

A POLICY BLUEPRINT FOR CARIBBEAN ECONOMIES

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A Policy Blueprint for Caribbean Economies

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Abbreviations

AML/CFT	-	Anti-Money Laundering and Combatting the Financing of Terrorism
ASR	-	Annual Surplus savings rate
BMC	-	Borrowing Member Country
bn	-	billion
BVI	-	British Virgin Islands
CARICOM	-	Caribbean Community
CariCRIS	-	Caribbean Information and Credit Rating Services
CBR	-	correspondent banking relationship
CSME	-	CARICOM Single Market and Economy
CCRIF SPC	-	Caribbean Catastrophe Risk Insurance Facility
CCT	-	conditional cash transfer
CDB	-	Caribbean Development Bank
CUBiC	-	Caribbean Uniform Building Code
DS	-	debt stock
ECCB	-	Eastern Caribbean Central Bank
ECCU	-	Eastern Caribbean Currency Union
EE	-	energy efficiency
ETPS	-	Education and Training Policy and Strategy
EU	-	European Union
FDI	-	foreign direct investment
Fintech	-	financial technology
FY	-	fiscal year
GCF	-	gross capital formation
GDP	-	gross domestic product
HIN	-	households in need
ICT	-	information and communications technology
IDB	-	Inter-American Development Bank
IDM	-	Implementation and Delivery Mechanism
IMF	-	International Monetary Fund
IDI	-	ICT Development Index
ITU	-	International Telecommunications Union
LAC	-	Latin America and the Caribbean
mn	-	million
MSMEs	-	micro, small and medium-sized enterprises
NNP	-	Net National Product
OECS	-	Organisation of Eastern Caribbean States
PB	-	primary budget balance
PPP	-	public-private partnership
PwC	-	PricewaterhouseCoopers
R&D	-	research and development
RASR	-	Resilience Annual Surplus savings rate
RE	-	renewable energy
S&P	-	Standard & Poor's

SIDS	-	small island developing states
SOE	-	state-owned enterprise
T&S	-	transfers and subsidies
TFP	-	Total Factor Productivity
UNDP	-	United Nations Development Programme
UK	-	United Kingdom
USA	-	United States of America
USD	-	United States dollar

Executive Summary

The Caribbean Region's vulnerability was magnified during the 2017 hurricane season, despite the socioeconomic developments over the past four decades. Caribbean economic performance lagged behind other developing regions, hindered by frequent external shocks and economic policy inertia. Comprehensive long-term strategies and effective implementation are needed to help Caribbean states diversify their economies and accelerate growth, while addressing persistent challenges related to skills and productivity, competitiveness, social issues, gender and climate change.

This paper introduces a framework for discussing impediments to sustainable economic growth and development. The challenges to regional development can be broadly characterised under: Macroeconomic, Productivity and Competitiveness, Human Development, and Environmental. These issues persist against a backdrop of an ambitious, yet stagnant, regional integration agenda and other implementation gaps that further restrict governments' ability to achieve economic growth and development objectives.

This paper presents a vision for regional economic transformation, underpinned by specific strategies with achievable objectives. The effectiveness of these strategies depends on recognition of the importance of building resilience in all aspects of development. The foundations of the proposed blueprint are:

- **Macroeconomic:** promoting economic growth and diversification, building a strong and resilient financial sector, and practising prudent fiscal management;
- **Productivity and Competitiveness:** supporting private-sector-led growth, opening new trade markets, promoting regional payments facilities (and the digitalisation of the economy more broadly), and building first-class and cost-saving infrastructure;
- **Human Development:** providing quality education for all and relevant workforce skills training; improving citizen security; and targeting conditional cash transfer programmes to the most vulnerable; and
- **Environmental:** improving building codes enforcement, insurance coverage, and financial and physical disaster and climate change preparedness.

Regional integration, gender equality, digitalisation, and implementation are overarching themes that will feature in the blueprint for growth and sustainable development. This paper makes suggestions for national and regional priority agendas, and the effectiveness and overall accomplishment will be determined by the implementation of progressive policies and plans.

Chapter 1: Introduction

1.1 Background

The history of the Caribbean reflects economic progression. The plantation model that underpinned early colonial economic policy gave way to the more modern, industrialised systems that emerged in the late 19th century. These systems have evolved into mostly service-based or commodity-based economies. However, these surface transformations mask the perpetual vulnerabilities of the Caribbean economies related specifically to narrow export concentrations, lack of competitiveness, fiscal imbalances and high debt, unequal distribution of human development gains and environmental risks. The Region's trade openness has contributed to its susceptibility to global economic shocks, in addition to environmental vulnerabilities due to its geographical location. While most of the countries are in the mid to high end of the global per capita income spectrum, these extreme vulnerabilities present unique development issues. The progress of Caribbean economies has been widely uneven and characterised by *"growth without development, adjustment without transformation, and export without diversification"*¹. Governments have often relied on tax incentives and other—often piecemeal—strategies to stimulate economic growth². As a result, average regional debt levels have risen as governments borrow for budgetary support, existing debt-financing obligations, disaster reconstruction efforts, and recovery from other negative external shocks.

Limited capital and a lack of technical skills, as well as delays in technological innovation and diffusion have further stunted the Region's ability to gain and maintain market share—on fair terms—with larger and often cheaper competitors. Weak infrastructure and a difficult environment for doing business are among other challenges to the Caribbean's economic diversification and foreign exchange earnings potential. These difficulties, not necessarily unique to the Caribbean, contributed in part to the lack of implementation of economic policies and strategies to raise the levels of sustainable growth required to build resilient economies.

Over the next six chapters, the Policy Blueprint for Caribbean Economies presents high-level, yet bold, public policy strategies for building socioeconomic and environmental resiliency from the household level to the level of government. This is the first in a series of papers that will propose country-specific policies for the Borrowing Member Countries³ (BMCs) of the Caribbean Development Bank (CDB). The series complements CDB's ongoing efforts to support each BMC in charting the way towards a vibrant economic future.

1 Girvan, Norman. "Caribbean Dependency Thought Revisited." *Canadian Journal of Development Studies/Revue Canadienne D'études Du Développement*, vol. 27, no. 3, 2006, pp. 328–352.

2 *A New Paradigm for Caribbean Development: Transitioning to a Green Economy*. Caribbean Development Bank, 2014.

3 CDB's BMCs are: Anguilla, Antigua and Barbuda, The Bahamas, Barbados, Belize, British Virgin Islands, Cayman Islands, Dominica, Grenada, Guyana, Haiti, Jamaica, Montserrat, St. Kitts and Nevis, Saint Lucia, St. Vincent and the Grenadines, Suriname, Trinidad and Tobago, and Turks and Caicos Islands.

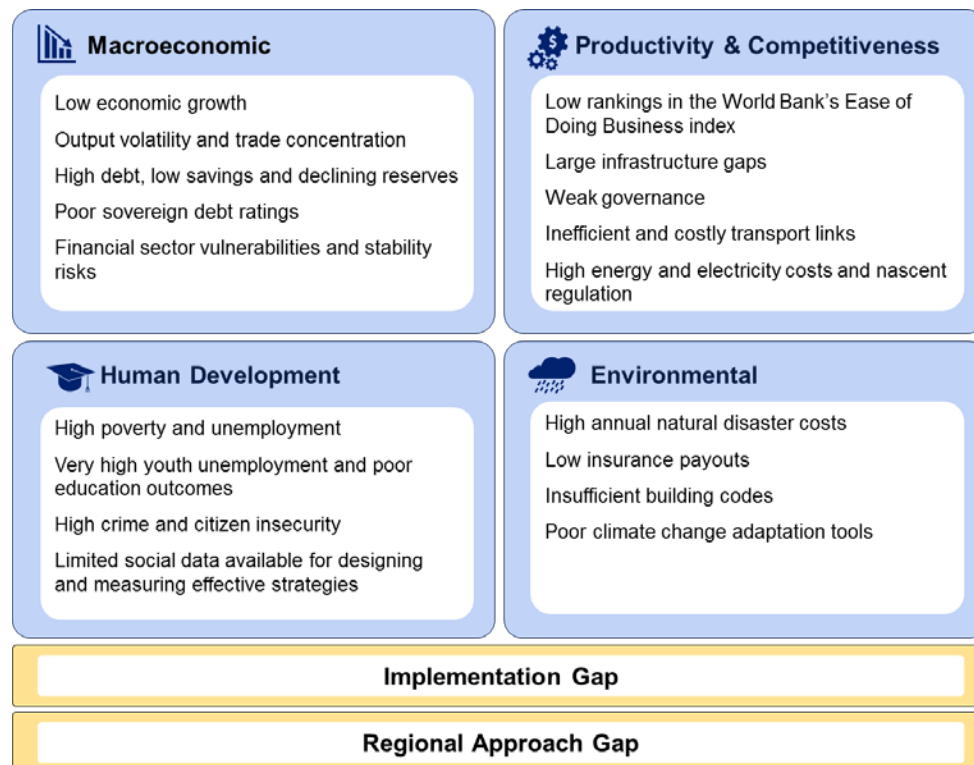
1.2 Regional Challenges

Current economic strategies have failed to provide the levels of sustained growth necessary to build resilient economies. Improvements in the rates of life expectancy at birth, adult literacy, school enrolment and other socioeconomic indicators place much of the Region on the higher end of the global human development spectrum. Despite these successes in improving several development outcomes over the last three decades, critical and familiar challenges persist. Development in the Caribbean has left at least one-fifth of the Region's population in poverty⁴. Many of the BMCs have racked up unsustainable levels of debt, in part due to low economic growth; high unemployment levels particularly among the youth; and a generally uncompetitive business climate. Furthermore, the Region's generally high Human Development Index rankings fail to reflect extreme economic and environmental vulnerabilities inherent in small, very open economies.

The ambitious 2030 Sustainable Development Agenda has renewed BMCs' focus on tackling high levels of poverty and inequality, as well as building their defences against increasing climate change threats. Efforts to address these issues have been hindered by four broad categories of development challenges: (i) Macroeconomic, (ii) Competitiveness and Productivity, (iii) Human Development, and (iv) Environmental. The practice of crafting impressive development plans and initiatives at the national and regional levels, including those created by development partners, to address these issues, has not achieved the desired impact as many projects suffer from low implementation rates and in some cases, never materialise. These problems, combined with an inability to act in a timely and effective manner, leave the Caribbean with a cocktail of policy and implementation inertia. Figure 1 provides further details of these Caribbean challenges.

Figure 1: Challenges Leading to Caribbean Vulnerability

⁴ Smith, Warren. "President's Remarks." Caribbean Leadership and Transformation Forum: Delivering Results, 18 Sept. 2017, Barbados.



The development challenges highlighted above are interlinked, that is, challenges in any quadrant undermine efforts to improve conditions in another quadrant. Poor human development outcomes have significant impacts on the macroeconomic frameworks via government spending on blanket social programmes. Low productivity and a lack of competitive environments for the private sector to thrive have limited employment opportunities. Furthermore, micro, small and medium-sized enterprises (MSMEs) that would normally employ many workers struggle within a costly environment for doing business. Low employment levels lead to lower tax revenues, thus reducing governments' ability to meet obligations towards wages and salaries or social programmes, which are oversubscribed because of unemployment. With governments spending a significant proportion of income on consumption activities, there are insufficient resources remaining for savings, capital expenditure and investment. To fill the gap, governments have to seek deficit financing which, if not managed via a golden rule (ensuring that the rate of return is higher than the cost of borrowing), eventually leads to unsustainable public sector debt levels.

Additionally, environmental vulnerability leads to infrastructure damage, which in turn leads to rehabilitation efforts that governments must often finance by issuing debt. This results in further build-up of debt levels that are unsustainable and that have unnecessarily negative impacts on growth (IMF 2012). As such, environmental vulnerability and the limited enforcement of building codes and land use planning regulations are also having significant impacts on the Caribbean's macroeconomic frameworks. With high levels of debt, the macroeconomic environment becomes unstable and un conducive for private sector economic activity resulting in insufficient labour market opportunities. This feedback loop adds to poor human development outcomes and household vulnerability.

In addition to the issues in Figure 1, small markets and small populations mean that regional integration is imperative to overcome limited economies of scale and provide displacement options when disasters strike. These issues are further exacerbated by the tremendous implementation gap experienced in the Caribbean, meaning that well-articulated plans seldom become a reality due to a lack of indicative budgets, and granular implementation plans and strategies. In addition, monitoring and evaluation usually do not feature in development plans and strategies, with little accountability by policymakers. The concept of value for money is not usually incorporated in project identification and planning, leading to poor overall outcomes and citizen benefits.

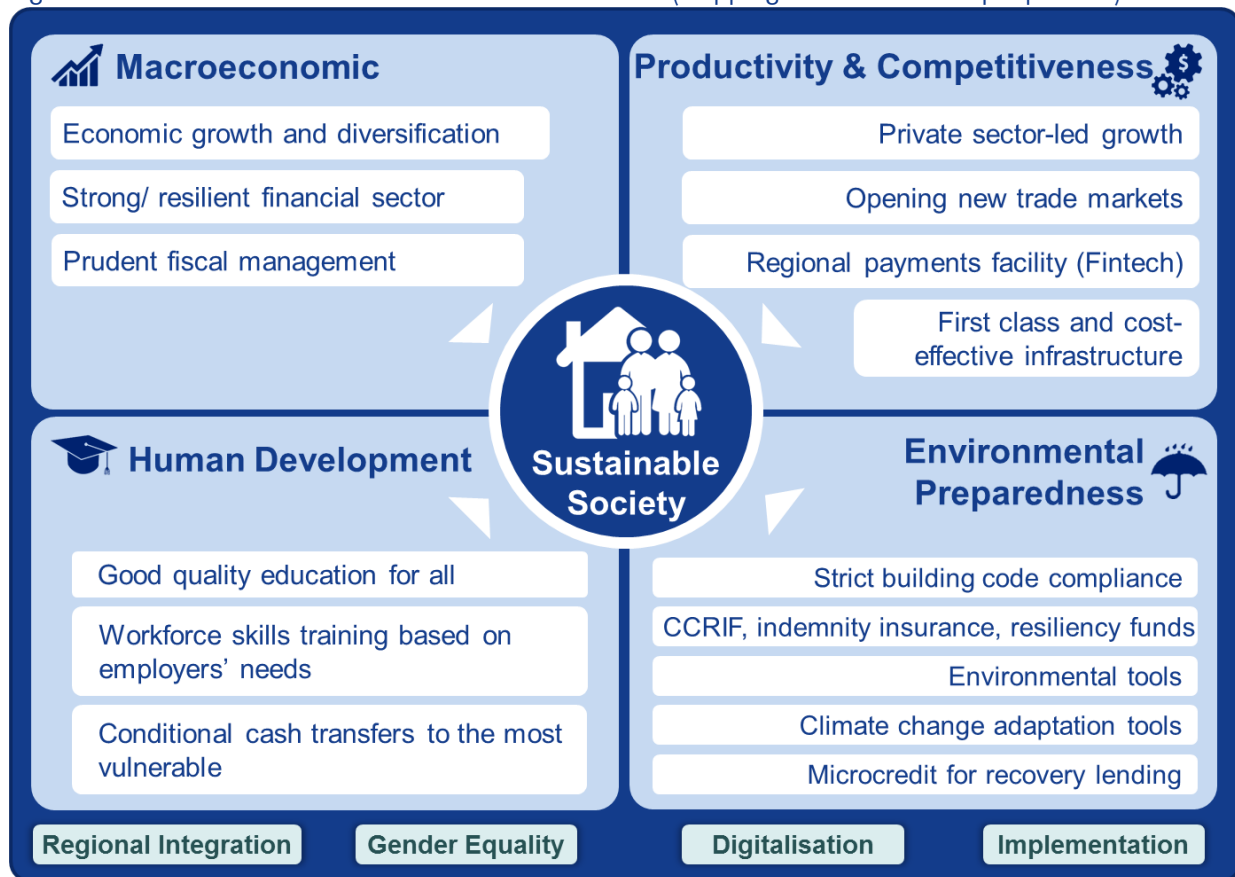
1.3 The Blueprint: A Vision for Our Economies

The following chapters articulate a vision for Caribbean economies, and the imperative for reforms based on the challenges and vulnerabilities highlighted. Given the range of issues faced by the Caribbean, it is important to recognise the relationships between these issues and explore how they contribute to vulnerability within the Region. Understanding the interlinkages will help to identify the policy response needed to build resilient economies – the Policy Blueprint for the Caribbean Economy.

Given the interconnectedness of the challenges (Figure 1), any effort to build a resilient Caribbean economy must do so across the spectrum, with the foundation being strong households and positive human development. A resilient household is one that can withstand numerous possible shocks, and has the following attributes: good health; consumption above the minimum requirements; citizen security; access to finance; skills; active labour market participation; and sustainable livelihood opportunities. Therefore resilient households provide the ‘ring beam’ that strengthens and stabilizes all quadrants. However, the feedback loops mean that vulnerable quadrants also impact negatively on the resilience of households.

Figure 2 shows the virtuous resilient matrix—“*Reculer Pour Mieux Sauter*”, illustrating how Caribbean societies must step back and reform in order to jump further. How to build resilience in each of the four quadrants is examined.

Figure 2: The Virtuous Matrix: Reculer Pour Mieux Sauter (Stepping back in order to jump better)



Chapter 2: Macroeconomic

2.1 Macroeconomic Challenges: Sluggish recovery



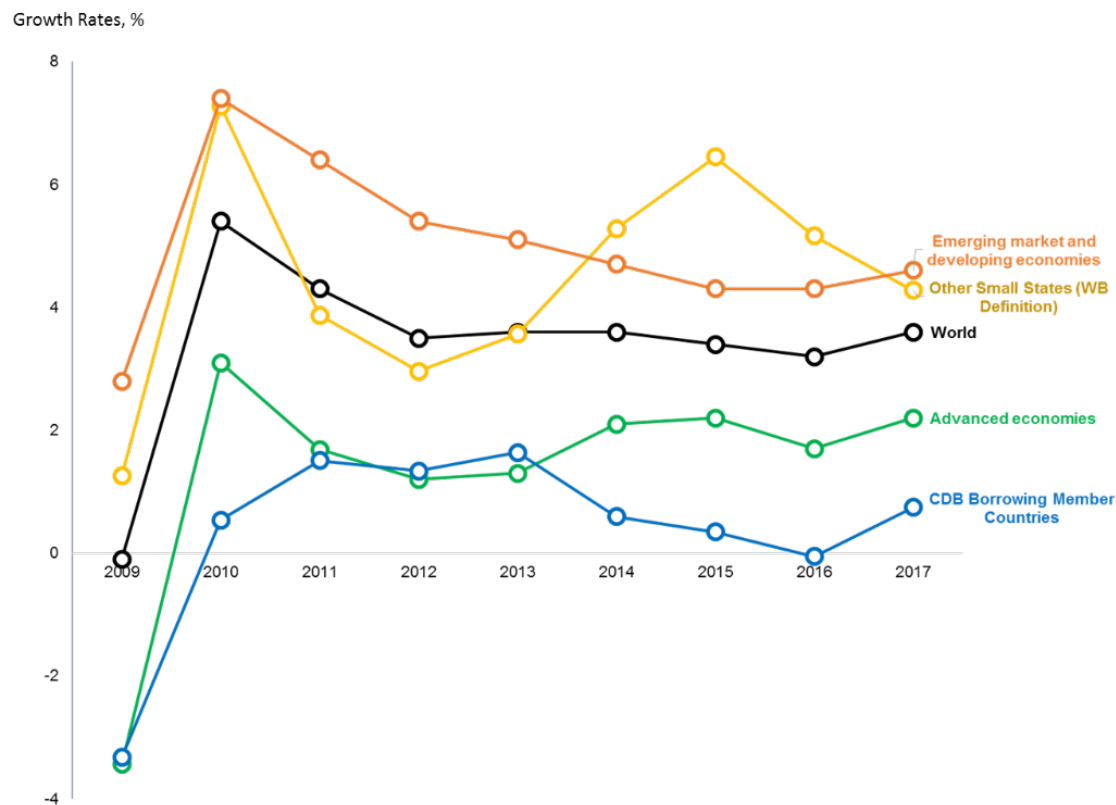
Macroeconomic Issues

- Low economic growth
- Output volatility and trade concentration
- High debt, low savings and declining reserves
- Poor sovereign debt ratings
- Financial sector vulnerabilities and stability risks

Economic growth has decelerated across the BMCs since the peak of the global financial crisis in 2009, with annual growth in BMC economies averaging 0.8% annually between 2009 and 2017⁵. While this economic recession was not unique to the Caribbean Region, it led to a prolonged period of low growth, while other small states rebounded more quickly to pre-crisis levels. For example, in 2017, BMC economies grew by a modest 0.5% on average (*weighted*) while the economies of comparable small island developing states (SIDS) grew by 4.3%, and the world economy by 3.7% (Figure 3).

Economic activity in the Caribbean has been concentrated around a few, globally volatile sectors, namely tourism, commodity exports, and business and financial services. It has also been concentrated around a few major trade partners. This vulnerability is most clear when there are disruptions to key economic sectors. The anaemic growth performance reflected underlying weaknesses in aggregate demand and supply, evidenced by low commodity and oil prices, declining foreign direct investment (FDI) and tourists resorting to more budget-friendly regions. The Zika pandemic and increased financial sector scrutiny, in part due to anti-money laundering and combatting the financing of terrorism (AML/CFT) efforts, added to the unfavourable external environment. Furthermore, the 2017 weather events resulted in damage to physical infrastructure, economic displacement, and social upheaval as the main industry of many BMCs (tourism) was disrupted in the peak season.

⁵ 2017 *Caribbean Economic Review and 2018 Outlook*. Caribbean Development Bank, 2018.

Figure 3: Comparative Weighted Annual GDP Growth Rates (2009-2017^e)

Source: WEO, UNStats, CDB

However, the Region's economic situation has not been all negative. In 2017, an uptick in the global economy helped to improve conditions in Belize, Trinidad and Tobago, and Suriname following the fallout from weak international commodity prices in 2016. The external positions of both Belize and Guyana also improved as export values and volumes rose. Current account deficits improved in both Suriname and Trinidad and Tobago, boosted by increased oil and gas prices. Suriname's ongoing economic crisis was triggered by difficulties in gold, oil, and alumina production and trade, but the International Monetary Fund (IMF) notes that the crisis was exacerbated by "insufficient buffers and policy responses"⁶. Most notable was the Government's failure to leverage the boom and "save resources for future price corrections", followed by its inability to fully implement policies from the 2015 fiscal adjustment plan⁷.

