



**WP/19/24**

# **IMF Working Paper**

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Reinvigorating Growth in Belize

by Dmitry Vasilyev

I N T E R N A T I O N A L M O N E T A R Y F U N D

**IMF Working Paper**

Western Hemisphere Department

**Reinvigorating Growth in Belize**

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Authorized for distribution by Uma Ramakrishna

February 2019

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**Abstract**

In the 1990s and early 2000s, Belize grew faster than its regional peers. By the mid-2000s, however, economic growth had slowed down to the regional average. A vicious circle of low growth and increasing public debt has been clouding Belize's outlook. This paper applies a growth diagnostic approach based on the Hausmann-Rodrik-Velasco framework to investigate the main growth constraints and opportunities for higher growth in Belize. Improvements in access to finance and in the business climate could unlock Belize's strengths.

JEL Classification Numbers: O11, O43, O54.

Keywords: growth diagnostics, development policies, structural transformation.

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<sup>1</sup> I am grateful for comments by Daniel Leigh, Bert van Selm, and participants at the macro-structural pilot brainstorming session and the IMF WHD seminar.

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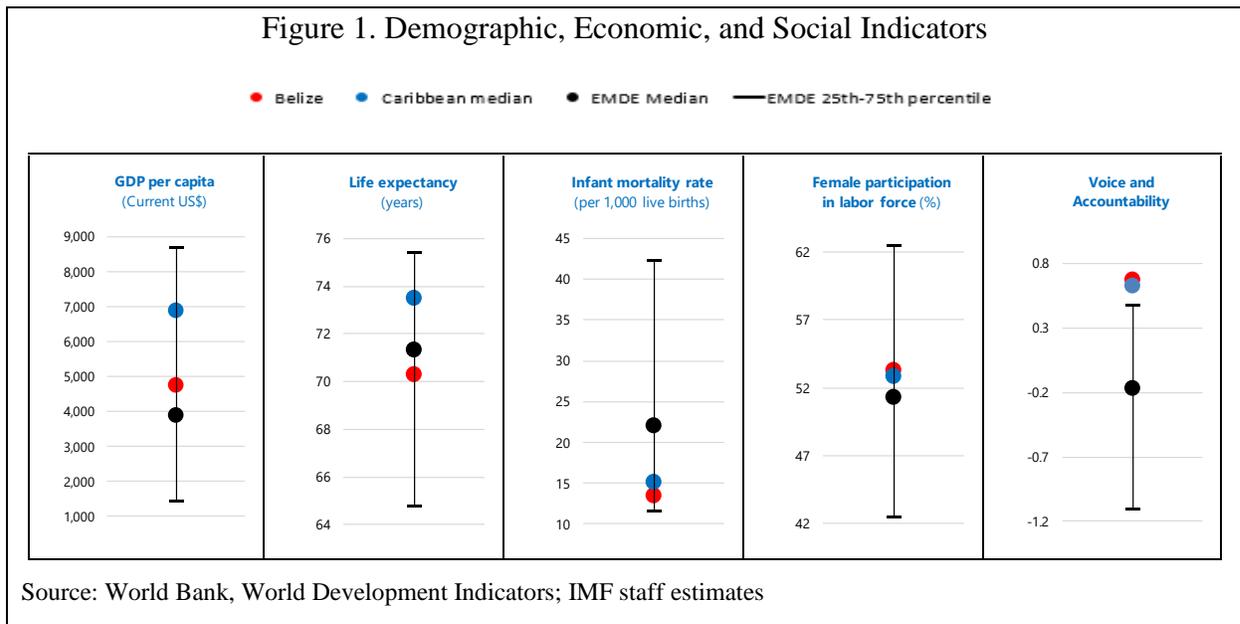
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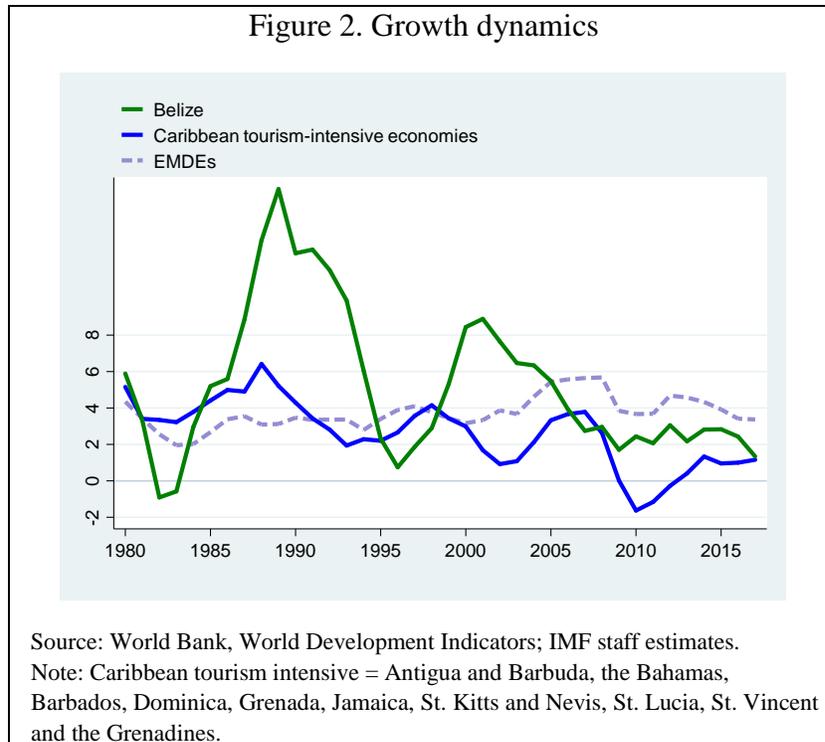
“In practice, structural reform has come to represent a grab bag of policies meant to enhance productivity and improve the functioning of the supply side of the economy.”  
 Dani Rodrik (2016).

## I. INTRODUCTION

Since attaining independence from the United Kingdom in 1981, Belize has registered strong economic and social outcomes. Per-capita income has risen and is above the median for other emerging market and developing economies (EMDE), if lower than the median for other Caribbean economies. Infant mortality is relatively low and female labor force participation is quite high. Belize’s demographic and social indicators are comparable to those of other Caribbean economies (Figure 1).

Belize’s pace of economic growth exceeded that of other Caribbean economies in the 1990s and 2000s. Real GDP grew by 5.8 and 4.8 percent, on average, in the 1990s and 2000s, respectively, well above the Caribbean median (Figure 2).





In recent years, however, Belize's progress in converging to higher living standards slowed. Growth since 2010 has averaged only at 2.2 percent per year. With average population growth estimated at about 2.5 percent per year, GDP per capita since 2010 has been declining.<sup>2</sup> This sluggish growth has complicated job creation, raising Belize's wages and social conditions toward advanced economy levels, and the task of addressing economic challenges, including reducing Belize's elevated level of government debt.

To shed light on the reasons for low growth in Belize, and on how Belize could resume its convergence toward the living standards of richer economies, this paper synthesizes insights from existing research and conducts a diagnostic of Belize's growth constraints and opportunities.<sup>3</sup> In particular, it addresses the following questions:

- How has growth in Belize compared with peer economies, including economies at a similar level of income?

<sup>2</sup> The source of the population growth statistics is National Statistics Office. Latest available data are for 2014. According to anecdotal evidence, relatively high population growth reflects substantial inflows of migrants into Belize.

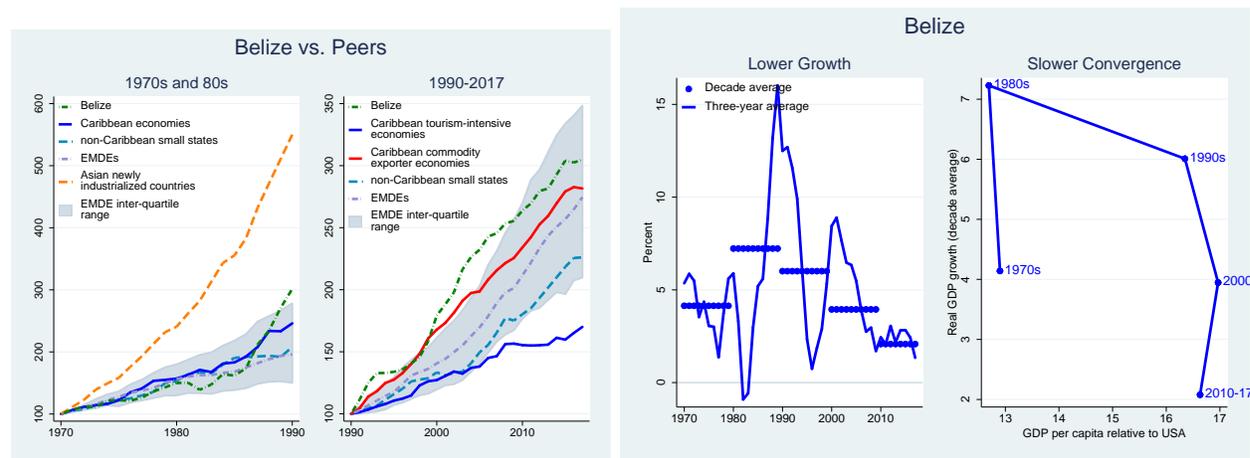
<sup>3</sup> Our analysis builds upon previous growth diagnostics (Hausmann, Klinger, 2007; Martin, 2015) and on research in a recent book on the Caribbean (Alleyne et al., 2017).

