| Institutions                                    | 120               | 15                                                      |
| Goods market efficiency                         | 121               | 15                                                      |
| Overall ranking                                 | 123               | 13                                                      |
| Brain drain                                     | 124               | 13                                                      |
| Innovation and sophistication factors           | 131               | 8                                                       |
| Business costs of crime and violence            | 132               | 7                                                       |
| Extent and effect of taxation                   | 132               | 7                                                       |
| Prevalence of trade barriers                    | 139               | 2                                                       |
| Market size                                     | 140               | 1                                                       |
| Favoritism in decisions of government officials | 140               | 1                                                       |
| Total                                           | 142               | 0                                                       |

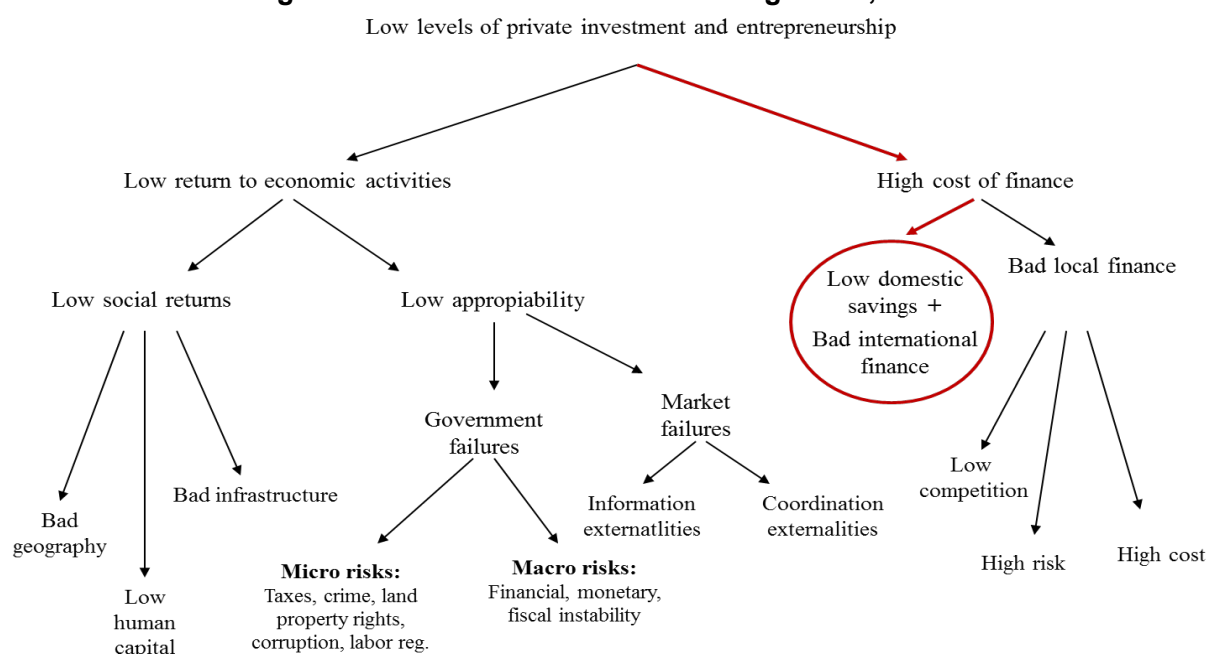
Source: IDB based on WEF (2011).

The GCI suggests that taxation has become a much more prominent drag on competitiveness in Belize. Most studies in the last decade concluded that Belize had a relatively sound taxation system that was not overly burdensome (Jenkins and Kuo, 2006). Today the private sector regards the tax burden as onerous and unevenly shared, with significant evasion and underreporting. The GCI estimates that 93 percent of countries have taxation levels with less impact on incentives to work and invest.

## 4. UPDATING THE GROWTH DIAGNOSTIC

This chapter updates HK 2007, which concluded that high cost finance was the binding constraint to economic growth in Belize (i.e., on the right hand side of the growth diagnostic tree) (Figure 19). The diagnostic attributed the high cost of finance to a combination of low national saving and weak access to external saving.<sup>13</sup> In turn, the cumulative effects of poor fiscal discipline (and the resulting overhang of debt which tended to reduce public and private saving) led to low national saving, while low international credit ratings, which again were related to the high level of external debt, caused weak access to external saving. The diagnostic also recognized that the alternative explanation for high interest costs—inefficient and uncompetitive financial intermediation by the domestic financial sector—was also plausible and likely contributed to the high cost of finance. All other constraints were found not to be binding.

**Figure 19. Decision Tree: Growth Diagnostic, 2007**



Source: Adapted from Hausmann, Rodrik, and Velasco (2005).

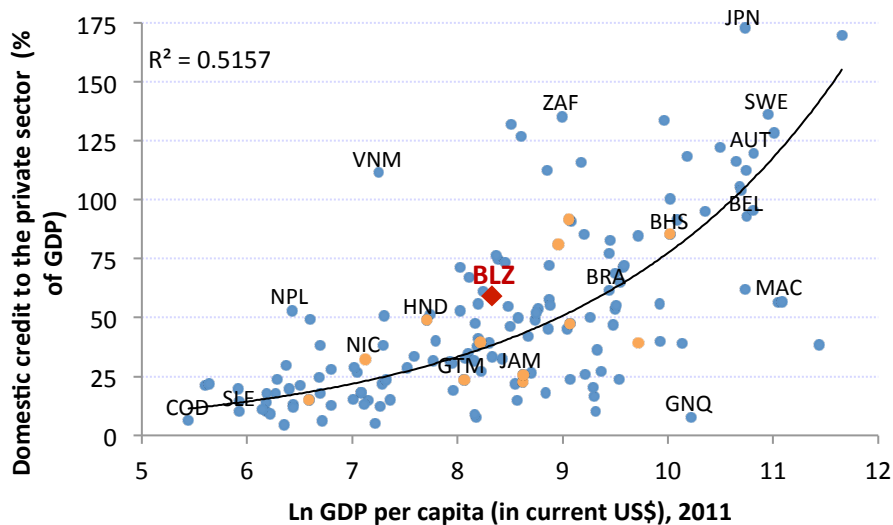
<sup>13</sup> According to national accounting definition, national investment is equal to the sum of national saving plus external saving.

#### 4.1. Cost of Finance

The World Bank 2010 Enterprise Survey suggests that the private sector still regards high cost finance as a binding constraint to economic growth. In fact, 67 percent of firms surveyed—more than double the averages for LAC or the world—identified access to finance as a major constraint. It was the second most frequently cited main obstacle, with more than 15 percent of all firms identifying it as such. This share was similar across small, medium, and firms.

It is likely that the identification of access to finance as a constraint is actually more a complaint about the cost of credit rather than its availability. First, within the same survey more detailed indicators point to reasonable access to credit (at least on average, although small firms may face greater difficulties). The percentage of firms in Belize using banks to finance working capital (57 percent) was higher than the LAC average (43 percent) and the world average (29.8 percent). Similarly, the percentage of firms in Belize using banks to finance investments (36.7 percent) was actually higher than the LAC average (33.6 percent) and the world average (26.3 percent). However, the proportion of investments financed internally (which can be an indicator of high cost finance) was higher in Belize (76.3 percent) than in LAC (63.2 percent) and the world (68.7 percent). Second, data from this survey are consistent with macro data on credit access. Despite sluggish growth since the recession in 2009, credit provided to the private sector is still relatively large with respect to GDP by the standards of countries with similar per capita incomes (Figure 20).

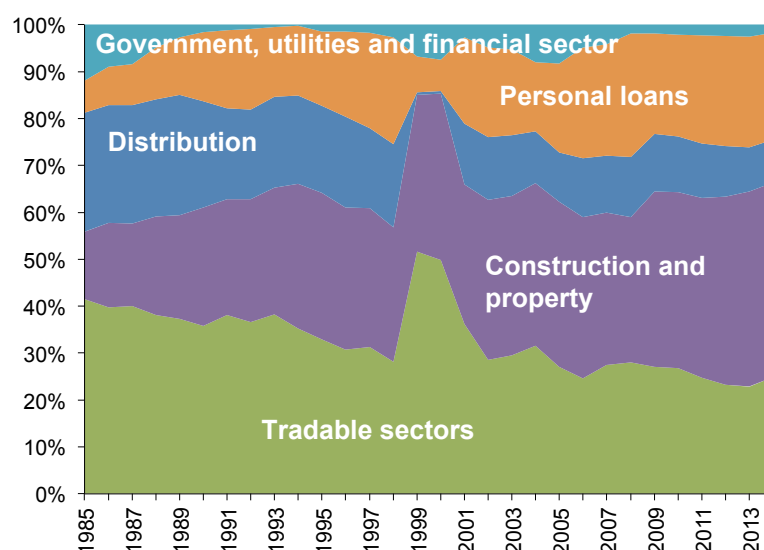
**Figure 20. Financial Depth versus GDP Per Capita, 2011**



Source: IDB based on World Bank, 2013b.

From the perspective of economic growth, the problem is not so much the aggregate quantity of credit to the private sector as the destination. Although the Development Finance Corporation (DFC) and at least one large commercial bank try to focus lending on the productive sectors, for the banking system as a whole the share of credit destined to tradable sectors declined from 42 percent of total credit in 1985 to 25 percent in 2014 (Figure 21).<sup>14</sup> There was a short-lived spike in credit to the tradable sectors in 1999–2000, which coincided with the second growth boom. However, the underlying trend has been for a growing proportion of credit to go to non-tradable sectors: construction and property, distribution, and personal loans. By 2014, three-quarters of all credit went to these sectors.

**Figure 21. Commercial Banks and DFC: Sectoral Distribution of Loans and Advances**



Source: IDB based on CBB website (2015).

The banking system has become less and less effective for translating saving into private investment in tradable goods; consequently, it has become less relevant to the process of economic growth. The net flow of credit to tradable sectors was less than 2 percent of GDP a year from 2000 to 2014, and by 2014 the stock of outstanding credit to the tradable sectors was less than 15 percent of GDP. As previously discussed herein, private sector investment in Belize is low and FDI and internally generated resources finance most of the investment in tradable goods activities. The Belizean banking system's heavy reliance on physical collateral for lending may cause a structural bias in favor of sectors such as construction and property, but

<sup>14</sup> Internationally tradable sectors are proxied by agriculture, commercial fishing, forestry, mining, manufacturing, tourism, professional services, and transport under the CBB classification.

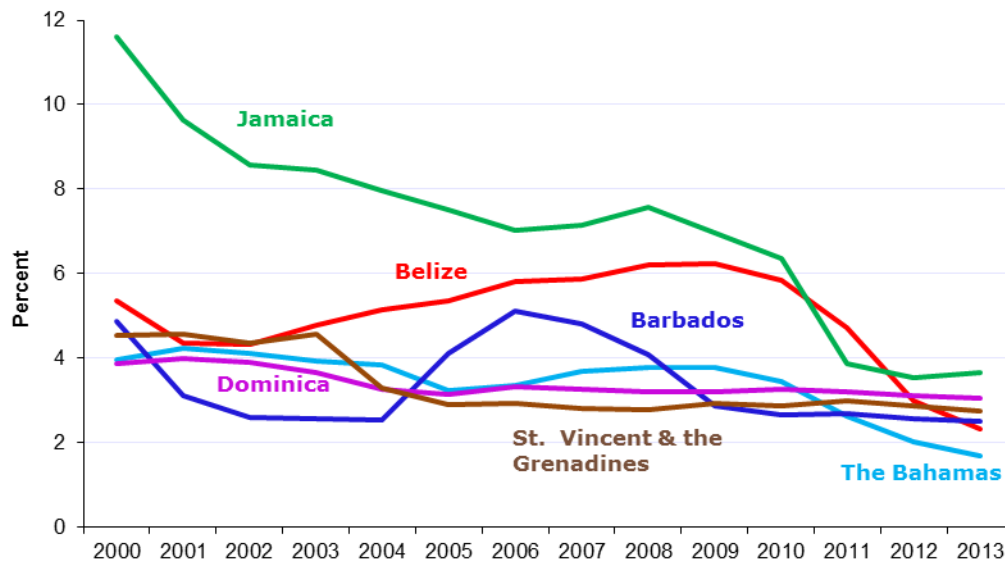


it is unclear that this factor would cause a trend change over time. More likely, the falling share of lending directed at tradable sectors reflects a gradual but persistent decline in their profitability relative to non-tradable sectors.

Domestic credit remains costly by international standards and despite Belize's long track record of low inflation. The nominal weighted average interest rate on new loans in 2014 was 9.9 percent, compared with annual inflation of 1 percent. This implies that the real (inflation-adjusted) interest rate was approximately 9 percent in 2014. It is likely that a number of potential investments in Belize would be viable if only the lending interest rate were lower. HK 2007 showed that high lending interest rates in Belize stemmed from both high deposit rates and high interest spreads. However, compared to other countries, Belize was further above the mean country with respect to deposit rates than with respect to spreads. Martin (2010) confirmed this finding in a comparison of Belize with other Caribbean countries that shared similar monetary and exchange arrangements. HK 2007 attributed high deposit rates to low national saving and competition among banks to secure funding. High deposit rates, along with the close relationship between the current account balance/external saving and growth spurts/recessions, led to the conclusion that the underlying binding constraint to economic growth was low national saving, which in turn was linked to historical periods of very large fiscal deficits. This link remains today. Small current account deficits since 2008 have been associated with low levels of investment and economic growth, which reflects a saving-constrained economy. However, the financial sector evidence is now very different. Since 2007, three pieces of evidence call into question the HK 2007 explanation for the high cost of lending: (i) developments in the financial sector, (ii) analytical studies, and (iii) the views of commercial banks.

Since 2007, commercial bank deposit interest rates have declined significantly. Between 2010 and 2014, the weighted average of interest rates on new deposits declined from 8.02 percent to 2.1 percent. The reduction in new deposits brought the average interest rate on all deposits down from 5.9 percent in 2007 to 1.7 percent in 2014. As a result, deposit rates in Belize have converged with those in most of the other English-speaking Caribbean countries (Figure 22). Deposit rates are still higher than in the United States—to whose currency Belize's currency is pegged—and there is still a limited amount of scope for deposit rates to decline further. However, above-average deposit rates are no longer the principal reason for Belize's above-average lending rates.

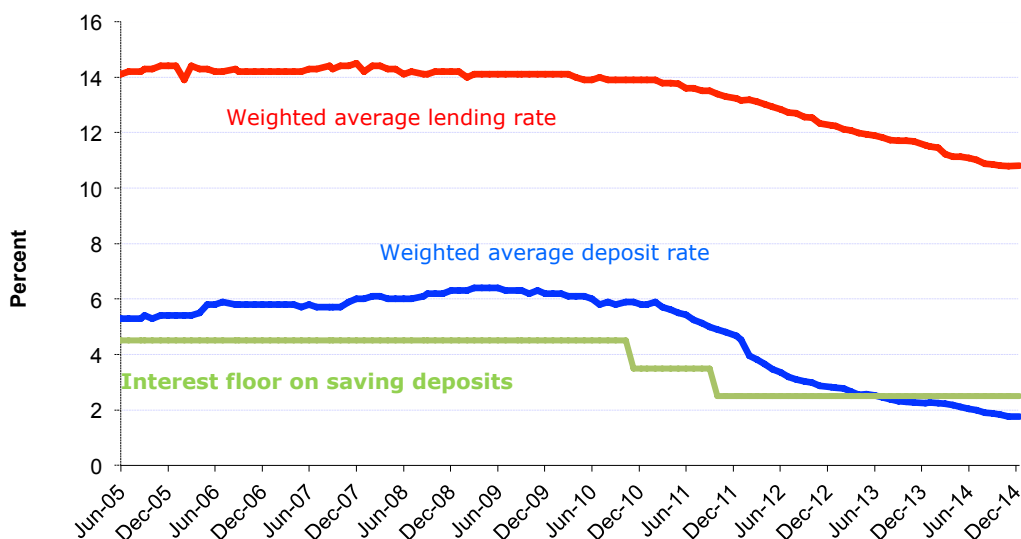
**Figure 22. Weighted Average Deposit Interest Rates, 2000–2013**



Source: World Bank (2015) and CBB.

Deposit interest rates declined for two reasons. First, effective November 1, 2010, the CBB lowered the interest rate floor on savings deposit from 4.5 percent to 3.5 percent. In October 2011, the CBB further reduced the rate to 2.5 percent (Figure 23). Interest rates on deposits declined swiftly thereafter. Second, liquidity in the banking system increased following the 2008 global financial crisis. Commercial banks' liquid assets in excess of statutory requirements grew from 21 percent of the required amount in 2008 to 55 percent by 2013. Credit to the private sector peaked at the equivalent of 67 percent of GDP in 2009, and then declined to 56 percent of GDP from 2012 to 2014, likely due to a decline in investment demand as well as tighter lending standards.