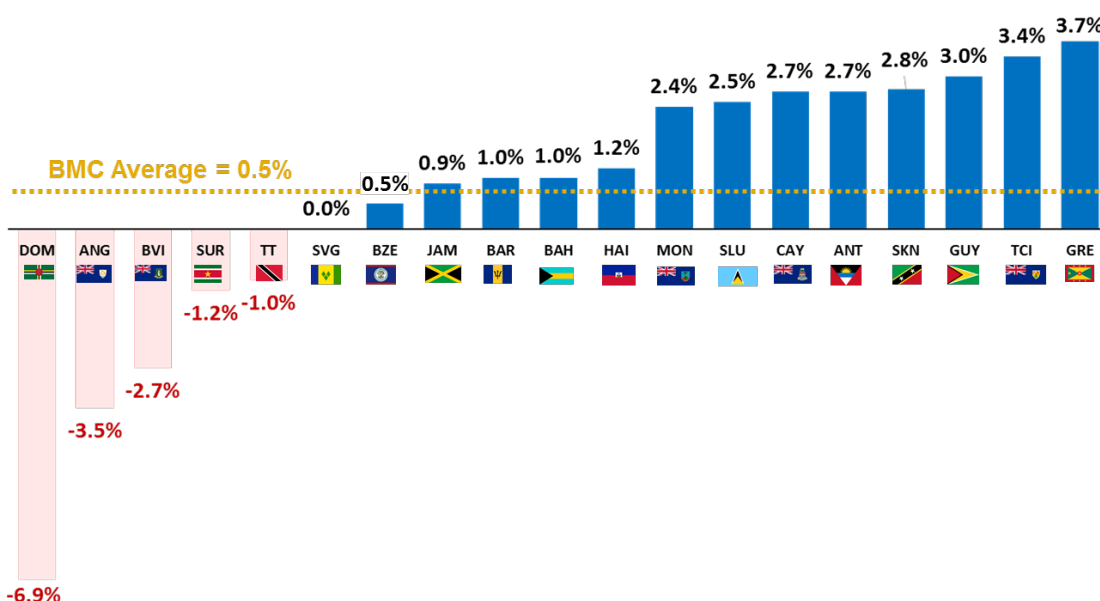
In service-based economies, recent growth has been buoyed by economic recovery in major tourism and finance partner markets. Increased tourist arrivals boosted the economy directly

⁶ "IMF Executive Board Concludes 2016 Article IV Consultation with Suriname." International Monetary Fund, 24 Jan. 2017. Surinamese authorities

⁷ To restore macroeconomic stability and confidence, Suriname started an adjustment programme, which included bold fiscal measures to reduce the fiscal deficit from 8.8% of GDP in 2015 to under 1.5% by 2018. This included plans to phase out electricity subsidies, increase fuel taxes, exercise wage restraint, introduce a Value Added Tax, introduce reforms (e.g., a Sovereign Wealth Fund Law), and other initiatives.

through tourism dollars, and indirectly through related expenditures and investments in construction, retail, and business services. The pre-2017 lower fuel prices that hurt the petroleum-exporting economies helped to improve trade deficits of net-importers. In particular, the lower oil prices and increased tourism numbers helped to reduce the current account deficits in Barbados, Grenada, and St. Vincent and the Grenadines. However, other macroeconomic issues plagued these smaller, undiversified economies (Figure 4).

Figure 4: Estimated 2017 GDP Growth Rates



Source: CDB

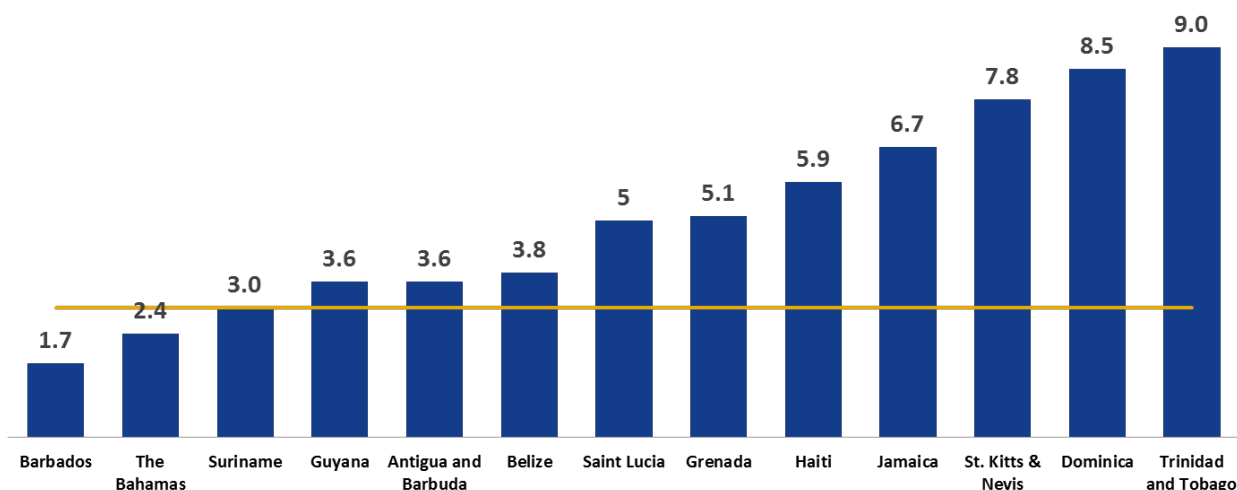
Output volatility is symptomatic throughout the Caribbean. The Region witnessed higher growth volatilities (4.1%) than Latin America (2.3%) and emerging markets (1.8%) over the period 1980-2015 (CDB 2017). The outcome is exacerbated by the countries' small size, high degree of openness, proneness to natural hazards and dependence on commodity exports and tourism services from a limited range of countries. Relatedly, studies such as Cashin (2004), and Kouame and Reyes (2015) found growth synchronisation between the Caribbean and advanced economies such as the United States of America (USA) and the European Union (EU), whereas the World Bank (2016) found co-movement between global commodity prices and the USA, EU and Chinese business cycles. At the country level, the commodity-exporting countries of Belize, Suriname, and Trinidad and Tobago exhibited the highest levels of volatility, whereas the tourism-intensive countries (particularly members of the Eastern Caribbean Currency Union⁸ (ECCU)) such as

⁸ The ECCU is a monetary union of the eight states of the Organization of Eastern Caribbean States that use the Eastern Caribbean dollar as their official currency. These member states are: Anguilla, Antigua and Barbuda, Dominica, Grenada, Montserrat, Saint Lucia, St. Kitts and Nevis, and St. Vincent and the Grenadines.

Antigua and Barbuda, Grenada, and Saint Lucia faced moderate volatility. These countries were the ones less diversified with heavy reliance on commodity exports and tourism as their major growth drivers. The countries with the least volatility in the Region were those with more diversified economic sectors and contributions from agriculture and industry to Gross Domestic Product (GDP) growth.

Inflation slowed in Anguilla, Antigua and Barbuda, the Cayman Islands, Dominica, and St. Vincent and the Grenadines. Other BMCs experienced testing circumstances attributed to slowly increasing international commodity prices, low aggregate demand (Trinidad and Tobago), and drought conditions (Belize, Guyana, and Haiti). By December 2016, regional inflation rates ranged from 1.7% in Jamaica (a 50-year low) to over 60% in Suriname due to exchange rate adjustments. Most BMCs' import covers are comparable with those of small islands in the Pacific (5.9 months), but less than OECD countries (9.6) and the Latin America and Caribbean (12.1) averages in 2016. For example, the ECCU's combined reserves can cover six months of imports and Trinidad and Tobago's can cover three-quarters of a year. However, among the BMCs, the foreign currency reserves of Barbados and The Bahamas have deteriorated below the global benchmark of having sufficient reserves to cover three months' worth of imports (Figure 5). The import cover is an important indicator of currency stability and demonstrates a country's ability to protect itself against external crises. For Barbados, this buffer is necessary as the government continues to prioritise maintaining the Barbados dollar to U.S. dollar (USD) exchange rate without borrowing on the international market.

Figure 5: Total Reserves in Months of Imports (latest available for 2017)



Source: CDB, World Bank, Central Banks

Since the 1990s, a persistent increase in public debt has led to the Caribbean becoming one of the world's most indebted regions. At the end of 2017, BMC governments had a median debt-to-GDP ratio of 64.6% (Figure 6). The service-based economies tended to have higher debt rates, with members like Barbados and Jamaica recording debt well over 100% of their GDP. However, it must be noted that following stringent reforms, Jamaica's public debt position has improved significantly.

Fiscal mismanagement, coupled with economic downturns, has driven several economies to default and debt restructuring within the last decade⁹. For most BMCs, this public debt accumulation can be linked to a number of factors¹⁰:

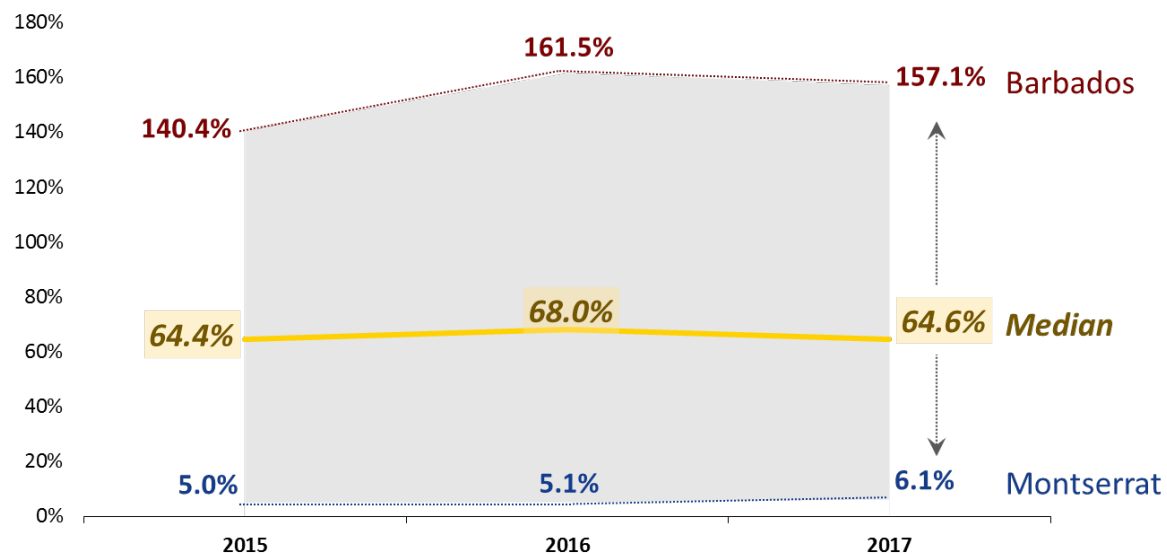
- (i) large and widening fiscal imbalances as a result of budgetary resources being insufficient to meet recurring expenses in addition to debt-financing obligations;
- (ii) increased borrowing to meet governments' budgetary and external financing;
- (iii) a series of negative external shocks to highly vulnerable economies (e.g. the loss of preferential trade agreements with Europe and the global financial crisis);
- (iv) low growth; and
- (v) natural disasters.

High debt service payments have also reduced the governments' ability to engage in counter-cyclical stimulus spending and other strategies to drive growth.

⁹ Wigglesworth, Robin. "The Caribbean's 'Silent Debt Crisis.'" Financial Times, 23 Feb. 2016.

¹⁰ *Public Sector Debt in the Caribbean: An Agenda for Reduction and Sustainability*. Caribbean Development Bank, 2013.

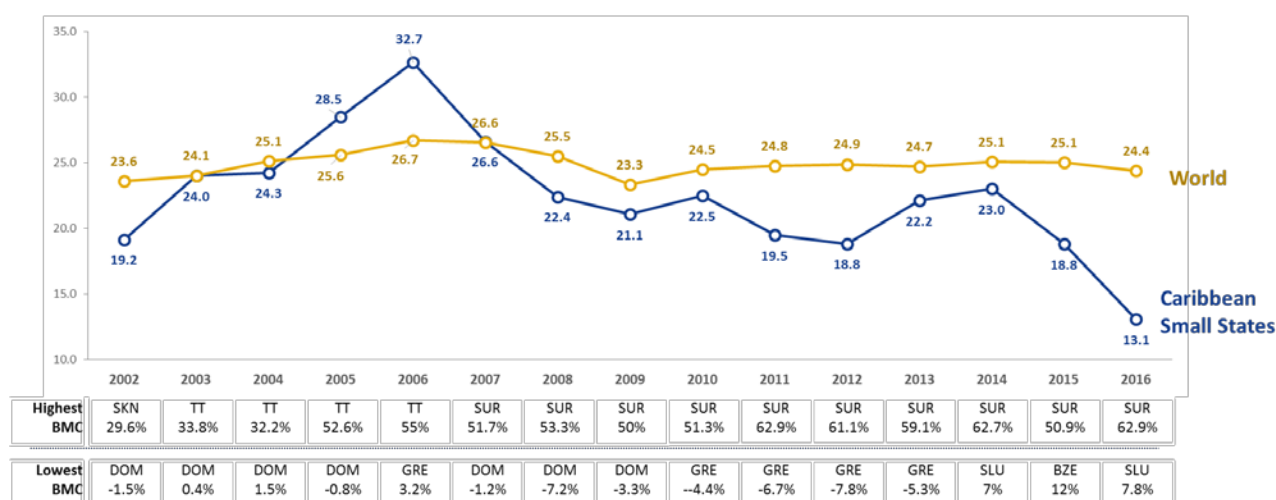
Figure 6: Range of BMC Government Debt-to-GDP ratios (%), latest figures available for each year



Source: Central Banks, CDB

The increase in public debt is also apparent in the gradual decrease in public and overall savings in the Region. A high savings rate for developing economies tends to indicate greater capital accumulation, paving the way for future expansion in a country's productive capacity. However, the savings rate of many BMCs falls well below the world average, with St. Kitts and Nevis and Trinidad and Tobago as notable exceptions. In the decade leading up to 2016, the average Caribbean small state shifted from either saving or investing 31% of GDP to just over 13% (Figure 7). Many BMCs have fallen into the trap of low savings and high debt, thus depending on foreign investments to expand local productive capacities and drive growth. However, the aggregate regional FDI level is yet to recover to pre-crisis levels (Figure 12).

Figure 7: Gross Domestic Savings (Percentage of GDP)



BMC ranges are based on available data | Source: World Bank

Note: Gross savings are calculated as gross national income less total consumption, plus net transfers.

The Region's high debt ratios and low economic growth rates have also negatively impacted long-term sovereign credit ratings, a standard indicator of the financial and political risk associated with investing in an economy. A country's credit rating strongly influences its capital flows and the costs of financing its public sector. Key factors assessed in the ratings by Moody's Investors Service and Standard & Poor's (S&P)—two major global credit rating agencies—include a country's perceived economic strength, political risk, growth prospects, fiscal flexibility, monetary flexibility, and economic growth prospects¹¹. Poor credit ratings can hurt a country's access to finance on the international bond markets and deter private sector investment.

Table 1: Long-term Sovereign Debt Ratings

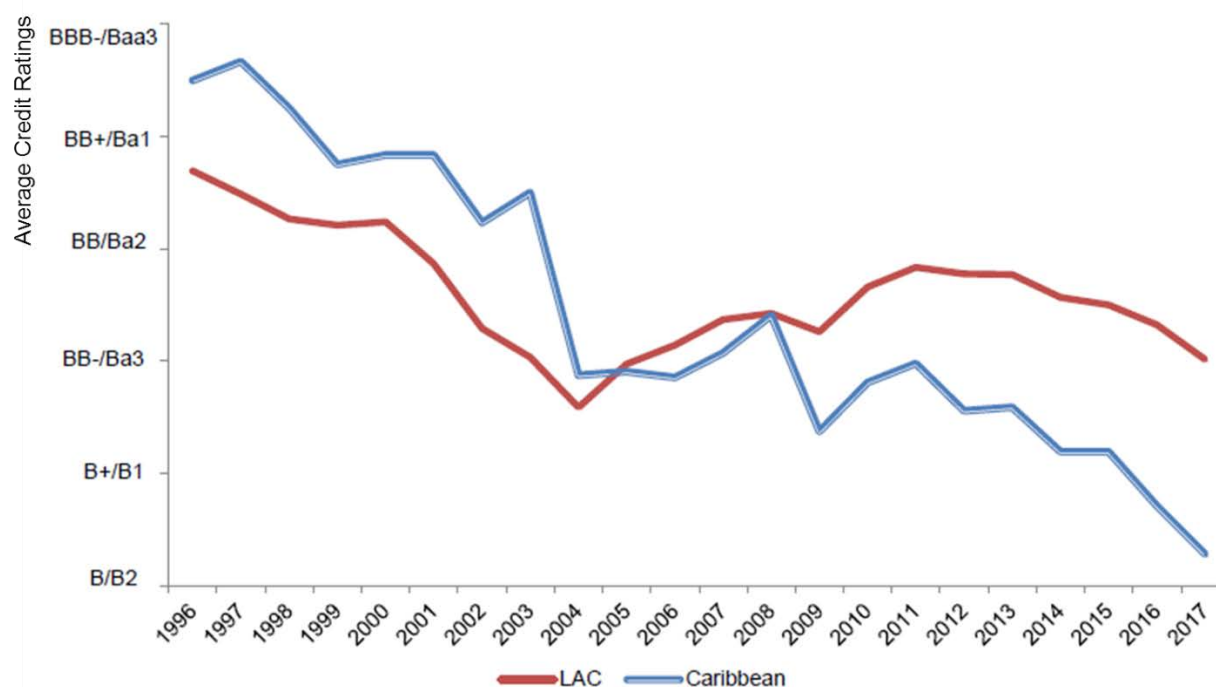
¹¹ *Global Financial Stability Report: Sovereigns, Funding, and Systemic Liquidity*. International Monetary Fund, 2010, pp. 85–122.

Country	Ratings Agency			Investment Grade Ratings
	Moody's	S&P	CariCRIS	
Singapore	Aaa	AAA		Aaa/AAA Minimal risk
United States	Aaa	AA+		Aa/AA Very low
United Kingdom	Aa2	AA		A/A Low risk
Japan	A1	A+		Baa/BBB Moderate risk
Bahamas, The	Baa3	BB+	<i>Not rated</i>	Ba/BB Substantial risk
Barbados	Caa3	CCC	BBB	B/B High risk
Belize	B3	B-	<i>Not rated</i>	Caa/CCC Very high
BVI	<i>Not rated</i>	<i>Not rated</i>	AA-	
Dominica	<i>Not rated</i>	<i>Not rated</i>	BB+	
Jamaica	B3	B	BBB	
St. Lucia	<i>Not rated</i>	<i>Not rated</i>	BBB	
SVG	B3	<i>Not rated</i>	<i>Not rated</i>	
Suriname	B1	B	<i>Not rated</i>	
Trinidad & Tobago	Ba1	BBB+	AA+	

Source: Moody's, S&P, CariCRIS

Current fiscal and economic conditions do not bode well for the BMCs under these factors. As a result, both Moody's and S&P conclude that most BMC governments are at a high risk of failing to meet their debt obligations. Even the least risky among the BMCs (The Bahamas and Trinidad and Tobago) do not meet Moody's and S&P's investment grade standards. In 2017, three BMCs (Barbados, Suriname and Trinidad and Tobago) received credit downgrades as the agencies expressed continued concerns about debt and deficit levels, as well as underlying economic strength. Another perspective provides a more nuanced comparison of debt-issuers within the Region. Launched in 2004 in Port of Spain, Trinidad, the Caribbean Information and Credit Rating Services (CariCRIS) provides more positive investment ratings for several BMCs when compared with regional counterparts. However, the global ratings have greater impact on BMCs' access to and cost of international finance (Table 1). As Figure 8 demonstrates, the Region's average credit rating from the global services has steadily deteriorated from 2013 to 2017.

Figure 8: Evolution of Credit Ratings: Caribbean vs. Latin America and the Caribbean



Source: United Nations – ECLAC, 2018

Note: Average of credit ratings from Fitch, Moody's and S&P.

The financial sector in BMCs is dominated by the banking sector according to size (banking assets as a percentage of GDP) and financial depth (ratio of private credit to GDP). However, the size and depth are misleading indicators of financial development, as the institutions are not adequately proficient in managing financial market volatility and fostering economic growth. Using the IMF's Financial Development Index (Sahay et al 2015) to capture aspects of financial development as opposed to few indicators, the Region scored 0.32 (on a scale of 0-1, the higher the index the better the level of financial development) relative to the United States of America (0.88) and Mauritius (0.43), a comparator country. At the regional level, a scan of the financial sector conditions over the period 2010-2016 (IMF Article IV, financial stability reports, FSAP) highlights key vulnerabilities and risks:

- domestic banks fragility with high non-performing loans and eroded capital base;
- output volatility and country risks keeping interest rates high;
- high cost of credit;
- banks and non-bank financial institutions' sovereign exposure, with a combined holding of approximately two-thirds of domestic public debt, linking financial sector soundness to fiscal sustainability;
- the reduction in correspondent banking relationships (CBRs) and cross-border remittance services, raising concerns that some parts of the world are at risk of being excluded from formal financial channels.

Since 2016, an additional, ongoing threat to the Region has come from the loss of several CBRs, as global banks reassess the profitability and risks associated with transactions with smaller local and regional financial institutions. A 2015 World Bank survey identified Latin America and the Caribbean (LAC) as one of the most affected regions, where “89 percent of jurisdictions reported experiencing significant to moderate declines in their foreign CBRs”¹². For example, in 2015 and 2016, global banks terminated 22 CBR accounts (out of 31) in the majority of Belize’s commercial and offshore banks¹³. In the wider LAC region, more than 50% of banks surveyed by the Financial Stability Board in early 2016 depended on two or fewer relationships for access to the international financial system. Many banks have been able to either replace lost CBRs (by establishing relationships with smaller U.S. banks or banks in Europe and Asia) or lean more heavily on retained relationships, thus limiting the broader macroeconomic impact of this issue. This can be detrimental to the Region’s ability to participate on a level playing field in the global financial system, engage in global trade, promote finance inclusion and empowerment, and generally regulate the banking system¹⁴.

The financial strain on indigenous financial institutions has been more acute than on foreign banks¹⁵. Direct CBR fees have increased substantially—doubling for some transactions in the ECCU¹⁶. Indirect costs (e.g., AML/CFT compliance and training) have also risen. The pressure on cash-intensive services has increased costs or reduced access to popular money transfer services in The Bahamas and Jamaica, making remittances more taxing for expatriates.

¹² *Withdrawal from Correspondent Banking: Where, Why, and What to Do About It*. World Bank, 2015.

¹³ *FSB Correspondent Banking Data Report*. Financial Stability Board, 2017.

¹⁴ Boyce, Toussant. *Strategic Solutions to 'De-Risking' and the Decline of Correspondent Banking Relationships in the Caribbean*. CDB, 2016.

¹⁵ Alleyne, Trevor S.C. *Loss of Correspondent Banking Relationships in the Caribbean: Trends, Impact, and Policy Options*. International Monetary Fund, 2017.

¹⁶ *Eastern Caribbean Currency Union: Discussion on Common Policies of Member Countries — Staff Report*. International Monetary Fund, 2017.

2.2 Blueprint for Macroeconomic Recovery and Resilience

Macroeconomic Challenges

Low economic growth
High debt, low savings and declining reserves
Output volatility and trade concentration
Poor sovereign debt ratings
Financial sector vulnerabilities and stability risks

Policy Priorities

Economic growth and diversification
Prudent fiscal policy
Strong, resilient financial sector

The problems associated with the macroeconomic environment are centred on low growth and high indebtedness. This cocktail of underperformance has led to significant strains on the public accounts with levels of expenditures (usually social—transfers and subsidies and high wage bills) that are unmatched by government income and tax receipts. In most instances this has led to unsustainable primary balances. Given the debt dynamics illustrated by Equation 1, these balances have driven debt levels upwards and constrained potential economic growth.¹⁷

In any given period, the debt stock grows by the existing debt stock (DS) multiplied by the interest rate less the growth rate of GDP ($R - \Delta GDP$), less the primary budget balance (PB).