- How much of the sluggish growth reflects slow accumulation of capital and labor, and weak total factor productivity growth?
- In terms of policy-relevant factors, how does Belize compare with peer economies based on about 50 characteristics relevant for growth and prosperity? In particular, what are the main growth constraints and what are the strengths of the economy? What are the main opportunities for achieving faster growth?
- What policies could help address growth constraints and take advantage of opportunities?

## II. BELIZE'S GROWTH PERFORMANCE IN INTERNATIONAL PERSPECTIVE

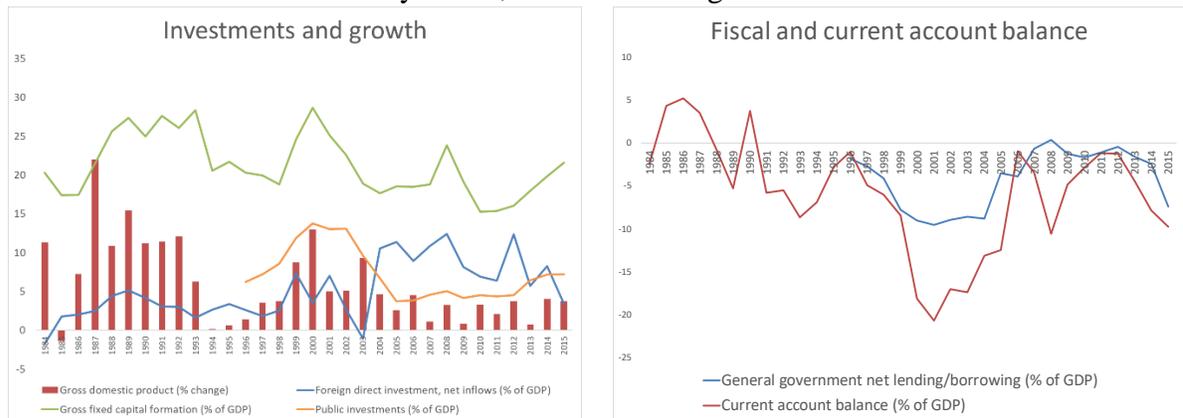
After several decades of high growth, the convergence of the Belizean economy with advanced economies has slowed down and lately even reversed (Figure 3). Belize has seen two growth spurts in 1986-1993 and in 1999-2002 due to tourism inflows and higher investment on the back of “citizenship-by-investment” program (1995-2002) and public expenditure. Hausmann and Klinger (2007) noted that each of these high growth periods ended with a decline in FDI inflows, public investment acceleration and higher fiscal and current account deficits (Figure 4). Unlike the first boom-bust cycle, the second growth spike was financed by increasing external public debt, as private savings declined.

Figure 3. Growth overview



Source: World Bank, World Development Indicators; IMF staff estimates

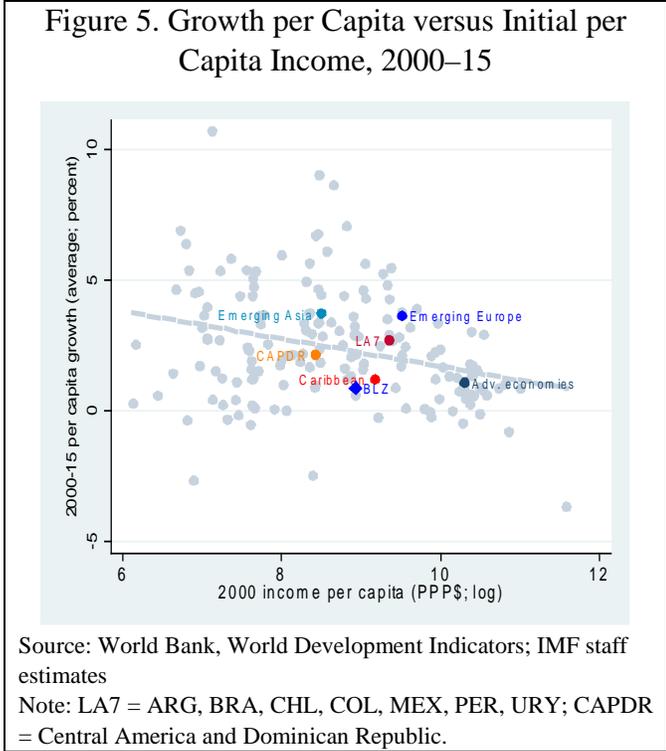
Figure 4. While public investments helped stimulate total investments and growth in late 1990s-early 2000s, it resulted in higher twin deficits



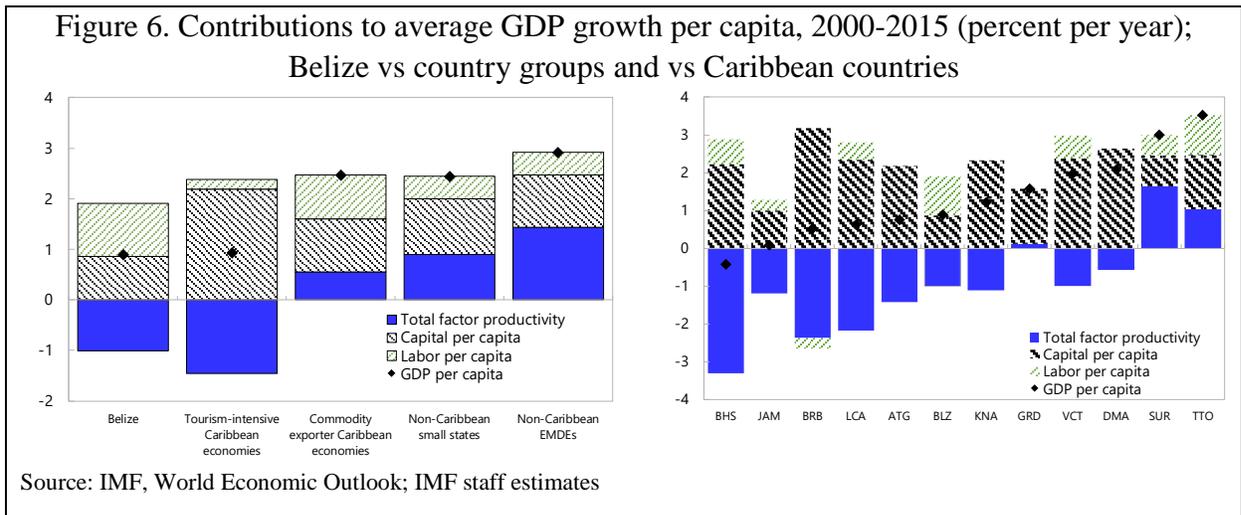
Source: IMF, World Economic Outlook; the authorities; IMF staff estimates.

Since then, a number of adverse external developments, persistent domestic macroeconomic imbalances, and structural impediments have depressed growth. The adverse external shocks include the erosion of preferential trade access to European markets, the decline of official development assistance, and increasingly frequent natural disasters. As a result, both fiscal and external positions deteriorated. With low FDI and financial sector weaknesses, the fiscal malaise started to undermine potential growth by crowding out private investment and requiring higher taxes. A vicious circle between weak macroeconomic fundamentals and structural impediments have hurt growth and sustainability prospects, preventing Belize from benefiting fully from globalization and technological progress.

Belize's growth rate is now below that of other countries at a similar level of per-capita income. As Figure 6 illustrates, the experience of 179 economies since 2000 is consistent with the idea that countries at a higher income level grow more slowly. Since the per capita income of Belize is well above that of Central American economies, standard growth theory predicts that Belize should grow more slowly. Slower growth comes from a smaller gap with advanced economies to bridge through the accumulation of capital and technological leapfrogging. However, Belize's growth has been slower than growth in countries with similar per capita income. Such growth under-performance also characterizes a number of other Caribbean tourism-intensive economies (Figure 5).