**Figure 23. Weighted Average Deposit and Lending Interest Rates**



Source: CBB website (2015).

Interest rates on new lending declined from 14.36 percent in 2010 to 9.9 percent in 2014—a 4.5 percentage point reduction in less than three years. As a result, by the end of 2014, the weighted average lending interest rate had declined by more than three percentage points to 10.7 percent, the lowest average lending interest rate since 1977. Moreover, it is likely that the average interest rate on all outstanding loans will continue to fall over time, as older, higher-rate loans are amortized. The four percentage point decline in deposit interest rates was matched by a four percentage point decline in the lending rate, causing the average interest rate spread between deposit rates and lending rates to remain broadly unchanged at 7 to 8 percentage points from 2008 to 2014. The interest rate spread accounted for just over half of the lending rate in 2008, and 84 percent by 2014. Clearly, Belize’s lending interest rates are high because of the spread, not the deposit rate.

Since 2007, two research papers have examined the determinants of interest rate spreads in Belize. Following Randall (1988), Perez (2011) used an accounting model to decompose and quantify the contribution of different factors on the overall spread. Perez concluded that the primary drivers of high spreads are high operating costs and high returns on assets, both of which reflect few market participants and information asymmetries in credit markets. Between 2001 and 2010, the interest rate spread averaged 8.9 percent (operating costs accounted for 5.8 percentage points; return on assets for 4.3; cash reserve requirements

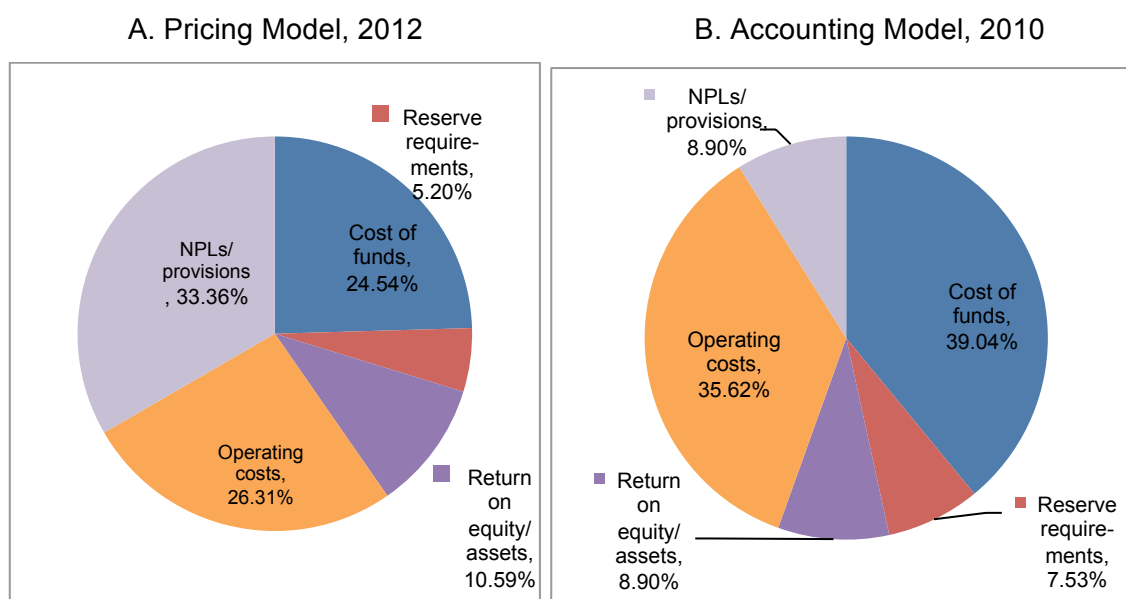
for 1; taxes for 0.7, and provisions for bad loans for 0.6). These factors were partially offset by banks' non-interest income, which reduced spreads by 3.3 percentage points. Subsequent econometric tests broadly confirmed the findings of the accounting model and established that concentration of the banking sector (market share), increases in adversely classified loans and holdings of liquid assets above required levels all had a significant and positive impact on interest rate spreads (Perez, 2011). Using econometric analysis, Auguste and Cornejo (2013) came to similar conclusions: high lending interest rates result primarily from imperfect competition, high levels of non-performing loans, and cash reserve requirements. The authors point out that even though high operating costs are likely related to a lack of scale economies in Belize, at 6.8 percent of total assets between 2002 and 2012, Belize's banking sector's operating costs were significantly above that even of other small states, such as St. Kitts and Nevis (3.0 percent) and Antigua and Barbuda (4.7 percent).

The findings mentioned above are broadly consistent with how commercial banks themselves say they price their loans. Commercial banks' pricing of loans in 2012 attributed 25 percent of the lending interest rate to the cost of funds, 25 percent to operating costs, 34 percent to the cost of non-performing loans (write-offs and provisions), 5 percent to reserve requirements,<sup>15</sup> and roughly 11 percent to a target rate of return on equity (Figure 24). This is similar to the breakdown provided by Perez's accounting model in the last year for which she had data (2010), especially when one considers developments in the financial sector between 2010 and 2012. As outlined above, deposit interest rates declined significantly after December 2010, which would have cut the cost of funds sharply. In addition, commercial banks increased provisions for non-performing loans and absorbed greater costs from loan write-offs.

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<sup>15</sup> Reserve requirements that are unremunerated or remunerated substantially below market rates reduce the amount of deposits available for lending at market interest rates. Consequently, banks must either increase the interest rate on other loans or reduce the rate paid on deposits to compensate (Gray, 2011). Montoro and Moreno (2011) show that countries with higher reserve requirements have higher interest rate spreads.

**Figure 24. Disaggregation of Components of Lending Interest Rates**



Source: IDB based on personal communication with a commercial bank and Perez (2011).

In view of the above, it becomes apparent how much of a contribution the CBB has made to reduce lending interest rates in recent years. The CBB successively reduced the floor on savings deposits and hence significantly reduced the cost of funds for banks. It has also progressively reduced reserve requirements: it reduced cash reserve requirements from 10 percent to 8.5 percent of average deposit liabilities in May 2010, while the liquid asset requirement remained at 23 percent. In three steps in 2011, the CBB reduced the proportion of Government of Belize treasury bills that commercial banks were required to hold as part of the securities requirement from 6.5 percent to zero percent. These reductions in the direct and opportunity costs of reserve requirements should diminish this component of interest rate spreads.

Finally, the actions and policies that the CBB has taken to address the non-performing loan (NPL) problem and reduce the chances of its reoccurrence in the future should over the medium term start to cut the component of interest rate spreads attributable to the costs of NPLs and provisions. Both the Perez (2011) and Auguste and Cornejo (2013) studies demonstrated that NPLs accounted for a significant part of the interest rate spread after 2008. Consequently, in addition to the 4.5 percentage point reduction in lending rates between 2010 and 2014 already achieved, there is a reasonable prospect that the CBB's policies may result in a further significant decline in the interest rate spread and lending rates. The component of

spreads attributable to operating costs, however, may be less amenable to policy action, since this is related to more structural factors, such as the lack of economies of scale, imperfect competition, and inefficiencies within the banking system.

In conclusion, lending interest rates have declined by 4.5 percentage points since HK 2007. Nevertheless, the cost of finance remains high and it is regarded as the second most important obstacle by the private sector. It is now clear that high lending rates are attributable mainly to interest spreads rather than high deposit rates. This casts doubt on the HK 2007 conclusion that low national saving and bad international finance were the main constraint to Belize's economic growth. In addition, over the long run a growing proportion of domestic credit has gone to non-tradable sectors, such as construction and property, distribution, and personal loans. This implies that the profitability of tradable sectors has declined relative to non-tradable sectors, which is an issue outside of the financial sector and on the left-hand side of the growth diagnostic decision tree (see Figure 19).

## **4.2. Social Returns**

Low rates of private investment can be a rational response to low profitability caused by low underlying social returns to investment. Low social returns are generally the result of unfavorable geography, an insufficiently trained labor force, or to poor-quality infrastructure.

### **4.2.1. Geography**

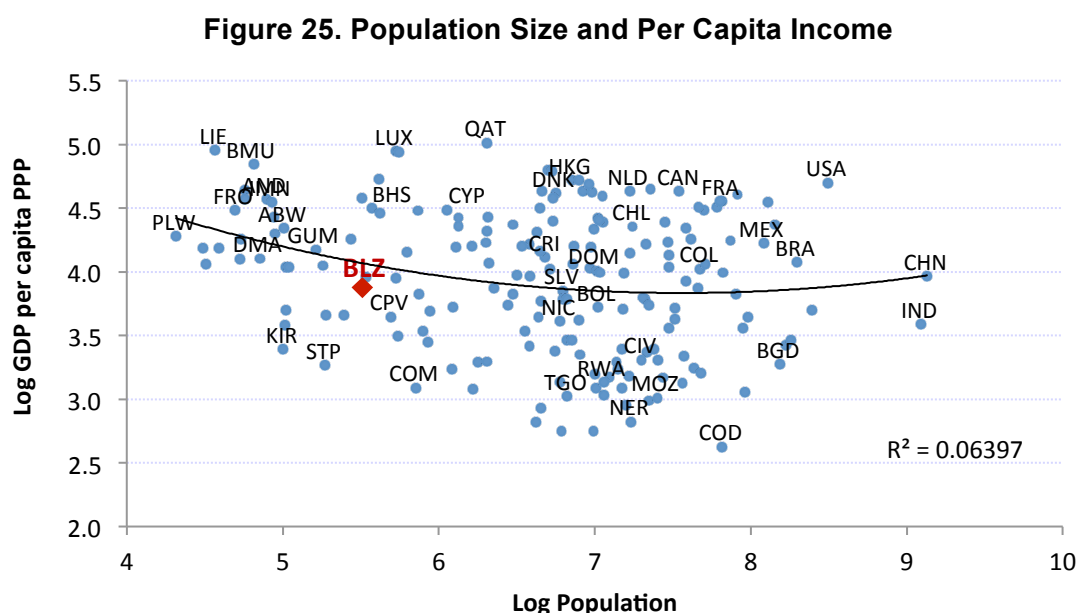
Unfavorable geography can lead to low social returns. In particular, a country's isolation or distance from major international markets and/or sources of inputs can cause high transport costs, which in turn undermine the profitability of economic activity and restrict trade. Because sea-based trade is less costly than land- or air-based trade, economies near coastlines have a great advantage over hinterland economies. Gallup, Sachs, and Mellinger (1998) show empirically that landlocked countries are poorer than countries with coastlines. As a country with a long coastline, Belize does not suffer from this disadvantage, and it is not far from the core market of the United States. However, Belize is located in the tropics, which Gallup, Sachs, and Mellinger (1998) pointed out had an income penalty, and it has considerable exposure to tropical storms.<sup>16</sup>

In a variant of the "bad geography" argument, it has been suggested that Belize's economic growth and development has been constrained by the country's size, which limits its

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<sup>16</sup> IMF (2013c) shows that there is a 17.2 percent probability of a hurricane striking Belize in a given year and Rogers (2010) details the cost of natural disasters in Belize from 1931–2005.

ability to take advantage of economies of scale and reduced transport costs (IDB, 2013c). In practice, there is little systematic relationship on a global scale between population size and income level per capita. Many factors influence income levels, and population size is actually relatively insignificant in this sense. Moreover, to the extent that there is an association, it is actually negative—per capita income tends to be lower in countries with larger populations (Figure 25). Many small states are very rich, and small states are disproportionately represented among high-income countries and underrepresented among low-income countries. For example, Easterly and Kraay (2000) found that after controlling for location and whether the states are oil producers or members of the Organization of Economic Cooperation and Development (OECD), small states are actually 50 percent richer on average than their regional neighbors. They found that this income advantage was largely due to higher productivity levels, which is inconsistent with the idea that small states suffer from productivity disadvantages due to their inability to exploit economies of scale. In addition, at the global level both Easterly and Kraay (2000) and the Spence Commission (World Bank, 2008) concluded that small states have, on average, equal or faster growth than larger states. In contrast, Thacker, Acevedo, and Perrelli (2012) estimated that the small size of Caribbean countries subtracts around 0.3 percentage points from their growth each year.



Source: IDB based on World Bank (2013b).

Interestingly, Thacker, Acevedo, and Perelli (2012) estimated that the growth penalty for being a small island in the Caribbean was 2.5 percent—that is, around eight times as large as the penalty for being just small in size, per se. This finding implies that the impact of high transport costs and other barriers to trade are more important than small size, per se. This is consistent with the literature on small states (e.g., Srinivasan, 1986; Easterly and Kraay, 2000), which shows that integration with larger economies is a key way of adapting to small size and overcoming a lack of economies of scale. This finding also suggests that Belize's land borders with Guatemala and Mexico confer a huge potential advantage vis-à-vis small Caribbean islands, which to date may have been underexploited.

The argument that Belize's size is a critical constraint to its economic growth is not consistent with Belize's historical growth path—one of the key criteria in the growth diagnostic methodology (see Annex 1 herein). A country's small population size is an invariant factor. If it were a binding constraint to economic growth, one would expect growth to be consistently low and rather stable, which has not been the historical pattern in Belize. As illustrated above, Belize has experienced marked cycles of rapid and slow growth over the last three decades. The existence of two periods of growth averaging over 10 percent per annum suggests that the country's small population size is not a binding constraint on its economic growth.

#### ***4.3. Human Capital***

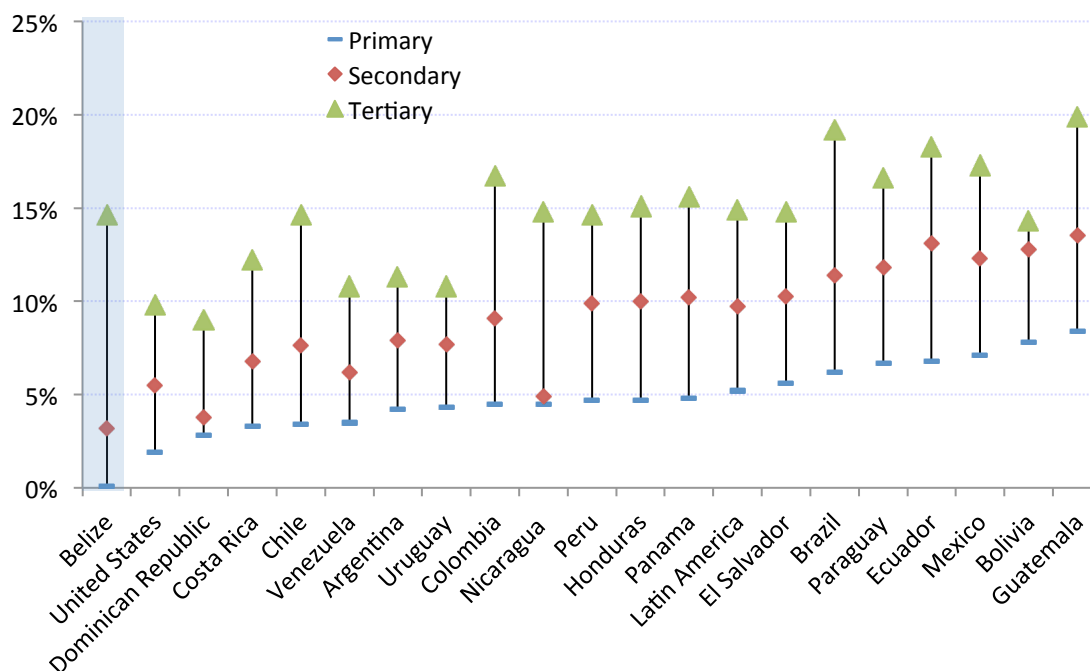
Belize's education sector faces important challenges. In terms of enrollment, preschool attendance in Belize was less than half that of Barbados, Jamaica, and Trinidad and Tobago in 2009. Primary school attendance declined from 95 percent in 1999 to 92 percent in 2009, while secondary school attendance rose from 39 percent in 1999 to 44.6 percent in 2009 (Näslund-Hadley, Alonzo, and Martin, 2013). At the tertiary level, enrollment expanded by 65 percent between 2004–05 to 2010–11, but coverage, at only 17 percent, was among the lowest in the LAC region (Cerccone, 2012). High dropout and repetition rates are partly responsible for completion rates that are also below the regional average. Student performance on primary and secondary exams is poor (Näslund-Hadley, Alonzo, and Martin, 2013).