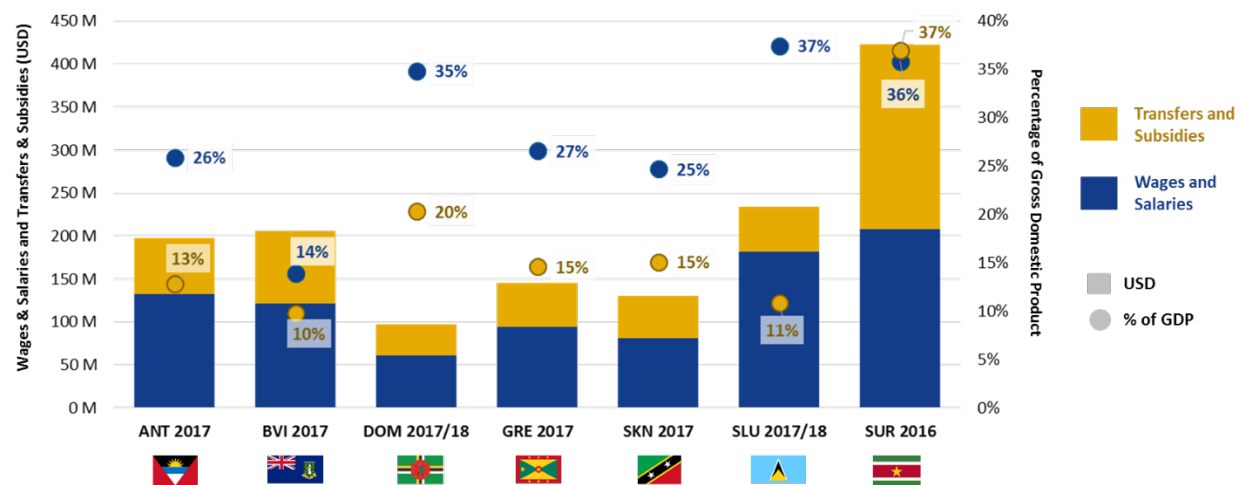
$$\text{Equation 1: } \text{Debt Stock} = [DS \times (R - \Delta GDP)] - PB$$

Equation 1 shows that building resilience at the macroeconomic level requires careful management of a number of macroeconomic variables to ensure that the debt dynamics do not lead to unsustainable debt levels.

Figure 9 shows the level of transfers and subsidies (T&S) and the wage bills of governments. They indicate that significant public sector reforms are required if the Caribbean is to have stable macroeconomic environments. The rules and reforms that should be considered for maintaining a stable macroeconomic environment are therefore presented below. Caribbean governments can no longer afford current levels of expenditure. Every country should evaluate and dissect expenditure lines so that appropriate reforms can be implemented. However, this paper proposes that governments urgently address the following imbalances.

¹⁷ High levels of debt without a credible medium-term debt strategy leads to an unstable policy environment that is detrimental to investment decisions. Government also reduces its capital formation programme and might also lead to a deterioration of sovereign credit ratings.

Figure 9: Estimated Wages & Salaries and T&S, Total and as a Percentage of GDP



Source: Government estimates (Antigua and Barbuda, British Virgin Islands (BVI), Dominica, Grenada, St. Kitts and Nevis, Saint Lucia, and Suriname)

2.2.1 Transfers and Subsidies

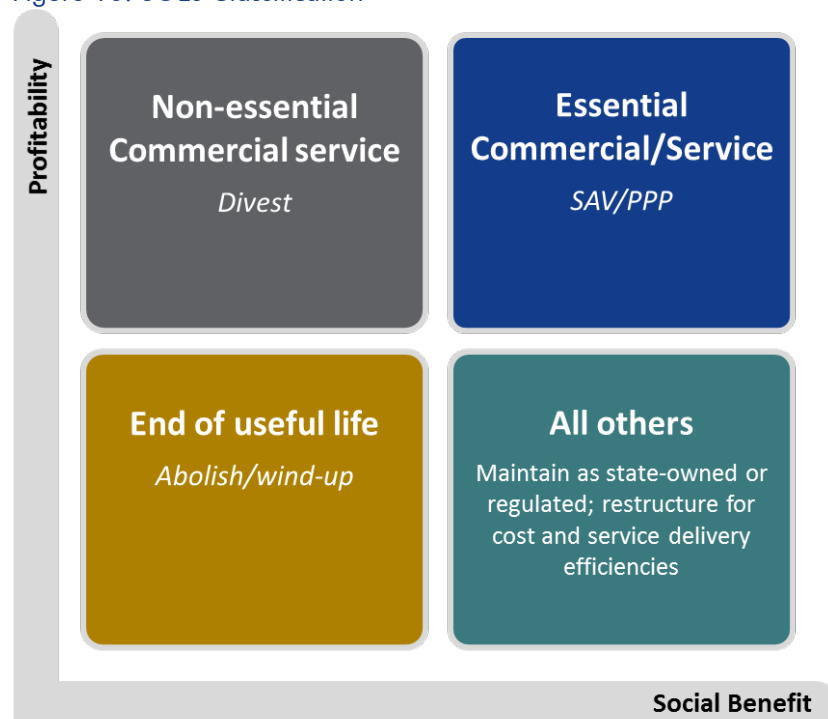
For many countries the T&S level is too high. Blanket subsidies and other social spending tend to benefit wealthier households more than the households that actually need the assistance. For example, motor vehicle fuel subsidies have tended to benefit higher income households more and actually lead to wasted expenditure and overuse of a valuable resource (Coady et al. 2015). To ensure that subsidies and social spending benefit those in society who need it, governments have to collect better data through regular Household Budget Surveys and Standard of Living Surveys so that households in need (HIN) can be identified and social expenses channelled to those households. A means-testing approach to social expenditure would reduce government spend and ensure that individuals and HINs receive the assistance that they need. Assisting HINs via targeted social interventions should be with the stated objective of moving these households out of poverty and into sustainable livelihoods. This should be done in conjunction with reforms in other parts of the economy such as those which diversify the economy and enhance the private sector, making it easier to do business.

Large portions of T&S spending are not only related to social costs. A more significant proportion of the T&S budgets of governments is related to transfers made to inefficient state-owned enterprises (SOEs)¹⁸. In many instances, SOEs are established to perform functions of the government, often without well-conceived governance arrangements. This results in inefficiency, and many SOEs not

¹⁸ In November 2017, the IMF noted that The Water and Sewerage Authority and Caribbean Airlines Limited were receiving the bulk of current transfers from the Central Government of Trinidad and Tobago. Similarly, the 2017 Article IV consultation with Barbados recommended targeted interventions to reform SOE operations in order to reduce government transfers and to address structural imbalance in the public sector.

charging fees for their services. Many SOEs also have operating costs that are in excess of the economic and social benefits of the service that they are providing. There are of course some goods and services provided by some enterprises in the SOE sector that deliver economic and social benefits that are in excess of the financial cost. There needs to be a systematic review of all SOEs to determine their usefulness for Caribbean societies. A recent review by PricewaterhouseCoopers (PwC) provides a very useful approach, which Caribbean governments could consider when looking to reform the SOE sector¹⁹. Figure 10 is a useful schematic that governments could use to evaluate the performance and long-term viability of SOEs.

Figure 10: SOEs Classification



Source: PwC 2015

SOEs that make a profit, but provide a service that has few public good attributes or social benefits should be divested and fully privatised. SOEs that do not have an earning potential and also do not provide socially beneficial services should be discontinued. SOEs that provide a beneficial social service but are not profitable should be maintained, but regulated to ensure efficient management. SOEs that do not provide a pure public good, but earn profits, could be divested and regulated. Alternatively, a public-private partnership (PPP) could be considered for service provision, with examples being some hospital services and air and sea ports.

¹⁹ PwC. 2015. State-owned enterprises: Catalysts for public value creation?

If governments undertake this type of exercise, the T&S bill could be reduced significantly, realising considerable fiscal savings that could also assist with bringing the public accounts into equilibrium. Furthermore, SOEs that are divested to the private sector could, in time, become net contributors to the exchequer as private sector firms begin to pay taxes on profits earned.

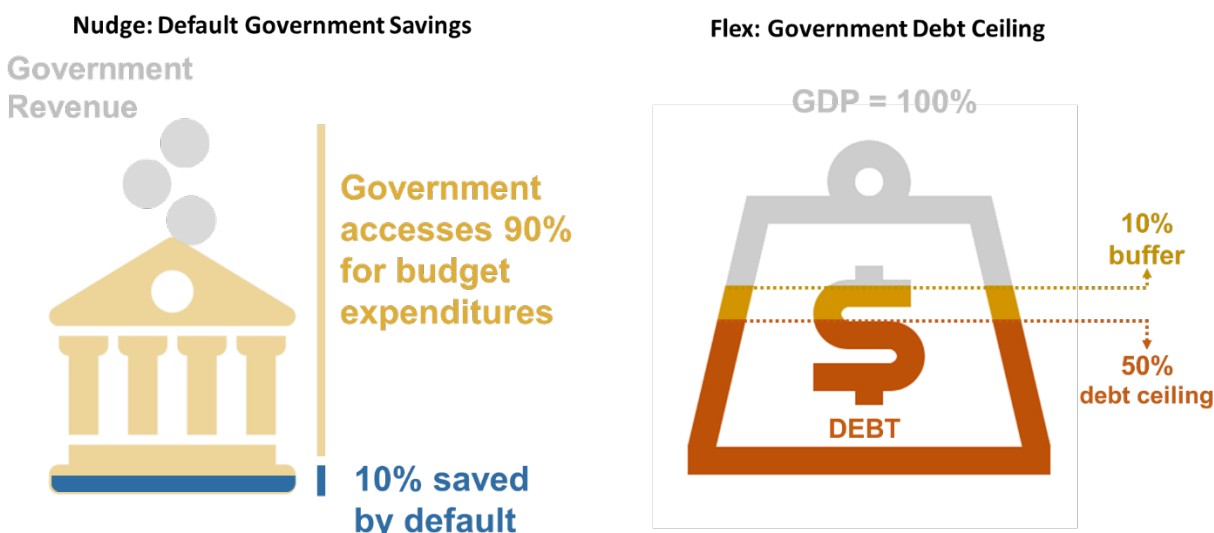
2.2.2 Prudent Fiscal Policy

IMF research has shown that when the debt-to-GDP ratio reaches 60%, economies begin to experience debt distress²⁰ and the national debt begins to have a negative impact on growth via an unstable macroeconomic environment. High debt also leads to the possible deterioration of the country's sovereign wealth rating. In addition, the public cost of rebuilding after natural disasters has contributed significantly to the build-up of debt in the region (CDB 2013). Given the frequent occurrence of natural disasters and/or economic shocks, governments are encouraged to adopt prudent fiscal management practices such as the adoption of fiscal rules, to stabilise the fiscal accounts, generate fiscal space and provide the flexibility to respond to natural disasters and economic shocks.

Firstly, this paper advocates a “nudge and flex” rule (Figure 11). The default should be for governments to save first. Governments should spend only a proportion of annual revenues, for example no more than 90%. This means that 10% of revenues are saved in a sovereign wealth fund or stabilisation fund. Secondly, debt levels should not exceed 50% of GDP, with an additional 10% buffer to borrow for disaster recovery. Active debt management practices should include prudent borrowing, where governments prioritise borrowing for productive enterprise ensuring that the socio-economic rate of return or yield is higher than the cost of borrowing.

²⁰ Greenidge, Kevin, Roland Craigwell, Chrystol Thomas and Lisa Drakes (2012): Threshold Effects of Sovereign Debt: Evidence from the Caribbean. IMF Working Paper WP/12/157.

Figure 11: Government Fiscal Nudge and Flex



2.2.3 Resilient Financial Sector

A stable macroeconomic environment is buttressed by a predictable monetary framework. A stable exchange rate, along with low interest rates, would help to build a resilient financial sector. However, a stable fiscal framework would also be important for the credibility of a stable exchange rate. Governments seeking to diversify their economies and diversify their export-earning sectors might want to consider having a more flexible real exchange rate regime that allows the currency to depreciate in line with the difference between the domestic inflation rate and the inflation rate of the country's main trading partners.

Monetary policy also requires an independent central bank that has a specific mandate to provide a stable monetary policy environment of low inflation and a competitive exchange rate (based on the preferences of the population). This Policy Blueprint for Caribbean Economies promotes the refocusing of BMC policymakers' attention on improving the financial sector intermediating function through initiatives targeted at improving the ease of getting credit, ensuring adequate regulatory framework and financial infrastructure and fostering financial inclusion. For example, by supporting flexible regulations that governed and supported the growth of mobile money technology (M-Pesa in Kenya), the Kenyan authorities succeeded in scaling immutable physical barriers and reducing transaction costs, while increasing financial access to the otherwise 'unbanked'.

Several member governments are designing and/or implementing projects aimed at the establishment of collateral registries; business credit guarantees schemes via member government central banks/development agencies; insolvency and legislative reforms to encourage entrepreneurship. These initiatives are anticipated to improve the quality of financial intermediation (efficiency, access to credit).

Governments are encouraged to support initiatives aimed at strengthening the adoption and implementation of anti-money laundering best practices, updating laws and regulations as

required and increasing the technical capacity of banks and credit unions in the Caribbean to conduct customer due diligence. Developments in the field of financial and regulatory technologies offer opportunities to the Caribbean financial system. Financial technologies (fintech) and new payment initiatives provide alternatives for cross-border payments compared to CBRs or traditional remittance providers, notably through the use of virtual currencies and distributed ledger technology or “blockchain”. These alternatives promise much faster—potentially instantaneous—cross-border flows, at a fraction of the current cost.

2.3 Next Steps

While poor fiscal and debt conditions have heightened BMCs’ vulnerability to external and environmental shocks, effective fiscal and debt management can help build macroeconomic resilience. Governments need to take a longer view to be able to design strategies that are more proactive and sustainable.

Chapter 3: Productivity and Competitiveness

3.1 Productivity and Competitiveness Challenges: High Cost of Doing Business



Productivity and Competitiveness

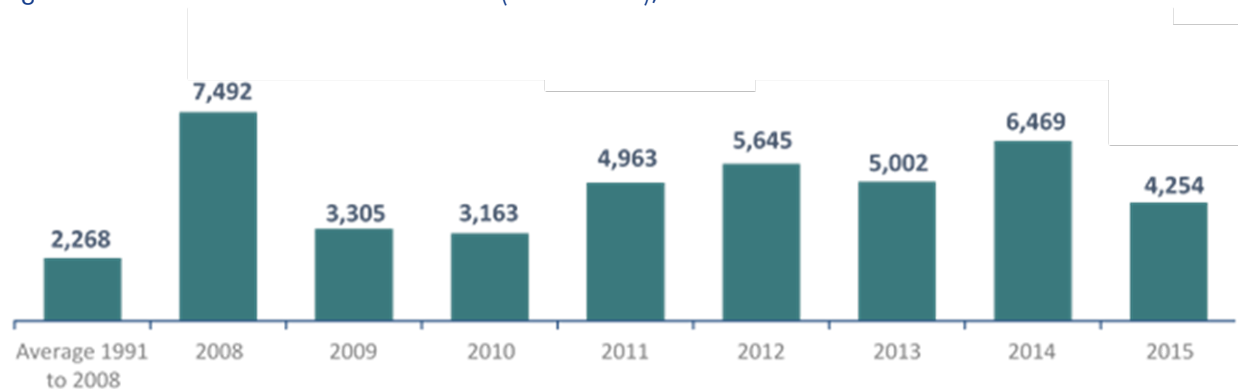
- Declining foreign direct investment
- Low rankings in the World Bank's Ease of Doing Business
- High energy and electricity costs and nascent regulation
- Inefficient and costly transport links
- Large infrastructure gaps

CDB's study, *Enhancing Productivity and Growth in the Caribbean*,²¹ discusses the Region's challenges with respect to the four elements of the productivity and growth process: FDI; information and communications technology (ICT); research and development (R&D) and innovation; and industrial clustering. The Region has not effectively utilised new technologies and advances in innovation and productivity as strategies for driving growth out of the "middle income trap". Furthermore, linkages between sectors (e.g. tourism and agriculture) are weak in many BMCs, undermining the potential multiplier effects of sector-specific gains throughout the economy.

For developing countries, FDI can help to stimulate long-run economic growth by building out the local capital stock and increasing total factor productivity. Domestic savings levels are low across most of the Region, therefore key industries are particularly dependent on foreign-sourced capital injections. However, the level of FDI inflows into the Caribbean fell 43.2% in the eight years after the financial crisis (Figure 12). Among the BMCs, the majority of FDI inflows have historically gone to The Bahamas, Jamaica, and Trinidad and Tobago. In addition, FDI in the Region was negatively impacted by the 2007/2008 financial crisis. Since peaking in 2008, all BMCs (except Haiti and Suriname) experienced a reduction in FDI inflows, ranging from a 4.2% decline in Antigua and Barbuda to a more substantial 75% decline in The Bahamas. *For BMC-specific FDI trends, see Appendix I.*

²¹ Enhancing Productivity and Growth in the Caribbean. Caribbean Development Bank, 2017.

Figure 12: FDI Inflows in to the Caribbean (1991-2015), USD million



Source: CDB, IMF

Both foreign and domestic investments have also been constrained by the relatively high costs of doing business. In addition, foreign investors are deterred by the size of domestic markets, the limited number of productive industries, high energy costs, infrastructural deficiencies, and the generally inadequate policy, regulatory, and institutional environments. Other “problematic factors for doing business” in the Region identified in the World Economic Forum’s *Global Competitiveness Report 2016-2017* include:

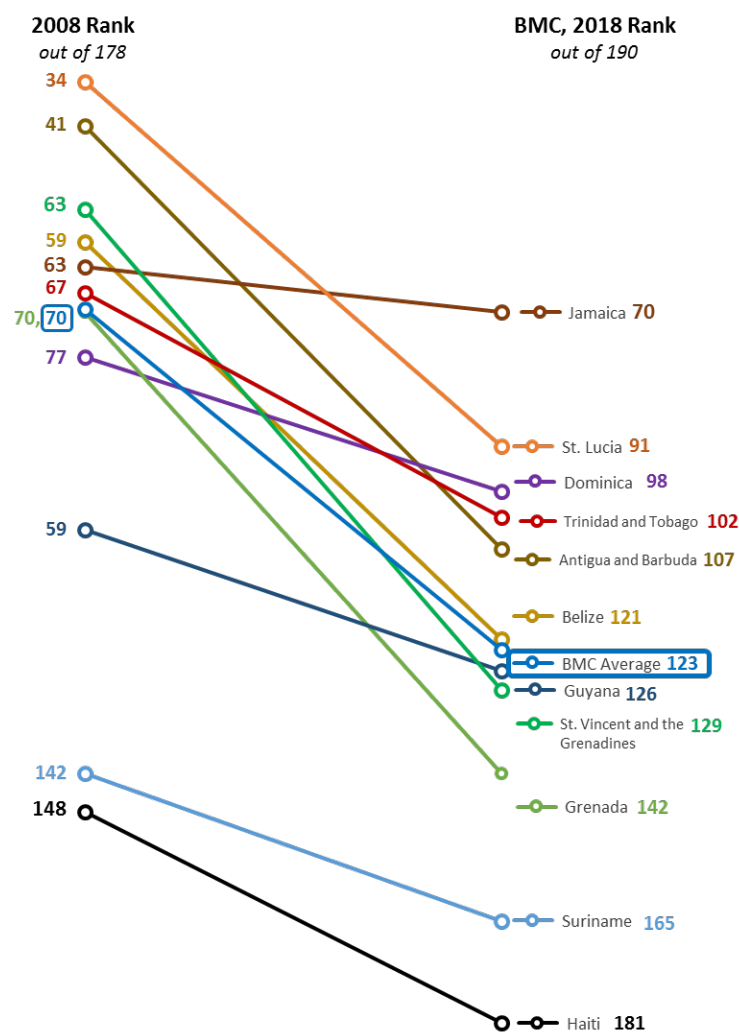
BARBADOS	Poor work ethic in the national labour force, inefficient government bureaucracy, access to finance, and tax rates;
GUYANA	Corruption, tax rates, crime and theft, and inefficient government bureaucracy;
JAMAICA	Crime and theft, inefficient government bureaucracy, corruption, and tax rates;
TRINIDAD AND TOBAGO	Poor work ethic in the national labour force, corruption, inefficient government bureaucracy, crime and theft, and foreign currency regulations; and
SURINAME	Inefficient government bureaucracy, corruption, access to finance, and an inadequately educated workforce

As a result, the regional business climate does not fare well when ranked against other parts of the world. Currently, Jamaica is the highest placed BMC at 70th out of the 190 nations included in the 2018 World Bank Ease of Doing Business rankings. In the 181st position, Haiti is the lowest ranked BMC as it is particularly difficult for entrepreneurs to start a business, register property, access credit, and enforce contracts. On average, the BMCs were ranked at 123.

Over the last decade, relative positions in the rankings have deteriorated for all BMCs. For instance, in 2008, Saint Lucia was the highest ranked BMC in 34th position globally (out of 178 countries), but declined to 91st (out of 190 countries) in the 2018 survey. The average BMC rank has fallen from 70 to 123 between 2008 and 2018—indicative of a relative increase in regulatory and financial hurdles for businesses in the Region (Figure 13). Smaller BMCs faced the steepest declines, with Grenada, St. Kitts and Nevis, and St. Vincent and the Grenadines falling 70+ positions over the decade. Registering property and getting credit were flagged as challenges in all of these jurisdictions. Businesses in St. Kitts and Nevis also face testing tax systems, while entrepreneurs in

St. Vincent and the Grenadines and in Grenada have to contend with underdeveloped legal frameworks or high costs when resolving insolvency.

Figure 13: 2018 Doing Business Ranking of Selected BMCs



Source: World Bank

In promoting a strong business environment, the Region needs to improve ICT costs and infrastructure—particularly for enterprise-grade services. Since the start of the 21st century, ICT service accessibility and familiarity have improved for personal use. According to the 2016 ICT Development Index (IDI) report, the International Telecommunication Union (ITU) referred to St. Kitts and Nevis as “the most dynamic country” in the IDI 2016 for having moved up 20 places in the rankings to the 35th position globally. In the 2017 IDI, St. Kitts and Nevis further improved, increasing one place. The improved rankings for St. Kitts and Nevis and other Organisation of Eastern Caribbean States (OECS) neighbours were driven by lower costs, better access, and consequently greater uptake of ICT services primarily for basic consumption (Table 2; Figure 14)

While personal ICT use has grown in recent years, uptake of such services has remained low in production and commerce. Businesses tend to require faster internet speeds for operation. In a 2017 ICT-Pulse survey of Caribbean countries, half of the BMCs surveyed did not have a single internet service offer for speeds 100Mbps and higher—an indication of an underdeveloped business ICT environment (Table 2).