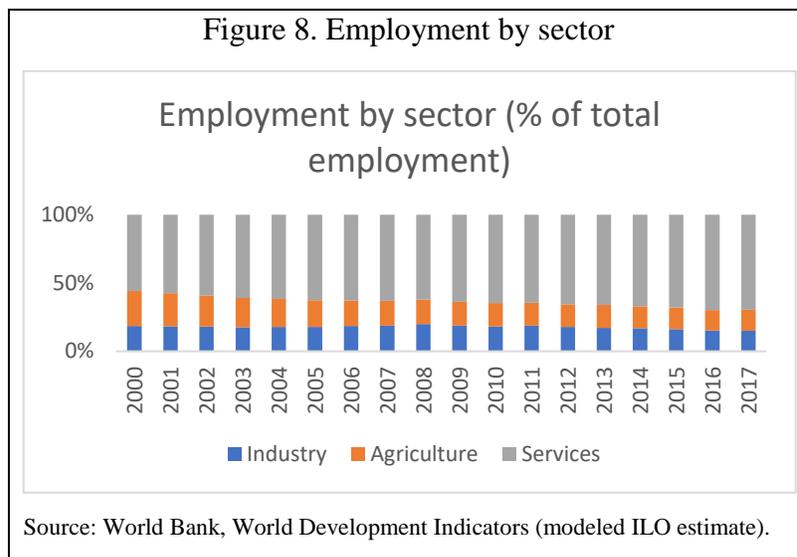
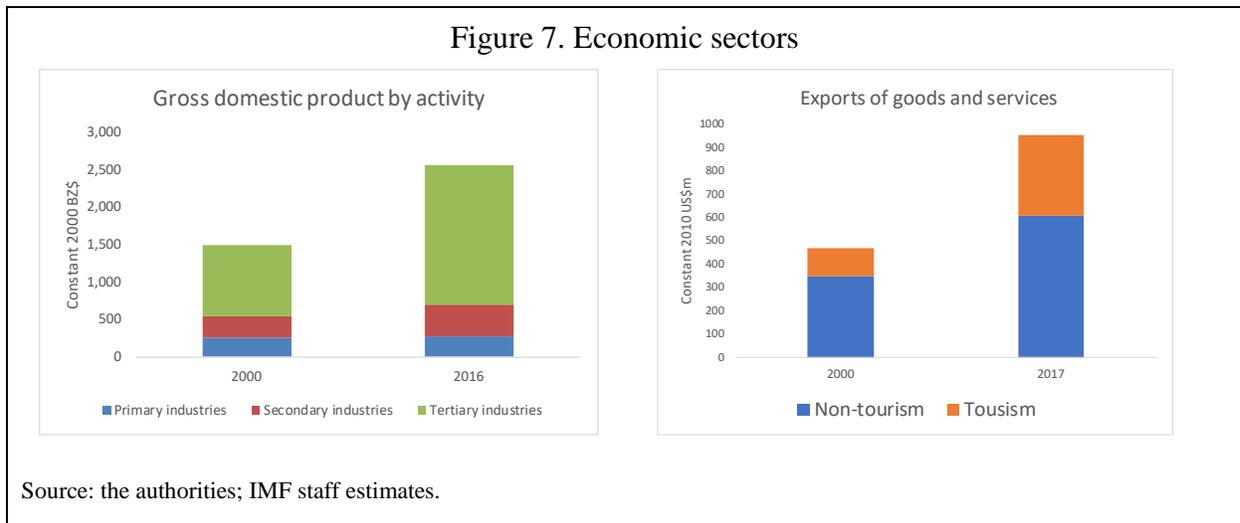


Weak total factor productivity (TFP) growth is a central problem. A supply-side decomposition shows that TFP has declined in 2000-2016, as in other Caribbean economies (Figure 6). TFP measures the overall productivity of both labor and capital and reflects such elements as technology. On average, during 2000-2015, TFP growth contributed -1 percentage point to annual growth. The analysis of growth constraints in section 3 aims to shed light on the reasons behind the declining total factor productivity, as many factors studied below are linked to TFP.



There are signs of what some studies refer to as “premature deindustrialization” in Belize. Rodrik (2015) notes that many developing economies prematurely deindustrialize. Therefore,

they deprive themselves from convergence in productivity with advanced economies (Rodrik, 2012). In Belize, the share of tertiary sector is expanding. However, the expansion in services is driven by the growing tourism sector. A sectoral decomposition indicates that the share of the tertiary sector – tourism, in particular – has been increasing (Figure 7). While the share of the agricultural sector in employment has been decreasing from about 26 percent of total employment in 2000 to 15.4 percent in 2017, employment in industry decreased from a maximum of 20 percent in 2008 to 15.1 percent in 2017 (Figure 8).



At the same time, there are no signs that inflows to the tourism sector weaken manufacturing or agricultural sectors. There is a risk that capital inflows and rapid development in the tourism sector can increase unit labor costs, including in the manufacturing and agricultural sectors, and undermine competitiveness in these sectors. However, diversification indicators do not show a deterioration in competitiveness. There has been no change in the

diversification of goods production, as shown in export diversification index (Figure 9) and export tree maps for 2016 and 1995 (Figure 10).