The fact that Belize has significant problems on the “supply side” of education does not necessarily mean that a shortage of human capital is a binding constraint on economic growth because the demand for skills could also be low. In the World Bank 2010 Enterprise Survey, 15 percent of Belizean firms identified an inadequately educated workforce as the most important constraint to their business, which made it the third most frequently cited principal obstacle and an a priori indicator that the private sector might be demanding more human capital than is



being supplied. However, in the growth diagnostic methodology the classic method to see if education is restricting economic growth is to analyze the implicit “price” by measuring the rate of return to an additional year of education (see Annex 1).<sup>17</sup> Using data for 2009, Arcia (2012) found that the private rates of return to an additional year of education in Belize were 0.12 percent at the primary level, 3.2 percent at the secondary level, 11.3 percent for vocational education, and 14.6 percent at the tertiary level. The pattern of increasing private rates of return with increasing level is consistent with international experience (Colclough, Kingdon, Patrinos, 2010), but the rates of return to primary and secondary education in Belize are very low by international standards (Figure 26).

**Figure 26. Rates of Return to Education, LAC Region and the United States**



Source: IDB based on Hausmann, Rodrik, and Velasco (2005) and Arcia (2012).

Under the growth diagnostics methodology, these low rates of return in Belize suggest that the market is unwilling to pay more for education, and that primary and secondary education are not a binding constraint on economic growth. Other factors must be restricting

<sup>17</sup> Usually the estimated rates of return are private rates of return or “wage returns,” which are calculated by comparing the average post-tax earnings between those with a given level of education and those at the next level below it. It is difficult to estimate “social” returns because of the data challenges in estimating externalities. Nevertheless, education is considered to provide important positive externalities.

economic growth and leading to weak demand for human capital. If all other factors in the economy were conducive to growth, firms would be competing for scarce skills and bidding up their price. Other explanations for the low rates of return to primary and secondary education might include the weak demand for education (i.e., a natural-resource based economy has inherently lower demand for human capital than a skills-intensive economy) or the low quality of education. However, there are many other LAC countries with similar education quality that have significant rates of return to primary and secondary education. The rates of return for tertiary and vocational education in Belize are much more in line with other LAC countries and suggest that a shortage of students completing tertiary and vocational education may be a constraint to some sectors and some businesses.

In addition to examining the implicit “price” of a factor, a second useful criterion in the growth diagnostics methodology is to examine how economic agents adapt to a constraint. If education were a binding constraint, one would expect to see firms getting around the constraint by investing significantly in training. However, in the case of Belize, only 14.4 percent of firms offer formal training, compared with 35.3 percent worldwide and 43.7 percent in the region as a whole.

#### **4.4. Infrastructure**

As the 2007 growth diagnostic recognized, infrastructure provision is inherently problematic in a tropical country with a very low population density. Nevertheless, infrastructure was discarded as a binding constraint to economic growth on the basis of “growing investment in infrastructure-intensive industries, few reports of congestion, good international rankings, and a lack of infrastructure shocks coinciding with growth dynamics” (Hausmann and Klinger, 2007). Is there any reason to change this assessment?

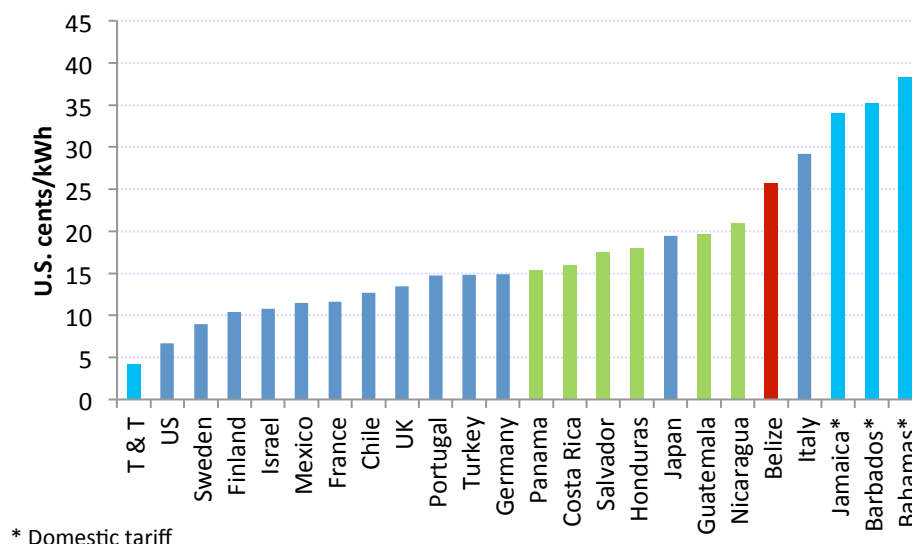
##### **4.4.1. Electricity**

It is difficult to make the case that the electricity sector is currently a binding constraint to economic growth in Belize. The supply of electricity is unusually reliable by developing country standards. The number of electrical outages in a typical month in Belize (2.5) is the same as the LAC average, and compares favorably with the world average (7.0). Similarly, the average duration of a typical electrical outage is shorter than the world average, and losses as a percentage of annual sales are lower than in the LAC region and the world.

Only 15.4 percent of firms in Belize own or share an electrical generator, compared with 28.1 percent in LAC and 32.5 percent in the world. In spite of the relatively favorable situation

with respect to the reliability of electricity supply, the proportion of firms in Belize that cite electricity as a major constraint is similar to that in the LAC region and the world (36.4 percent, 37.6 percent; and 38.9 percent, respectively).<sup>18</sup> This discrepancy likely results from the high cost of electricity in Belize, which compares unfavorably with advanced countries and Central American countries, but is still lower than that of many Caribbean countries (Figure 27).

**Figure 27. Industrial Energy Tariff**

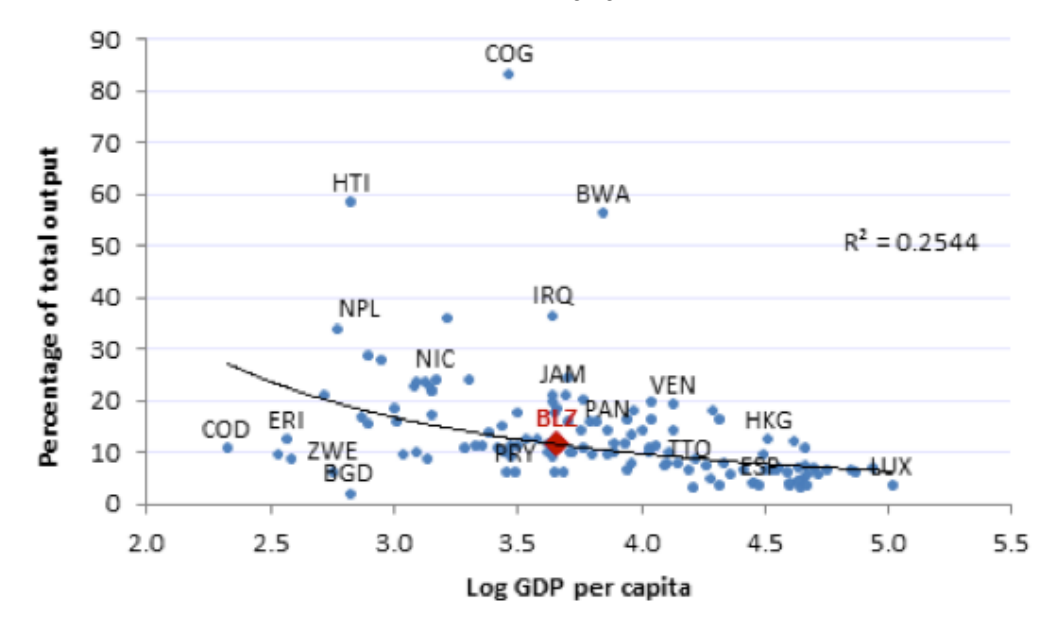


Sources: BEL (2014); CARILEC (2012); ECLAC (2012); Eurostat (2013); INE (2013).  
Notes: Years: Belize and Nicaragua: 2013; rest of Central America: 2011; others: 2012.

High electricity rates result from the high dependence on petroleum-based fuels in electricity generation, the absence of economies of scale due to Belize's small size, relatively high transmission and distribution costs due to low population density, and losses, which at around 11 to 13 percent are not unduly high for a country at Belize's development level (Figure 28).

<sup>18</sup> All data in this paragraph are based World Bank (2010a).

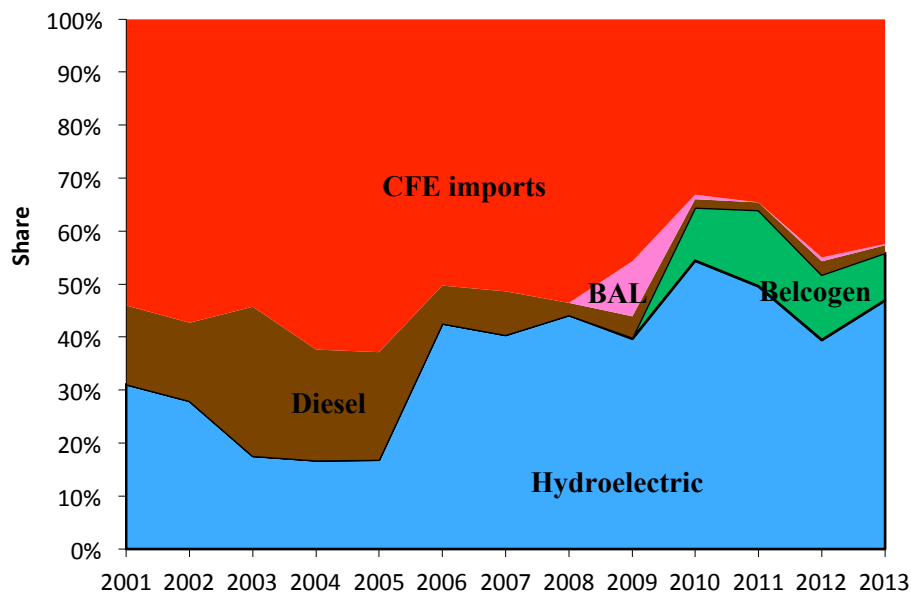
**Figure 28. Technical and Non-Technical Transmission and Distribution Energy Losses, 2010**



Source: World Bank (2011b).

Belize has made great progress in changing its energy generation matrix over the last decade. The proportion of electricity generated by relatively lower cost hydroelectric and bagasse cogeneration sources increased from 31 percent in 2001 to 56 percent in 2013 (CBB, 2013) (Figure 29). Nevertheless, the third of electricity that is still generated from bunker or diesel fuels significantly increases the average wholesale cost of electricity when international crude oil prices are high, as was the case from 2010 to 2012. Moreover, below average rainfall quickly cuts flow-of-the-river hydroelectric production and increases the quantity of expensive, bunker fuel generated electricity imported from Mexico.

**Figure 29. Composition of Energy Generation**



Source: IDB based on BEL (2014).

In sum, the reliability of electricity is above average in Belize but so is the cost. While the high cost of electricity pushes up production costs throughout the economy and is not an ideal situation for businesses, it does not appear to be a critical obstacle for the economy as a whole (it was rated only seventh as an obstacle in the World Bank's Enterprise Survey). Undoubtedly, it rules out the profitability of energy intensive activities, and therefore it shapes the form of Belize's productive activity. However, it does not appear to be a binding constraint to the economy in general.

#### 4.4.2. Transport

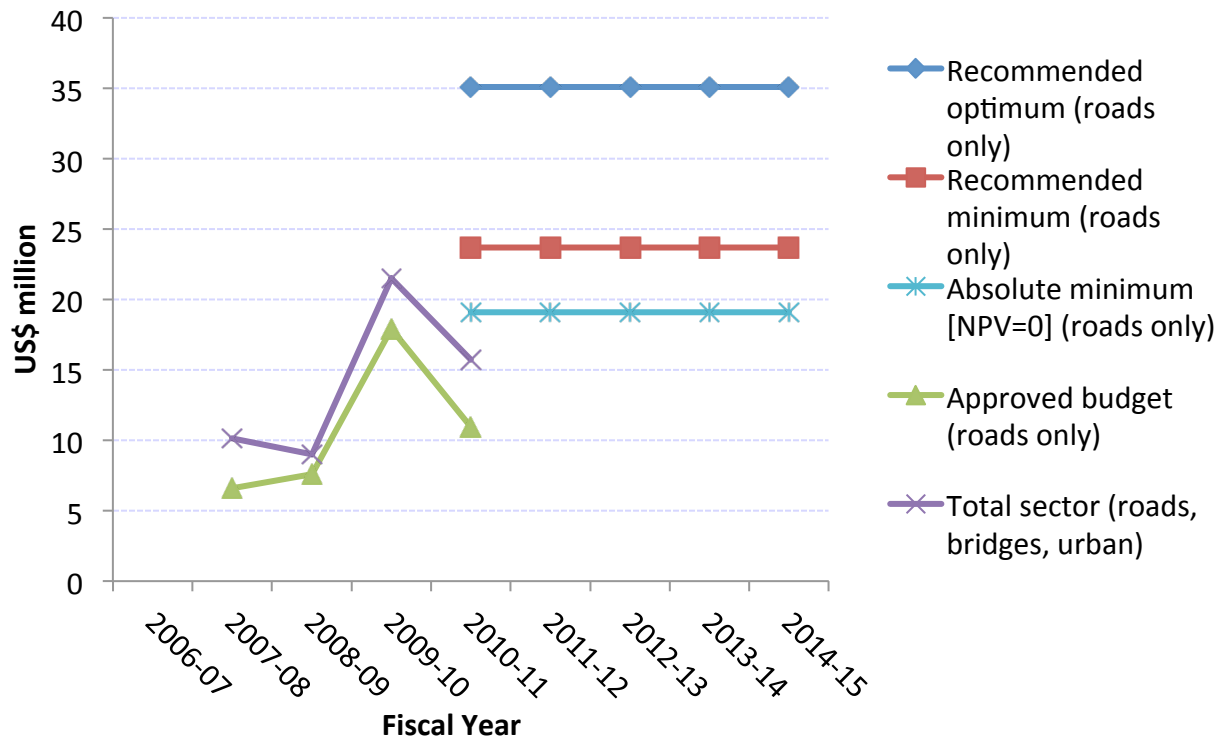
The private sector increasingly cites transport infrastructure as a constraint. Based on the World Bank (2010a), transport was rated as an obstacle by more than half of surveyed firms and came fourth in the ranking of most important obstacle. Indeed, it was the most frequently cited principal obstacle for large firms (those with more than 100 employees). Ports and rural roads are a key concern of the agricultural sector (Valdes and Foster, 2013).

Reflecting its low population density, Belize has a low density of roads per square kilometer but a relatively high amount of roads per person (IDB, 2013b). Only about 20 percent of the road network is paved, which is the lowest in the LAC region and again reflects low population density. Road network coverage is incomplete, especially in the district of Toledo—

where communities have received decent access to roads only recently—and in rural areas. In addition, access to some key tourism attractions (including Caracol, one of the most important Mayan ruins in Belize) is inadequate. The National Sustainable Tourism Masterplan for Belize 2030 (Tourism and Leisure and BTB, 2011) lists road and trail accessibility as its first priority in the subprogram for infrastructure and accessibility of cultural tourism. The existing network of roads and bridges on Belize's four main highways requires upgrading to accommodate current and future levels of traffic. The situation with the George Price Highway, which was built in the 1930s and is the main corridor to Guatemala, is especially critical given relatively rapid population growth in the Cayo district and booming trade with Guatemala since the implementation of the partial scope trade agreement in 2010. Although to date no rigorous data or studies exist, anecdotal evidence suggests that economic activity in the Toledo district is booming, following the upgrading and paving of the Southern Highway to the border with Guatemala at Jalacte. This suggests that although transport may not have been a binding constraint for the Belizean economy as a whole in the recent past, it may have been for the district of Toledo.

HK 2007 noted that funding for road maintenance had been cut markedly in the fiscal adjustment of 2004–2006 and flagged that the country's road network could quickly deteriorate. This concern appears to have been borne out. Funding for roads may have been some US\$5–6 million a year less than necessary (below the absolute minimum), on average approximately US\$15 million a year less than advisable (below the recommended minimum), and at only around one-third of the recommended optimal funding level (Figure 30).