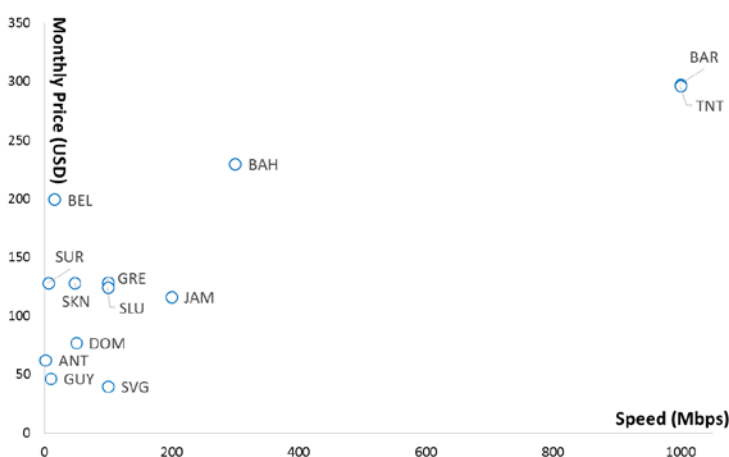
Table 2: 2017 IDI Ranking and Inputs

	IDI Rank out of 175	Access	Use	Skill	Highest d/l speed	
					Speed/ bps	Price (USD)
 ANT	75	6.3	4.0	6.2	2 M	\$62.20
 BAH	64	6.8	4.5	7.5	300 M	\$229.99
 BAR	35	8.2	5.9	7.7	1 G	\$297.50
 BZE	119	3.7	2.6	5.8	16 M	\$199.52
 DOM	69	6.4	4.8	6.1	50 M	\$76.93
 GRE	74	6.3	3.8	7.0	100 M	\$128.46
 GUY	121	4.3	1.7	5.7	10 M	\$46.37
 JAM	99	4.8	3.6	5.8	200 M	\$116.43
 SKN	34	7.7	6.5	7.6	48 M	\$128.09
 SLU	94	5.7	3.7	5.5	100 M	\$124.22
 SUR	84	5.9	4.5	4.7	6 M	\$39.74
 SVG	78	6.5	3.9	5.9	100 M	\$128.09
 TT	67	7.0	4.5	5.7	1 G	\$296.30

Source: ITU

Figure 14: 2017 Broadband Internet Speeds and Prices/Month

Source: ITU



Based on CDB interviews²² with regional entrepreneurs, MSMEs, and regulators, the key issues constraining commercial ICT strategies are:

- high broadband cost and unaffordability;
- unreliable network services and infrastructure;

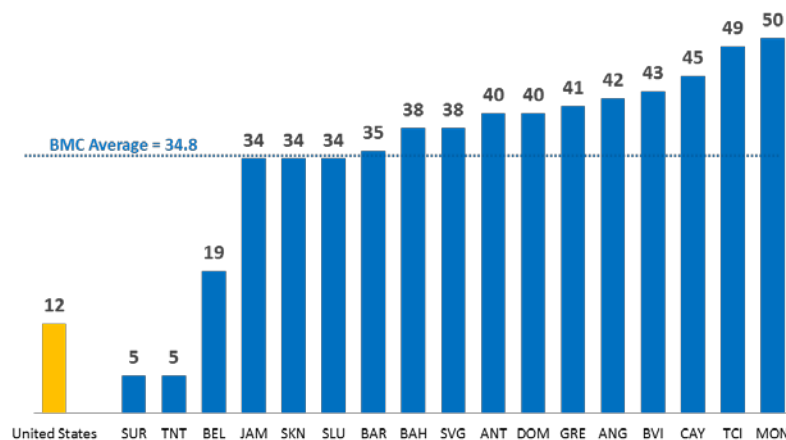
²² Micro-Small-Medium Enterprise Development in the Caribbean: Towards a New Frontier. Caribbean Development Bank, 2016.

- limited access to bank loans specifically for ICT and creative industries start-ups;
- outdated laws, policies and regulation;
- poorly targeted training programmes; and
- the need for improved media literacy programmes across a wide selection of the public to help drive more individual adoption of new or indigenous technology products and services.

These factors have also limited the development of sophisticated ICT services that can further foster innovation and facilitate internet-based commerce, knowledge sharing, and economic diversification.

High electricity costs also contribute to low business competitiveness. A 2012 CARILEC survey of regional electricity tariffs shows that domestic electricity costs were, on average, almost three times that in the United States. The average Caribbean business pays 35¢/kWh—a rate that doubled in the decade to 2012. The cost was lowest in the energy-producing Trinidad and Tobago. The smallest economies, which are also the most dependent on imported petroleum products, faced the highest tariffs (Figure 15).

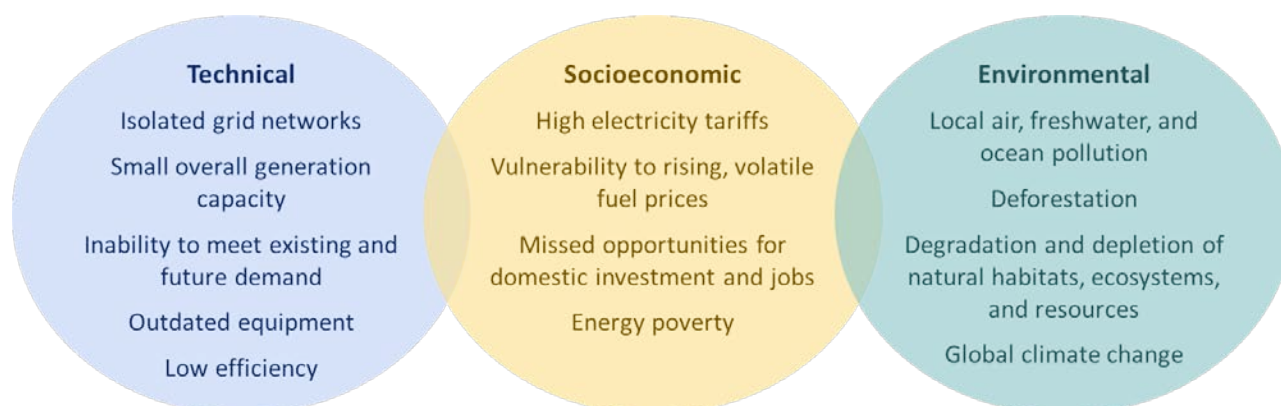
Figure 15: Local Electricity Tariffs (2012), US¢/kWh



Source: CARILEC, World Bank

Despite the relatively high costs and dependence on imported energy, many regional regulators are yet to implement measures to incentivize or regulate more energy-efficient practices by consumers and businesses. BMCs have significant unexploited potential for developing renewable energy resources, to the extent that many of the services-based economies can evolve into net energy exporters. These resources range from the geothermal potential of the volcanic Lesser Antilles, to the hilly topographies, and high rainfall for wind and hydropower generation. Solar photovoltaic (PV) systems are also abundant throughout the Region but remain extremely underutilized. Figure 16 highlights additional energy challenges faced by the Region. Conversely, there are immediate gains to the yield from energy efficiency and energy savings measures that can be deployed across many economic sectors.

Figure 16: Major Energy Challenges in the CARICOM Region



Source: Caribbean Community (CARICOM) 2015 Caribbean Sustainable Energy Roadmap and Strategy

Table 3: Installed Power Capacity and Share of Renewables in CARICOM Member States, as of 2015

Country	Installed Power Capacity	Installed Renewable Power Capacity	Renewable Share of Installed Power Capacity
	MW	MW	percent
Antigua and Barbuda	113.0	0.8	0.7
The Bahamas	536.0	0	0
Barbados	240.0	5.5	2.3
Belize	141.8	82.5	58.2
Dominica	27.7	7.6	28.6
Grenada	48.6	0.7	1.4
Guyana	383.0	55.1	14.4
Haiti	390.0*	62.4	16.0
Jamaica	926.4	72.0	7.8
Montserrat	5.5	0	0
Saint Lucia	88.6	0.2	0.2
St. Kitts and Nevis	56.4	3.2	5.7
St. Vincent and the Grenadines	52.3	6.4	12.2
Suriname	410.0	189.0	46.1
Trinidad and Tobago	2,368.0†	0.01	0.005
CARICOM Total	5,787.3	485.4	7.9

Source: CARICOM (2015) Caribbean Sustainable Energy Roadmap and Strategy

* Only 244 MW of this capacity is currently operational. † Capacity of the generators has been de-rated from 2,368 MW to 2,117 MW due to the age, manufacturer, and ambient conditions of the machines that are presently available to the grid

The under-exploitation of renewable energy and energy efficient approaches is partly due to the Region's difficulty with accessing financing for sustainable development. Furthermore, stronger legal frameworks are needed to simulate enough energy sponsorship to bridge the financing gap.

On the other hand, electricity cost issues became marginally less pressing as the net-importers began benefitting from lower global oil prices and concessional financing under the Petrocaribe Energy Cooperation Agreements²³. According to the IMF (2016), this has "prolonged oil dependence by discouraging [or delaying] diversification into alternative fuels"²⁴ and increased these countries' economic vulnerability and debt levels. Electricity costs are again on the forefront of issues as oil prices have begun to recover and daily Petrocaribe oil shipments have fallen by over 75%²⁵ from a 2012 peak as Venezuela faces its deep political and economic crisis. This in turn has the potential to weaken the competitiveness (and potentially the output) of energy-intensive industries, such as the manufacturing sector. Facing rising costs, countries need to explore more cost-effective energy sources and/or improve the energy intensity of critical sectors.

Total factor productivity (TFP) is a common measure of the efficiency and intensity of inputs (labour and capital) in the production process. Robert M. Solow (1957) laid the groundwork for the neoclassical growth accounting model that separately attributes output growth to either increases in observable variables or a residual effect (i.e., the Solow residual or TFP growth). "Growth in TFP represents output growth not accounted for by growth in inputs"²⁶, and is thought to capture the advantage of using new technologies and other innovations. While TFP differences between different countries are not perfectly explained by technological differences, technology tends to be a critical driver²⁷. Other literature discusses the impact of other structural and political factors in boosting or inhibiting economic growth (Table 4).

Table 4: Factors Affecting Economic Growth

Positive Impact	Negative Impact
Human capital formation	Inflation
Openness to trade	Population growth
Institutions – rule of law, social capital, political rights, civil liberties	Institutions – coups, wars, political instability
Investment in plant and equipment	Political uncertainty
Better developed financial markets	Deterioration in the terms of trade
Innovation	Market distortions (real exchange rate, negative exchange rate, labour market rigidities)
Productivity growth	Debt accumulation

²³ Established by the Government of Venezuela in 2005, Petrocaribe is an Energy Cooperation Agreement for Venezuela to provide preferential payment arrangements for petroleum and petroleum products to participating Caribbean and Latin American countries. Participating nations buy oil at market value with only a portion paid for upfront, and the remainder paid through a 25-year financing agreement on 1% interest.

²⁴ McIntyre, Arnold et al. *Caribbean Energy: Macro-Related Challenges*. International Monetary Fund, 2016.

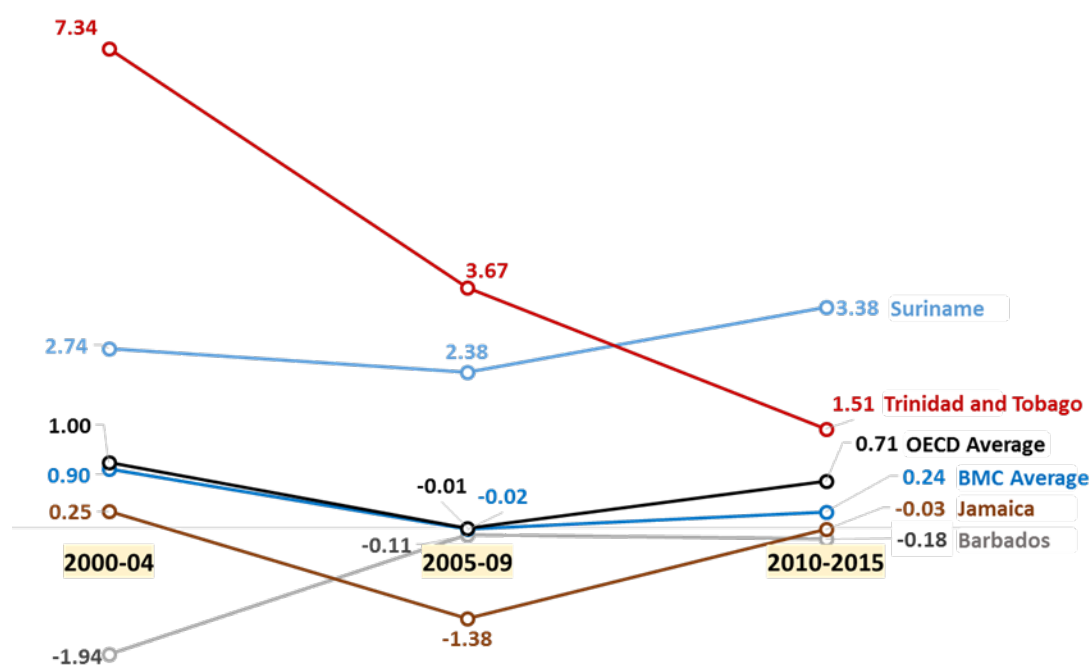
²⁵ Stargardter, Gabriel. "Mexico Studies Supplying Petrocaribe Oil If Venezuela Govt Falls." Reuters, Thomson Reuters, 23 Aug. 2017.

²⁶ Hornstein, Andreas, and Per Krusell. "Can Technology Improvements Cause Productivity Slowdowns?" *NBER Macroeconomics Annual*, vol. 11, MIT Press, 1996.

²⁷ Islam, Nazrul. *International Comparison of Total Factor Productivity: A Review*. 1999.

In the Region, limited use of ICT and innovative approaches has constrained the productive potential of economic inputs, which has translated into low TFP contributions to economic growth in the past decade. Based on CDB's growth accounting calculations, TFP contributions explained 45% of regional output growth in the 1980s and 1990s, but fell to explaining only 15% in the 2010-2015 period. Viewed another way, out of the average 1.44% growth in BMC economies each year between 2010 and 2015, TFP contributed only 0.24% to that rate each year (i.e., labour and capital inputs expanded by 1.19%)²⁸.

Figure 17: Average Annual TFP Residual (2000-2015)



Source: CDB, OECD

The downward trend in regional TFP contributions was driven primarily by reduced productivity in The Bahamas, Barbados, Haiti and Saint Lucia between 2000 and 2015. In particular, Barbados' economy has been registering negative TFP shocks for over a decade. Between 2010 and 2015, the TFP contribution was negligible in service-based economies (e.g., Jamaica and St. Kitts and Nevis) and highest in the commodity-exporting countries of Belize, Suriname, and Trinidad and Tobago. Several studies within the Region indicate that highly productive Caribbean firms tend to be foreign-owned; sophisticated ICT users; certified in high quality standards; able to access finance; and run by qualified managers and professionals²⁹.

Over the period 2010-2015, average annual TFP contribution across BMCs (0.24) was substantially lower than the OECD average (0.71) (Figure 17). This can be attributed to better

²⁸ *Enhancing Productivity and Growth in the Caribbean*. Caribbean Development Bank, 2017.

²⁹ *Ibid.*

systems in place to support rebounding from the global crisis in many OECD countries. Insufficient adoption or diffusion of different innovations and reforms to address the multi-layered effects of economic regression may have, in part, affected most BMCs. This is supported by the observation that the BMCs also underperformed when compared to other developing regions, prior to the crisis. During the period 2005-2009, average TFP in the Region was on par with that in Sub-Saharan Africa at -0.02 annually, while average TFP contribution was 0.18 in Eastern Europe and Central Asia (2008-2009) and 0.01 in Latin America (2006)³⁰ (Table 5). This supports the possibility of comparatively low technological and productivity diffusion in the Region. Thus, to address productivity and competitiveness weaknesses, there is a need for policies that go beyond the traditional factor inputs to address gaps in research and development, ICT, innovation, and clustering and to leverage knowledge building and sharing as strategies to boost growth.

Table 5: Countries with High and Low Productivity Levels between 2006 and 2008, by region

Eastern Europe and Central Asia (ECA)		Latin America (LA)		Sub-Saharan Africa (AFR)	
Mean	0.18	Mean	0.01	Mean	-0.02
High Performers		High Performers		High Performers	
Hungary	1.50	Peru	0.32	Ethiopia	0.24
Romania	1.16	Mexico	0.28	Botswana	0.23
Low Performers		Low Performers		Low Performers	
Serbia	-0.27	Honduras	-0.34	Zambia	-0.24
Slovak Republic	-0.19	Guatemala	-0.19	Swaziland	-0.19

Source: World Bank

Note: TFP estimates are based on firm-level survey analysis conducted in different years. The ECA survey included 2,875 firms in 25 countries in 2008/09; the LA survey included 5,514 firms in 15 countries in 2006; and the AFR survey included 5,582 firms in 25 countries in 2006/07.

The cost and inconvenience of air transport have constrained opportunities for intra-regional travel and trade. Higher cost of trade also impact FDI inflows to the Region (CDB 2017). According to the World Bank's Logistics Performance Index (LPI) the Caribbean is the most ineffective region in moving goods and connecting manufacturers and consumers with international markets. Furthermore, the Region lagged behind the rest of the world in all sub-indices: customs clearance processes, quality of trade and transport-related infrastructure, ease of arranging competitively priced shipments, quality of logistics services, ability to track and trace consignments, and frequency with which shipments reach consignees within scheduled times (Table 6).

Table 6: Regional Performance on the LPI (2016)

Region	LPI Score	Customs	Infrastructure	International Shipments	Logistics Competence	Tracking / Tracing	Timeliness
East Asia	3.69	3.39	3.56	3.48	3.52	3.60	3.97
Europe	3.40	3.19	3.33	3.29	3.36	3.45	3.79
North America	2.76	2.63	2.61	2.76	2.71	2.76	3.08
MENA	2.89	2.60	2.78	2.96	2.81	2.86	3.29

³⁰ Saliola, Federica, and Murat Seker. *Total Factor Productivity across the Developing World*. Enterprise Note Series vol. 23, World Bank, 2011.

Region	LPI Score	Customs	Infrastructure	International Shipments	Logistics Competence	Tracking / Tracing	Timeliness
Sub-Saharan Africa	2.47	2.36	2.29	2.49	2.42	2.39	2.84
South Asia	2.62	2.42	2.45	2.68	2.56	3.56	3.03
Europe & Central Asia	3.23	3.03	3.16	3.14	3.17	3.24	3.62
Caribbean	2.38	2.31	2.23	2.39	2.32	2.30	2.66
BRIC	3.19	2.82	3.16	3.10	3.22	3.28	3.55

Source: World Bank

Despite the challenges with intra-regional connectivity, the Caribbean's propensity to travel often exceeds that of other regions and the global average (0.5 trips per capita). For example, the average Saint Lucian takes four flights per year, Barbadians – give trips, and Bahamians – eight trips³¹. This is in part driven by regional integration and the lack of alternatives for intra-regional travel. However, because the aggregate passenger and freight markets are small, the Region makes up a very small share of global transport, and regional carriers are not commercially successful. In most jurisdictions, home-designated carriers meet the majority of passenger and freight transportation needs. This contributes to the lack of regional cooperation on air transport, as shareholder governments seek to retain passenger numbers and revenue. To offset costs associated with airlines and airports, governments levy high taxes and other charges on air transport, much of which is passed on to travellers. For example, in 2015, a survey of intra-CARICOM routes³² found that for a Barbados-Antigua return trip booked one day in advance, taxes and fees accounted for 34.5% of the total fare. When booking a month in advance, this share rose to 47.8%. Put another way, taxes and fees were 92% of the base fare. This has hampered both demand and revenues.

Physical infrastructure deficiencies (ICT, transport, public services) limit the Region's productive capabilities. Large areas in many BMCs have inadequate access to road infrastructure and unreliable power and connectivity services. CDB's 2014 report, *Public-Private Partnerships in the Caribbean: Some Early Lessons*, estimated that in order to increase and improve the Caribbean Region's infrastructure base to acceptable international standards, total investment of about USD21.4 billion was required from 2014 to 2025. This infrastructure gap is compounded by the fact that regional infrastructure investment trails other regions. For example, the World Bank estimates that LAC spends an average 2.8% of GDP on infrastructure while other countries spend over 4% and some regions, such as East Asia and the Pacific, spend as much as 7.7%.

The Region's public infrastructure spending tends to be inefficient due to "lack of institutional capacity for planning, capital budgeting, and implementation"³³(World Bank, 2017). This is reflected in gross capital formation (GCF) rates (as a percentage of GDP), which increased marginally over the period 2000 to 2015. This increase was driven by Suriname and to a lesser

³¹ Making Air Transport Work Better for the Caribbean. Caribbean Development Bank, 2015.

³² Ibid

³³ Fay, Marianne. *Rethinking Infrastructure in Latin America and the Caribbean: Spending Better to Achieve More*. International Bank for Reconstruction and Development / World Bank, 2017.

extent Haiti, while for all other BMCs for which there is available data, GCF trended downwards over the period. This decline signals a slowing replenishment of the productive capacity in the region. If this continues over an extensive period, the long-term effect may be one of near stagnation (Table 7). Net National Product (NNP) if measured properly is the actual return on a country's assets. If investment is stagnant or in decline NNP and by extension economic growth will also be stagnant or decline.

Table 7: GCF as a Percentage of GDP

Country	2000	2005	2010	2011	2012	2013	2014	2015
Bahamas, The	25.9	24.2	24.0	25.9	30.3	27.5	30.8	23.9
Belize	28.7	18.5	15.3	15.4	16.1	18.0	19.8	21.6
Barbados	17.6	18.4	12.8	13.9	12.7	12.6	12.3	15.4
Guyana	23.8	24.8	25.2	23.9	24.8	18.9	28.7	23.4
Haiti	27.3	27.4	25.4	27.9	29.5	30.0	30.9	32.4
Jamaica		26.7	19.9	20.9	19.6	21.0	22.0	21.2
Saint Lucia	26.6	28.4	25.2	25.3	24.4	23.2	19.6	20.4
Suriname	12.4	24.9	37.5	53.2	57.8	62.9	70.7	67.4
Trinidad and Tobago	16.8	30.2	13.2	11.6	11.2	12.2	12.9	12.4
Caribbean small states	19.1	26.6	18.9	20.0	20.5	20.9	22.8	21.3
LAC	18.8	18.6	20.1	20.5	20.9	20.9	20.4	19.9
Heavily indebted poor countries	18.3	20.8	22.3	23.5	24.5	24.9	25.6	25.6

3.2 Blueprint for Improving Productivity and Competitiveness

Productivity and Competitiveness Challenges

Low rankings in the WB Ease of Doing Business
 Large infrastructure gaps
 Weak governance
 Inefficient and costly transport links
 High energy and electricity costs and nascent regulation

Policy Priorities

Private sector-led growth
 Opening new trade markets
 Regional payments facility (fintech)
 First class, cost-effective infrastructure

Some of the most pressing productivity and competitive challenges in the Region are: (1) the high cost of doing business; (2) large infrastructure gaps; and (3) high energy costs. A blueprint of solutions to each of these challenges is discussed below. Other important components like digitalisation that incorporates fintech are discussed later in this paper.

3.2.1 Improving the Ease of Doing Business

The World Bank's Ease of Doing Business assessment showed that the Caribbean's ranking has been in decline, with the average ranking for the Caribbean being 123 (World Bank, 2018). The success of the policy suggestions for macro fiscal prudence as well as for human development will hinge on how well the rest of the economy performs. Governments' adopting fiscal rules that prioritise savings and limit expenditure would lead to a reduction in the headcount within ministries and some public agencies, and also within SOEs—if SOEs are reformed based on the framework set out before. In some ministries and government agencies, there might not be a fall in headcount. However, the skills required might change, e.g. the ministry and agencies responsible for social programmes might require more analytical skills since social expenditure and receipts will be based more on means testing and assessment of progress if conditional cash transfers are adopted. There is likely to be a displacement in employment within the public sector, which means that more employment or entrepreneurial opportunities must be created in the rest of the economy. In fact, the private sector must become the engine of growth within the economy if fiscal sustainability, social and human development and environmental sustainability are to be realised. Therefore, governments seeking to expand their economies, must also focus on the ease of doing business environment. With poor Doing Business Indicator rankings in the Caribbean, governments should systematically attempt to improve their business climates to better facilitate the development of the private sector, thereby improving their position in the Doing Business rankings.