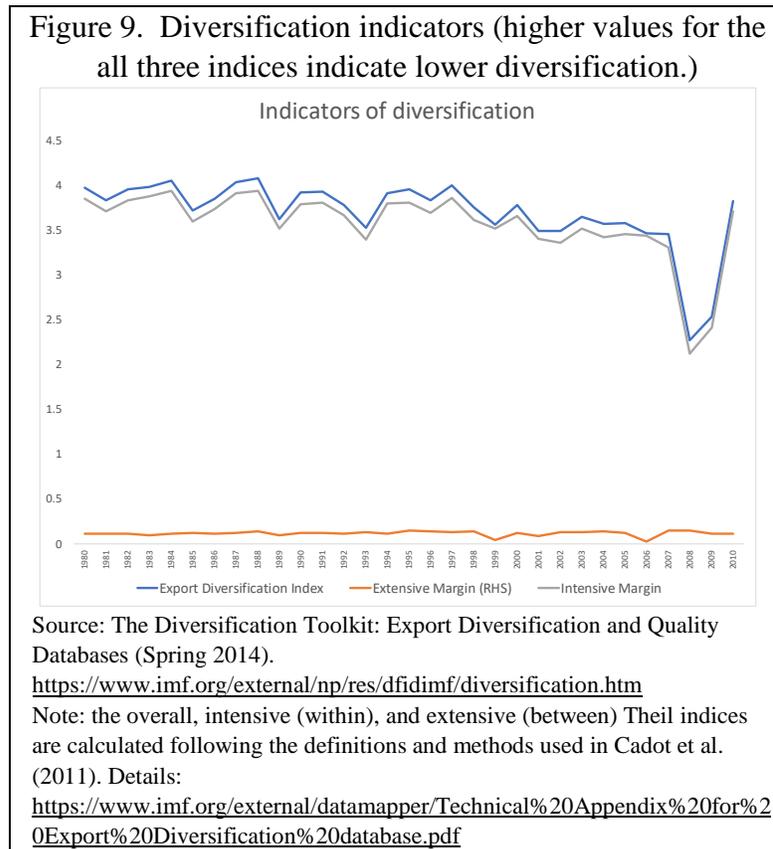
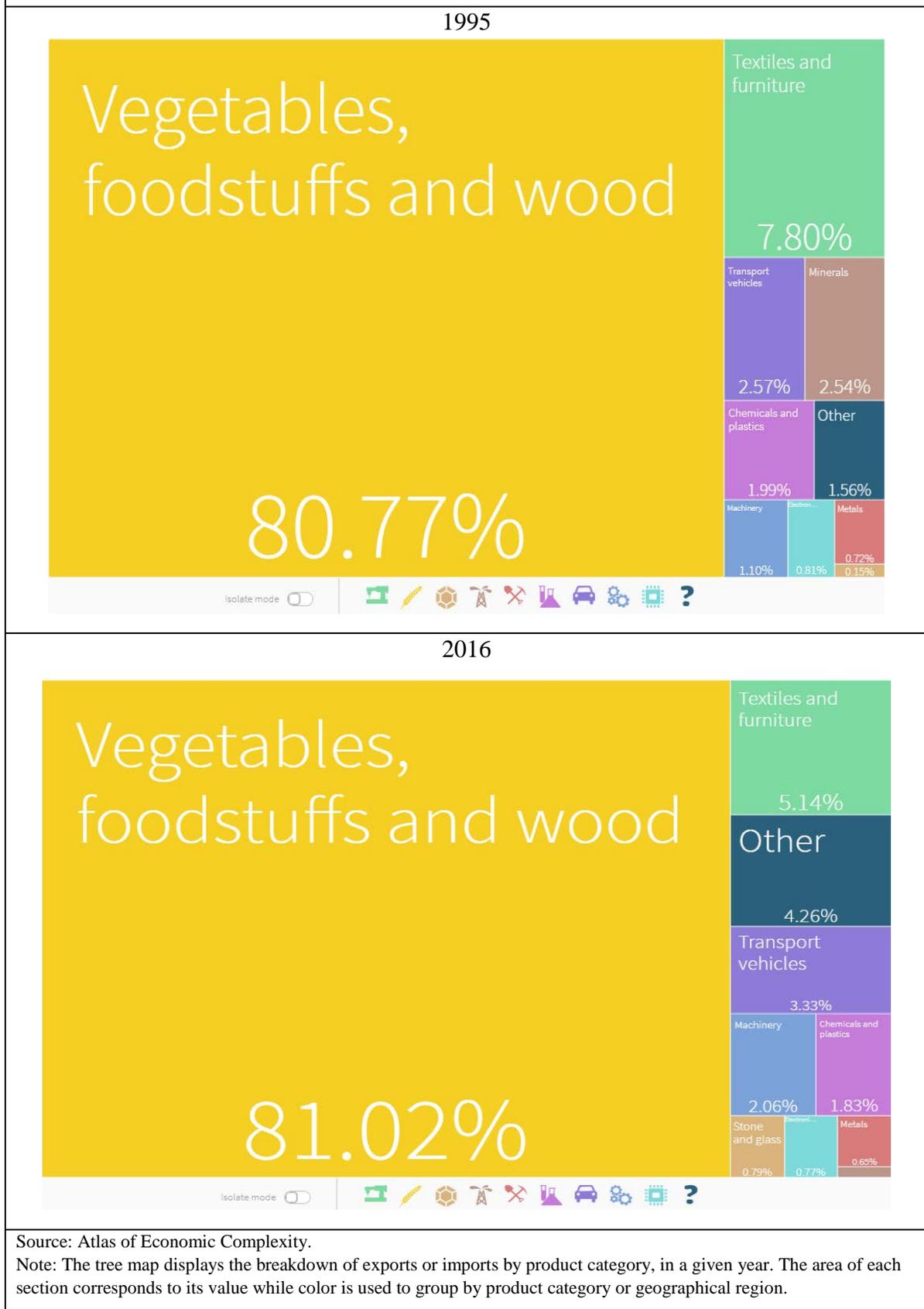
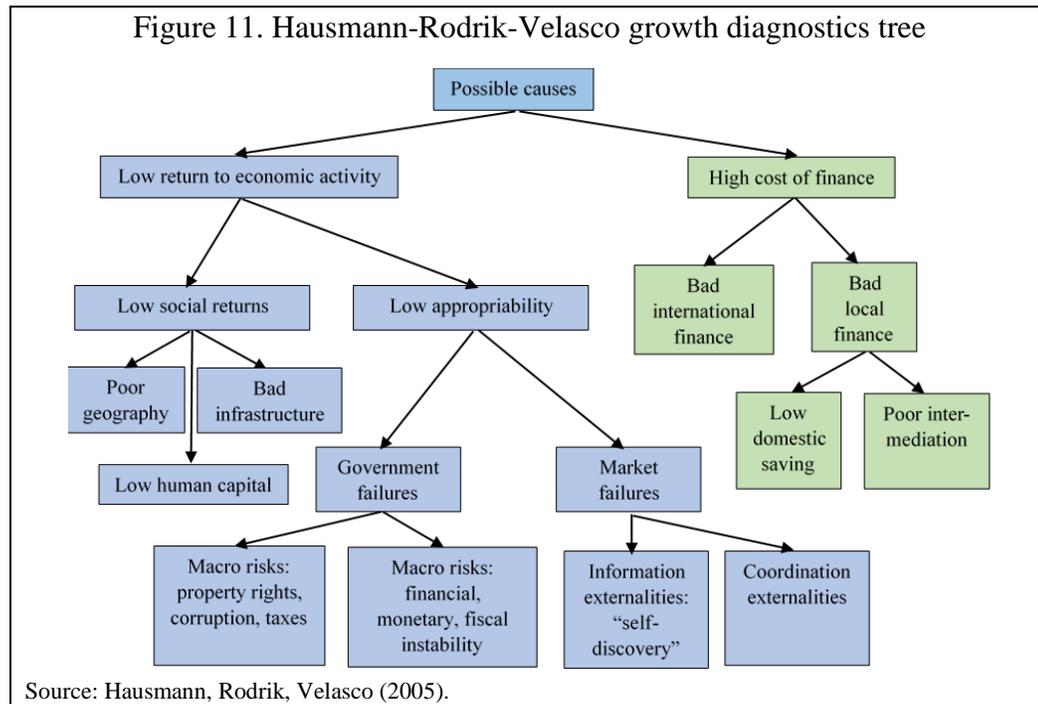


Figure 10. Product tree maps: 1995–2016.



### III. DIAGNOSTIC: GROWTH CONSTRAINTS

To identify what is holding up economic activity, this paper conducts a growth diagnostic based on the Hausmann-Rodrik-Velasco (HRV) framework. This approach provides a decision tree for identifying major constraints, as illustrated in Figure 11.



Using the HRV framework we group the indicators of growth constraints in the heatmap (Appendix Table 1). The heatmap uses 2017 data or the latest available and compares Belize with: Caribbean countries; economies with similar income group (+/- 20 percent of GDP per capita in international dollars in 2016), economies of Central America, Dominican Republic and Panama; non-Caribbean small states.

#### High cost of finance

Belize scores relatively poorly on financial indicators demonstrating that high cost of finance is an important growth constraint. Almost 70 percent of firms identified access to finance as a major constraint, according to the 2010 World Bank Enterprise Survey. The Doing business indicator “getting credit” also points to constrained access to funding in Belize. The bank spread (difference between loan and deposit rates) seems comparable to other countries, however, spread at 7-8 percentage points is substantial. At 12 percent, gross (total) saving is on a low side comparing to peer countries.

There could be two explanations of high costs of finance: low saving and/or poor financial intermediation. Although at 12 percent gross (total) saving is on a low side, low deposit rates and excess liquidity in the banking sector indicates that low saving is not the main reason of

high cost of finance. Weighted average deposit rates have been below 1.3 percent in 2017 – first half of 2018, while weighted average lending rate have been above 9 percent.

Poor intermediation is the main driver of high cost of finance. Keeping lending rate relatively high, banks hold large amount of excess liquidity. At the same time, high spreads drive lending rates high. There are four reasons that can explain high spreads: implicit taxes, low competition and high profits, banks operational costs, risk premium.

Implicit taxes are high but they unlikely play a key role in widening interest spread. Reserve requirement stands at 8.5 percent and liquidity statutory requirement is 23 percent of total assets. Rather high liquidity and reserve requirements are mopping up excess liquidity created by the central bank when it finances fiscal deficits. These requirements create additional costs for banks. Thereby, fiscal deficits increase the cost of finance for the private sector. This conclusion from Hausmann and Klinger (2007) is still valid. However, liquid assets exceeded this requirement by 44.9 percent at end-2017 meaning that statutory requirements are not binding on average.

Banks' operational costs and the lack of competition also do not appear to be main reasons for high interest rate spreads. Although operational costs may be on high side, non-interest rate expense to total income at 56.7 percent in 2016 does not seem particularly high. Return on assets at 0.63 percent also does not flag the lack of competition and high monopoly power of the banks.

After the elimination of other factors, risk premium appears to be the main factor explaining high interest rate spread in the banking sector of Belize. Establishing Credit Bureau and collateral registry will be instrumental in reducing the interest rate spreads and costs of finance.

High cost of finance was identified as a major constraint in Hausmann and Klinger (2007) and one of major constraints in the World Bank diagnostic (2016) and this conclusion still holds. High public debt is crowding out financial resources for private investments. In addition, in the 2000s, a weakened fiscal position resulted into serial debt restructurings (2006-2007, 2012-2013, and 2016-2017) that undermined the government's credibility and complicated the access to international capital markets (Asonuma et al., 2018). In 2015, the loss of CBRs has increased the cost of finance even further. Overall, financial constraints are tight in Belize.