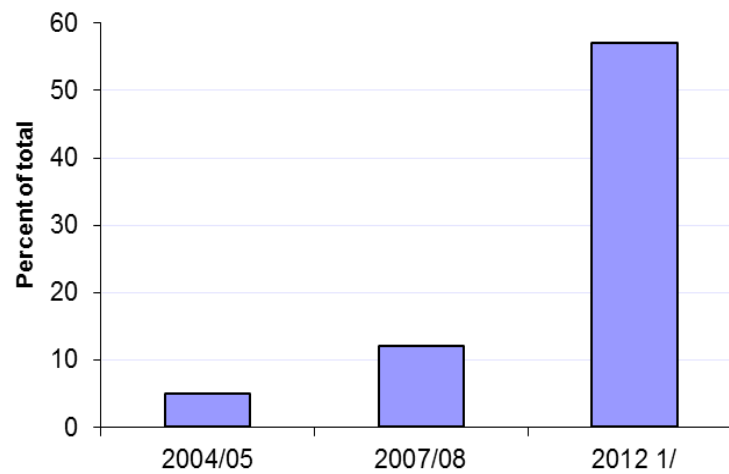
**Figure 30. Road Maintenance Funding: Recommended versus Actual**



Source: MoW (2010).

Underfunding of road maintenance in Belize has led to a reduction in road quality. The proportion of the road system considered in poor to bad condition increased from 5 percent of the total in 2004/2005 to 12 percent in 2007/2008 (Figure 31). While there has been no current scientific condition survey conducted on the basic network, expert advice cites the network as 23 percent good, 20 percent regular, 35 percent bad, and 22 percent very bad (IDB, 2013b). The decline in road quality is reducing the level of service to users and increasing their costs. It will also likely necessitate expensive road rehabilitation projects.

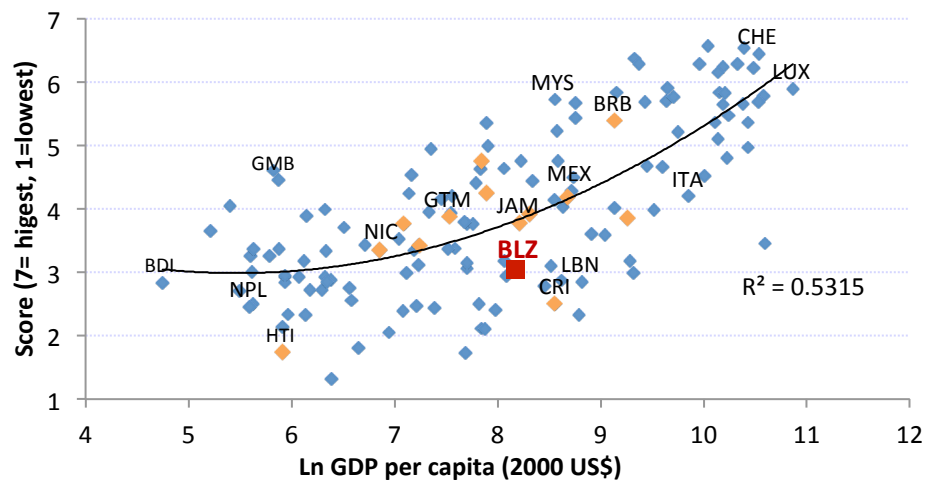
**Figure 31. Percentage of Road Network Rated Poor to Bad in Belize**



Source: IDB (2013b).

Also unsurprisingly, the quality of Belize's roads is inferior to what one would expect given its level of income (Figure 32). Based on WEF (2011), within the transport sector the road transport subsector had the biggest gap between Belize's score and the score expected for a country of its income level.

**Figure 32. Quality of Roads in Belize**

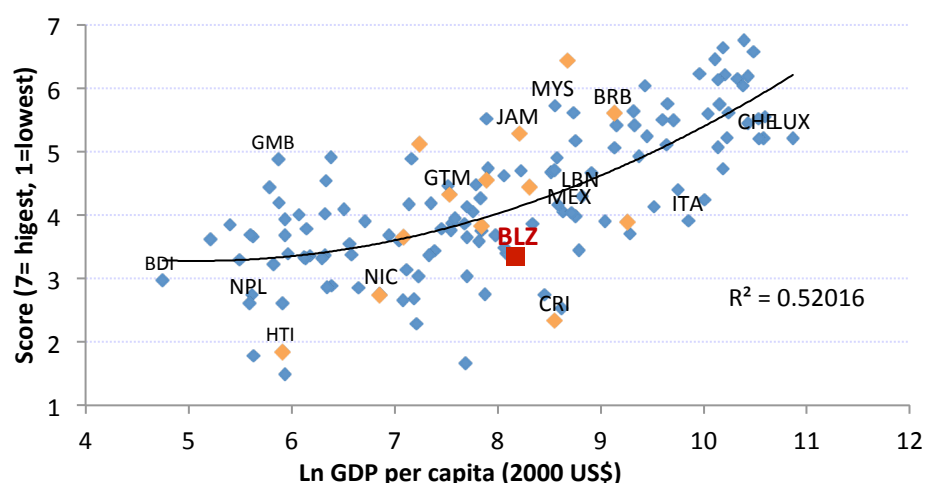


Source: IDB based on WEF (2011) and World Bank (2011b).



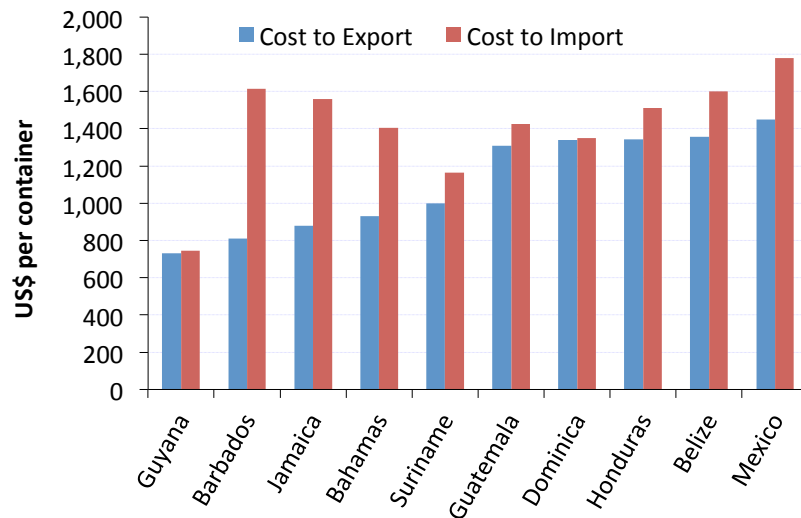
The agricultural sector views high costs and poor infrastructure as an important limitation on actual and potential agricultural exports (Valdes and Foster, 2013). Belize's port infrastructure is also deficient and below the level expected for a country of Belize's income (Figure 33). The ports face inherent geographical difficulties due to the relatively shallow water depth and access channels. Lack of dredging maintenance can cause silting, further reducing effective water depth. Physical infrastructure, notably the pier and cranes, is in poor condition at the country's principal port and inadequate in other ports, limiting the size of ships that can dock, increasing loading and unloading times, and driving up costs for shippers. Antiquated working practices also inflate costs at one port (Figure 34).

**Figure 33. Quality of Ports in Belize**



Source: IDB based on WEF (2011) and World Bank (2011b).

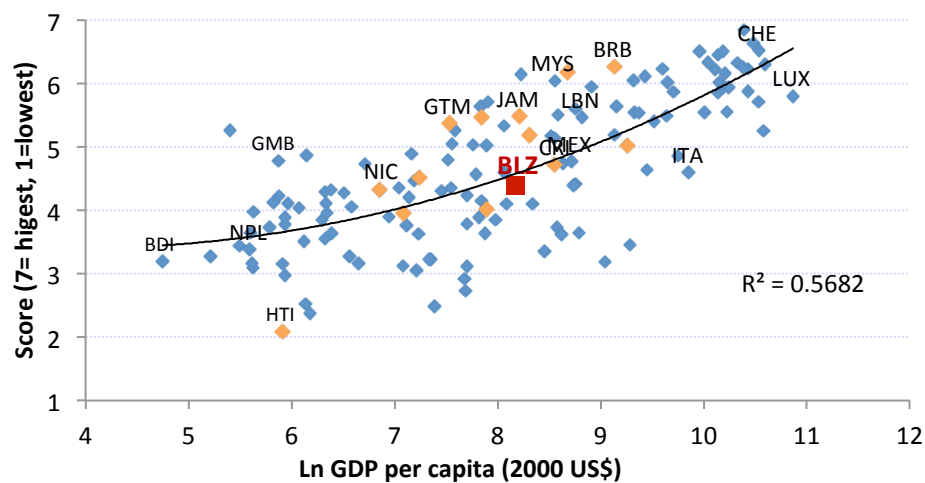
**Figure 34. Cost to Export and Import a Container**



Source: World Bank (2013c).

Belize's air transport infrastructure is less of a concern than the road and port infrastructure. There is little evidence of congestion or overcrowding, especially in the international airport, and service quality appears reasonable (Figure 35).

**Figure 35. Quality of Airports in Belize**

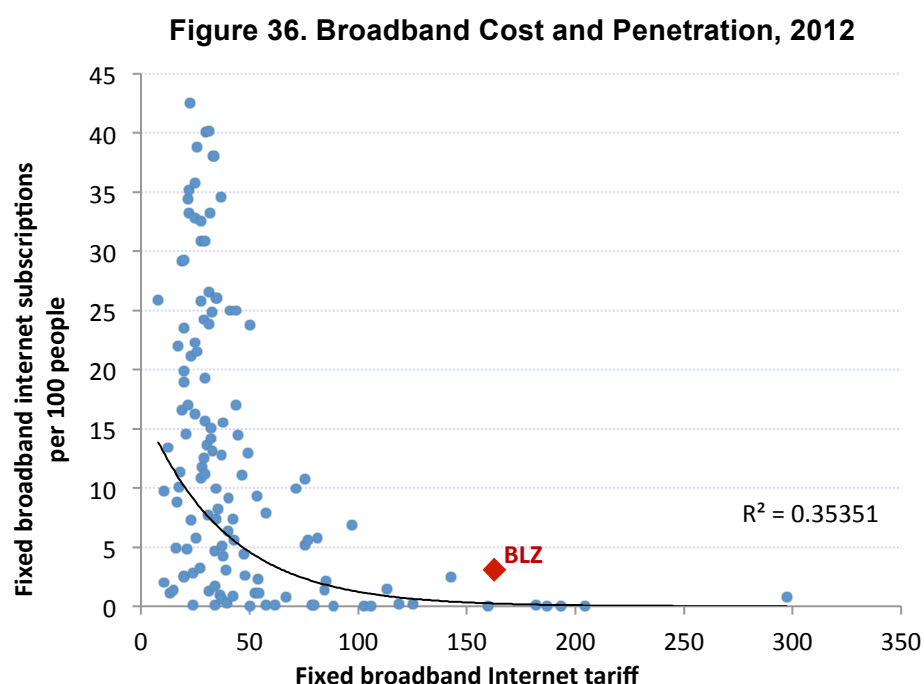


Source: IDB based on WEF (2011) and World Bank (2011b).

However, even in air transport there is cause for concern, particularly about the potential for an adverse shock to the leading tourism industry. Although the privately managed international airports is regarded as generating sufficient revenue to meet its requirements—including maintenance—the seven main municipal airstrips, all of which are government owned, have not been improved sufficiently over the last 30 years and the condition of many of them is poor; in fact, none of the municipal airstrips meet International Civil Aviation Organization (ICAO) requirements for operational safety (IDB, 2013b).

#### 4.4.3. Telecommunications

Belize has an undeveloped telecommunications sector, with indicators that place it among the lowest performers in the LAC region in terms of penetration, quality, and price of broadband services as well as readiness and usage in its information and communications technology (ICT) (Anta, 2013). The average price of fixed broadband service in Belize is more than three times that of most other countries and by far the highest in the English-speaking Caribbean. Such high prices are likely an important constraint on penetration and usage (Figure 36).



Source: WEF (2012); World Bank (2013b).

In the service sector, access to high quality and affordable telecommunications services is important. In particular, BPOs are intensive users of telecommunications services. Since

Belize has one of the most expensive telecommunications services in the world, this impediment could have prevented the emergence of the BPO industry. Because Belize Telemedia Limited (BTL) did not allow VoIP transmissions until 2013, the first call centers had to negotiate exceptions and agree to transmit only incoming VoIP calls (Stern, 2006). Similarly, to remain competitive, the industry has negotiated special telecommunications tariffs for BPOs. High cost telecommunications services and low penetration and usage probably do not represent a binding constraint to economic growth in the country but they do impede the country's competitiveness, particularly in services.

#### ***4.5. Appropriability***

Low rates of private investment can also be caused by a divergence between private and social rates of return. The perceived or expected profitability of investments may be lower than the underlying social returns to investment for the economy because of: insufficient information about the opportunities (in particular those that can only be realized if actions need to be coordinated with other agents), perceived riskiness (due, for example, to fears of expropriation or macroeconomic instability), and high regulatory costs or taxes. In this situation, there are potentially profitable investment opportunities in the economy but private investors cannot "appropriate" them.

##### ***4.5.1. Information and Coordination Failures***

Information and coordination failures could conceivably limit private investment by impeding a country's discovery and development of new higher value added activities. In the case of Belize, HK 2007 showed that Belize's export basket of goods was indeed unsophisticated and typically exported by countries poorer than Belize. However, they also noted that this pattern is typical of both countries that rely heavily on exports of services and smaller countries. Since 2006, there has not been a strong upsurge in non-traditional export products. On the contrary, the export of goods has become more concentrated, with the share of the traditional big three agricultural exports—sugar, citrus, and bananas—rising from 59 percent of all agricultural exports in 2006 to 70 percent in 2012.

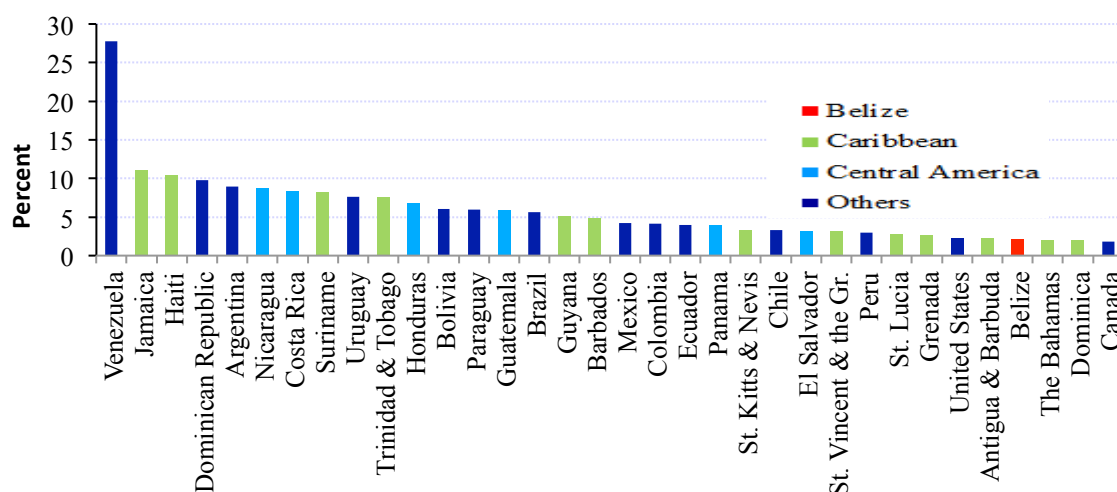
As HK 2007 pointed out, there does not seem to be a problem in identifying high potential sectors or coordinating their emergence. Tourism, ICT, agriculture and agro-processing, and fisheries and aquaculture have repeatedly been identified as high potential sectors (Belize Chamber of Commerce and Industry, 2001; Beltraide, 2006). Moreover, there are first movers in nearly all of them. Tourism and ICT have grown successfully with initial

private sector investments that were later complemented by the public sector. The lack of expansion of non-traditional agricultural exports in Belize appears related to constraints rather than a lack of knowledge about their potential. In addition, the apparent excess demand for the supply of some of these exports—notably cocoa and hot peppers—points to real supply constraints rather than information and coordination failures.

#### 4.5.2. Macroeconomic Risks

It is unlikely that private investment is deterred by concerns about macroeconomic stability. In recent years, Belize has enjoyed remarkable macroeconomic stability in terms of price and exchange rate volatility. The exchange rate has been pegged to the U.S. dollar at the same rate since 1976, and Belize generally records one of the lowest levels of inflation in the Western Hemisphere (Figure 37).