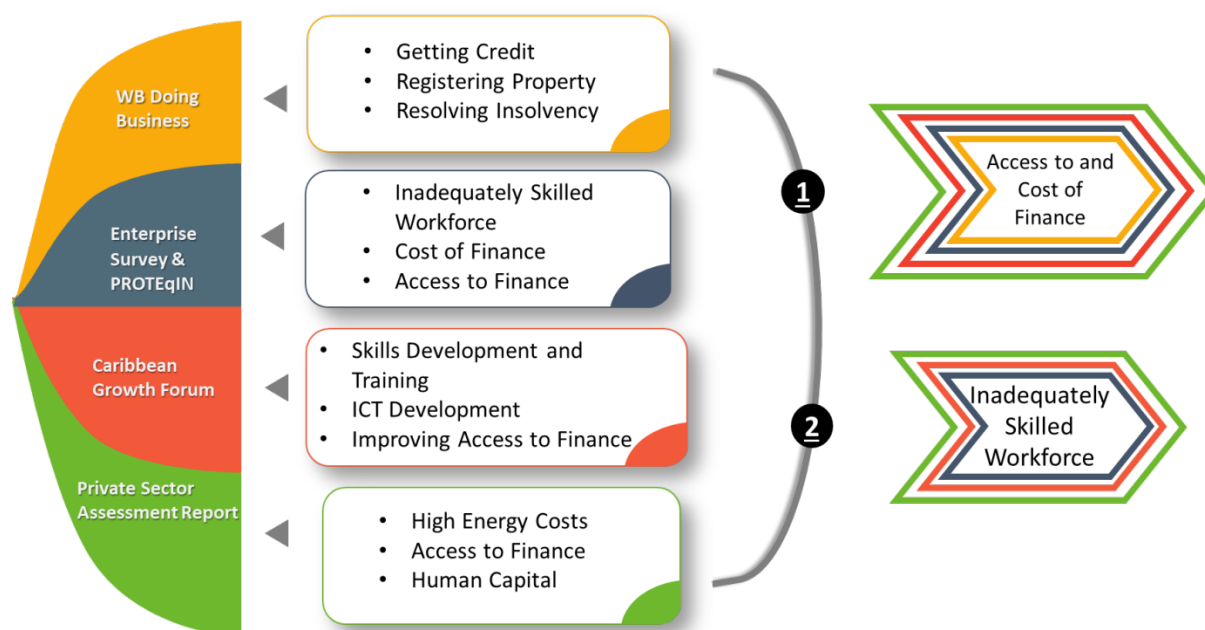
Research by Jamal Ibrahim Haidar (2012) analysed the impact of business regulatory reforms on economic growth over the period 2006-2010. Examining cross-country differences in business regulatory reforms as well other variables that captured macroeconomic dynamics in 172 countries, the assessments showed that each additional reform was associated with, on average, 0.15% increase in economic growth.

Dohnert, Persaud, Pereira, Elliott and Grant (2016) concluded that access to, and the cost of, finance and an inadequately skilled workforce were in fact the two regional priorities for improving the business environment in the Caribbean. This meta-analysis, which included an assessment of the World Bank's Doing Business results for the Caribbean, Enterprise Survey & PROTEqIN, Caribbean Growth Forum and The Private Sector Assessment Report pointed to many areas where improvements were required. Access to finance was tagged as a priority in all of the reports, while an inadequate work force was deemed a priority in three of the four reports (Figure 18).

There are many policy reforms that could improve access to and the cost of finance. These include adequate laws and regulations that relate to venture capital, angel investing and private equity such as insolvency and bankruptcy legislation, tax treatment of equity investment versus debt financing, treatment of minority shareholders and legal reporting requirements. There is also inadequate legislation, regulations and institutions to address commercial matters directly. Incentives for the promotion of junior stock exchanges could also be examined as an option to improve access to finance³⁴.

³⁴Micro, Small and Medium Enterprise Development in the Caribbean: Towards a New Frontier. Caribbean Development Bank, 2016.

Figure 18: Regional Business Climate Reform Priorities



Source: Adapted from Dohnert, Persaud, Pereira, Elliott, and Grant (2016)

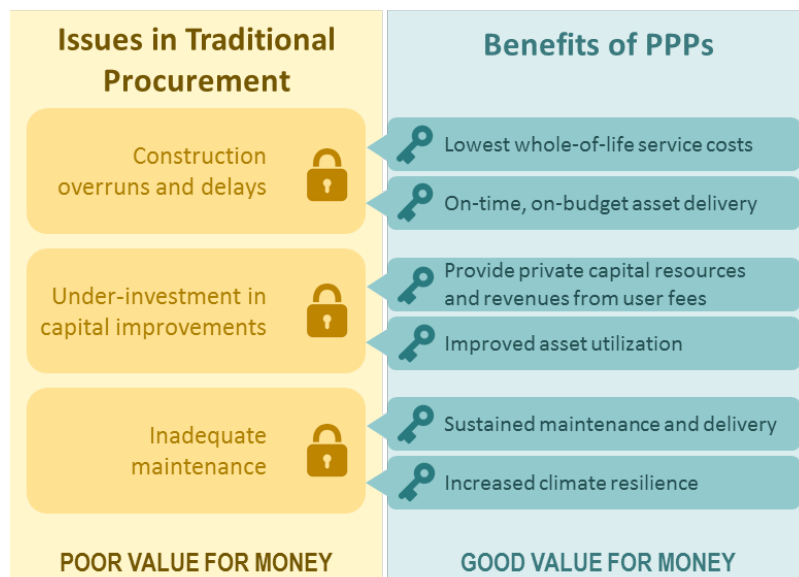
3.2.2 Reducing the Large Infrastructure Gaps

While Caribbean governments have the ability to finance just over half of the requisite infrastructure needs over the next decade, this would leave a financing gap of approximately USD10.6 billion (CDB, 2014). Furthermore, traditional public procurement of infrastructure services often fails to provide value for money. To cost-efficiently address public infrastructure issues, a new paradigm for the procurement should be considered, namely PPPs.

The PPP concept is not new to the Caribbean, and there are risks associated with improperly deployed procurement procedures. For example, this arrangement could lead to longer-term public finance liabilities for the government if demand for the PPP-provided service or good is less than anticipated. It is important that governments work with international partners to provide public officials with technical skills to assess the efficacy of proposed PPP arrangements. If PPPs are implemented in a manner where the risks are shared appropriately between the government and the partnering private sector entity, then Caribbean populations would receive a high level of service while providing the private sector with an acceptable rate of return for its investment. Asset class allocation requirements and rules of long term investors such as insurance companies could also be adjusted to allow these institutional investors to invest in the provision of infrastructure. Encouraging long term investors to participate in PPP arrangements is also a priority.

PPPs may be considered as a viable alternative to traditional public procurement procedures. They have been particularly successful in Jamaica, with notable examples being Highway 2000 and Sangster International Airport in Montego Bay. Figure 19 shows some of the benefits associated with PPPs when compared to traditional procurement.

Figure 19: PPPs Address Key Issues in Traditional Public Procurement



In addition to these benefits, PPPs can help to address the need to build resilience in the fiscal accounts, as well to ensure that infrastructure is more climate resilient. Private sector risk management could therefore also assist with fiscal and climate related risks. Risks related to PPPs should also be considered to avoid the pitfalls of repeating the same mistakes and to ensure that countries learn from each other:

- Failure to attract qualified bids;
- Poor value for the public sector from lack of competition;
- Hidden fiscal costs; and
- Policy inflexibility (PPP contracts can be difficult and expensive to amend/terminate).

These risks are not insurmountable and can be managed effectively if governments take the lead in setting rules, defining priorities, and tracking promised deliverables under PPP arrangements.

3.2.3 Circumventing High Energy Costs using Renewable Energy/Energy Efficiency Approaches

Acknowledging the importance of energy security to economic growth and resilience, CDB has mainstreamed it as a strategic priority across all sectors within the Bank's portfolio. The Bank has facilitated several energy efficiency (EE) projects, exploring the impacts of innovative EE measures in a variety of economic sector applications. Opportunities for achieving EE include the adoption of smart architecture and construction measures, sale of energy-efficient consumer appliances, electricity grid interconnection, and grid infrastructure improvement.

At the CARICOM/regional level, renewable energy (RE) targets have been set as: 20% of total energy capacity by 2017; 28% by 2022; and 47% by 2027. BMCs are therefore tasked with implementing a sustainable energy programme to realize the targets. CDB, along with other international development partners, is supporting the creation of a cooperation framework to foster a regional energy sector transformation. Policy interventions include:

- supporting the implementation of policies, legislation and regulations that create an enabling environment for RE development. This includes the strengthening of institutional and other necessary arrangements for the removal of regulatory and policy barriers, such as regional and national energy policy advisory committees;
- innovative financing mechanisms for RE products and projects. Clean energy financing, including, but not limited to, mechanisms to support the substitution of diesel by cleaner, cheaper, and more secure sources of energy (natural gas, geothermal, hydro, ocean and sustainable biomass) for baseload power generation;
- EE policies and regulations such as energy efficient building codes, energy standards for appliances and equipment, and clean vehicle standards and regulations;
- building capacity of key players in the field of RE development, including project developers, financiers, engineers and technicians, government policymakers and planners, and utilities staff;
- RE, including solar, wind power and energy storage and their integration into the grid, in a cost-effective manner; and
- Grid management, including smart grid deployment.

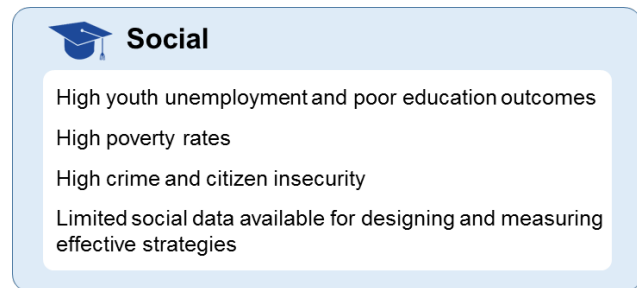
In an effort to assist the Region's shift towards cleaner energy, support to BMCs must also include technical assistance to utilities for developing, planning and designing energy storage and grid modernisation solutions for future investment.

3.3 Next Steps

Several governments acknowledge that the private sector is a critical partner in building resilience and driving growth throughout the Region. Governments can empower the sector through Doing Business reforms and by providing partnership opportunities with the public sector. These efforts should be supported through training for improved public-private sector relations; funding for private sector projects with a national economic development objective; and capacity building for MSMEs, among other interventions.

Chapter 4: Social and Human Development

4.1 Social and Human Development Challenges: Idle Hands



Given the impacts of recent macroeconomic and productivity challenges, social problems have intensified throughout the Region. The most pressing of these include poverty and inequality, healthcare, education, unemployment, and crime. CDB's BMCs face high rates of poverty (43.7%) and youth unemployment (18-47%), which have fuelled already high levels of crime and citizen insecurity.

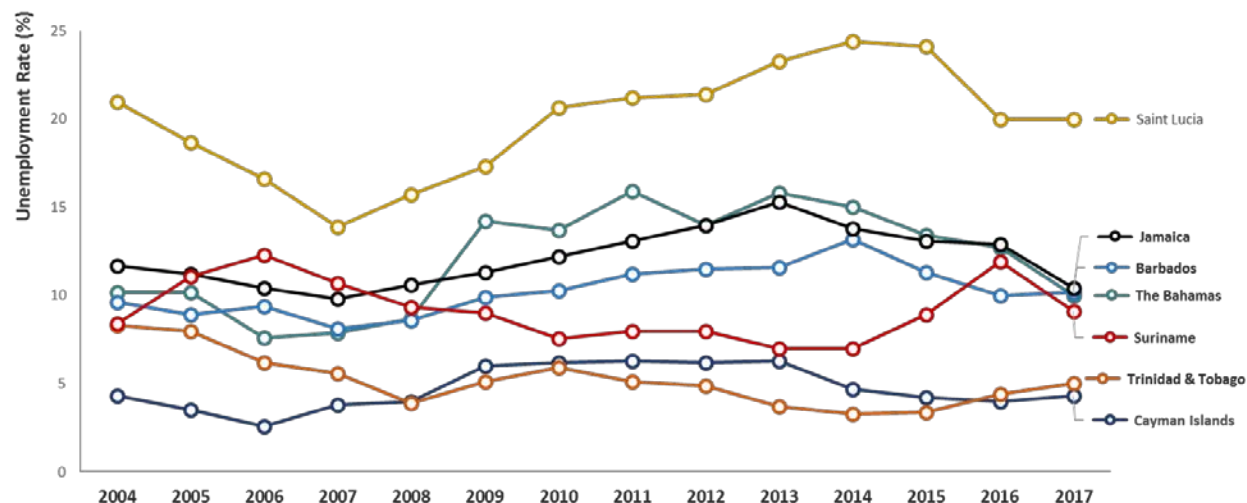
In the last decade, high unemployment rates have persisted across most of the Region where unemployment rates range from just over 4% in the Cayman Islands and Trinidad and Tobago to over 20% in Grenada, Saint Lucia and St. Vincent and the Grenadines (Figure 20). Addressing youth unemployment, which is at nearly 25% across the Region, represents a difficult task for current and future governments with potential costs related to social safety, health, crime, productivity and the ability to maintain social security systems and contribute to national income in the medium to long term³⁵. The primary factors related to the high levels of unemployment include the regional economic conditions, and the lack of relevant skills, training, and knowledge for the job market. A United Nations Human Development (UNDP) report in 2016 noted that many of the issues concerning youth, e.g. crime, unemployment, and education and training, are splintered among different official agencies within different ministries, often resulting in coordination weaknesses, failures and lack of holistic, comprehensive strategies and policies. Furthermore, where youth employment is present, it tends to be clustered in low skill, low education kinds of jobs with little opportunity for upward mobility³⁶.

At the current unsustainable levels, youth unemployment and underemployment pose a serious risk to productivity and potential output. These effects could be magnified for decades to come, if unemployed youth are unable to find jobs and cannot navigate the labour market. Persistent unemployment also can take a physical, financial, and psychological toll on youth who often turn to negative activities to gain income. Ultimately, this traps those who are already living in or vulnerable to poverty and adds to the national social and economic costs of poverty and unemployment.

³⁵ *Youth Are the Future: The Imperative of Youth Employment for Sustainable Development in the Caribbean*. CDB, 2015.

³⁶ Lashley J.G. and D.D. Marshall. 2015. "Youth and Employment in the Caribbean". Background Paper for the UNDP Caribbean Human Development Report. UNDP.

Figure 20: Historic Unemployment Rates (2004 - 2016), select BMCs



Source: Statistical Offices, CDB

Regional improvements in GDP and GDP/capita have not necessarily translated to reductions in poverty, vulnerability, and inequality for those at the lowest levels of household income. While the indigence levels are low and have fallen for most BMCs since the early 2000s, CDB estimates that over 40% of the aggregate population still lives in poverty. At the national level, poverty rates vary from 2% in the Cayman Islands (2006) to almost 60% in Haiti. In addition to Haiti, available data suggests that poverty levels are highest in Belize, Suriname, Grenada and Guyana, where over 30% of the population is poor. Some countries still face high levels of indigence. Approximately one out of every six Belizeans, every five Guyanese, and every four Haitians is unable to afford the basic food basket.

From a global view, most BMCs are moderately equal, and levels of inequality have either been stable or falling depending on the country and measure of assessment (Table 8). Looking more closely at consumption expenditures by income quintiles suggests that inequality has been trending downwards in Jamaica, Saint Lucia, and Dominica where consumption shares of the poorest quintiles has improved.³⁷

³⁷ *The Changing Nature of Poverty and Inequality in the Caribbean: New Issues, New Solutions*. Caribbean Development Bank, 2016.

Table 8: Comparative Comparison of Poverty, Vulnerability, and Inequality

Country	Year	Population Poor (%)	Population Vulnerable (%)	Population Indigent (%)	Poverty Gap Index	Gini Coefficient (0=equality)
Anguilla	2009	5.8	17.7	0	1.1	39
Antigua and Barbuda	2007	18.3	10	3.7	6.63	48
Bahamas	2001	9.3	-	5	2.8	57
Barbados	2010	19	10.4	9.1	6	47
Belize	2009	41.3	13.8	15.8	11.4	36
British Virgin Islands	2002	22	-	<1	4.3	23
Cayman Islands	2006/7	2	1.8	0	0.44	40
Dominica	2009	28.8	11.5	3	8.9	44
Grenada	2008	37.7	14.6	2.4	10.13	37
Guyana	2006	36.1	-	18.6	16.2	35
Haiti	2012	58.5	11.5	23.8	-	61
Jamaica	2012	20	-	-	4.5	38
St. Kitts	2008/9	23.7	-	1.4	6.4	38
Nevis	2008/9	15.9	-	0	2.7	38
Saint Lucia	2005	28.8	40.3	2	9	42
St. Vincent and the Grenadines	2007/8	30.2	48.2	2.9	7.5	40
Suriname	2012	47.2	-	-	-	-
Trinidad and Tobago	2005	15.5	9	1.2	4.6	39
Turks and Caicos Is.	2012	21.6	11.4	0	4	36
World	2013	22.3†				
LAC (excl. high income)	2013	10.8†				

Source: Regional Government Reports, CDB, WB; †WB Poverty Gap at \$5.50/day

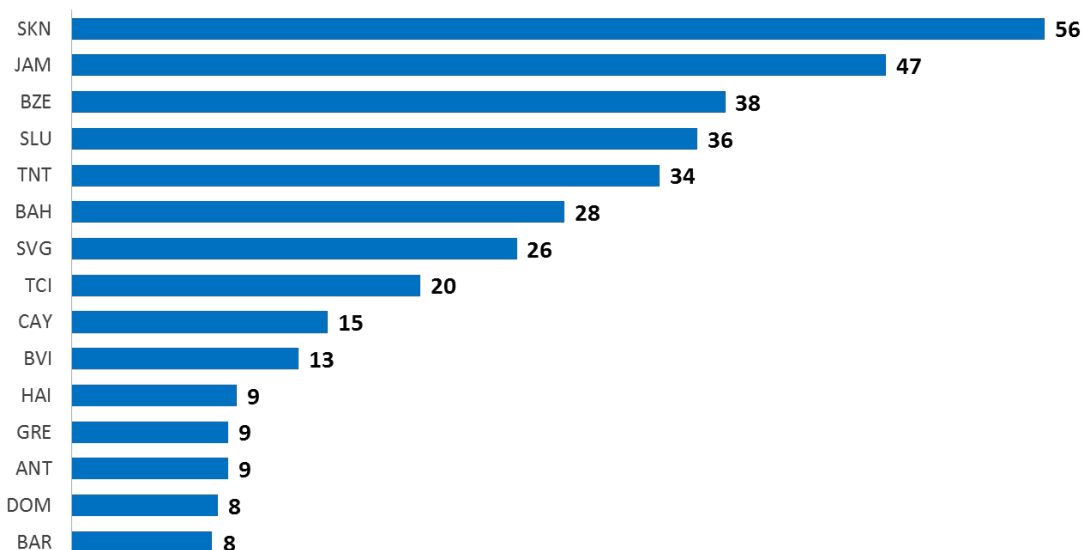
Ability to afford basic food is simply one aspect of poverty—a multidimensional phenomenon. Deprivation is also experienced through poor health, lack of education access, inadequate standard of living, poor work quality, violence, and general disempowerment. Complex interactions of these factors further inhibit the ability of poor households to progress economically.

The low impact of substantial poverty-alleviation funding and efforts over the last three decades has shed light on the need for multidimensional poverty approaches (MPAs). Strategies to drive economic growth and create job opportunities do not necessarily lead to poverty reduction, particularly if they are obtuse to the chronic non-income dimensions of poverty (limited access to social services, infrastructure, etc.) faced by the poor and the vulnerable. Furthermore, there is a globally recognised need to ensure that poverty-targeted strategies are centred on the specific experiences and perspectives of the populations that they seek to help. Persistent regional poverty and rising unemployment have helped to fuel rising crime rates across the region. In 2016, the murder rate exceeded 25 per 100,000 for seven BMCs: St. Kitts and Nevis³⁸, Jamaica, Belize, Saint Lucia, Trinidad and Tobago, The Bahamas, and St. Vincent and the Grenadines (Figure 21). This

³⁸ Note that there were fewer than 56 murders in St. Kitts and Nevis in 2016, but the rate is high due to the small population.

is significantly higher than 2015 murder rates in countries like the United States (4.9) and Singapore (0.2), and also compared to the Latin America and the Caribbean regional average (22.5)³⁹ (Figure 21). Beyond the direct effects of lives lost, violent crime has increased citizen insecurity and the cost of policing, while threatening tourism income.

Figure 21: Intentional Homicide Rate in 2016, per 100k population



Source: Official statistics and national reporting

A recent IDB study⁴⁰ confirmed that the Caribbean's violent crime rates are among the highest in the world. For the five Caribbean countries included in the study, 13% of residents were the victims of common crime over the past year and nearly a third of residents in capital cities had lost a close family member or friend due to violence. The rate of "victimization by assault and threat" (6.8%) exceeds that in Latin America (4.7%) or Africa (5.2%) (Table 9). Homicide rates in certain parts of The Bahamas, Jamaica, and Trinidad and Tobago are "comparable to countries in armed conflict". These violent crimes are concentrated in poorer neighbourhoods and committed by perpetrators who are familiar to the victims. The high tolerance for violence, particularly against women and children, creates an ideal environment for the perpetuation of such crimes, which in turn are under-reported and under-represented in police and crime surveys. There is a need for effective, evidence-based strategies, particularly targeting crimes against private businesses (23% have faced loss due to crimes), and against women and children.

³⁹ UN Office on Drugs and Crime: International Homicide Statistics database

⁴⁰ Sutton, Heather. Restoring Paradise in the Caribbean: Combatting Violence with Numbers. Inter-American Development Bank, 2017.

Table 9: Percentage of the Public Victimised by Crime over a One-Year Period, by Region

Region / Country	Car Theft	Burglary	Robbery	Theft of Personal Property	Assault and Threat
Africa (10 cities)	1.5	8.0	4.0	11.6	5.2
Asia (5 cities)	0.2	4.8	0.8	8.1	2.6
Caribbean (5 cities)	1.9	4.1	2.7	4.8	6.8
Eastern Europe (20 cities)	0.8	4.4	1.8	8.2	2.9
Latin America (7 cities)	1.4	5.9	7.8	11.0	4.7
United States (New York)	1.6	1.9	2.3	7.7	5.1
Western Europe (18 cities)	1.2	2.3	1.4	5.4	4.1
World average	1.2	4.5	3.0	8.1	4.5

Source: IDB

Note: Caribbean cities included in study are New Providence, The Bahamas; Greater Bridgetown Area, Barbados; Kingston Metropolitan Area, Jamaica; Paramaribo, Suriname; and Port of Spain Metropolitan Area, Trinidad and Tobago

Several studies have pointed to school dropout rates and insufficient quality youth employment opportunities among the many challenges fuelling youth involvement in criminal activity. Poor and uneven quality of education in some BMCs has led to many school leavers being unable to find employment, or to connect lessons from the classroom to the needs in the workforce. CDB's education specialists have identified three areas of persistent challenges⁴¹ in the education sector across BMCs:

Access, Equity and Participation: Early childhood services are mainly privately provided, of low quality in rural neighbourhoods, and generally insufficient to meet the needs of children with development challenges. These challenges extend into basic primary education, where the rurally located, poor, and vulnerable groups have limited access to quality basic education, even though it is provided by the government. At the post-secondary and tertiary levels, participation gaps widen, and there is low male enrolment.

Efficiency, Relevance, and Effectiveness: In 2014, only 43.2% of secondary school leavers in BMCs were able to graduate with five or more subjects in the Caribbean Secondary Education Certificates examinations (including English and Mathematics) – a standard measure of a student's capacity to contribute to the workforce.

Governance: In many Ministries of Education across the Region, the lack of standards, accountability and reliable data makes it difficult to evaluate performance of the system and make evidence-based decisions. For some, capacity deficiencies are present at both school and system levels.