### **Government failures**

High public debt and fiscal sustainability risks create an apparent constraint for sustainable development over the medium term. If fiscal risks realize they can result into procyclical adjustment that may significantly affect growth. Uncertain outlook limits private investment, as returns are unclear. At the same time, high public debt and the need to improve a fiscal balance constrain fiscal space for public investment. With debt above 90 percent of GDP, Belize's position is weaker than in a number of other emerging market economies. To reduce

debt burden, Belize has to maintain high tax rates and tariffs. Higher taxes and tariffs inevitably have adverse effects on business environment.

The business climate indicators paint a mixed picture. Overall, Belize has higher Doing business rating than many of its peers. However, such Doing business rating pillars as starting a business, registering property, protecting minority investors, enforcing contracts point to the areas where streamlining bureaucratic processes could bring positive results. World Governance Indicators of institutions, regulations, and bureaucracy support this conclusion.

### **Social returns**

This group of indicators also give a mixed picture. On the one hand, human capital indicators are relatively high and brain drain is not substantial, at least, comparing with Caribbean countries. On the other hand, homicide rate is high and climate change is becoming a worrying factor.

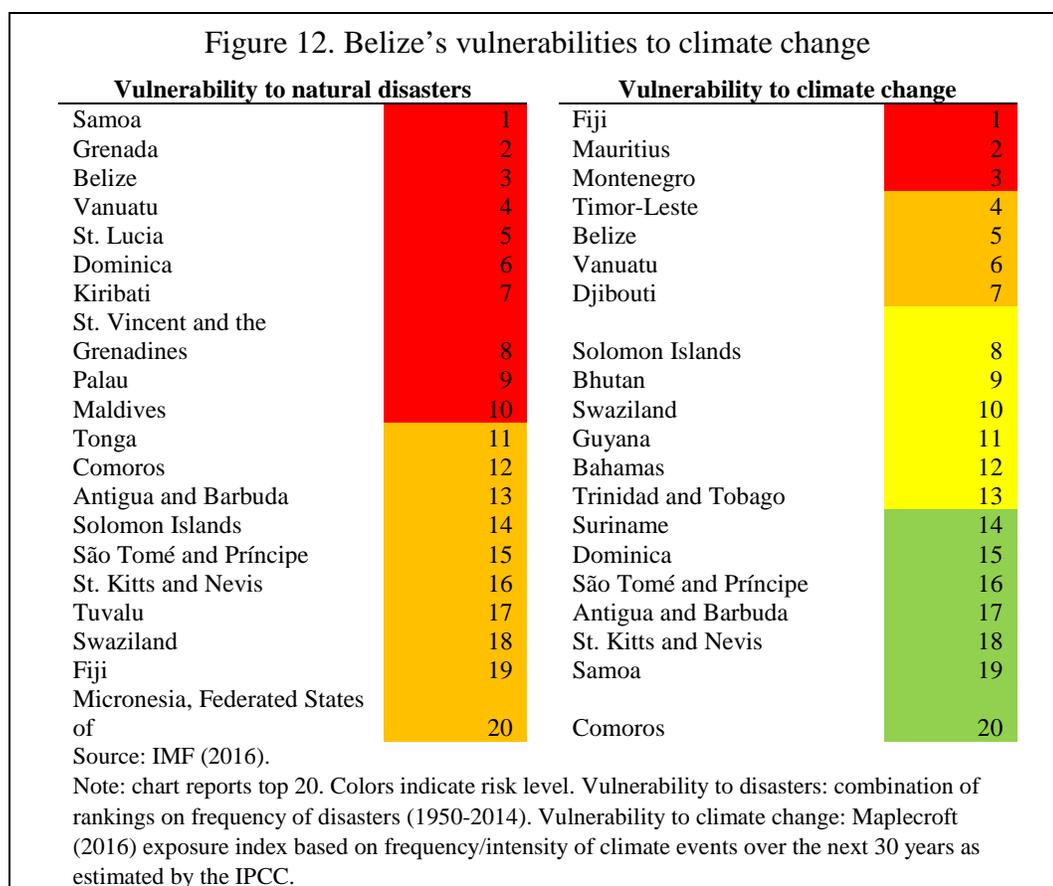
*Human capital.* Quantitative indicators give a mixed picture. On the one hand, school attainment is rather low in Belize. On the other hand, the heatmap shows that the emigration, including skilled one, is relatively low compared to other Caribbean economies.

The analysis of returns on education also does not provide a clear picture. The indicator “education” measures years of schooling scaled by assumed rate of return to education based on Mincer equation estimates (Psacharopoulos 1994). Belize scores very well on this indicator. However, Naslund-Hadley et al. (2013) found that returns are higher for higher education in Belize. Supporting this result, the Global Competitiveness Indexes shows gaps in the higher education and training areas in Belize, although education outcomes in primary education compare favorably with peers. A deficit of employees with higher education is broadly consistent with the anecdotal evidence that the lack of educated labor force constrained foreign investments.

*Crime.* With homicide rate at 34.4 per 100,000 population (as of 2015), social costs are significant. Violent crime discourages tourism and investments and reduce fiscal space by increasing security spending (Jaitman, 2017). At the same time, on some crime-related indicators Belize scores relatively well. In Belize, 8 percent of firms have experienced losses due to theft, vandalism, or arson vis-à-vis, for example, 33 percent in Guyana. According to the 2010 World Bank Enterprise Survey, companies paid only 1.3 percent of annual sales for security vis-à-vis 2.4 percent in Latin America and Caribbean and 3.5 percent in the world.

*Natural disasters and vulnerability to climate change.* Belize is among the most vulnerable countries in the world (Figure 12) regarding natural disasters and climate change (IMF, 2016). Losses from natural disasters average above 1 percent of GDP per year and the estimated probable maximum loss from natural disasters is 50 percent of GDP (250-year horizon) (World Bank, 2017). Rising temperature over the next several decades risks severely reducing Belize’s growth. The estimates of Burke, Hsiang, and Miguel (2015) show

that Belize's income will rise by significantly less over coming years than it would without climate change. The IMF October 2017 World Economic Outlook indicates that Belize is among the countries most negatively affected by global climate change.



*Infrastructure.* The quality of infrastructure in Belize has been weaker in Belize than in its peer countries, as shown by the infrastructure indicator of the 2012 Global Competitiveness Index. But expanding airlift and initiated construction of the sea port are set to ease some important infrastructure bottlenecks.

The quality of infrastructure in Belize is also related to vulnerability to climate change. Investments in resilient infrastructure is necessary to reduce such vulnerabilities. Strengthening the resilience of infrastructure connectivity—roads and bridges—was flagged as the most urgent priority and has been prominent in recent budgets. An estimated one-third of budget investment already goes to resilience-building projects. IMF (2018) proposes relevant recommendations.

### **Market failures**

Bearing in mind that these indicators tend to be low in all Belize's peer economies, Belize performs relatively favorably in terms of exports diversity, complexity, and functioning of markets. The goods market indicator of the 2012 Global Competitiveness Index strengthens the conclusion that business climate regulatory reforms should be stimulating for growth.

Labor market indicators look relatively well. With labor market participation above the peer economies, the informal sector seems to be smaller than in peers.

#### IV. GROWTH OPPORTUNITIES

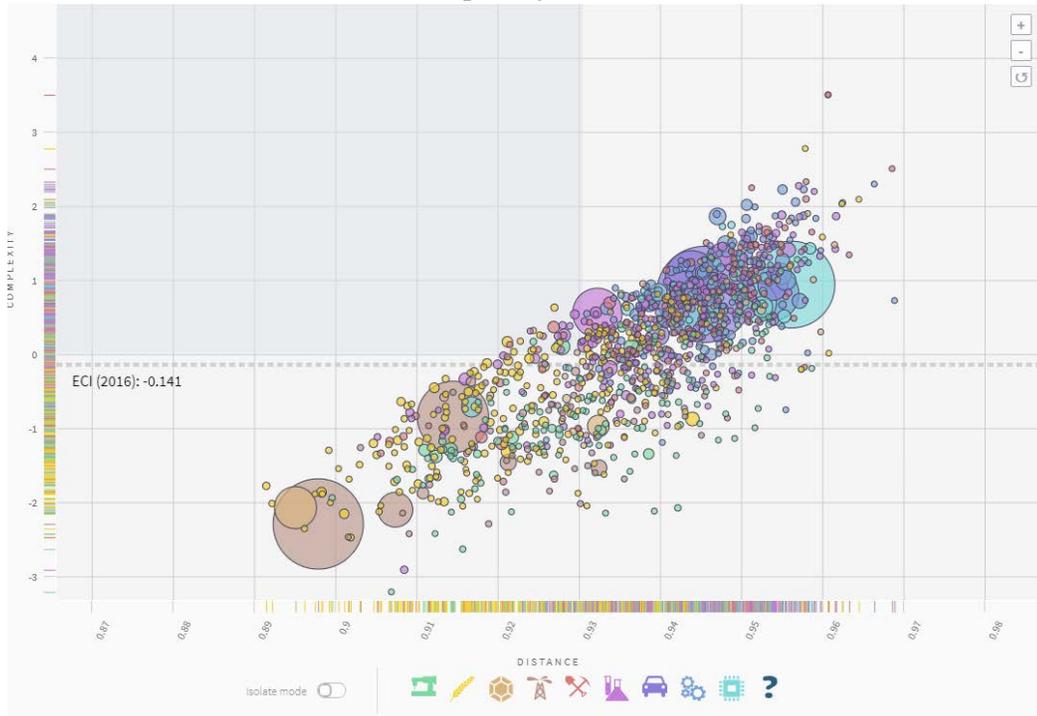
Section III examined Belize's growth fundamental growth constraints. This section seeks to identify opportunities for productive sectors to expand.