**Figure 37. Average Consumer Inflation, 2004–2014**



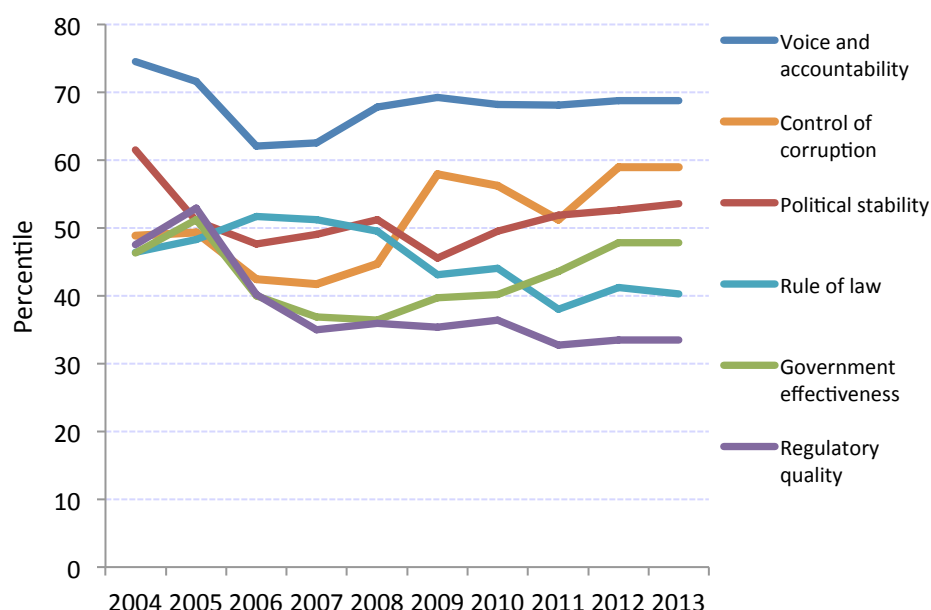
Source: IDB based on IMF (2015).

#### 4.5.3. Microeconomic Risks

A variety of microeconomic policy risks can either increase costs for the private sector (reducing private returns) or increase risks (lowering the probability that an investor will obtain an adequate return on his or her investment), including governance risks, labor market regulations, crime and violence, and taxation. According to the World Bank's Governance Indicators (World Bank, 2013b), since 2006, the ratings on the control of corruption and government effectiveness have improved moderately in Belize compared with other countries and weakened on the rule of law and regulatory effectiveness (Figure 38). Over a longer period of time there appears to be

little correlation between changes in Belize's ratings on such governance indicators and growth rates.

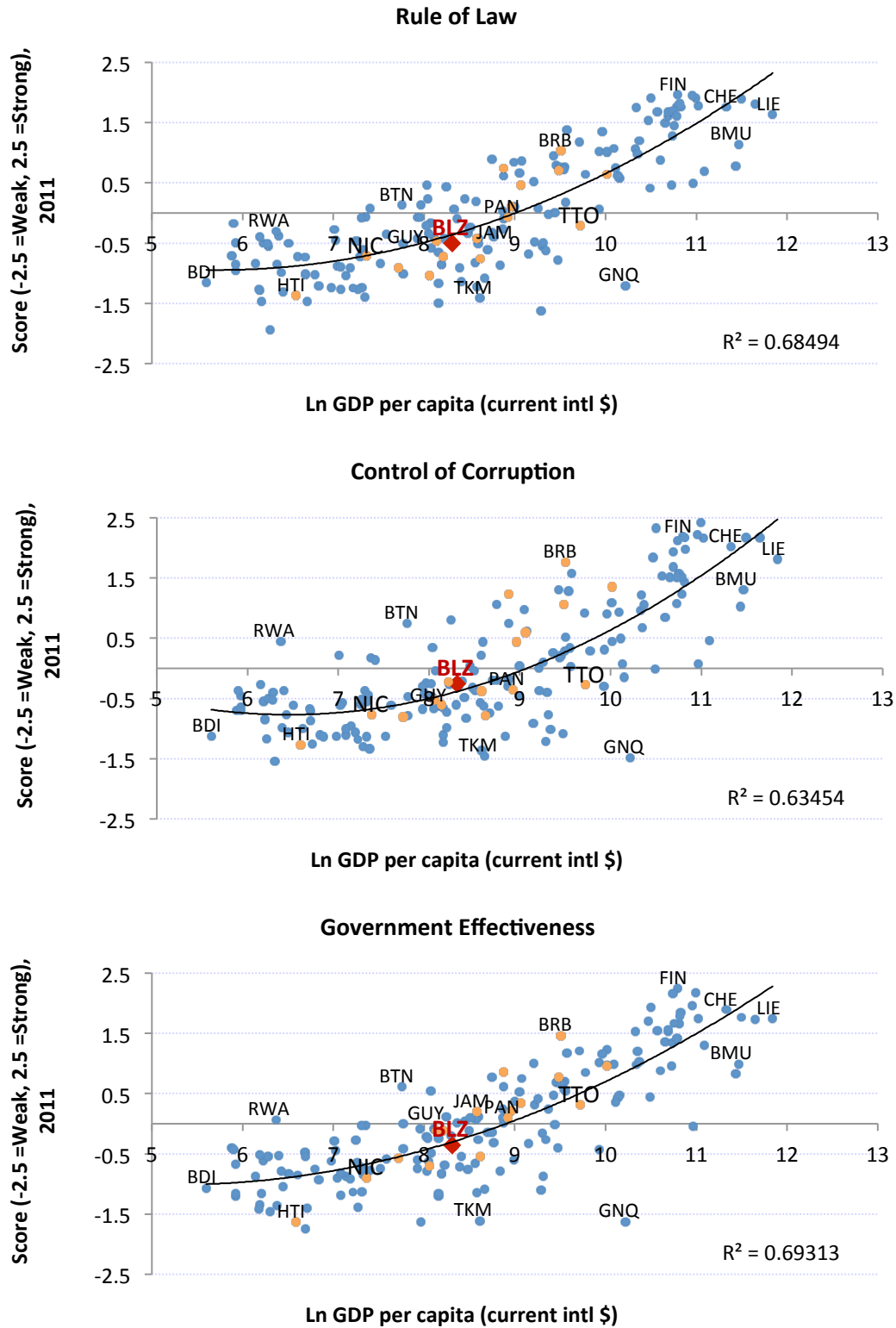
**Figure 38. Worldwide Governance Indicators in Belize**



Source: World Bank (2013a).

As a result, Belize ranks average for a country of its level of income in terms of rule of law, corruption, and government effectiveness (Figure 39). This coincides with the views expressed by the private sector in the 2010 Enterprise Survey (World Bank, 2010), where corruption and political instability in Belize were rated only the seventh and eighth most important constraints respectively. Some commentators expressed concern that the nationalizations of the principal telecommunications provider in 2009 and the electricity transmission and distribution company in 2011 would affect the investment climate by increasing expropriation risk (e.g., Belize Chamber of Commerce and Industry, 2011; Citigroup Global Markets, 2011). In response, the government argued that the private sector understood clearly that the nationalization policy was limited to the utility sectors and not a generalized policy. Its position appears to have been validated by the doubling of FDI in 2012, which suggests that at least foreign private investors were not deterred from investing outside of the utility sectors.

**Figure 39. Worldwide Governance Indicators in Belize (by indicator)**



Source: World Bank (2011a).

Economic growth does not appear to be constrained by excessive labor market regulations. In the 2010 Enterprise Survey (World Bank, 2010), labor market regulations were ranked ninth in the list of constraints. Similarly, in the Global Competitiveness Report 2011–2012 (WEF, 2011), Belize received its second strongest rating for labor market efficiency. Many labor regulations are in keeping with those observed elsewhere and seem appropriate to Belize’s circumstances. Lindauer (2013) concluded that prevailing labor market regulations, institutions and labor supply can be improved upon but do not appear as binding constraints on achieving more rapid economic growth.

Similarly, economic growth does not appear, in general, to be constrained by a dysfunctional land market. Since land is relatively abundant and this natural resource wealth underpins Belize’s comparative advantage in land-intensive sectors, such as tourism and agriculture, a well-functioning land market is important for Belize’s economic growth. Access to land does not appear to be a major issue for the tourism and agriculture sectors in general. It is estimated that 54 percent of land in Belize is privately owned and the land for most new investments in tourism resorts is reportedly acquired through private market transactions (Butler, 2013). Prices for land may be higher on average in the private market but the process is more expeditious than applying for a lease or purchase of publicly owned land.<sup>19</sup>

Transactions costs are relatively high. A stamp duty tax of 5 percent of the sale proceeds of a land sale applies to transactions of real property, and in terms of administrative aspects, land administration modernization projects have not yet had much of an impact on the performance of various registration functions, including registration in the land registry or transfers of registered land (Butler, 2013). On the basis of the number of steps and number of days required to transfer land, the World Bank (2013a) ranked Belize 136 out of 168 countries. This was Belize’s third weakest area and significantly worse than the overall ranking of 105. Notwithstanding problems with titling, the security of property tenure is not a problem for most economic activities. Butler (2013) views the legal system as strongly protective of property rights.

There is one economic activity where insecure property rights clearly are a major barrier and perhaps binding constraint—cocoa production. Belize is considered to have a strong comparative advantage in this activity. The cacao tree is native to Belize, which offers ideal climatological and soil conditions, and Mopan Mayans have harvested cacao in the area for

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<sup>19</sup> Of the 46 percent of the national territory that is publicly owned, protected areas and forest reserves represent 30 percentage points and land that has either been leased or is available to be leased represent the other 16 percentage points (Butler 2013).



centuries. Belizean cocoa is high quality with desirable flavors; consequently, it commands a high price on world markets. Moreover, the price is supplemented by premiums for organic production methods and Fair Trade certifications. International demand for Belizean cocoa considerably exceeds the country's production, indicating that production is constrained by supply.

The most suitable areas for cocoa production are in the south, especially in Toledo, the southernmost district of Belize. However, Toledo has the lowest level of private land ownership of any district (Butler, 2013). The Mayan Leaders Association and Toledo Alkalde Association have long claimed common property rights to the lands occupied by Mayan people in the Toledo District and, since 2007, have brought several legal claims against the government with respect to land issues (Butler, 2013). Unclear property rights and the difficulty in obtaining clearly defined ownership rights create two problems for Mayan cocoa farmers.<sup>20</sup> First, cocoa trees start to produce cacao pods five years after planting. So unclear property rights and pilfering of output represents a clear problem of appropriation. Second, without a title to land farmers cannot qualify for agricultural credit in a financial system oriented toward land collateral (Butler, 2013; Gaarder and McCommon, 1990).

Belize's production and export of cocoa remains at a fraction of its potential. Indeed, Belize's RCA in cocoa production is actually below one, which is clearly indicative of the country being unable to tap an economic activity that a priori should be a winner in Belize. Nevertheless, notwithstanding the constraint that land issues pose for the cocoa industry, there is little evidence to suggest that land issues represent a binding constraint for the economy as a whole.

Another serious risk is crime. The homicide rate increased from 16 to 41 per 100,000 inhabitants between 2000 and 2010 (OAS, 2012) (Figure 40). In 2012, according to official data, there were 145 murders for a population of 340,786 (estimated mid-year population for 2012)—that is, a rate of 42.5 per 100,000 inhabitants, Belize's highest rate to date (Pierce and Veyrat-Pontet, 2013). This is higher than the average rate for Central America and for the Caribbean,<sup>21</sup> and ranks behind only Guatemala, Honduras, El Salvador, and Jamaica in terms of national rates. Furthermore, Belize City's homicide rate is far higher than the country average (estimated at 106 per 100,000 people),<sup>22</sup> putting it on par with other violent cities of the region, such as Guatemala City and San Salvador, although not as high as San Pedro Sula (Pierce and Veyrat-Pontet, 2013).

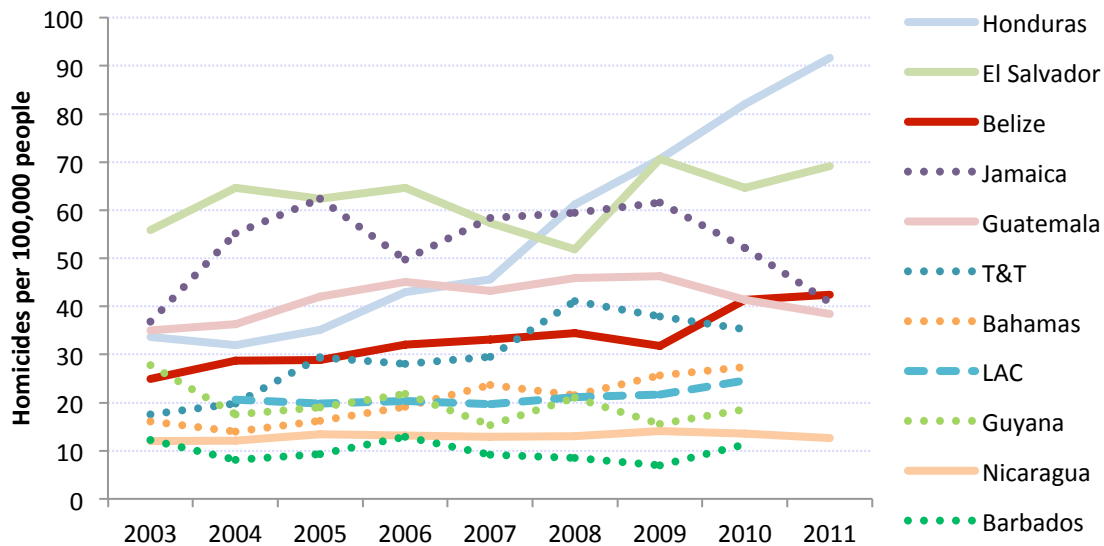
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<sup>20</sup> Only small-scale Mayan farmers undertake cocoa production in Belize.

<sup>21</sup> Compared to the United Nations Office on Drugs and Crime (UNODC) rates for 2010 and 2011.

<sup>22</sup> Based on the UNODC rate for 2010.

**Figure 40. Homicides per 100,000 persons: 2003–2012**



Source: IDB based on UNODC (2011); JICC (2013).

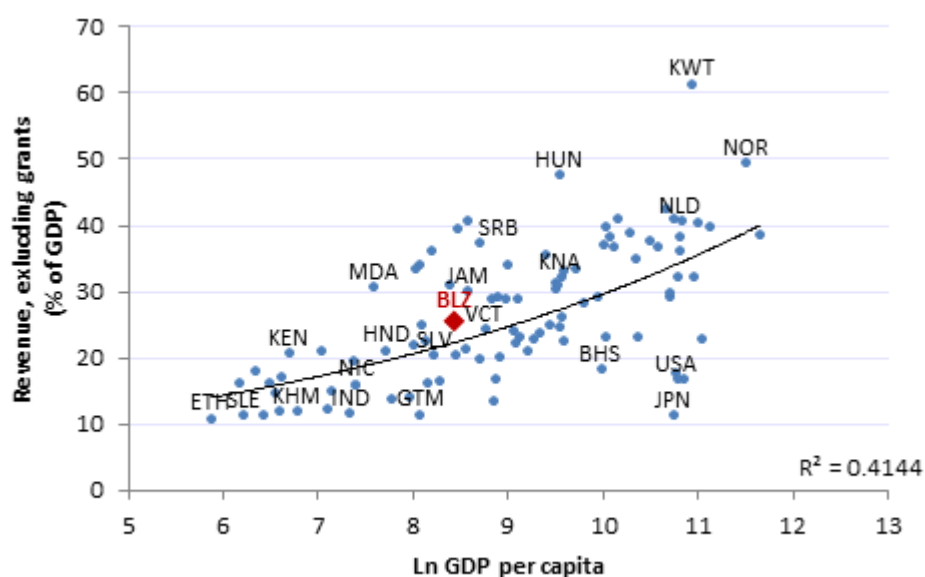
Crime and violence can potentially reduce economic growth through two channels: first by increasing business costs and reducing profitability; second, by adversely affecting sales, for instance in the tourism industry. In the Global Competitiveness Report 2011–2012 (WEF, 2011), Belize ranked 132 out of a 142 countries in terms of the costs of crime and violence to business, countries. In the 2010 Enterprise Survey (World Bank, 2010), over 50 percent of firms in Belize considered crime, theft, and disorder a major constraint to their business, and it was the fifth most frequently cited principal constraint. In the same survey, 70 percent of firms reported to be paying for security compared with 62 percent for LAC and 57 percent worldwide. Nevertheless, security costs paid by establishments was reported as equivalent to only 1.3 percent of annual sales, and this was lower than the LAC and world average. The only direct evidence of crime affecting the tourism industry to date is the cancellation of cruise ship port calls following a U.S. State Department security message regarding travel to Belize City in January 2013. In this respect, crime remains a latent threat to the tourism industry, of which the Belize Tourism Board is well aware.