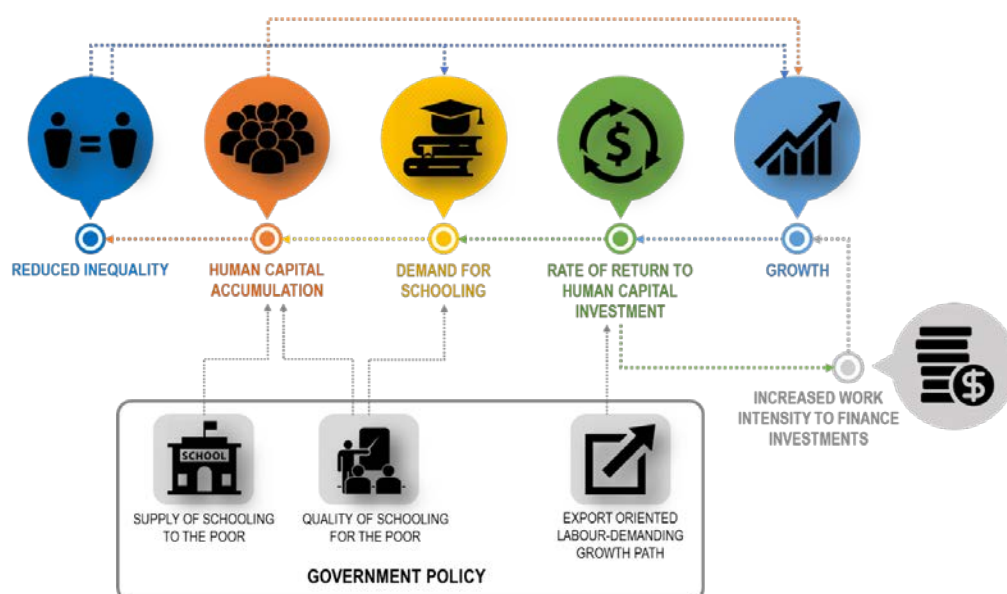
The best incentive to stay in education is a dynamic export-driven economy with many employment opportunities as described by Nancy Birdsall et al. (2000)⁴² as the virtuous circle (Figure 22). Poor

⁴¹ CDB Discussion Paper on the Education and Training Policy and Strategy presented at the 277th Meeting of the Board of Directors held July 20th 2017.

⁴²Birdsall, N., Thomas Pinckney and Richard Sabot (2000), *Natural Resources, Human Capital, and Growth*. Carnegie Endowment Working Papers.

educational outcomes in some BMCs encourage qualified citizens to pursue opportunities abroad. Between 1965 and 2000, an average of seven out of every 10 university graduates migrated out of the Region to OECD member countries^{43,44}. Over that period, the rate of tertiary graduate emigration was highest in Guyana (89%), and it has not improved vastly since then, given the relatively low demand for skilled and professional-grade labour. Throughout the Region, finding good-fit employment is not a reality for technical school and university graduates who remain at home because of the generally low labour demand and their misalignment with the skills needed for particular roles. Regional integration efforts have not yet effectively delivered on the promise of freely moving labour, which can help to smooth labour supply excesses and shortfalls in various territories.

Figure 22: Virtuous Circle



Source: Nancy Birdsall et al., 2000

Population forecasts suggest that some Caribbean nations will experience population decline during this century. Notable examples are Antigua and Barbuda, which is forecast to have a 13% decline in population between 2015 and 2100; Dominica, 22%; Trinidad and Tobago, 28%; Grenada, 35% and Jamaica, 50% (Figure 23)⁴⁵. The United Nations Department of Economic and Social Affairs also forecasts that Grenada and Montserrat will, in 2100, have populations lower than in 1950. The major reasons for this decline in population are lower fertility rates and net positive emigration rates. There are significant implications associated with declining populations. From a policy perspective, most critical is the likely increase in the dependency ratio, i.e. higher

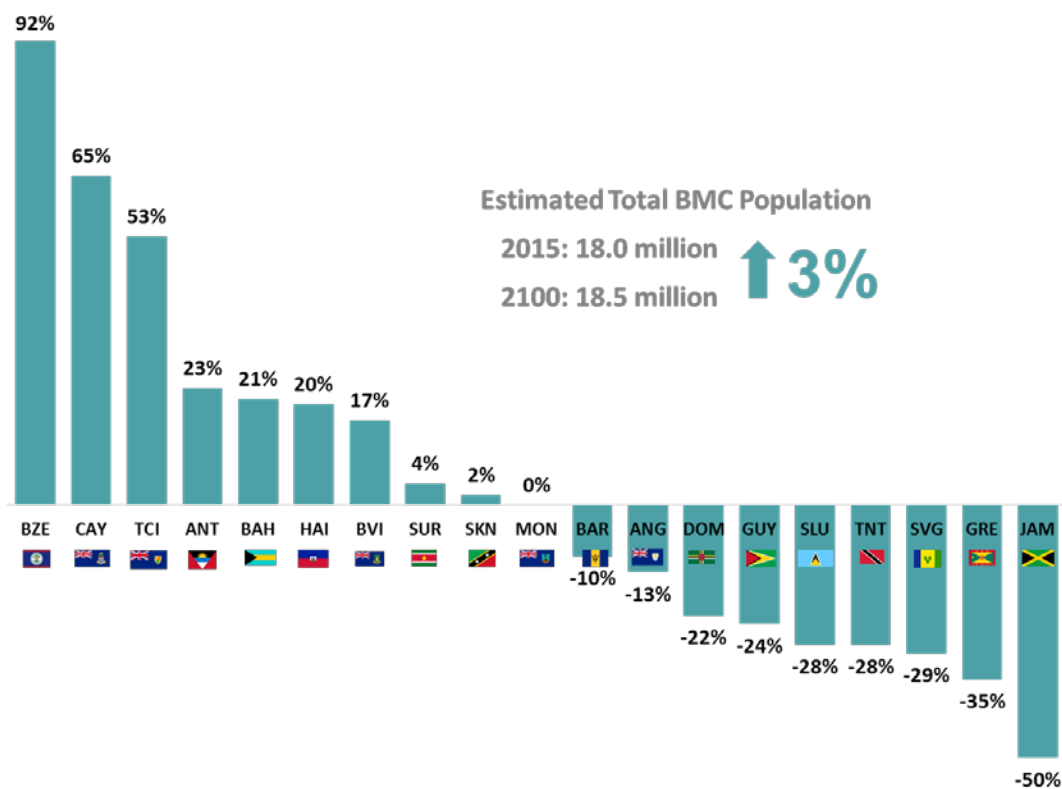
⁴³ Docquier, Frédéric, and Abdeslam Marfouk. *Measuring the International Mobility of Skilled Workers*. World Bank, 2004.

⁴⁴ Wenner, Mark. "Brain Drain: A Curse of Small States?" *Caribbean DevTrends*, Inter-American Development Bank, 28 Sept. 2016.

⁴⁵ UN DESA

non-labour market population dependent on the active labour market population and the liabilities associated with future welfare or future superannuation obligations.

Figure 23: Population Forecast: Change from 2015 to 2100



Source: UN Department of Economic and Social Affairs

In addition to slowing population growth rates, developing countries are likely to face significant fiscal and growth challenges arising from the ageing of their populations. For the Caribbean, this issue is amplified by projections that the Region is ageing at one of the fastest rates among the developing world. The elderly population (over 65 years) accounted for 13% of the total population in 2010, more than triple its share in the 1940s. Projections suggest that by 2050, the elderly population may account for a quarter of the Region's total population (Rawlins 2010). The United Nations Population Division (2016) adds credence to these projections with its models suggesting declining regional populations accompanied by a narrowing of the population under age 15 and significant growth in the ages above 65. In fact, the United Nations projects that the old age dependency ratio (persons over age 65 per hundred persons of working age) will increase from 13.2 in 2010 to 31.3 by 2050. The projections, using a medium variant⁴⁶, further suggest that the

⁴⁶ This uses the median values to determine the changes to the demographic components of the population projections. Such projections serve as a guide to potential population changes based on numerous assumptions.

number of persons above age 65 will grow beyond one elderly person for every two working aged persons by 2100 (Table 10).

In the current context of low growth accompanied by rising debt and increasing demands for government resources, public spending needs to be balanced with sound economic policies. Government policies need to enhance the production possibility and output potential of economies. In this regard, growing expenditure on pensions (both contributory and non-contributory) and a declining labour force is a major concern for the Region. Countries in the Region may soon face one or two channels of impact of an aged population: either i) the expenditure effect, or ii) the growth enhancing effect. The expenditure effect speaks to rising social welfare payments as a result of growing payments of pensions and age-related social welfare. This outcome increases demands on government spending and, in the current fiscal environment, may burden economies already saddled with negative fiscal balances. Further, increasing social expenditure on the elderly cohort can have a crowding-out impact on overall public investment spending. As such, pre-emptive planning is important so that countries are sufficiently prepared for the impending costs of an aged population.

The growth-enhancing effect speaks to a loss of the potential productive capacity of the economy as a result of a narrowed labour force. Any large net outflow from the labour force may lead to production constraints which can negatively impact fiscal balances (Fiscal Affairs Department - IMF 2016). Given the potential for a shrinking of the youth population accompanied by increasing retirements, the Region faces a significant output challenge in the coming decades. This can reduce the size of the regional labour force, and tighter supplies of workers may inadvertently lead to increased nominal wage growth without a corresponding increase in output. As a result, inflationary pressures may build, having a negative impact on real wages. The decline in real wages will be particularly uncomfortable for the large elderly population as most pension incomes are not inflation-indexed in the Region, thus the aged demographic may face a significant income crunch in the coming decades.

The rapid pace of population ageing may also strain the social security systems of the Region in the coming decades. Based on IMF 2016 calculations (Table 10), expenditure will exceed contribution incomes of social security schemes before 2020 in 12 Caribbean countries. This situation is further compounded by the fact that the reserves of these plans may be exhausted by 2045 – given current rates of contribution and expenditure.

Efforts to achieve the sustainable goals will require that the Caribbean accurately measure its progress using more timely data capture and analysis. Data shortages are most apparent when addressing social problems. With the exception of Jamaica, most BMCs do not conduct regular household (hh) income/expenditure surveys and many country poverty assessments are dated. There needs to be systematic processes in place to capture and analyse social data that can ultimately be used to develop and fund effective and evidence-based policies.

Table 10: Demographic Projections for the Caribbean (Medium Variant)

4.2 Blueprint for Strong Social Policy and Human Development

Human Development Challenges

High poverty
High youth unemployment and poor education outcomes
High crime and citizen insecurity
Limited social data available for designing and measuring effective strategies

Policy Priorities

Good quality education for all
Workforce skills training based on employers' needs
Conditional cash transfers to the most vulnerable

In the macroeconomic policy prescriptions, it was recommended that governments reduce overall spend on transfers and subsidies, thus implying that social expenditures should be targeted to households that require and need them the most. The implications of fiscal rules and the human development needs require a focus on some specific social issues within the Caribbean if resilience is to be enhanced.

4.2.1 Quality Education for All

Providing access to good quality education should be a priority for all governments. Focus should not only about the size of the education budget but also the quality of education that is provided to students. The success of education reforms and expenditure should be measured by the employment and labour market outcomes of individuals when they leave the education system. To support this, CDB recently revised its Education and Training Policy and Strategy (ETPS) to better focus on improving learner outcomes and producing a qualified and capable workforce. Through the ETPS, CDB supports BMCs in transforming education systems from the early childhood through to post-secondary and tertiary levels.

Governments might also want to consider setting targets for tertiary level education, such as a percentage of school leavers who should go on to study for a degree or a technical vocational skill. Additional sector reforms may involve curriculum reviews; increased use of technology; and greater advocacy and support for STEAM⁴⁷ subjects, job market training; innovation and entrepreneurship skills building. Financing good education for all and ensuring that the population sees education as an investment will require not only sufficient budget for education but also the correct incentives to encourage youth to stay in school.

Even with a well-functioning virtuous circle (Figure 22), some households may be living in such abject poverty and with high discount rates, that encouraging children to stay in education might inflict a huge opportunity cost on the household. In instances like this, presumably where these households are known, targeted conditional cash transfer (CCT) programmes might be desirable e.g. *Bolsa Família* in Brazil, *PATH* in Jamaica, and *Oportunidades* in Mexico (Table 11). CCTs provide money to families that meet certain verifiable conditions. By targeting poor households with children and delivering transfers to head of households particularly women, they “hold the

⁴⁷ STEAM – Science, Technology, Engineering, Arts and Mathematics.

promise for addressing the inter-generational transmission of poverty and fostering social inclusion”⁴⁸. Evidence indicates that, in some contexts, CCTs have indeed helped to reduce the incidence and depth of poverty among programme participants.

Table 11: Overview of Selected Conditional Cash Transfer Programmes

Programme Country	Mexico	Jamaica	Brazil
Year introduced	1997; Expanded in 2002	2004	2005
Number of beneficiaries	4.2 million hh (20% pop.)	63,000 hh (8% pop.)	8.7 million hh (22% pop.)
Average unit transfer (US\$ PPP 2003/month/hh)	\$62 education \$21 health-nutrition	\$27 education \$27 health-nutrition	\$64 total
Annual budget (% of GDP)	\$2.6 billion (0.32%)	\$18.3 million (0.32%)	\$3.0 billion (0.36%)
Education benefits	Education grant; school materials; supply and quality strengthened; savings acct for graduates	Education grant	Education grant
Target group for education grants	Poor households with children 8-18 enrolled in primary school and up to 20 years old in secondary school	Poor households with children 6-17 years old	Extreme poor and poor households with children 6-15 years old
Health and nutrition benefits	Food grant; basic healthcare; nutrition and health education and supply; nutrition supplements	Health grant and education	Nutrition grant
Target group for health and nutrition grants	Poor households; nutrition supplements to pregnant and lactating women, children 4-24 months and malnourished children 2-5 years old.	Poor households with children 0-5; pregnant and lactating women; people over 65; destitute under 65; persons with disabilities.	Extreme poor and poor households with children 0-15 years old; pregnant and lactating women.

Source: Adapted from de la Brière and Rawlings (2006)

On the supply side of education, there should also be incentives for schools to provide students with good education. Options include performance-based incentives for teachers and school voucher (or school choice) schemes.

4.2.2 Workforce Skills Training

The social policy and human development quadrant of the virtuous matrix (Figure 2) recognizes relatively high levels of unemployment. There are specific interventions that should be deployed to deal with this issue, such as ensuring that school leavers are equipped with the correct skills for the labour market and that there are active labour market policies including employment agencies. The provision of training and apprenticeship opportunities to the inactive youth and female populations may increase their ability to access employment opportunities. The success of such a

⁴⁸ De la Brière, Bénédicte, and Laura B Rawlings. *Examining Conditional Cash Transfer Programs: A Role for Increased Social Inclusion?* World Bank, 2006.

strategy will allow the economy to evade any potential production shortfalls due to a decline in the labour force and, through formal employment, provide much needed contributions into the respective National Insurance Schemes.

4.2.3 Balancing the Pension System

As discussed earlier, ageing populations can lead to future economic vulnerabilities, often related to entitlements that are funded by pay-as-you-go systems with high economic and social costs. This is a worrying but not insurmountable situation. Increasing contribution rates and widening maximum insurable earnings are potential short-term fixes, but the larger issue requires addressing labour market imbalances throughout the Region. Given increased longevity and mobility across the older ages, extending the retirement age is a possible remedy for some countries. Lu, Mulder and Papaioannou (2010) suggest that “a prudent response would be to accumulate assets in the present to offset the projected higher liability related to sustaining pensions and social welfare in the future”.

4.2.4 Improving Citizen Security

Citizen insecurity can have a negative impact on investment, human capital growth and economic activity. Governments should therefore prioritize a reduction in crime and the attainment of public safety to acceptable levels. However, interventions need to be targeted, well informed, adequately resourced and structured to ensure that they are effective. CDB’s ongoing support has included social crime prevention interventions such as enhancing community cohesiveness and resilience through environmental design; improving shelter conditions; and supporting crime diversion and human development programmes. After-school programmes and other literacy and life skills initiatives are also considered to be effective strategies to reduce youth vulnerability to crime. Some interventions include the development of culturally appropriate and gender-sensitive community safety strategies to address crime, violence and anti-social behaviours. Other civil society support has been provided to enhance programmes that provide psycho-social and psycho-educational assistance to victims and perpetrators of gender-based violence. Such an approach has proven to be essential to promoting conflict resolution and social cohesion, necessary pre-requisites for improving life chances. An analytical, data-driven approach to fighting crime should also be encouraged. For example, better data use can help to identify youth at high risk and design targeted assistance programmes that will reduce their propensity to criminal activity, and ultimately reduce national crime levels.

4.3 Next Steps

Strong social capital and good governance improve a country's ability to "adapt and transform for the better, when faced with natural or manmade shocks and stresses"⁴⁹. Building resilience to these shocks requires multidimensional policy approaches that target the most vulnerable in society. To further its core poverty reduction objectives, CDB continues to support several regional efforts to improve the accessibility and use of quality data for decision-making. The Bank aims to facilitate a transformational approach to poverty reduction, which includes multidimensional poverty assessments and the analysis of non-income dimensions of poverty and human development⁵⁰.

⁴⁹ Bedi, Nikki, (et al(2014) "Linking Resilience and Good Governance: A Literature Review," *Anthós*: Vol. 6: Iss. 1, Article 3

⁵⁰ *Annual Report 2016*. Caribbean Development Bank.

Chapter 5: Environmental

5.1 Environmental Challenges: Weak Resilience



Environmental

- High annual natural disaster costs
- Insufficient building codes
- Low indemnity insurance coverage and payouts
- Poor climate change adaptation tools

Between 1950 and 2014, 148 disasters resulted in \$52 billion in damage across the Caribbean. Natural disasters cause damage costing 2% of GDP per annum, on average. The passage of Hurricanes Irma and Maria during the 2017 hurricane season further highlighted the Region's extreme environmental vulnerability⁵¹. Early estimates suggest that the impact of Hurricane Maria cost Dominica more than twice of its annual GDP, when it had barely recovered from losing 96% of its GDP two years earlier as a result of Tropical Storm Erika. Other catastrophic storms include Hurricane Hugo, which wiped out over 400% of Montserrat's GDP in 1989, and Hurricane Ivan which cost Grenada 200% of GDP in 2004 (Figure 24). Heavy rainfall has also been responsible for economic damage costs in the Caribbean. In addition, many countries suffer drought conditions every year.

The impact of these types of disasters have the potential to cripple economies (evidenced by the 2017 hurricanes) and can push countries and the Region into deeper levels of vulnerability and poverty, rendering sovereign states dependent on external aid and loans for recovery and reconstruction. The costs are multifold: from the immediate costs associated with humanitarian relief, rebuilding and reconstruction, to the often greater secondary costs associated with the decline in key industries, larger trade deficits, higher public debt levels, employment losses, and large scale population migration and displacement.

⁵¹ CDB is producing a forthcoming paper, examining the vulnerability of the Caribbean to a number of threats, including economic, social and environmental vulnerabilities. In this paper, the authors will also assess mitigating measures that have been implemented by countries against these threats, i.e. resilience. The paper will seek to develop a risk of harm index for Caribbean countries (Ram, Cotton, Frederick and Elliott, 2018)

Figure 24: Economic Cost of Selected Storms and Hurricanes in the Region



Poor enforcement of building codes and low insurance coverage further increases the Region's economic vulnerability to the effects of natural hazards. Efforts towards more uniform and comprehensive regional building standards for the Region will need to be prioritized. Having a uniform code would harmonize requirements across jurisdictions, facilitate common platforms for training and updating, and "promote inter-regional trade in construction services and materials"⁵². The Caribbean Uniform Building Code (CUBiC) was launched in 1985, and is currently used by several BMCs, however it needs to be more consistently enforced between jurisdictions. Current building standards and codes include:

- Barbados, Belize, OECS: CUBiC and national codes
- The Bahamas: South Florida Building Code
- Cayman Islands: Southern Building Code Congress International
- TCI: hybrid USA and CUBiC

However, not all of these codes are enforced locally. In 2012, roughly half of the BMCs had building codes enacted as laws and regulations that were regularly enforced (Table 12).

Table 12: Regional Building Regulations, 2012

Country	Standards	Laws	Enforcement
Anguilla	Y	Y	Y
Antigua and Barbuda	Y	Y	Y
The Bahamas	Y	Y	Y
Barbados	Y	N	N
Belize	Y	N	N
British Virgin Islands	Y	Y	Y
Cayman Islands	Y	Y	Y
Dominica	Y	Y	N
Grenada	Y	Y	Y
Guyana	N	N	N
Jamaica	Y	Y	Y
Montserrat	Y	Y	Y
St. Kitts and Nevis	Y	Y	N
Saint Lucia	Y	N	N
St. Vincent and the Grenadines	Y	N	N

⁵² Thompson, Darryl. "Caribbean Building Codes." Global Earthquake Modelling Workshop. 3 May 2011, Trinidad and Tobago, University of the West Indies.

Country	Standards	Laws	Enforcement
Turks and Caicos Islands	Y	Y	Y
Trinidad and Tobago	Y	Y	Y

Source: Consultant Engineers Partnership⁵³

The events of 2017, which saw two Category 5 hurricanes in the same month, have prompted many disaster analysts to reflect on existing building codes and the need for current codes to be more strictly enforced and upgraded or enhanced to keep up with climate change. For many BMCs, this includes moving poorer residents from low-quality housing in disaster-prone regions and investing in strengthening infrastructure nationwide. In 2013, the Association of Caribbean States recommended that governments prioritise:

- (i) hazard mapping (seismic, rainfall, flood, winds);
- (ii) enforcement and monitoring of codes;
- (iii) training building inspectors, designers, engineers, builders, and construction workers on the updated codes; and
- (iv) periodic revisions—updating disaster models and national codes every five to 10 years to reflect evolving needs⁵⁴.

Political fragmentation has undermined progressive regional efforts to spread risk and the cost of relief across the Region. The Caribbean Disaster Emergency Management Agency's modest 2017 budget had been spent in September alone. Following Hurricane Irma, the Caribbean Catastrophe Risk Insurance Facility (CCRIF SPC) pledged a total payment of \$31 million to the governments of Anguilla, Antigua and Barbuda, Haiti, St. Kitts and Nevis, Turks and Caicos Islands, and The Bahamas. The sum, though substantial, did not come close to the \$10 billion in damage that some experts⁵⁵ estimate across the Caribbean. Furthermore, paying into a fund that spreads the risk across the Region has not been a priority for some governments.

Hurricanes and the associated hazards are only one type of potential environmental disaster that threatens the Region. The long-term environmental and economic impacts of droughts, rising sea levels and other climate change hazards are tremendous. At the United Nations General Assembly in September 2017, Dominica's Prime Minister, Honourable Roosevelt Skerrit, noted the fundamental injustice of climate change, where small nations like Dominica suffer tremendously despite being the least responsible. Furthermore, despite the globally perceived wealth of the Caribbean, many of these countries lack the financial resources to upgrade infrastructure to the standards needed to withstand the strongest of storms.

The mid-to-high income status of many BMCs prevents them from accessing concessional aid or grants in times of natural disasters. In late 2017, Grenada's Prime Minister Dr the Right Honourable Keith Mitchell and other regional leaders highlighted the need for countries' vulnerability to natural and external shocks to be considered in decisions with respect to aid and concessionary financing

⁵³ Gibbs, Tony. "Overview of Building Codes and CUBiC National Adoptions in the Eastern Caribbean National Adoptions in the Eastern Caribbean Discussion of Wind Loading in St Lucia." World Bank ECCR Workshop. 26 Jan. 2012, St. Vincent and the Grenadines.

⁵⁴ Association of Caribbean States- *Updating Building Codes of the Greater Caribbean for Winds and Earthquakes*.

⁵⁵ Daniel, James. *Hurricane Irma*. Center for Disaster Management and Risk Reduction Technology (CEDIM) Forensic Disaster Analysis Group, 2017.

in global development organisations. Dr. Mitchell also called on the Organisation of American States to use its political capital to advocate for greater climate change mitigation strategies by larger countries in the Region. However, in the meantime, Caribbean nations also need to prioritize effective regional strategies for reducing economic vulnerabilities with respect to environmental hazards.

5.2 Blueprint for Building Environmental Resilience

Environmental Challenges

High annual natural disaster costs
Low insurance payouts
Insufficient building codes
Poor climate change adaptation tools

Policy Priorities

Strict enforcement of building codes
CCRIF, indemnity insurance, resiliency funds
Environmental and climate change adaptation tools
Microcredit for recovery lending

The economic costs, the size of the countries, population density and where Caribbean nations are situated in the world, suggest that environmental resilience is an important component of the virtuous matrix. The following suggestions for Caribbean governments can help to build environmental resilience that reinforces the virtuous matrix.