*Diversification toward more complex products.* Belize needs to diversify its exports. Although the shares of sectors such as machinery and chemicals have slightly increased, Belize's goods exports continue to be dominated by vegetables, foodstuffs and wood. Diversification indexes do not show any change (Figure 9). The feasibility chart (Figure 13 A and B) indicates that opportunities for diversification toward more complex products are within reach. For example, Belize can increase its export complexity by producing furniture, chemicals and plastics.<sup>4</sup> These goods are in the north-west quadrant of Figure 13 A, meaning that they have higher than current average complexity and are not far from the core of a current product space. Specific reforms would need to address issues that constraint the production of these goods.

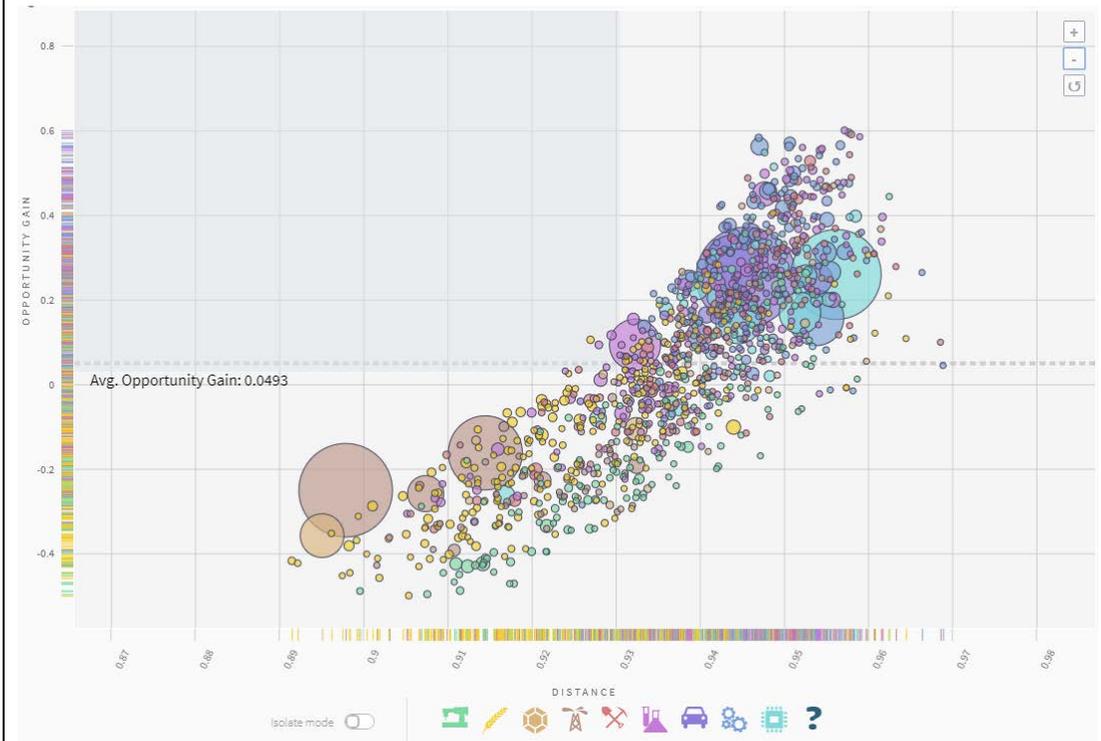
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<sup>4</sup> Other products include: (1) chemicals and plastics: other plastic plates, sheets, etc.; paints and varnishes, aqueous; paints and varnishes, non-aqueous; other plates of plastics, noncellular and not reinforced; toiletries; plastic builders' ware; (2) metals: structures and their parts, of iron or steel; stoppers, caps and lids of metal; tanks, etc. > 300 liters, iron, or steel; aluminum containers, <300 liters; aluminum structures (bridges, towers, etc.); (3) prefabricated buildings; other furniture and parts; (4) vegetables, foodstuffs and wood: other printed matter; letterstock; toilet paper; sausages; packing boxes; fermented milk products; other fermented beverages; other prepared and preserved meat; milk; food preparation not elsewhere specified.

Figure 13. Feasibility chart  
A. Complexity - Distance



B. Opportunity gain - Distance



Source: the Atlas of Economic Complexity.

<http://atlas.cid.harvard.edu/explore/feasibility/?country=29&partner=undefined&product=undefined&productClass=HS&startYear=undefined&target=Product&year=2016>

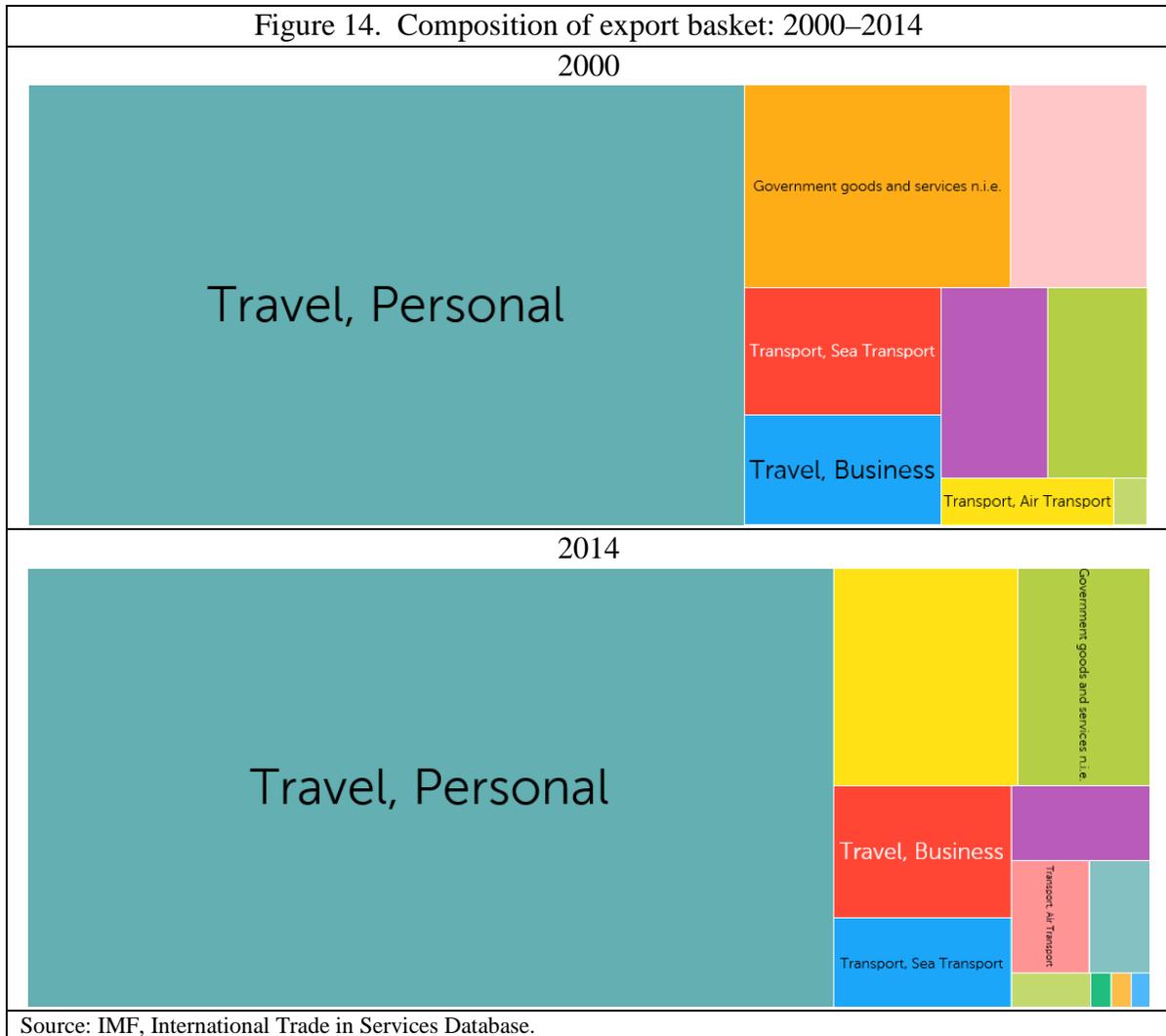
Note: The feasibility graph displays a country's opportunities for diversification based on what it currently exports. High-potential products are those in the top-left of the graph (shaded quadrant). These products are defined as being: (1) "nearby" or a shorter distance from existing exports (as taken from the product space) by relying on similar know-how and (2) offer higher complexity than average (dotted line) which predicts faster economic growth, or (3) offer higher opportunity gain to future diversification opportunities by being closely linked to many other high complexity products in the product space.