The private sector considers the tax burden to be a binding constraint. In the 2010 Enterprise Survey (World Bank, 2010), the private sector rated tax rates as the single most important impediment to its development and more than half of enterprises rated tax rates as a major problem. Similarly in the Global Competitiveness Report for 2011–2012 (WEF, 2011) Belize was ranked 132 out of 142 countries in terms of the extent and effect of taxation (only 7

percent of countries were ranked lower). Closely related to the tax burden, in terms of the prevalence of trade barriers, Belize was ranked 139.

At the macro level, Belize's tax burden (averaging 22 percent of GDP over the period 2008–2012) is heavier than would be expected for its income level, but not extremely so (Figure 41). However, the burden is concentrated and narrowly borne due to high nominal rates, counterbalanced by numerous exemptions. Honest formal sector enterprises not fortunate enough to benefit from exemptions bear a disproportionate burden and the private sector has expressed concerns about the horizontal equity of the taxation system.

**Figure 41. Tax Burden and GDP per Capita, 2011**



Source: IDB based on World Bank (2013b).

In addition, the tax system is distortionary due to the high share of suboptimal taxes (notably trade taxation) relative to more benign taxes (such as the “general sales tax” [GST], Belize’s version of the value added tax) and the specific design of Belize’s taxes. Belize taxes trade heavily both for revenue purposes and to protect domestic economic activities. As a member of the Caribbean Community (CARICOM), Belize allows imports from fellow members duty free, while applying tariffs based on the common external tariff (CET) to imports from non-CARICOM members (which accounted for 97 percent of merchandise imports in 2012). For extra-CARICOM imports, three separate import duties may be applied: (i) a most-favored nation (MFN) tariff based on the CET; (ii) a revenue replacement duty of 5 to 50 percent; and (iii) an

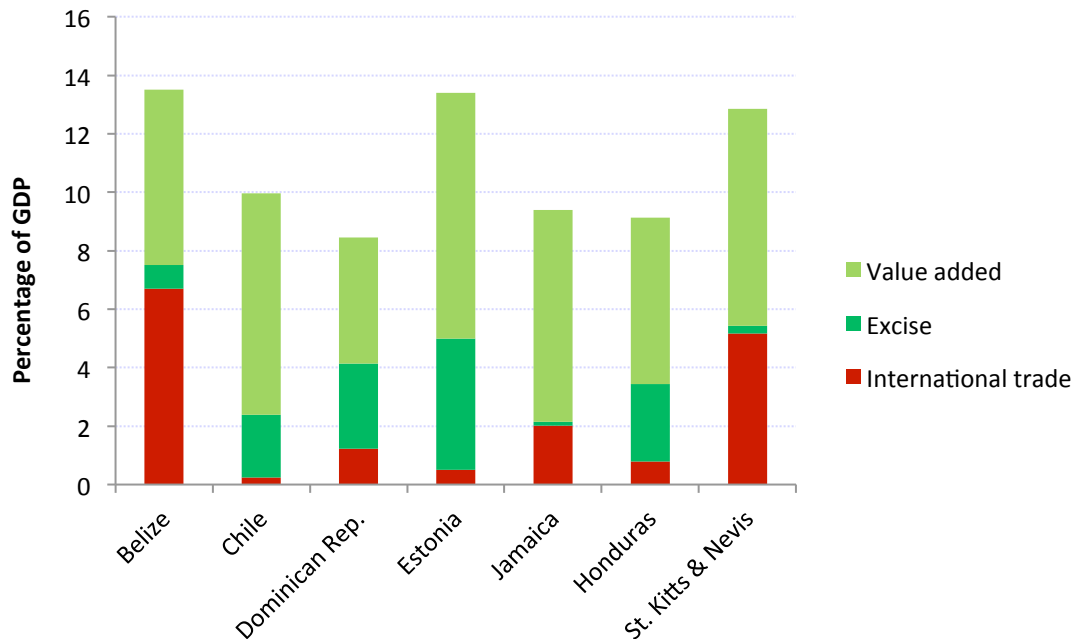
environmental duty of 2 percent for all imports except some basic foodstuffs and pharmaceuticals.

Despite a long-term decline in the importance of taxes on international trade since 1990, trade taxes still brought in revenues equivalent to 6.6 percent of GDP in 2012. Although other small Caribbean island states depend heavily on trade tax revenues, Belize's dependence level is approximately three times that of Guyana and Jamaica. In terms of the rest of the countries in the region, most Central American countries collect less than 1 percent of GDP from taxes on international trade (Figure 42), while Chile collects a mere 0.2 percent. Export and import duties are not considered optimal instruments to raise revenue because they lower trade and entail a relatively high efficiency loss (Shome, 1995).<sup>23</sup> In contrast, Belize undercollects or raises relatively little revenue from taxes that are considered less distortionary. Zero-rating and exempting many articles from the GST has narrowed its base considerably. Krelove, Schatan, and Gendron (2013) estimated that 44 percent of potential GST supplies are zero-rated, costing the government about 8 percent of GDP in foregone revenue on a gross basis. Excise taxes contributed only 3.2 percent of tax revenues, equivalent to only 0.7 percent of GDP in 2012. Along with GST, excise taxes have been recommended as a more efficient substitute for trade taxes (Jenkins and Kuo, 2006).

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<sup>23</sup> A tax on imports causes two deadweight losses. First, consumer surplus is reduced because consumers consume less of the imported commodity than they would have done at the free trade price. Second, domestic firms expand production of the good at higher resource costs at the margin than the costs at which importable goods are available from the rest of the world.

**Figure 42. Tax Revenue from Selected Indirect Taxes in Belize and Selected Comparators, 2011**



Source: IDB based on IMF International Financial Statistics and World Bank (2013b).

The design of Belize's primary tax on business income is also distortionary (Rider, 2012). Belize's business tax is levied on gross sales or turnover rather than a conventional corporate income tax on profits. In an attempt to compensate for the penalization of high turnover, low margin businesses, widely different rates are applied to different industries. Jenkins and Kuo (2006) praised the simplicity of the tax and played down the potential for a cascading of the tax rates, given that most manufactured items are imported. In contrast, Rider (2012) and Krelove, Schatan, and Gendron (2013) underlined the significant potential for tax cascading and distortion of producer behavior, notably by (artificially) creating incentives for firms to integrate vertically or to simply import final goods.

The tax structure, especially the high import duties, creates an anti-export bias in two ways. First, high import duties push up costs for all producers who directly or indirectly use imported inputs, undermining their competitiveness. Since exporters face an international price determined by the world market, rising costs in the context of a fixed sales price reduce profitability. For example, Rider (2012) estimated that the combined effects of import duties, environmental tax, and the exemption on GST increase the cost of hotel renovations, expansion, and new construction by as much as 37.5 percent. Similarly, his town hall meetings and surveys of stakeholders in the tourism industry revealed that a primary concern of tour

operators and tour guides was the added costs of importing equipment such as batteries, boats, fishing rods, and reels. Some activities are simply priced out of the market. For example, no fishing rods and reels are sold in Belize in the retail market even though game fishing is a major tourist attraction. Second, tariff protection causes higher prices in the domestic market, raising the profitability for import-substituting activities both in absolute terms and relative to export activities. In fact, a tax on imports is equivalent to a tax on exports (Lerner, 1936).

The cost of international trade is also increased by non-tax factors. Some products, especially food, are protected by quantitative restrictions rather than tariffs. The government reduced the list of products requiring non-automatic import licenses from 121 products in 2011 to half that level in 2012 (Fernández Monge, 2013). In addition to the impact of increasing the national price of such goods, domestic and imported goods may not be perfect substitutes. Rather, they may be differentiated in quality, performance, or other characteristics that lower the welfare of consumers (including firms) who are obliged by law to use the domestically produced alternative.

The complexity of trade policy also contributes to time delays in trading and raises transaction costs for producers and costs to export a container (Figure 43).<sup>24</sup> Belize is ranked 102 out of 185 economies in terms of trading across borders (World Bank, 2013c). Relatively high administrative and logical costs of trade in Belize further undermine the competitiveness of exporters of goods or those requiring significant imported goods as inputs.

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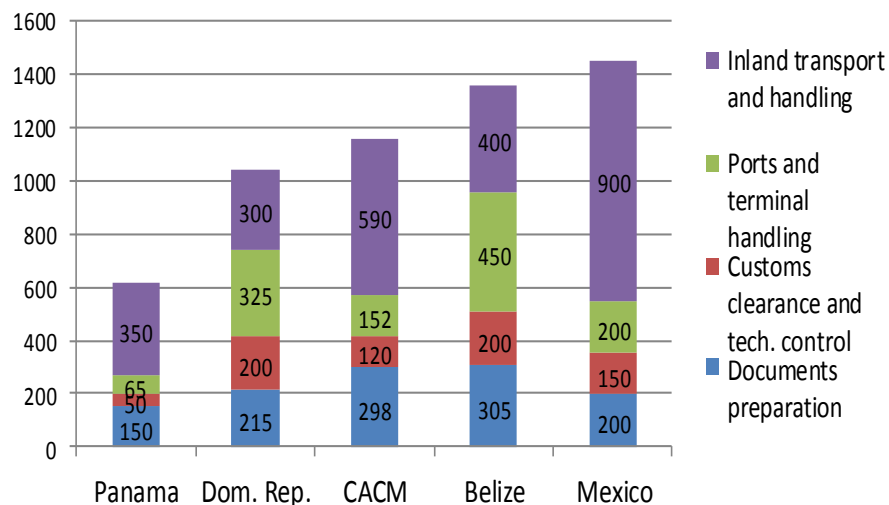
<sup>24</sup> It costs US\$1,355 to export a container from Belize compared with US\$1,160 in Central America (World Bank, 2013c).

**Table 4. Trade Policy Complexity in Belize versus Chile**

|                                      | CHILE                                                     | BELIZE                                                                                                      |
|--------------------------------------|-----------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|
| <b>Trade capacity</b>                |                                                           |                                                                                                             |
| <b>Staffing at customs agency</b>    |                                                           |                                                                                                             |
| <i>Actual agents</i>                 | 347                                                       | 200                                                                                                         |
| <i>Agents per 100,000 population</i> | 2                                                         | 56                                                                                                          |
| <b>Trade policy complexity</b>       |                                                           |                                                                                                             |
| <b>Tariff structure simplicity</b>   | Almost uniform rate (99% of trade at 6%)                  | Tariffs range from 0 to 100%, with an average applied tariff at 20%.<br>The coefficient of variation is 0.4 |
| <b>Other duties</b>                  | VAT                                                       | VAT (GST); revenue replacement duty; environmental tax                                                      |
| <b>Import licenses</b>               | None                                                      | 126 tariff lines reduced to 68 tariff lines in 2012                                                         |
| <b>Free zones</b>                    | 2 (in poles of country for regional development purposes) | 53 EPZs and 1 commercial free zone                                                                          |

Source: Fernández Monge (2013); WTO (2010).

**Figure 43. The Cost of Exporting in Belize and Selected Comparators**



Source: IDB based on World Bank (2013c),

Heavy taxation of international trade not only increases costs and tends to depress investment in exportables but also distorts incentives and the allocation of investment, thereby potentially reducing the efficiency of investment. There is significant dispersion of tariffs, giving rise to widely different effective rates of protection<sup>25</sup> for different activities and a distortion of producer incentives (Fernández Monge, 2013; IDB, 2013d; Valdes and Foster, 2013). The CET is composed of the following bands: rates between 0–5 percent, 10 percent, 15 percent, 20 percent, and 40 percent. Belize's tariff comprises 6,305 tariff lines at the HS eight-digit level. There are 12 tariff rates applied, with the most frequent being 5 percent, followed by 20 percent and then duty free (IDB, 2013d).<sup>26</sup> Belize's simple average MFN tariff (excluding specific rates) was 11 percent in 2011. The average applied tariff for agriculture (WTO definition) is just over 20 percent, with tariffs ranging from 0 to 100 percent. For non-agriculture, the average is 9.6 percent, with tariffs ranging from 0 to 50 percent.<sup>27</sup> This reflects the CARICOM policy of according high tariff protection to agriculture and agri-processing. Generally, unprocessed products attract the highest tariffs, followed by fully processed products. Belize's tariffs on agricultural and non-agricultural products are more dispersed than those of its Central American neighbors, and significantly more dispersed than that of Chile (Figures 44 and 45).

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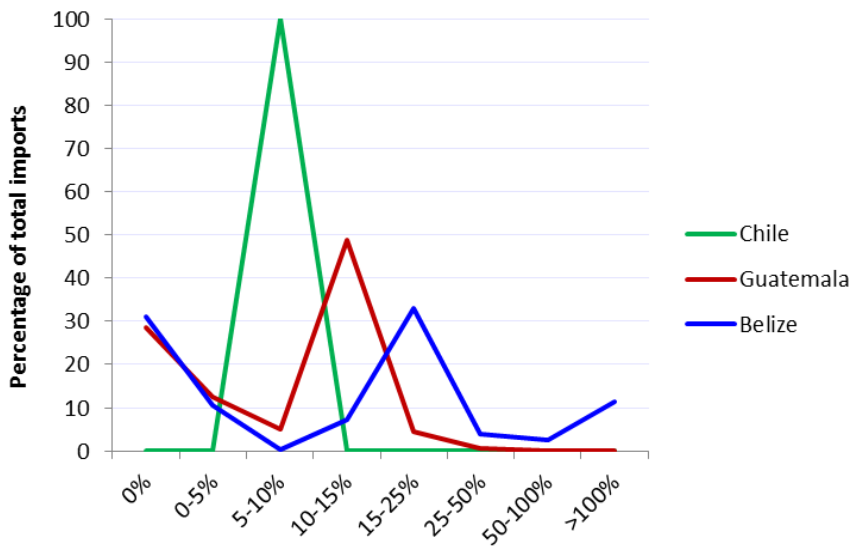
<sup>25</sup> While the “nominal” rate of protection refers only to the tariff on a sector’s output, the “effective” rate of protection takes into account also the protection on inputs. Consequently, the concept of “effective rate of protection” measures the combined impact of tariffs on inputs and outputs on value added within a sector.

<sup>26</sup> The respective tariff levels and number of tariff lines are as follows: duty free (617 lines); 5 percent (3,333); 10 percent (220); 15 percent (328); 20 percent (1,078); 25 percent (60); 30 percent (35); 35 percent (55); 40 percent (409); 45 percent (42); 50 percent (69); and 100 percent (12).

<sup>27</sup> See <http://stat.wto.org/TariffProfile/WSDBTariffPFView.aspx?Language=E&Country=BZ>

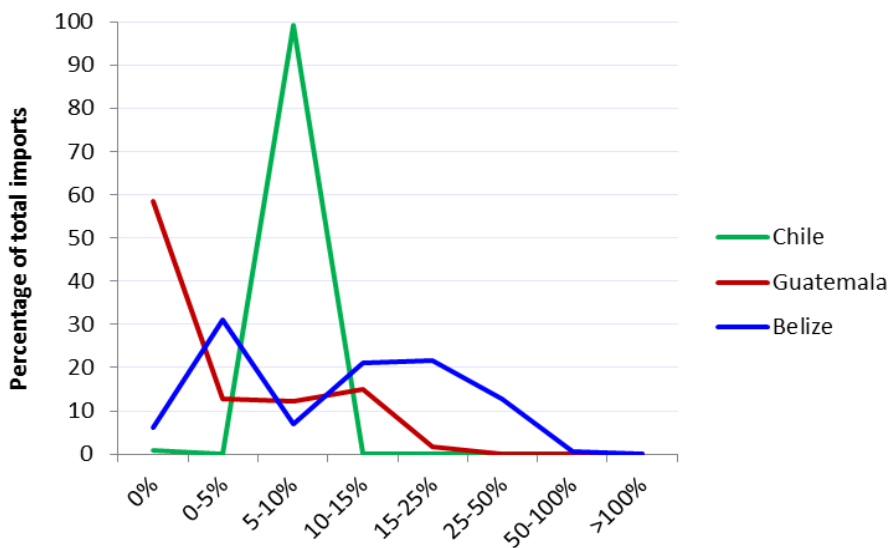


**Figure 44. Frequency of Applied MFN Tariffs to Agricultural Products by Import Value, 2010**



Source: <http://stat.wto.org/TariffProfiles>.