5.2.1 Savings Fund

A savings fund is expected to provide a financial buffer for a “rainy day”. Each government could determine the level of savings that would be adequate, based on its own vulnerabilities and the average damage and lost revenues caused by disasters or economic shocks. The savings fund should accumulate sufficient resources to allow a government to maintain its operations for a specified period of time after a shock has occurred, be it economic or natural. The amount to be saved should also be based on a country’s overall vulnerability and resilience.

5.2.2 A Formula for a Resilience Fund based on Economic and Environmental Vulnerability

Reserves or a savings fund can play an important role in reducing the risk associated with crises and mitigating their impacts when they occur. It should be noted that a savings fund is not a substitute for sound macroeconomic policy (Papaioannou et al. 2010). The proposed savings fund for the Caribbean is set within a framework that promotes the Nudge and Flex fiscal rules, includes sound macroeconomic management, human development, structural reforms to improve competitiveness and disaster risk management. The savings fund is simply an important component of the virtuous matrix. It is meant to assist countries by providing “fiscal breathing space”, when a crisis occurs so that reforms can be implemented, infrastructure rebuilt or to supplement revenue streams during the crisis to reduce fiscal risks, so that a full-blown structural crisis is avoided. A savings fund is expected to be supported by insurance provided by facilities like CCRIF SPC.

How should Caribbean governments determine what would be an adequate savings reserve? According to Papaioannou et al. (2010), reserves provide significant benefits such as reducing

external vulnerability and providing country insurance. Adequate reserve levels should be agreed on between the government and the central bank. However, given the additional vulnerability that Caribbean nations face from natural disasters, the level of adequate reserves should also be agreed to with ministries responsible for planning, and with offices of disaster management and preparedness. At the macroeconomic level, some of the indicators that governments should consider when determining adequate reserves are:

- The Greenspan-Guidotti rule of 100% coverage of short-term external debt
- Coverage for large external current account deficits
- Overvalued exchange rates
- High levels of short-term public domestic debt
- Derivate exposures of the public sector
- Weak banking sectors
- Internal drain and the likelihood of capital flight
- Non-resident holders of the country's local bonds who have derivatives to hedge against currency depreciation
- Fiscal stimulus that might be required during a downturn

Some of these factors should be managed proactively through other policy measures and may not need to be covered by a sovereign wealth fund or resilience fund. For example, current account deficits and overvalued exchange rates in the Caribbean could be managed through prudent fiscal management, monetary policy and inflation targeting and, where possible, regular exchange rate adjustments via the market, or through a set rule based on the differences between domestic and external inflation rates or terms of trade. Proactive, adequate regulation and supervision will be needed to ensure a strong banking sector, and that financial institutions have ample capital adequacy ratios.

Saving for economic crises should focus on covering short-term liabilities and counter-cyclical fiscal policy during a downturn to assist with smoothing fiscal spending and to cover regular or extraordinary public debt. In commodity-rich nations, the applicable fiscal rule should encourage that government expenditure equate with long-term revenues, minus a structural surplus as a percentage of GDP⁵⁶. The Region can have the savings rule for macroeconomic crises as:

$$\begin{aligned}
 \text{Budget Balance} &= \text{Revenues} - \text{Expenditures} \\
 &= \text{Revenues} - [\text{Longterm Revenues} - \text{Structural Surplus}] \\
 &= \text{Revenues} - [\text{Longterm Revenues} - (k \times \text{GDP})] \\
 &= \text{Revenues Gap} + (k \times \text{GDP})
 \end{aligned}$$

Where

$$\begin{aligned}
 k &= \text{Structural Surplus/GDP} \\
 &= \text{Annual Surplus Savings Rate}
 \end{aligned}$$

⁵⁶ Macrofinancial Linkages of the Strategic Asset Allocation of Commodity-Based Sovereign Wealth Funds. Lu, Mulder and Papaioannou. IMF 2010.

Interestingly, a greater structural surplus requirement could mean that the sovereign wealth fund would only have to be used when there is a very large revenue shortfall. With the Nudge and Flex fiscal rule proposed, governments should be conservative and err on the side of caution when determining the structural surplus. Additionally, the proceeds of the savings fund should be invested in assets where their performance is negatively correlated with the major export sectors of the economy.

In the Caribbean where the expected losses from natural disasters can be quite high, an additional component for a savings fund should be considered. This should be related to the annual possible losses associated with natural disasters or the values associated with the country's vulnerability ranking or value as it relates to the long-term average annual losses from natural disasters. On average, Caribbean countries experience annual losses of 2% of GDP.

Thus the above formula should be augmented with a factor that covers environmental vulnerability. Therefore, the annual surplus savings rate (ASR) should be:

$$ASR = k + env$$

Where *env* denotes environmental vulnerability. So at a regional level, there would be an augmented resilience annual surplus savings rate (RASR) of:

$$RASR = k + 2\% \text{ of } GDP$$

For each country, *env* would be that country's annual expected losses from natural disasters based on long-term data.

Given the virtuous matrix proposed for long-term resilience building, the more Caribbean countries build resilience at the household level, increase labour market opportunities so that individuals and households can self-insure, improve and enforce building codes, and improve private sector opportunities so that the private sector and public sectors share risks, the less savings will be needed in the future. However, these savings funds provide country insurance and buffers in the cases where the shocks are particularly large. The resilience fund, if managed well, can also be a dividend payment vehicle in the future.

5.2.3 Financial Protection Frameworks for Natural Disasters

An important component of responsible fiscal policy as it relates to disaster preparedness is the need for governments to have access to liquidity throughout the immediate, recovery, and reconstruction phases of a disaster. This liquidity can be provided through a number of instruments that could be broadly categorised into ex-ante and ex-post instruments based on the level of

advanced planning that is required prior to a natural event⁵⁷. Ex-ante instruments need to be in place prior to the event and require some level of proactivity in determining the adequate levels of coverage among other factors. Such instruments include parametric insurance and other risk-transfer mechanisms, reserve funds, budget contingencies and contingent debt facilities. On the other hand, ex-post instruments do not require advance planning and encompass instruments such as foreign aid, budget reallocation, domestic and external credit and fiscal measures.

Well-designed disaster risk financing strategies can be used to create financial incentives for governments and households to further mitigate their risks⁵⁸. Given the varying disbursement times and costs of the various instruments, prudent governments should seek to create natural disaster response toolkits that encompass a range of financial instruments. In general, ex-ante instruments tend to disburse quickly after a disaster, while it takes some time to mobilise ex-post instruments. Notably, the convenience of having the quick disbursing ex-ante instruments tends to attract additional costs. However, in the immediate post event stage, it is not necessary to have all of the funding for the recovery and reconstruction phases (Ghesquire & Mahul, 2010). This is particularly important especially when the absorptive capacity of BMCs is considered. As such, a portfolio of ex-ante and ex-post instruments would prove to be the most cost-effective option for BMCs to consider.

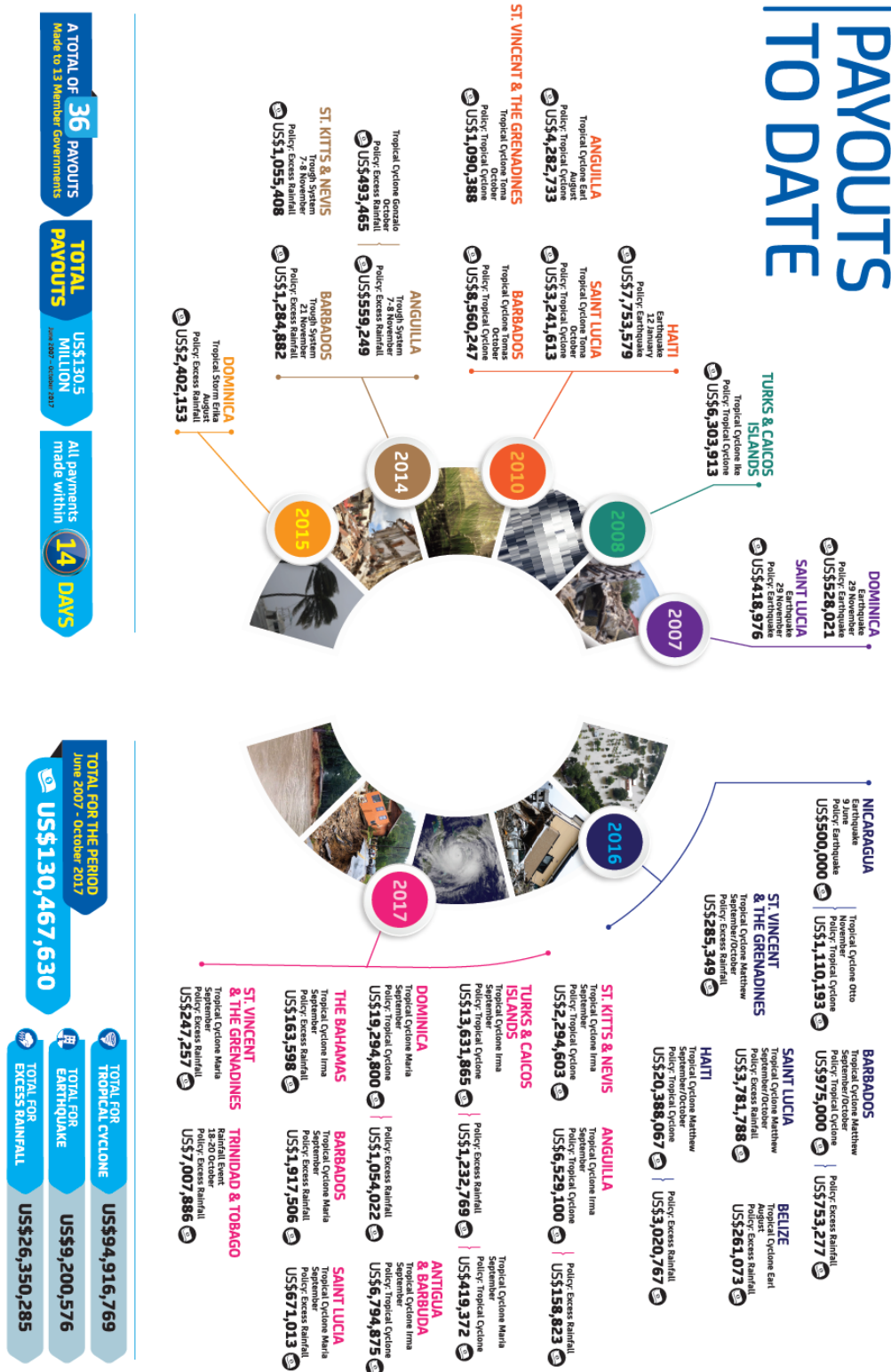
One example of an ex-ante instrument that exists in many BMCs is CCRIF SPC, which provides natural disaster coverage via parametric policies⁵⁹. Since it was established in 2007, the Facility has paid out about \$130.5 million to Caribbean governments and in 2017 alone, CCRIF SPC paid out \$61.5 million (Figure 25). It should be noted that CCRIF SPC insurance is not meant to cover the total damage costs associated with a disaster, but rather to provide urgent liquidity support to governments to assist with immediate needs and clean-up costs. Governments should continue to insure with CCRIF SPC as an important resilience building strategy within their disaster response toolkit.

⁵⁷ Ghequiere, Francis and Oliver Mahul (2010). "Financial Protection of the State against Natural Disasters-A Primer." World Bank Working Paper 5429.

⁵⁸ Ibid.

⁵⁹ Parametric triggers release money automatically depending on how severe a calamity is (as measured by wind speed, rainfall or magnitude of tremors) rather than after a tedious damage assessment.

Figure 25: CCRIF SPC Payouts (2007-2017)



Source: CCRIF SPC Annual Report 2016-2017

In addition to CCRIF SPC's policies, and recognising that parametric insurance alone is not sufficient to build strong buffers against potential natural hazards losses, some BMCs have started to develop a broader set of insurance-linked securities to meet their disaster risk insurance needs. This work is being designed to devise a cost-effective suite of tools and measures that BMCs can use to rebound from natural disaster events. Much of the work is still preliminary and is being undertaken through the Disaster Risk Financing Technical Assistance Programme.

Complementary to BMCs' governments' efforts to strengthen resilience to natural disasters through financial protection frameworks for natural disasters, there is also a need for households and the private sector to enhance their resilience via similar instruments, particularly those that transfer risk. However, private indemnity insurance coverage in addition to micro-credit accessibility in the post event stage of a disaster has been inadequate in the Caribbean. An important component for building resilience would be for the Caribbean to develop a similar suite of instruments for private asset holders to assist them in phasing their financing related to building resilience as well as in reducing the costs associated with natural disasters. Further work will be required to advance this initiative. Additional measures to incentivise private sector and household compliance with risk reduction and mitigation strategies may include mortgage requirements and insurance premium reductions.

5.2.4 Strict Building Codes and Enforcement

Similar to the reactions after Hurricane Hugo in 1985, the 2017 hurricane season has spurred calls to "build back better" on the islands devastated by the storms. Within a month of being hit by Hurricane Irma, the government of the BVI announced plans to review and upgrade building codes with an eye towards greater resilience against the impacts of climate change. Regional architects have also pointed to the strength of the existing OECS Building Code and the extremity of winds speeds in Hurricane Irma:

"The building codes in the Eastern Caribbean dictate that buildings should be designed to take wind speeds of between 154mph - 180mph, depending on the location and category of building [...] Irma is an anomaly of a superstorm that hit the islands at 185 mph."⁶⁰

While some countries may need to upgrade building codes, many simply require ratification and more stringent enforcement. Regional efforts are required to ensure that essential and other public facilities are better prepared for extreme weather events, including evaluating existing structures and retrofitting where necessary. There is an opportunity for the public and private sector to work collaboratively on implementing building codes throughout the Region. In support of the Government of Dominica's resilient reconstruction plans, CDB funded training for over 230 Dominicans on how to effectively and efficiently build and repair structures in accordance with the building codes.

⁶⁰ Linda Dias, Chief Architect for the Government of Montserrat, quoted in "Architect Responds after Floridians Call Caribbean Houses 'Cardboard'." *Loop News Trinidad and Tobago*, 10 Sept. 2017.

5.2.5 Credit Ratings

This Policy Blueprint for Caribbean Economies has emphasized the interconnectedness, and forward and backward linkages between each quadrant of the virtuous matrix throughout the paper. The fiscal rules proposed earlier are also important for a country to maintain investment grade credit ratings. Investment grade credit ratings allow a country to access the market at competitive interest rates for its debt issuances. This, in combination with the fiscal rules could also provide countries with access to resources from the market at low interest rates if countries need to borrow to rebuild in the wake of a disaster.

5.2.6 Access to a Pool of Concessional Resources

Until countries are able to build their own reforms for resilience such as an adequate savings fund, institute fiscal rules, enforce building codes and land use planning regulations, and develop indemnity insurance markets countries will need to have access to a pool of concessional resources. Access to CDB's special funds, IDB's emergency resources, World Bank ODA resources and IMF emergency resources are insufficient to help cover the costs associated with natural disasters. The total damage costs (as much as 330% of GDP in BVI) associated with the 2017 hurricane season have brought this to light. At the regional and international levels, the Caribbean along with other SIDS will need to make the case for access to a pool of concessional resources for disaster rebuilding.

5.2.7 Climate Change Adaptation Tools

Foresight, the practise of predicting and preparing for future events based on current knowledge and past experiences, is increasingly being seen as an essential tool in development planning. The Region needs to extend this thinking to the issue of climate change, so that it influences how we protect against land and coastal degradation, loss of lives and infrastructure, mass population migration, and other negative impacts. Climate change adaptation involves "anticipating the adverse effects of climate change and taking appropriate action to prevent or minimise the damage they can cause, or taking advantage of opportunities that may arise"⁶¹. These measures include both infrastructural and behavioural changes.

Using climate change adaptation tools can help BMCs reduce loss of lives and other resources in the long term. For example, climate screening and resilience toolkits to assess the climate resilience of investment decisions of governments, businesses, and households should be employed more widely.

⁶¹ "Adaptation to Climate Change." *Climate Action*, European Commission, 16 Feb. 2017.

5.3 Next Steps

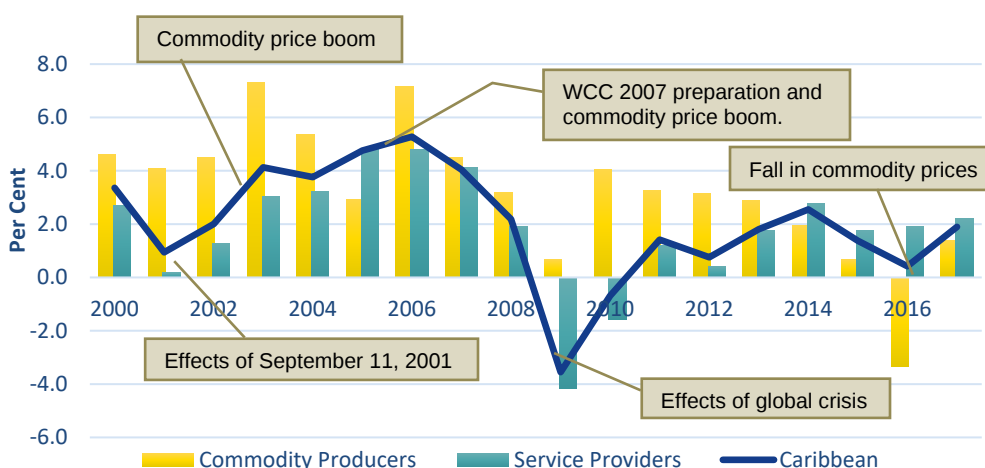
After the extreme weather events of 2017, the Region and global development partners have marshalled around the mission to “build back better”. Doing so requires substantial financing and technical assistance at concessionary rates that many BMCs either lack access to or do not have the fiscal space to assume. CDB continues to support governments in accessing funds, in exploring creative financial instruments, and in integrating climate risk and vulnerability assessments into the projects.

Chapter 6: Cross-Cutting Interventions

6.1 Regional Integration

Economic growth in the Region is largely driven by exogenous factors, which increase the Caribbean's vulnerability to policies and occurrences over which it has no control. In this regard, economic development for these SIDS is stymied in achieving the desired responses as transmission from external sources can hinder domestic policies. Since the turn of the new millennium, regional growth faced significant economic setbacks following geopolitical tensions from the events of September 11, 2001 and the spill over from the Global Financial Crisis of 2008/2009. Further, global commodity price changes have had contrasting impacts on the Region's commodity and service producing economies over the period (Figure 26).

Figure 26: Caribbean Economic Growth



Source: CDB President's Annual Speech, 2017

The Caribbean faces a myriad of common macroeconomic, environment and social challenges, which typify the common vulnerability of the Region. In spite of this, many countries seek to address these challenges irrespective of the potential gains of a regional collaborative approach. A cursory glance of policies and initiatives across the archipelago highlights common themes of development strategies and national plans. In this light, a forward-thinking and proactive blueprint for development requires the Region to take advantage of internal gains and the potential benefits of economies of scale which presents itself from greater regionalism. Countries of the Caribbean need to recognise one another as complements in the development process, rather than as competitors.

Across the four quadrants, there are notable areas which regional strategies can fast track the growth and development timeline of individual countries. Notably, the burden of

implementation of said strategies can be shared amongst the countries. Also, stronger regional advancement in key areas can diffuse from one country to the other through greater knowledge sharing and wider integration of key process. Some of the potential areas for targeted regional approaches include:

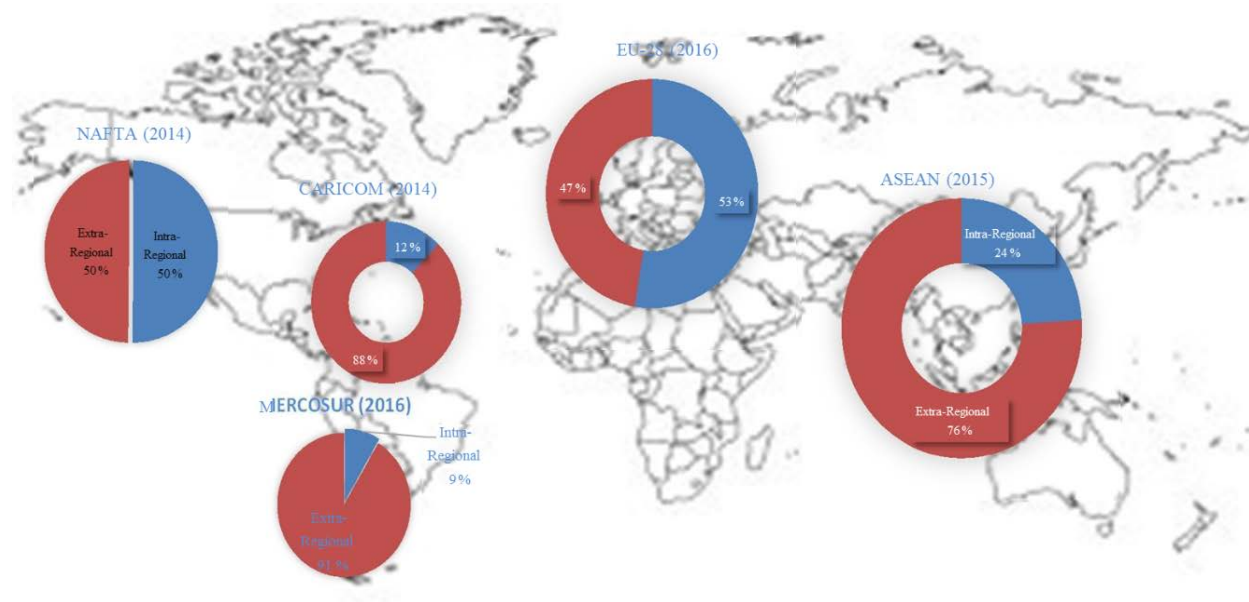
- **Macroeconomic:** integrated financial sectors, institutional reform; and implementation mechanisms;
- **Productivity and Competitiveness:** private sector-led growth, deepening of regional trade markets, regional payments facilities, shared technology and infrastructure; centres for research and innovation;
- **Human Development:** relevant workforce skills training, labour mobility; and
- **Environmental:** building codes, insurance coverage, and climate change strategies.

In the following sub-sections, the paper takes a closer look at specific areas where a regional approach is critical for accelerating aggregate growth and advancement.

6.1.1 Intra-regional Trade

One of the main areas with significant growth potential is intra-regional trade. In comparison to other regional trading blocs, CARICOM is more dependent on foreign-produced items than those of its regional trading partners. In fact, in 2014, less than 12% of total trade in the Region came from intra-regional sources (Figure 27). This is indicative of a reliance on extra-regional imports which adds to the constraints on foreign exchange reserves and dwindling regional production. Greater demands for regional goods can have a circular multiplier effect across the Region, as each country receives a fillip to its domestic activities due to higher consumption of its products. Further, an effective intra-regional connection between countries can reduce the costs to households and other final consumers and help develop subsidiary industries.

Figure 27: Share of intra-regional trade in major regional trading blocs



Source: CDB President's Opening Statement, Forty-Seventh Annual Meeting of the Board of Governors, 2017

Further to this, there are great benefits from the strengthening of regional ties and wider acceptance of intra-regional trade. Such approaches can foster less dependence on extra-regional economies and facilitate a more responsive regional network. In recent years, the response of CARICOM partners to the needs of hurricane-affected countries, particularly post Maria and Ivan, highlighted the potential for stronger ties across the Caribbean. Noteworthy was the opening of borders to families—particularly school children, and the provision of food items and basic necessities, which were produced from intra-regional sources.