**Opportunity Gain.** Measures how much a location could benefit in opening future diversification opportunities by developing a particular product. Opportunity gain quantifies how a new product can open up links to more, and more complex, products.

**Distance.** A measure of a location's ability to enter a specific product. A product's distance (from 0 to 1) looks to capture the extent of a location's existing capabilities to make the product as measured by how closely related a product is to its current exports.

**Economic Complexity.** A measure of the knowledge in a society as expressed in the products it makes. The economic complexity of a country is calculated based on the diversity of exports a country produces and their ubiquity, or the number of the countries able to produce them (and those countries' complexity).

*An expanding tourism sector.* Tourism has been a strong source of growth for Belize. The increase in the share of tourism in services exports is a positive sign (Figure 14). Belize's tourism industry is set to benefit from FDI by major international hotels, as they are announcing their expansion plans in the country.



## V. POLICIES FOR REINVIGORATING GROWTH

Belize’s Growth and Sustainable Development Strategy (GSDS) provides detailed guidance on priorities and specific actions to be taken to raise growth and productivity. The GSDS does not quantify the growth impact of the structural reforms it envisages, but seeks to achieve growth of 5 percent annually over the medium term. Belize has seen such rates of growth in previous decades, as already mentioned. Efficient implementation of the Growth and Sustainable Development Strategy (GSDS), which the government endorsed in April 2016, could harness this potential, raising productivity and long-term growth. Given the limited fiscal space, GSDS projects should be carefully prioritized and financed in close collaboration with development partners.

Improving the business climate remains a central priority. Belize’s outlook of rising growth, especially in the tourism, call-center, and agriculture sectors, provides an opportunity to make progress on policies that will strengthen the recovery in the short term and raise long-term growth. Efforts to implement such policies are underway, based on the 2016–19 Growth

and Sustainable Development Strategy (GSDS) in collaboration with Belize’s development partners. Legislative improvements in these areas could be implemented without significant fiscal costs or negative effects on near-term growth. Specific steps, whose effects on growth would be self-reinforcing, include:

- Facilitating access to credit. Establishing a Credit Bureau and a credit collateral registry and broadening the types of eligible collateral—the authorities have already made progress in drafting the relevant legislation—would support access to credit to farmers and small and medium enterprises (SMEs) for financing investment. Over the medium term, developing financing instruments such micro-financing and financial literacy programs would further promote financial inclusion.
- Streamlining regulations. Accelerating and modernizing procedures for starting a business would support investment, especially by SMEs.
- Addressing skill gaps. Over the medium term, reforms to further improve education include ensuring primary and secondary education access for all children, and expanding technical training.
- Reducing crime. Recent analysis of crime and violence in Belize by the Inter-American Development Bank (IDB) emphasizes the need to strengthen prevention and juvenile rehabilitation initiatives, such as Belize’s Community Action for Public Safety Program (CAPS). Amplifying support for such multi-faceted interventions, which also target “at-risk” youth, would strengthen safety and promote participation in the formal economy at a manageable fiscal cost<sup>5</sup>.
- Diversifying exports. The analysis in Section IV provides areas for diversification, based on feasibility and complexity of potential export products. Specific industrial policies, consistent with the authorities ongoing implementation of their development strategy (GSDS), could complement macro policies in supporting diversification towards these new products.

## VI. CONCLUSION

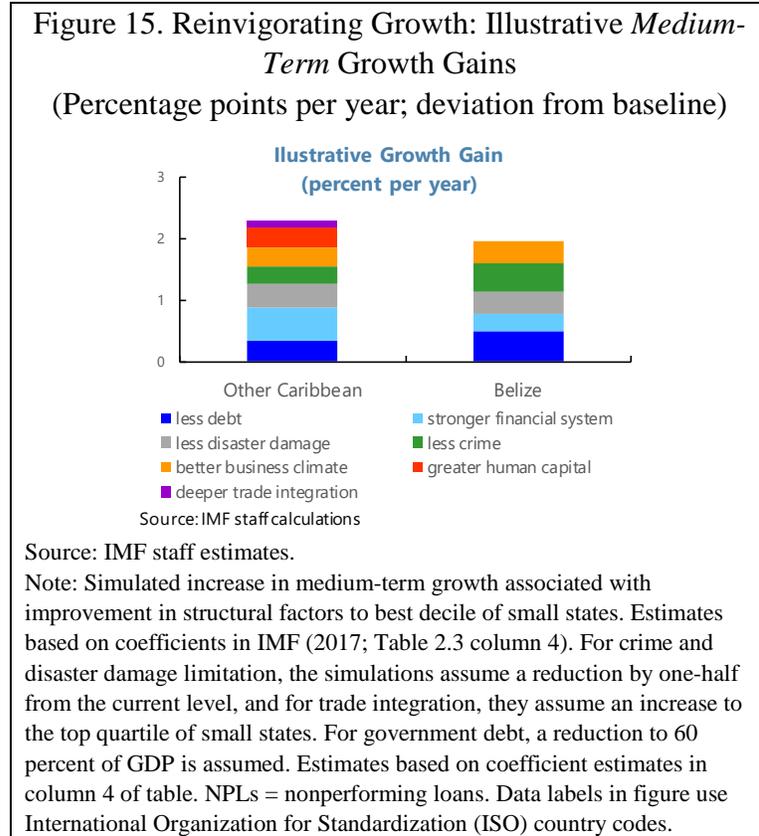
The HRV framework has helped identify several growth constraints: cost of finance, public debt/high taxes, crime, skill gaps, distortionary regulation. These constraints shed light on the puzzle of negative total factor productivity growth after 2000. Our analysis also showed that among the identified constraints crime and education are not the most binding for growth.

IMF (2017) estimated impact from the reforms in the area of cost of finance, crime, public debt, and the business climate. Addressing these structural bottlenecks in Belize and

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<sup>5</sup> The direct cost of the authorities’ first CAPS program (2012-15) was US\$5 million (IDB, 2017) and the authorities estimate that it significantly reduced youth crime and recidivism rates.

improving these indicators toward the level of best-performing small states could increase per-capita growth by 1-2 percentage points (to about 3-4 percent) over the medium term (Figure 15). The illustrative growth gain should not be interpreted as an overnight outcome because it could take years or decades to achieve.<sup>6</sup>



Among economic sectors, tourism is expanding especially rapidly. At the same time, the feasibility charts discussed in Section IV identified some opportunities in manufacturing that can increase diversification of the Belizean economy and its long-term growth.

<sup>6</sup> Costa Rica provides an example of significant gains in medium-term growth following reforms. The shift to faster growth in the 1990s was largely driven by Intel Corporation's decision to place its manufacturing plant in the country, which, in turn, was motivated by Costa Rica's high levels of educational attainment; economic openness; stable political, social, and macroeconomic environment; and strong doing business climate, reflecting decades of reforms, including investment in education.