**Figure 45. Frequency of Applied MFN Tariffs to Non-Agricultural Products by Import Value in 2010**



Source: <http://stat.wto.org/TariffProfiles>.

Trade protection provides artificial protection for some uncompetitive sectors—notably in food production—while raising costs for competitive or potentially competitive sectors. The economic activities benefitting most (with the highest effective rates of protection) are several agricultural products that are not exported. The activity most penalized is probably tourism. With

no nominal protection and with significant protection of inputs to the sector, the effective rate of protection for tourism is likely significantly negative. Trade and tax policies thus cause significant differences between social and private rates of return. In potentially competitive activities, expected private rates of return are depressed below social rates of return, impeding investment into those activities; in contrast, in protected and uncompetitive activities, realized private rates of return exceed the social rates of return for the country, thereby attracting and retaining resources in less productive activities.

An additional bottleneck for agricultural exports is the deficient infrastructure and human capacity of the Belize Agricultural Health Authority (BAHA), whose sanitary and phytosanitary control and monitoring systems require strengthening in various respects. Related to the aforementioned constraints, between 2000 and 2012, non-oil merchandise exports grew by an average of only 1.4 percent per year in current prices, and the export structure has remained concentrated in a narrow range of traditional products. The share of sugar, citrus, and bananas in non-petroleum domestic exports of goods rose from 59 to 70 percent between 2000 and 2012.

High trade barriers create strong incentives and pressures to avoid them. Producers try to get around the high trade barriers by seeking duty exemptions through export processing zone (EPZ) and fiscal incentive programs. Belize maintains three programs providing tax concessions for exports: the Fiscal Incentives Act, the Export Processing Zone Act, and the Commercial Free Zone Act. The exemptions from direct and indirect taxes are considered to be overly generous (Fernández Monge, 2013; Shukla and Martin, 2010), but producers who do not benefit from them are at a competitive disadvantage. Exemptions for some companies create an uneven playing field and horizontal inequality (i.e., differential treatment across activities and even between different producers in the same activity). This disparity, along with the significant dispersion of tariff rates and separate import duties create a complex system for both tax administrators and taxpayers. Moreover, the geographical dispersion of more than 50 EPZs in a country with 200 customs officials and a population of only 342,000 creates serious administrative problems and potential for leakages.

#### **4.6. Conclusions**

This update of the 2007 growth diagnostic finds a less clear cut situation and more diversified set of constraints on economic growth. The situation with regard to the factor that was identified as a binding constraint to economic growth in 2007—high cost finance—has improved, with lending interest rates declining by 4.5 percentage points from 2007 to 2014. In contrast, the

situation with some of the factors that were discarded as binding constraints in 2007—such as taxes, transport, and crime—have deteriorated since then.

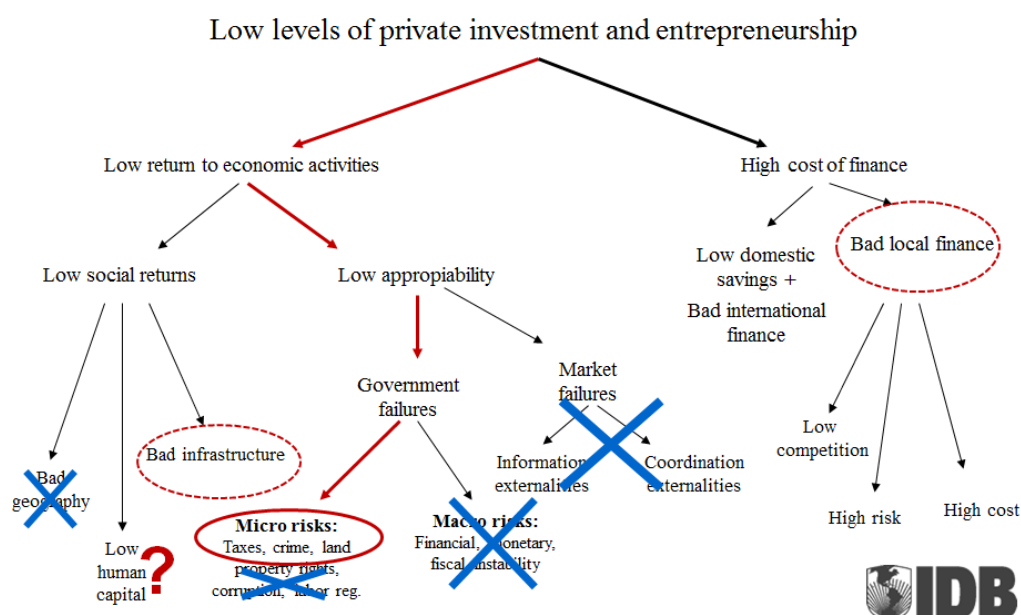
To be regarded as a binding constraint to growth, a factor should satisfy one or more of the criteria under the growth diagnostics methodology (Annex 1): (i) the implicit price should be high; (ii) movement in the restriction should translate into a movement in investment; (iii) firms should be trying to escape or avoid the constraint; and (iv) firms least intense in the restriction should proliferate and those that use intensively the relatively scarce factor should be absent or underrepresented. In addition, the factor should be regarded as a constraint by the private sector itself. In terms of the characteristics of economic growth in Belize over the last decade, any designation of binding constraints should be able to answer three questions:

1. Why has export performance been so disappointing since 2004 and why have non-tradable sectors attracted a growing proportion of credit and grown faster than tradable sectors?
2. Why have BPOs been relatively successful compared to other activities, particularly light manufacturing and non-traditional agricultural exports?
3. Why has FDI been relatively more abundant than domestic private investment?

After reviewing the evidence, some of which has changed since 2007, this study concludes that the binding constraint to economic growth in Belize is a longstanding and unintentional, anti-export bias of public policies (Figure 46). The most important aspect of the anti-export bias is the tax and trade policy framework, which skews incentives against exports. High trade taxes not only constitute a barrier to profitability and private investment, but they also impede investment in relatively desirable activities (activities of greater competitiveness and with higher social returns) more than other activities. Firms dedicate significant attention to obtaining exemptions from the tax burden and few important investments take place in the economy without tax and trade incentives that remove the barrier. The most significant exports outside of tourism—sugar, citrus, papaya, shrimp, and BPOs—rely on tax and trade exemptions. Successful exporters are underrepresented in the private sector. Along with access to finance, tax rates are rated as the biggest obstacle in the economy. Fifty-seven percent of all firms identify tax rates as a major constraint, placing it as the second most frequently identified factor as a major constraint to their business. The majority of respondents identified the tax rate as the one most important obstacle.

The anti-export bias of tax and trade policy is reinforced by the underprovision of key public goods that would support exports (notably in sanitary and phytosanitary control and in transport infrastructure, and by indirect public support for consumption and investment in non-tradable sectors). Infrastructure, particularly related to roads and ports, is an emerging constraint to economic growth. Since HK 2007, continued underfunding of maintenance has led to a deterioration of road quality. In addition, trade with Guatemala has taken off in recent years, increasing the importance of the road connections between Belize and Guatemala. This constraint is perhaps not as crosscutting as trade taxes and high-cost finance, but it is highly relevant for certain sectors. Tourism is constrained by poor road access to some important tourist attractions and agricultural exports may be constrained by port quality.

**Figure 46. Decision Tree: Growth Diagnostic, 2013 Results**



Source: Adapted from Hausmann, Rodrik, and Velasco (2005).

The cost of finance is a key concern of the private sector and may represent a second constraint to growth. Notwithstanding a considerable decline in lending interest rates, they remain high in absolute terms and compared with developing countries that have had high investment rates. Firms try to get around the constraint by relying heavily on internal funding. There is significant reliance on FDI. In a survey of the private sector, access to finance was the

factor most frequently identified as a major constraint to their business (mentioned by two-thirds of firms), and it was the second most frequent factor identified as the most important obstacle.

The degree to which low human capital represents a constraint to economic growth is unclear. There is no doubt that Belize's stock of human capital is limited, and it was the third most frequently cited main obstacle in the enterprise survey. On the other hand, the wage rates of return to primary and secondary education (the implicit "price") are very low by international standards, suggesting that the economy is not willing to pay for increased education. In addition, fewer Belizean firms appear to provide training to their employees when compared to firms in LAC and worldwide (i.e., they are not making strong efforts to get around the constraint). There is a sharp jump in the private rates of return to vocational and tertiary education, suggesting that a scarcity in the supply of post-secondary education may be constraining some firms.

Crime and violence do not appear at present to constitute a binding constraint to economic growth. Although homicide rates have risen, there is little evidence of the effect on private investment. More likely, crime represents a threat of potential damage to growth. Other factors (e.g., bad geography, risks of macroeconomic instability, microeconomic risks connected with property rights, corruption and labor regulations, and market failures connected with information and coordination externalities) do not appear to represent binding constraints on economic growth.

How do the binding constraints relate to the pattern of economic growth? Over the long run, there has been a clear correlation between the growth of exports and economic growth. Periods of rapid GDP growth have been associated with rapid growth of exports and vice versa. Much of the fluctuations in export performance, such as changes in terms of trade, development of new exports, changing export preferences, and discovery of petroleum in commercial quantities, have been exogenously driven rather than policy driven. However, these factors have masked the fact that the public policy framework is not supportive of export activities. The most recent exogenous boost to exports was the development of the petroleum industry after 2006. The rapid growth of petroleum exports temporarily compensated for a lack of growth in other exports. However, if the levels of petroleum production and exports continue to decline the weakness in other export activities will be exposed. The pattern of growth since 2003 has been skewed towards non-tradable sectors, pointing to a generalized problem with competitiveness and profitability in the export sectors. Bank credit has increasingly been directed at non-tradable sectors rather than the tradable sectors. Whether this reorientation of credit is due to effective credit screening on the part of banks or lower demand from the export-oriented private sector is

not important; it is a rational response to the relative profitability of the export sector and the incentive framework.

What accounts for the success of BPOs amidst stagnation in other export activities? Belize possesses some factors that make it attractive to BPOs, notably an English-speaking workforce and cultural and physical proximity to the United States. In addition, Belize scores relatively well on labor market regulations and efficiency in international assessments of the business environment. Importantly, the sector is not hindered by the binding constraints to growth or other impediments in Belize. Virtually all BPOs are under the EPZ program and so tax rates and trade impediments are not an issue. Once physically established and equipped, a company needs minimal imported inputs. In this sense, ports do not constitute a barrier; the biggest transportation issue is the daily commute of the workforce. Most companies are established through FDI, so the high cost of domestic finance is irrelevant. The industry needs employees with some training but does not require a highly skilled labor force. Finally, unlike in manufacturing, scale and agglomeration economies are not important in the sector.

In terms of the growth diagnostics methodology, BPOs are the “camels in the desert” (i.e., activities that are resistant to the scarcest factors in the business environment). In contrast, light manufacturing and non-traditional export agriculture are the “hippopotamuses in the desert” (i.e., activities that are sensitive to the scarcest factors in the business environment). In the latter, Belize produces world-class cacao and hot pepper sauces. In the face of considerable excess demand from the world market for Belize’s limited supply of these products, export growth has remained trivial (exports of both are under US\$1.5 million per annum). Producers are local, small-scale, and dispersed, particularly in the case of cacao production. These characteristics are not favorable for EPZ status and exemptions from the tax and trade policy framework. Imported inputs are important for the packaging materials for hot pepper sauces, and thus affected by import restrictions. Due to their location in the south, production relies on the least developed physical infrastructure in the country. Both products depend on national finance, either internally generated finance or the local banking system. In the case of cacao, property rights issues represent an additional constraint.

How do the binding constraints relate to the stylized fact that Belize has healthy levels of FDI but weak levels of domestic private investment? In many respects, foreign and domestic investors have access to the same investment climate. They use the same infrastructure, have access to the same human capital, and operate under the same macroeconomic and microeconomic risks and labor market regulations. However, there are three important differences. First, for the most part, foreign and domestic investors borrow or source their capital

from different jurisdictions. Foreign investors can borrow at considerably lower interest rates than domestic investors and, if needed, generally can access much larger amounts of finance. This difference means that there is a range of projects that are viable for foreign investors with their privileged access to credit at lower rate but whose expected rate of return is below the cost of capital for domestic investors. Second, foreign investors also have privileged access to tax incentives and exemptions from the tax burden due to their large size and the leverage afforded by their ability to choose to invest in other countries. For example, when American Sugar Refinery decided in 2012 to make a large investment in Belize's sugar industry, the government prepared and parliament approved a tailor-made act (the Sugar Industry and Cogeneration Project [Development Incentives Act]) to provide for exemptions from taxes and import duties to facilitate the new investment in the sugar sector. Third, foreign investors often have greater access to foreign markets than domestic producers. Indeed, with the notable exceptions of many tourist operators and the Mennonite communities in the agricultural sector, most exports from Belize are undertaken by foreigners. This is a reflection of the incentive framework and a factor that weakens the weight of the export sector in the political economy of domestic policies.<sup>28</sup> Greater participation of the domestic private sector in export activities would be healthy not only for long-term economic growth but also for establishing a virtuous circle between policy formation and export success.

## **5. REFORM PRIORITIES**

Belize's significant natural resource base provides it with abundant potential for developing further its tourism and agricultural sectors and for faster growth economic growth. However, tapping that potential will require important reforms and changes. Belize has enjoyed "easy periods" of economic growth based on high international sugar prices in the mid-1980s, early development of tourism from 1985 to 2004, and unsustainable fiscal stimulus from 1990 to 1993 and 1998 to 2004. These periods have allowed for the persistence of sub-optimal public policies—such as protection of inefficient producers and under-investment in key public goods. Unless a major positive exogenous shock occurs (e.g., a new discovery of petroleum), the vehicles for easy economic growth have likely been exhausted. Sugar is no longer as dominant in the economy, tourism—although still young—is more mature than it was, and a relatively high

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<sup>28</sup> Bulmer-Thomas and Bulmer-Thomas (2012) provide an interesting historical perspective on the erection of trade barriers after 1800 that favored entrepot trade rather than competitive export production under the influence of the politically dominant Belizean merchant class.

debt-to-GDP ratio and lack of access to external commercial finance rule out new bouts of fiscal stimulus. Achieving faster economic growth in the future will involve tackling some overdue public policy issues.

It is important to make economic growth a public policy priority. Rather than allow growth to be determined passively as the cumulative outcome of all public policies, it would be helpful to establish a target for economic growth and then orient public policies around the target. The growth target should be high enough to make a meaningful improvement to living standards and poverty reduction but low enough to be feasible. A real GDP growth target of five percent per annum on average would appear to balance these opposing criteria. The country already has a growth target for its most important economic base: tourism. The National Sustainable Tourism Masterplan (NSTMP) 2030 sets targets of average annual growth from 2008 to 2030 of 3.8 percent in overnight visitors, 4.9 percent in visitor nights stayed, and 7.65 percent in tourist expenditures. These targets fit neatly with an overall GDP growth target of 5 percent. Given the importance of tourism to the economy, achieving the NSTMP targets appears to be a necessary but not sufficient condition for attaining an overall GDP growth rate of 5 percent.

Success in rekindling economic growth will depend upon success in boosting exports. In concrete terms, achieving 5 percent GDP growth will likely require a real growth of exports of goods and services in excess of 5 percent per annum (given the need to balance the external current account over the long term): growth must be led by exports. In addition to the all-important tourism sector, the small but dynamic BPO sector could play a useful complementary role in the area of services exports. However, it is hard to foresee a vibrant growth of exports of goods and services and GDP without a sharp improvement in the performance of non-traditional agricultural exports. All export sectors require the reduction of the anti-export bias. Export promotion should become a central element of public policy.

### ***5.1. Recommendation 1: Improving Incentives for Export-led Growth***

The government should consider a significant overhaul of trade and tax policies to improve incentives for private sector investment in productive activities, especially in the areas of greatest comparative advantage. Important objectives should include switching to less distortionary means of raising revenues, in particular shifting the tax burden from taxes on inputs to production to consumption taxes, and greatly simplifying the trade and tax system for both users and administrators. This would involve a sharp reduction in tariff and non-tariff barriers to trade through: (i) consolidation of duties into a single import duty by eliminating the Environmental Tax and Revenue Replacement Duty; (ii) elimination of import licenses as a tool



of protection; and (iii) a sharp reduction in tariff variability and dispersion. The revenue lost by the reduction in trade tax revenues could be recouped by consolidating the GST as the principal indirect tax by sharply curtailing exemptions from the tax (utilizing the opportunity afforded by lower import prices) and by bringing the tourism sector into the GST system. As in Chile, the Dominican Republic, and Estonia, excise taxes could make a much stronger contribution to tax revenues in Belize.