6.1.2 Doing Business

Doing business reforms is another area where CARICOM countries can benefit from a regionally integrated strategy particularly when indicators such as Getting Credit, Registering Property and Resolving Insolvency are considered. Across the Region, there are similar inhibitors including labour market rigidities, higher education and training, and technological readiness. In these areas, much can be gained from implementing regional strategies and using harmonised and integrated strategies. Also, developing the capacity of individual countries in specific areas offers the advantage of building focal points across the Region which can then be used to help improve the other countries. This reduces the resource burdens placed on any single country at a point in time while, potentially achieving larger and more widespread gains throughout the Caribbean.

6.1.3 Transport

As a Region with predominantly island nations, air and marine transportation are vital to intra- and extra-regional connectivity. However, largely inefficient and costly transport networks have further isolated many BMCs, and hampered both trade and travel. In the air transport market, the underperformance of the Region's airlines have been linked to poor management and incentives, outside interference, lack of scope for economies of scale, lack of cooperation (between airlines and between airports and airlines), regulatory issues, and policy issues, such as taxation⁶². As a result, air traffic growth has been "negative or weak for many Caribbean Countries"⁶³. On the marine transport front, regional port inefficiency has been identified as a critical factor impacting the costs of import and export, and reducing regional economic competitiveness. Typical bottlenecks in the Caribbean include poor port infrastructure and outdated equipment, weak institutional frameworks, limited nautical accessibility, and lack of integrated IT systems⁶⁴.

⁶² *Making Air Transport Work Better for the Caribbean*. Caribbean Development Bank, 2015.

⁶³ *The Economic Cost of 'Lost' Air Connectivity in the Caribbean*. Caribbean Development Bank, 2018.

⁶⁴ *Transforming the Caribbean Port Services Industry: Towards the Efficiency Frontier*. Caribbean Development Bank. 2016.

Ultimately, the Region's high transport costs lead to greater un-competitiveness, compared to the major trading partners.

In the last few years, CDB has advocated for specific policy interventions to improve regional transport systems. Recommendations have included:

1. reducing aviation taxes and airport charges (and in effect reducing airfares) in an effort to stimulate air traffic from regional and international tourists;
2. improving bilateral service agreements and liberalising the market, also to stimulate traffic;
3. investing in both marine and aviation port infrastructure and employee skills training to improve operational efficiency; and
4. increasing the autonomy of transport entities, particularly limiting political interference in operations.

Improving the Region's connectivity and competitiveness requires that policymakers employ a longer-term strategy in the marine and air transport industries.

6.1.4 Export Diversification

CDB BMCs are at the mercy of fluctuations in commodity prices and economic conditions in their major trading partners owed to a large extent to a high degree of export concentration on a limited number of products and/or a few markets. In light of this, the future of BMCs' economies will depend on their diversification in order to open up new markets and opportunities. Such an effort will require a break from the Region's economic development model focused on increasing exportation of raw materials in too few goods, to that of producing more competitive goods and services with greater value-added. Further, it will require a collaborative assessment of the goods and services that each country has the comparative advantage in producing and exporting.

The analysis of trade statistics enables delineating the broad economic and export patterns that emerge across the Region. In essence, there are three broad exporting patterns emerging in the Caribbean:

1. Countries with high export concentrations in traditional crops that add very limited processing and value-added to their products. Most of these exports are found in the food and beverages final consumption goods. Countries like Belize, Dominica, Haiti, Saint Lucia and St. Vincent and the Grenadines illustrate this pattern. These exports rely on very limited processing of agricultural goods, raw materials like sugar and bananas are exported mostly to Europe, and low cost final consumption goods are mostly exported to neighbouring islands.
2. Countries with high export concentration in the resource extraction upstream industries. These are usually petroleum or mineral abundant countries, exporting those resources almost directly from the ground with very limited processing or value added. Trinidad and Suriname are the premier examples with more than 80% of exports deriving from the material/metals or petroleum/chemical upstream industries, and to a lesser extent Guyana and Jamaica.

3. Countries with high export concentration in the services industry. According to the Commonwealth Trade Review 2018, in 2016, majority of Caribbean countries depended on the services sector for over 70 per cent of their exports. For example, international financial services [banking and insurance] and tourism exports were the main drivers of economic activity in Antigua and Barbuda, The Bahamas, Barbados, and the British Overseas Territories.

Economic diversification and export sophistication can be catalysts for economic growth, enabling countries to produce more modern services and manufactured goods, which ensure that higher income accrues from exports (Anand et al., 2012). However, export sophistication requires a conducive macroeconomic policy environment that supports human capital development, investment, greater use of ICT and other technology⁶⁵, better quality jobs, high end service development, among other factors. Economic diversification must be understood in light of the changing demands of regional clients such as the U.S, Canada, Europe and China and potential extra-regional clients such as Latin America. The transition in BMCs ought to be grounded in an economic model that ensures knowledge, technology, productive infrastructure, transport and logistics are essential ingredients.

Accelerating regional integration and implementing the CARICOM⁶⁶ Single Market and Economy (CSME), will enable the Region to fully realise the benefits of the free movement of goods, services, capital and labour among member states. The commitment to implement the CSME by policymakers can help address many of the challenges to achieving economic growth, sustainable development and greater competitiveness in the SIDS.

6.2 Gender Equality

Moving societies to low levels of poverty, and ensuring that the economy operates at, or near to, full potential will require that policymakers seek to have gender equal policies particularly as it relates to the labour market. Statistics show that the majority of households living in poverty are female-headed households⁶⁷. This usually arises as a result of unequal pay for women in the labour market, and labour market time opportunity costs associated with childcare.

This paper therefore advocates that all policies be gender-assessed and marked to determine how the policy will affect men, women, boys and girls. For example, policies that are meant to invigorate the labour market, such as those highlighted earlier in the productivity and competitiveness solutions, should be assessed to ensure that female and male workers and entrepreneurs are able to take advantage of the opportunities presented. If policies have been assessed as gender unequal then mitigating policies should be considered. The following steps should be considered when setting policy.

⁶⁵ Although some countries are expanding these sectors more successfully than others, the Caribbean can learn from places like Ireland, on how ICT can be leveraged to pave the way for a knowledge economy. World Bank, 2005.

⁶⁶ The Caribbean Community (CARICOM) comprises 15 member states with a total population of 18 million.

⁶⁷ *The Changing Nature of Poverty and Inequality in the Caribbean: New Issues, New Solutions*. Caribbean Development Bank, 2016.

1. During the policy conception phase, it is important that gender dialogue with ministries and authorities with national oversight and relevant gender-related public/private sector organisations and Non-Governmental Organisations takes place.
2. While the policy is being written and analysed, gender analysis should be conducted ensuring that the socioeconomic, sectoral and institutional context is covered.
3. Indicative interventions of the policy should address all identified gender disparities and adequate resources allocated to these gender disparities.
4. If the policy is being formulated by one ministry, the assessment should be across government so that indicative interventions address weaknesses in the gender mainstreaming capacities of other ministries and government agencies (e.g. statistical offices) and adequate resources are allocated to these ministries and agencies to assist gender mainstreaming
5. Sex-disaggregated data should be included in baselines, indicators and targets of the Results Framework.

Within its operations, CDB actively practices gender mainstreaming in all projects undertaken. Appendix III provides an example of the CDB Gender Marker Framework for certain capital projects and technical assistance. While this does not solve gender equality issues, it is a critical step to ensuring that all perspectives and experiences are considered, and inequalities are not perpetuated.

6.3 Digitalisation⁶⁸

Caribbean governments are becoming increasingly aware of the importance of harnessing the benefits of the digital economy for innovation, growth and social prosperity. This awareness comes as the cost of data collection, storage and processing continues to decline dramatically and computing power increases, leading to social and economic activities increasingly migrating to the internet. At a time when productivity growth has slowed, rapid technological progress can significantly boost economic growth (McKinsey Global Institute, 2018). It can accelerate the process of structural transformation by which BMCs grow by shifting labour from low productivity activities to higher productivity activities in the services and manufacturing sectors. Technologies, smart applications and other innovations in the digital economy can improve services and help address policy challenges in a wide range of areas, including health, agriculture, public governance, tax, transport, education, and the environment, among others.

There remains significant scope for increased adoption and use of ICTs and the internet to boost growth through innovation in goods, services and business processes across all sectors. However,

⁶⁸ *Digitalisation* refers to the adoption of digital or computer technology when changing processes or models in a company, industry, or country. This is distinct from both *digitisation* (the process of converting information from an analogue to a digital (computer-readable) format) and *digital transformation* (a broader transformation of business activities and competencies and their societal impact). While *digital transformation* should be the ultimate goal, both *digitisation* and *digitalisation* are necessary foundations.

there are still large differences in the use of technologies. MSMEs tend to significantly lag in the uptake and use of ICTs, lowering aggregate productivity levels and limiting the inclusiveness of this transformation.

In addition to being catalysts for growth, ICT and technological innovations may be disruptive, with far-reaching effects on productivity, employment and well-being. Indeed, while new technologies create opportunities for businesses (especially MSMEs), workers and citizens to engage in economic activity, these technologies are also likely to displace workers in specific occupations and may further increase existing gaps in access and use, resulting in new digital divides and greater inequality (Science, Technology and Innovation Outlook 2016). Successfully leveraging the innovation and growth potential of the digital economy requires high-quality and competitively priced access to communications infrastructure, which provides the base on which applications and services in the digital economy are built. It also requires sufficient trust in the reliability and security of networks, the respect of privacy and consumer rights. With the increasing large-scale collection and analysis of data, it is essential to address digital security and privacy challenges as an economic and social risk.

CDB is reviewing its policies and practices to adopt ICT, technological innovations and digitalisation more fully into the design and implementation of projects.

6.4 Implementation

In the Caribbean, there is a wide gap between policy aspiration and performance reality. Though development plans are well articulated in budget speeches, medium-term plans, and national vision plans, they are often poorly executed or are not implemented at all⁶⁹. This implementation deficit heightens development challenges in the Region. The policy-performance gap or implementation deficit is endemic, and member governments lack coherent mechanisms to properly diagnose the problem, build capabilities and design systems that can respond in a timely fashion to the development challenge. This is manifested in below-par project implementation rates, which vary between 20% and 86% in the Region, with many BMCs falling on the lower end of the spectrum. The projects that use donor/external funds (e.g., CDB, IDB and the World Bank) have all experienced delays in implementation, often requiring extensions. In the CDB experience, the “average length of project extensions was 36 months for large grants and 42 months for loans”⁷⁰.

Several annual reviews of the CDB project and loan portfolios have identified weak local institutional capacity and weak inter-agency coordination as some of the key contributing factors to delays in project initiation and funds disbursement, and consequent delays in implementation. As discussed in CDB’s 2017 paper, *Implementation: Delivering Results to Transform Caribbean Society*, common reasons also include the lengthy procurement processes and variations to initial project scope. Furthermore, a 2014 review of the World Bank’s portfolio for the OECS attributed

⁶⁹ Ram, J, Kaidou-Jeffrey, D. et al. *Implementation: Delivering Results to Transform Caribbean Society*. CDB, 2017.

⁷⁰ *Development Effectiveness Review*. Caribbean Development Bank. 2017.

relatively low disbursement ratios and longer implementation periods to a “lack of well-trained human resources, obsolete systems of government personnel management, insufficiently robust accountability system for results, a weak enforcement culture to implement decisions, and scarce financial resources make it difficult for governments to achieve results effectively and on time when implementing projects”⁷¹.

This paper has outlined a coherent set of policies that could improve the resilience of SIDS, a group of which the Caribbean nations are members due to their geographical size and populations. This agenda of reforms will require significant effort, and therefore countries will need to improve their implementation rates and have a new focus on delivery if it is to become a reality.

CDB has proposed that countries adapt an implementation process and method that can assist in delivering the outcomes articulated earlier. A methodology that has cross-government support and public buy-in for key government priorities is recommended. It is also proposed that governments set up performance management and delivery units that will focus on delivering as well as account to the government and the public about promised outcomes.

CDB has supported several technical capacity development initiatives to enhance the effectiveness and efficiency of public sectors by strengthening the human and institutional capacity. Building on these efforts, CDB has committed to help fast-track BMCs’ development priorities and improve service delivery through country-specific Implementation and Delivery Mechanisms (IDMs).

IDMs typically involve:

Country Diagnostic that will engage in wide stakeholder consultations with key agencies including cabinet, opposition, private sector, civil society and academia. This assessment will inform the scope and scale of the planned intervention; the national key priorities for delivery, the human resource capacity, financial resources and organizational framework.

Cabinet Retreats to have visible political backing of the leadership and approval of the key priorities identified. The active interest, buy-in and commitment of the senior members of government, is necessary for success.

Strengthening of the IDM within government whether in the form of establishing a performance management and delivery unit and/or implementation unit. The activities under IDM strengthening include hosting policy labs, and the production of detailed implementation plans for the monitoring and evaluation of the targeted deliverables. This step requires a participatory approach, especially in the policy labs, and wide stakeholder engagement by sharing the plans with the population in “open days” to enable greater ownership of the transformation programme. Periodic reviews, accountability and transparency are also key factors to build public trust and confidence in the government’s ability to deliver. This reinforces the need to strengthen statistical capacities, data collection and analytical skills within the public service.

⁷¹ *Regional Partnership Strategy for the Organization of Eastern Caribbean States (OECS)*. IBRD, 2014.

The extent to which the IDM is financed and staffed determines its viability and success. Hence, IDM should be incorporated in national budget plans to ensure that projects/activities identified are financed and implemented over the given time period.

We have learnt from the recent experiences of Jamaica and Grenada, which have had some successes with implementation mechanisms to drive their economic reform programmes. Several enabling factors contributed to the success of their programmes. These include country-wide consultations and broad ownership of the reforms, oversight committees to monitor and communicate on the delivery of government services and improved coordination between the ministries and agencies. The implementation systems were supported by extensive capacity building and technical assistance by development partners.

There are many steps and policy reforms that are necessary to build a resilient Caribbean as articulated in this paper. To achieve this, a focus on relentless implementation will be required. The steps outlined above could assist with implementing the policy reforms. If the Policy Blueprint for Caribbean Economies is to become reality, then consultation, leadership, implementation plans that are fully resourced, and accountability will all be necessary ingredients for success.

Figure 28: Components of the Implementation and Delivery Mechanism



Source: Adapted from PEMANDU Associates

Chapter 7: Conclusion

Regional development and policy advisors are generally aligned on the Region's development needs and challenges. As CDB President, Dr. W^m. Warren Smith, stated at the CDB's 2017 Caribbean Leadership and Transformation Forum, "There is no lack of familiarity with the problems regional policy-makers face. The issues have been ventilated; thoroughly assessed; and the findings very well documented." However, given the implementation difficulties, there have been growing concerns about the Region's ability to achieve business and economic development objectives and policy priorities. There is a healthy appetite in the Region for more transformational development strategies. This paper taps into this knowledge and appetite to lay out a blueprint for Caribbean economic transformation.

The paper has shown that macroeconomic vulnerability, low productivity and competitiveness, social vulnerabilities and environmental vulnerabilities are all connected and lead to negative feedback loops for the entire economy, society and most importantly at the household level. The blueprint for a resilient Caribbean economy takes a virtuous matrix or circle approach to building resilience at the economy level by focusing on how the Region can reverse the negative feedback loop trend between the virtuous matrix quadrants. In fact the approach is to engender positive feedback loops between the sectors while at the same time ensuring that public policy contributes to building resilience at the household level. In many ways the Policy Blueprint for Caribbean Economies is a virtuous bottom up approach to building resilience at the economy and societal level. It needs to be supported by strong public policy that manages public finances so that savings becomes a priority. Governments should also facilitate private sector-led growth by implementing doing business environment reforms and by ensuring that adequate infrastructure is in place. At the social level there needs to be social investment, targeted at the most vulnerable so that all residents have opportunities to share the benefits of the new economy. Tackling environmental vulnerability is a fact of life for the Caribbean, and also means that building resilience by building climate-adapted infrastructure, and improving insurance at the public finance and household levels are also important considerations. Cross-cutting themes of regional integration, gender equality, digitalisation, and implementation are essential for the Policy Blueprint to be a success. As the economy improves, households, government and society should be better prepared to deal with environmental or economic shocks that are certain to come in the future.

This paper is the high level articulation of the Policy Blueprint for Caribbean Economies at the regional level. An upcoming series of papers will provide more in-depth analysis of individual country vulnerabilities and formulate specific Blueprints for a resilient economy for each of the CDB's BMCs.

Figure 29: Virtuous Matrix



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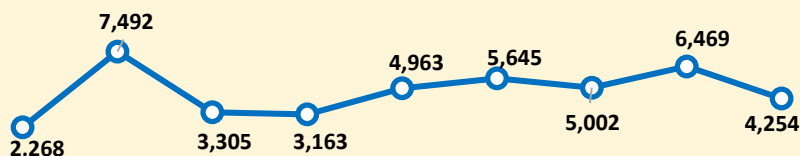
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Appendices

Appendix I: Foreign Direct Investment in the Caribbean

FDI Inflows, by BMC (1991-2015), USD million

Year:	Average 1991-2008	2008	2009	2010	2011	2012	2013	2014	2015	Change 2008-2015
ANG	47.1	100.9	43.6	11.4	38.9	43.5	42.2	79.3	85.5	-15.3%
ANT	102.0	160.8	84.6	101.3	68.3	137.5	100.9	154.8	154.1	-4.2%
BAH	548.2	1,512.3	873.1	1,147.6	1,533.3	1,073.4	1,100.8	1,595.9	384.9	-74.5%
BAR	127.8	615.1	255.3	446.3	362.0	312.8	-35.1	485.6	254.4	-58.6%
BZE	45.7	169.7	108.8	97.2	95.4	189.2	95.2	152.7	64.6	-61.9%
DOM	24.6	56.8	57.9	43.4	34.6	58.6	25.4	35.4	36.0	-36.6%
GRE	52.6	140.7	104.0	63.6	45.2	34.3	113.6	38.2	60.7	-56.9%
GUY	70.5	178.0	164.0	198.0	246.8	293.7	214.0	255.2	121.7	-31.6%
HAI	22.1	29.8	55.5	178.0	119.0	156.0	160.4	99.0	104.2	249.7%
JAM	433.7	1,436.6	540.9	227.7	218.2	413.3	594.7	591.5	794.5	-44.7%
MON	3.9	12.7	2.6	3.6	2.5	2.6	3.8	6.2	4.2	-66.9%
SKN	58.8	183.9	136.0	118.8	111.6	110.0	138.6	120.1	78.2	-57.5%
SLU	82.4	166.2	151.9	126.6	100.4	77.9	95.2	93.1	95.0	-42.8%
SVG	59.9	159.3	111.0	97.4	85.8	115.4	159.9	109.8	120.7	-24.2%
SUR	-51.1	-231.4	-93.4	-247.7	69.8	173.7	187.6	163.4	246.4	219.4%
TT	647.0	2,800.8	709.1	549.4	1,831.0	2,452.9	1,994.3	2,488.8	1,618.6	-42.2%
TOTAL										



Appendix II: CCRIF Payouts

Full list of CCRIF payouts from 2007 to 2017, by event

Event	Country Affected	Pay outs (US\$ m)
Earthquake, 29 November 2007	Dominica	0.5
Earthquake, 29 November 2007	Saint Lucia	0.4
Tropical Cyclone Ike, September 2008	Turks and Caicos Islands	6.3
Earthquake, 12 January 2010	Haiti	7.8
Tropical Cyclone Earl, August 2010	Anguilla	4.3
Tropical Cyclone Tomas, October 2010	Barbados	8.6
Tropical Cyclone Tomas, October 2010	Saint Lucia	3.2
Tropical Cyclone Tomas, October 2010	St Vincent and the Grenadines	1.1
Tropical Cyclone Gonzalo, October 2014	Anguilla - Excess Rainfall Policy	0.5
Trough System, 7-8 November 2014	Anguilla	0.6
Trough System, 7-8 November 2014	St. Kitts and Nevis	1.1
Trough System, 21 November 2014	Barbados	1.3
Tropical Storm Erika, 27 August 2015	Dominica - Excess Rainfall policy	2.4
Earthquake, June 9, 2016	Nicaragua	0.5
Tropical Cyclone Earl, August 2016	Belize - Excess Rainfall policy	0.3
Tropical Cyclone Matthew, September 2016	Barbados	1.0
Tropical Cyclone Matthew, September 2016	Barbados - Excess Rainfall policy	0.8
Tropical Cyclone Matthew, September 2016	Saint Lucia - Excess Rainfall policy	3.8
Tropical Cyclone Matthew, September 2016	St. Vincent and the Grenadines - Excess Rainfall policy	0.3
Tropical Cyclone Matthew, October 2016	Haiti	20.4
Tropical Cyclone Matthew, October 2016	Haiti - Excess Rainfall policy	3.0
Tropical Cyclone Otto, November 2016	Nicaragua	1.1
Tropical Cyclone Irma, September 2017	St. Kitts and Nevis	2.3
Tropical Cyclone Irma, September 2017	Anguilla	6.5
Tropical Cyclone Irma, September 2017	Anguilla - Excess Rainfall policy	0.2
Tropical Cyclone Irma, September 2017	Antigua & Barbuda	6.8
Tropical Cyclone Irma, September 2017	Turks and Caicos Islands	13.6
Tropical Cyclone Irma, September 2017	Turks and Caicos Islands - Excess Rainfall policy	1.2
Tropical Cyclone Irma, September 2017	The Bahamas - Excess Rainfall policy	0.2
Tropical Cyclone Maria, September 2017	Dominica	19.3
Tropical Cyclone Maria, September 2017	Dominica - Excess Rainfall policy	1.1
Tropical Cyclone Maria, September 2017	Saint Lucia - Excess Rainfall policy	0.7
Tropical Cyclone Maria, September 2017	Turks and Caicos islands	0.4
Tropical Cyclone Maria, September 2017	Barbados - Excess Rainfall policy	1.9
Tropical Cyclone Maria, September 2017	St. Vincent and the Grenadines - Excess Rainfall policy	0.2
Rainfall event, October 18-20 2017	Trinidad and Tobago	7.0
Total for the Period 2007 - 2017		130.5

Appendix III: CBD Gender Marker Framework

CDB Gender Marker Framework for Capital Projects and Technical Assistance (Over USD\$1 m)

Project Cycle Stage	Criteria	Score
Analysis: Introduction/ Background/ Preparation	Consultations with relevant categories of males and females and relevant gender-related public/ private sector organisations and Non-Governmental/ Community-Based Organisations will take / have taken place.	0.5
	Socioeconomic, Sector and/or Institutional analysis considers gender risks and / or gender disparities that impact the achievement of project outcomes.	0.5
Design: Project Proposal/ Definition/ Objective/ Description	Project interventions / policies address existing gender disparities.	0.5
	Project objective / outcome includes the enhancement of gender equality or the design of gender-responsive policies or guidelines.	0.5
Implementation: Execution	Implementation arrangements include either: - Capacity building initiatives to enhance gender mainstreaming of the executing and/or implementing agency, Or - Active participation of representatives of gender-relevant stakeholders in project execution.	0.5
	Terms of Reference of consultancy / project coordinating unit / project management unit includes responsibilities and resources, including budgets for gender mainstreaming.	0.5
Monitoring and Evaluation: Results-Monitoring-Framework (RMF)	Sex-disaggregated data included in the baselines, indicators and targets of the RMF Or Collection of sex-disaggregated data is part of the project.	0.5
	At least one gender-specific indicator at the outcome and/or output level in the RMF or included in tranche releases of PBLs.	0.5
Maximum Score:		4.0

Scoring Code

Gender Specific (GS) and Gender Mainstreamed (GM):: if 3 to 4 points

Marginally Mainstreamed (MM): if 1.5 to 2.5 points.

NO: if projects score zero or 1; if NO please give a justification why



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