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<b>Appendix. Table 1. Rodrik-Hausmann-Velasco Growth Diagnostics in a Heatmap for 2016</b>				
<b>Characteristics Relevant for Growth</b>				
(Red = least favorable; green = most favorable)				
Possible causes of low growth 1/	Belize compared to:			
	Caribbean	Similar income group	CAPDR	Non-Caribbean SS
<b>High costs of finance?</b>				
Financial constraints (WBES)	Red	Red	Red	Red
Financial development (GCI)	Yellow	Yellow	Red	Yellow
Crowding out 2/	Yellow	Yellow	Red	Yellow
Gross saving	Orange	Red	Red	Orange
Getting credit (DB)	Orange	Yellow	Red	Orange
NPLs	Yellow	Yellow	Red	Yellow
Bank spread	Yellow	Yellow	Green	Yellow
Investment	Yellow	Yellow	Yellow	Yellow
Credit to GDP	Green	Green	Yellow	Green
<b>Low social returns?</b>				
Poverty	Red	Orange	Orange	Orange
Natural disaster vulnerability 3/	Red	Red	Red	Red
Infrastructure (GCI)	Orange	Yellow	Red	Yellow
Violent crime	Orange	Orange	Yellow	Red
Emigration	Green	Orange	Red	Orange
Skilled emigration	Green	Orange	Red	Orange
Education	Green	Green	Green	Green
Health and primary education (GCI)	Green	Green	Green	Yellow
Higher education and training (GCI)	Green	Red	Red	Orange
<b>Government failures?</b>				
Institutions (GCI)	Red	Orange	Yellow	Orange
Bureaucracy (WGI)	Red	Orange	Red	Orange
Regulations (WGI)	Red	Orange	Red	Orange
Taxation	Red	Orange	Red	Orange
Protecting minority investors (DB)	Orange	Yellow	Green	Yellow
Public debt	Orange	Red	Red	Orange
Enforcing contracts (DB)	Orange	Yellow	Yellow	Orange
Construction permits (DB)	Yellow	Yellow	Yellow	Orange
Resolving insolvency (DB)	Yellow	Yellow	Yellow	Orange
Trading across borders (DB)	Yellow	Orange	Red	Yellow
Trade tariff	Yellow	Orange	Red	Orange
Doing business	Yellow	Orange	Red	Orange
Getting electricity (DB)	Yellow	Yellow	Yellow	Green
Starting a business (DB)	Yellow	Orange	Red	Orange
Labor tax and contributions	Green	Green	Green	Green
Registering property (DB)	Green	Red	Red	Yellow
Paying taxes (DB)	Green	Green	Green	Green
<b>Market failures?</b>				
Goods markets (GCI)	Red	Orange	Red	Orange
Labor participation (female)	Orange	Green	Green	Green
Trade connectivity	Yellow	Orange	Red	Green
Labor participation (male)	Yellow	Green	Green	Green
Trade openness	Yellow	Red	Red	Yellow
High-tech export share	Yellow	Yellow	Yellow	Yellow
Export diversification	Yellow	Red	Red	Yellow
Labor market (GCI)	Yellow	Green	Green	Yellow
GVC participation	Yellow	Yellow	Yellow	Yellow
1/ Based on Hausmann-Rodrik-Velasco (2005) "decision tree" for identifying obstacles to growth. Note: Table reports 2016 or most recent data. WBES = World Bank Enterprise Survey; GCI = Global Competitiveness Report; DB = World Bank Doing Business Report (distance to frontier indicators); WGI = World Governance Indicators (scores). 2/ Government debt/total credit. 3/ IMF (2016) "Small States' Resilience to Natural Disasters and Climate Change - Role for the IMF."				

Source: Barro-Lee 2013 data set; IMF, Diversification database; IMF, World Economic Outlook; Institute for Employment Research, brain-drain dataset; Penn World Table; World Bank, Ease of Doing Business Index; World Bank, Enterprise Survey; World Bank, World Development Indicators; World Bank, World Governance Indicators; and World Economic Forum, Global Competitiveness Index.

Note: Red = less favorable ranking; green = more favorable ranking.

**Caribbean:** Antigua and Barbuda, The Bahamas, Barbados, Dominica, Grenada, Guyana, Jamaica, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Suriname, Trinidad and Tobago

**Belize income group:** Armenia, Bhutan, Bolivia, El Salvador, Fiji, Georgia, Guatemala, Guyana, Jamaica, Jordan, Morocco, Paraguay, Philippines, Swaziland, Ukraine

**CAPDR:** Costa Rica, Dominican Republic, El Salvador, Guatemala, Honduras, Nicaragua, Panama

**Non-Caribbean SS:** Bhutan, Cabo Verde, Comoros, Djibouti, Fiji, Kiribati, Maldives, Marshall Islands, Mauritius, Micronesia, Montenegro, Rep. of Palau, Samoa, Seychelles, Solomon Islands, Swaziland, São Tomé and Príncipe, Timor-Leste, Tonga, Tuvalu, Vanuatu

## Annex Table: Data Sources

Indicator	Source and Notes
<b>High costs of finance</b>	
Financial constraints (WBES)	WBES; percent of firms identifying access to finance as a major constraint
Getting credit (DB)	World Bank Ease of Doing Business Index distance to frontier (0-100)
Financial development (GCI)	Global Competitiveness Index 8th pillar: financial market development (1-7)
NPLs	WDI, augmented by data collected for (IMF, 2017, Chapter 11)
Bank spread	WDI; interest rate spread (lending rate minus deposit rate, %)
Gross saving	WDI; gross savings (% of GDP)
Investment	WDI; gross capital formation (% of GDP)
Credit-to-GDP ratio	WDI; domestic credit to private sector (% of GDP)
Crowding out	WDI, IMF WEO; public debt/domestic credit to private sector
<b>Low social returns</b>	
Violent crime	WDI; homicides per 100,000 inhabitants
Natural disaster vulnerability	EM-DAT; damage from natural disasters (% of GDP)
Skilled emigration	IAB brain-drain data set; share of nationals with tertiary education living abroad
Education	PWT, Barro-Lee (2013) data set; years of schooling scaled by assumed rate of return to education based on Mincer education estimates (Psacharopoulos 1994)
Health and primary education (GCI)	Global Competitiveness Index 4th pillar: health and primary education (1-7)
Higher education and training (GCI)	Global Competitiveness Index 5th pillar: higher education and training (1-7)
Infrastructure (GCI)	Global Competitiveness Index 2nd pillar: infrastructure (1-7)
Poverty	WDI, augmented by data collected for IMF Article IV staff reports
<b>Government failures</b>	
Public debt	WEO; general government debt in percent of GDP
Taxation	WEO; general government tax revenue divided by nominal GDP
Labor tax and contributions	WDI; labor tax and contributions (% of commercial profits)
Trade tariff	WDI; average trade tariff (percent)
Institutions (GCI)	Global Competitiveness Index 1st pillar: institutions (1-7)
Bureaucracy (WGI)	Worldwide Governance Indicators; score
Regulations WGI)	Worldwide Governance Indicators; score
Doing business	World Bank Ease of Doing Business Index distance to frontier (0-100)
Starting a business (DB)	World Bank Ease of Doing Business Index distance to frontier (0-100)
Construction permits (DB)	World Bank Ease of Doing Business Index distance to frontier (0-100)
Getting electricity (DB)	World Bank Ease of Doing Business Index distance to frontier (0-100)
Registering property (DB)	World Bank Ease of Doing Business Index distance to frontier (0-100)
Protecting minority investors (DB)	World Bank Ease of Doing Business Index distance to frontier (0-100)
Paying taxes (DB)	World Bank Ease of Doing Business Index distance to frontier (0-100)
Trading across borders (DB)	World Bank Ease of Doing Business Index distance to frontier (0-100)
Enforcing contracts (DB)	World Bank Ease of Doing Business Index distance to frontier (0-100)
Resolving insolvency (DB)	World Bank Ease of Doing Business Index distance to frontier (0-100)
<b>Market failures</b>	
Trade openness	WDI; imports + exports (% of GDP)
Trade connectivity	IMF (2017)

GVC participation	IMF (2017)
High-tech export share	WDI, percent
Export diversification	IMF Diversification database; index
Goods markets (GCI)	Global Competitiveness Index 6th pillar: goods market efficiency (1-7)
Labor market (GCI)	Global Competitiveness Index 7th pillar: labor market efficiency (1-7)
Labor participation (male)	WDI; Labor force participation rate, male (% of male population ages 15+)
Labor participation (female)	WDI; Labor force participation rate, female (% of female population ages 15+)
<b>Growth decomposition</b>	
Real PPP GDP	PWT, extended based on WEO
Population	WEO
Capital Stock	PWT, extended based on WEO
Labor	PWT, extended based on WEO
<p>Note: Data are 2017 or latest available. For natural disasters, distribution for 2010-15 is used. EM-DAT = International Disasters Database; GVC = global value chain; IAB = Institute for Employment Research (Brücker, Capuano, and Marfouk 2013); NPLs = nonperforming loans; PPP = purchasing power parity; PWT = Penn World Tables; WBES = World Bank Enterprise Survey; WEO = IMF, World Economic Outlook; WDI = World Bank, World Development Indicators.</p>	