The EPZ and fiscal incentive programs should be phased out by 2015, in line with WTO rules. The need for such programs would be much lessened by the reduction in trade taxation outlined above but a duty drawback system should be introduced to compensate export activities for the remaining tariffs on imports.

### ***5.2. Recommendation 2: Additional Measures to Boost Exports***

The reform of tax and trade policies (recommendation 1) could be complemented and reinforced by additional measures to promote exports. This requires adequate funding of activities that have public good characteristics, thereby falling in the public domain, and which are likely to have a high economic payoff. Three small public agencies have important interactions with the private sector and are important for promoting exports: BAHA, BELTRAIDE, and the Belize Tourism Board (BTB). BAHA is key for meeting sanitary and phytosanitary standards in agricultural exports, BTB for the promotion of tourism, and BELTRAIDE for general export and investment promotion. In addition to these activities, trade facilitation in the form of strengthening customs administration and lowering non-tax costs would help to promote exports.

### ***5.3. Recommendation 3: Improve Infrastructure Provision***

Notwithstanding fiscal constraints, resolving infrastructure constraints to economic growth, particularly those related to exports, would likely have a significant economic payoff. Increased resources need to be devoted to road maintenance to avoid costly deterioration in the quality of roads. Road maintenance tends to have a higher economic rate of return than new infrastructure investments (Belli, 2010). Road maintenance expenditure in Belize has been estimated to have an internal rate of return in excess of 30 percent, which is likely one of the highest payoffs for any category of government expenditures and is far above the government's cost of capital (MoW, 2010). In addition, it will be important to support tourism-specific infrastructure (roads and sanitation) that will enable successful implementation of the NTSMP.

Solutions for port infrastructure issues could be analyzed to provide the government with a full menu of policy options. Last, strengthening telecoms sector regulation is key for enabling a strong reduction in telecommunications prices for users.

#### ***5.4. Recommendation 4: Continue to Reduce the Cost of Credit***

The CBB has made significant progress in reducing lending rates over the last four years. The reduction in the administrative floor on savings deposit rates has been effective in helping to reduce average deposit rates. There is scope to do more by either further lowering the floor or abolishing it. Concern about protecting depositor income may be a deterrent but arguably overall welfare would gain on net by achieving further reductions in lending interest rates and realizing the potential additional investment in productive sectors that this could trigger. Similarly, the CBB's tightening of regulatory standards has contributed to declining NPLs since mid-2010, which should feed through to reductions in interest spreads in the future. Improvements in the institutional architecture of the financial sector, such as the creation of a credit bureau and a moveable property register, could help to reduce information asymmetries and risks, strengthen creditor confidence, and help access to affordable credit. Again, the CBB has been active in working to establish a credit bureau.

Nevertheless, in spite of the need to continue working on improving the functioning of the commercial banking sector, it is important to address the bias of credit to the non-tradable sectors. Many of the recommendations above should serve to increase the profitability and attractiveness of investment in export activities. Consequently, they may have the effect of increasing the demand for credit from export activities and the banks' willingness to extend credit for those purposes. On the other hand, it may be too much to expect a strong reorientation in the destination of credit. In this context, it would make sense for the DFC to focus its lending on export activities. The sustainable development of export activities likely has positive social returns over and above the private returns available to an investor, which therefore merits some measure of public support. Lending to the productive sectors is already a stated priority for the DFC. However, given its limited financial resources relative to the potential investment in export activities, it would further make sense for the DFC to phase out its lending for student loans and housing, which tend to boost the non-tradable sectors. In contrast to lending for exports, benefits of student and housing loans are concentrated on the recipients of such lending rather than the wider public. Moreover, focusing on fewer larger loans to the export sector rather than the retail level student and housing loans would enable the DFC to keep administrative costs to a minimum and reduce its lending rates to its clients. Enhanced

cooperation and dialogue between BELTRAIDE, the DFC, and the Economic Development Council on export promotion could help facilitate the flow of information and help the public sector respond to the export sector's requests for actions that facilitate the business and investment climate.

In addition to such improvements in the financial sector, at a more fundamental macroeconomic level, increasing national saving over the longer term will allow higher national investment. It is much easier to increase national saving in a fast growing economy (through having a higher propensity to save additional income than the average propensity to save from existing income) than in a slow growing economy. In many countries, notably Chile and South Korea, growth accelerations preceded increases in the national saving, which then in turn allowed sustained growth (Talvi, Gavin, and Hausmann, 1997). This underlines the importance of triggering growth acceleration through the trade and tax policy reforms outlined above.

#### ***5.5. Reduce Less Efficient Expenditures Over Time and Work on Public Sector Efficiency and Effectiveness***

Increased expenditures on key growth-promoting public goods can be balanced by increased efficiencies in other areas of public spending. Despite poor education outcomes, Belize devotes one-fourth of its national budget (excluding interest payments) to the education sector (equivalent to nearly 7 percent of GDP). There is scope for improving the efficiency and effectiveness of public expenditure on the sector to generate better education outcomes for a given amount of expenditures (better value for money). Citizen security—the second most important functional destination of public funding—might also benefit from a public expenditure review to ensure that public expenditures are being allocated and utilized efficiently and effectively. More broadly, continued reform of public financial management and management for results could contribute to public sector efficiency and value for money. In terms of the destination of public expenditure by economic classification, the biggest part of discretionary spending is on the government wage bill and pensions (Larraín, G. and J. Rodriguez, 2011).

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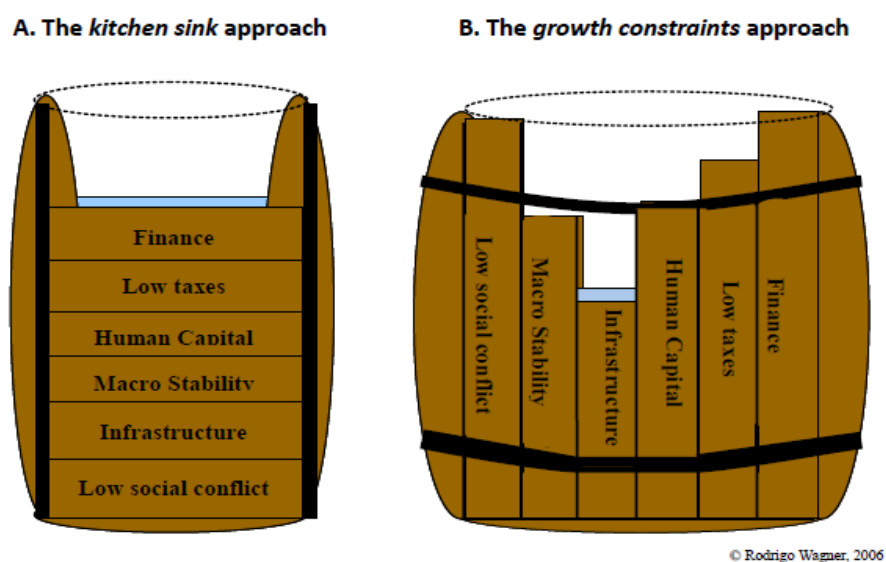
## **ANNEX 1. GROWTH DIAGNOSTICS METHODOLOGY**

The growth diagnostics methodology (GDM) offers policymakers a guide that differs from traditional approaches to economic growth. Traditional approaches, characterized as “kitchen sink” or “laundry list” approaches, suggest an indiscriminate, across-the-board effort to reform policy. However, given that governments have limited political capital and administrative capacity, long lists of reforms are not helpful. Moreover, attempting to solve all problems simultaneously may cause governments to dissipate their efforts resolving problems that actually turn out to have little impact on growth. The GDM argues that it makes sense to first identify the factor or factors that are most restrictive to economic growth and then concentrate public policy efforts on resolving that restriction, providing policymakers with the biggest bang for the buck.

A second characteristic of the GDM is that it provides country-specific diagnoses. In contrast to the traditional approach of basing recommendations on policies that have been found to be conducive to growth in the average country, the GDM posits that the binding constraint on growth varies from country to country and over time.

Figure A1 illustrates one of the fundamental ideas behind the GDM: factors that may contribute to the growth of an economy are not necessarily perfect substitutes. Panel A of the figure presents a world in which growth-supporting factors (represented by the horizontal planks in the barrel) are perfect substitutes. Which of all these factors that contribute to growth should be the focus of public policies? If the world is like the barrel in panel A, the question is irrelevant. The capacity of the barrel (or economic growth) is simply the sum of the height of all the horizontal planks and will increase no matter which planks of public policy are improved. Policy improvements in any of the areas—or all of them at the same time—will bring similar results in terms of economic growth. However, in the real world the different elements that contribute to growth are not perfect substitutes. If a lack of nutrients constrains the growth of a plant, adding more sun or more water will not compensate for this lack and boost its growth. Consequently, it is important to identify which constraints are the most binding.

**Figure A1. A Comparison of Conceptual Approaches to Economic Growth**

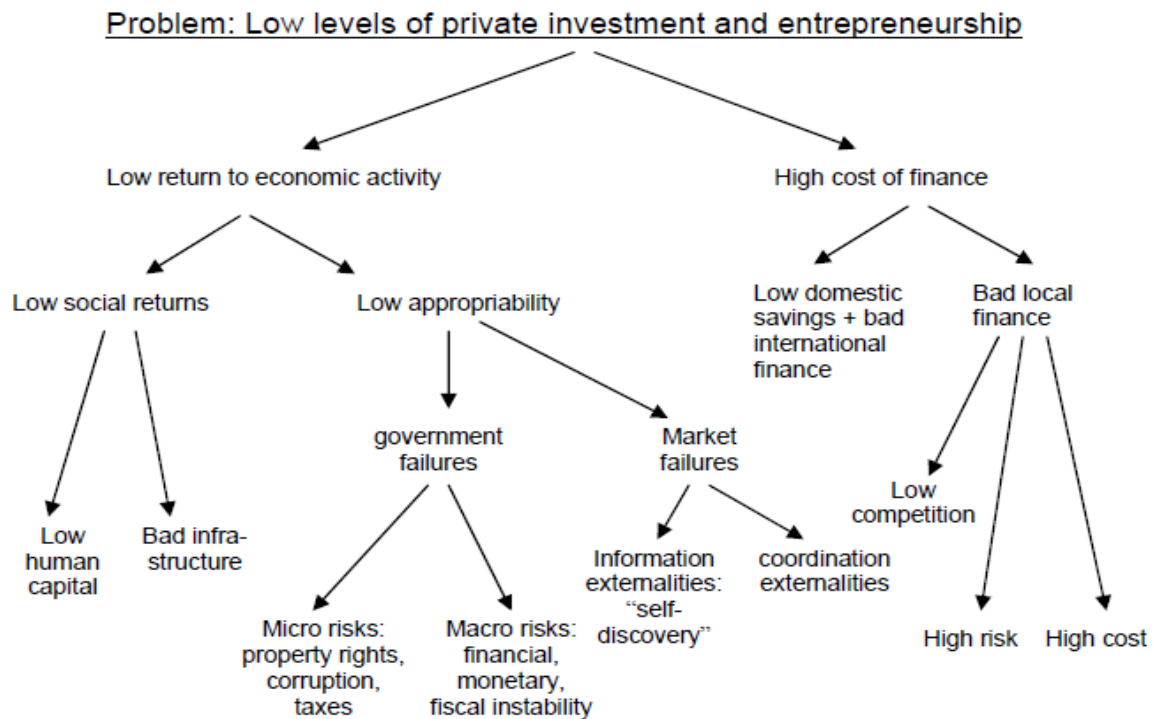


Source: Hausmann, Klinger, and Wagner (2008).

The barrel in panel B of the figure presents a different scenario. In this case, how much the barrel will hold is determined by the shortest plank (in the example of this figure, the shortest plank is infrastructure). Although there is no doubt that the level of human capital could improve, in this example improving the level of human capital is ineffective, unless infrastructure is developed first. The true constraint that is holding back growth (or the capacity of the barrel) is infrastructure, and that should be the focus of public policy in the short term. The real world may lie between the two extremes represented by the barrels in panels A and B, and there may be more than one constraint that restricts growth at the same time.

To assist the analytical process and identification of the binding constraints on growth, Hausmann, Rodrik, and Velasco (2008) use a decision tree (Figure 48) that explores all the factors that could potentially cause low levels of investment and, hence, slow economic growth. It is possible that inefficient investment rather than low levels of investment lead to weak growth (Agosin, Fernández-Arias, and Jaramillo, 2009; Felipe and Usui, 2008). However, In the case of Belize, weak growth is clearly associated with a low investment rate.

**Figure A2. Growth Diagnostic Decision Tree**



Source: Hausmann, Rodrik, and Velasco (2005).

The decision tree first divides into two general categories: does the country face low returns to domestic private investment (the left-hand side), or does it suffer from a high cost of finance (right-hand side)? This division is based on the condition that for an investment to take place, the rate of return must be higher than the rate of interest. If investment is low, this could be due either to low returns on private investment or to a high cost of finance.

If it is determined that the constraint is low returns to private investment, the left-hand branch of the tree explores various possible causes of low returns. The next decision point asks whether private returns are low because social returns are low, or whether social returns are high but private investors, for various reasons, are unable to appropriate them. If social returns are low, this could be due to an insufficiently trained labor force or to poor-quality infrastructure. If social returns are respectable, but private investors are unable to appropriate them, the problem may be due to government failures such as macroeconomic instability, insecure property rights, excessive taxation, or corruption, or the problem could stem from market failures related to different types of externalities or coordination failures.

On the other hand, if it is determined that the primary constraint is high-cost domestic finance or a lack of financing, the right-hand branch of the tree then explores whether the

financing problem originates from inadequate external finance or problems related to domestic financing.

Analysis of the different branches of the decision tree leads to several questions: How to identify the relevant branch? How to identify if a factor is one of the most binding constraints on growth? To make an accurate diagnosis, all available information should be considered so that nonbinding factors can be systematically discarded. A good starting point to determine whether a factor is a binding constraint is to investigate the “quantities” of certain factors, such as education coverage or credit to the private sector as a share of GDP. If the country compares favorably with other countries in a particular area, that area is probably not a binding constraint. By contrast, if the country compares unfavorably in an area, that is a signal that the area requires deeper examination.

If a factor is a binding constraint, the scarcity of that factor should also be reflected in “prices.” For example, if access to finance is a problem, that should be reflected in high interest rates. Similarly, if low education coverage is a binding constraint, the returns to investment in education (the value that the labor market places on an additional year of education) should be high, suggesting that the market is demanding a factor that is scarce.

If a constraint is binding, changes in the supply or availability of that factor should be reflected in significant changes in the rate of economic growth. If this is not the case, then the factor is not binding.

The behavior of agents in the economy can be another indication of whether a factor is binding. If a factor is scarce and a binding constraint, the private sector should attempt to overcome or bypass that constraint. For example, in countries with an unreliable supply of electricity, companies and households often invest heavily in self-generation, even though this is more expensive than reliable electricity sector provision. Similarly, one would expect that industries that use a particular factor intensively would be absent or only poorly developed where that factor is scarce. To illustrate this point, Hausmann, Klinger, and Wagner (2008) use the metaphor of animals thriving in the Sahara Desert. In the Sahara, one can observe many camels but very few hippopotamuses. This observation about the relative balance between camels and hippopotamuses, combined with the fact that camels can thrive with little water while hippopotamuses are intensive in water, suggests that the binding constraint on the presence and survival of animals in the Sahara is the availability of water. The above criteria are summed up in Box A1.

### **Box A1. Guide and Criteria for Determining a Binding Constraint to Growth**

Guide – Entrepreneurs opinions

Criteria:

1. The implicit price should be high.
2. Movement in the restriction should translate into a movement in investment.
3. Economic agents' reactions. (Trying to escape or avoid the constraint).
4. Agents least intense in the restriction should proliferate and agents who use intensively the relatively scarce factor should be absent or underrepresented.

In sum, the GDM involves testing and rejecting hypotheses rather than a search for rigorous “proof.” In this sense, a growth diagnostic is more like a civil suit than a criminal case, because it relies on “the preponderance of the evidence” rather than the criterion of “beyond all reasonable doubt.” To apply the GDM to the specific case of Belize, it is important to start with a good description of the country’s growth process that not only provides a long-term view, but also highlights the fluctuations, since the fluctuations may be indicative of movements in the binding constraint.