

## Chapter 2

# The Caribbean Development Context: Past, Present and Future

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### 2.1 Introduction

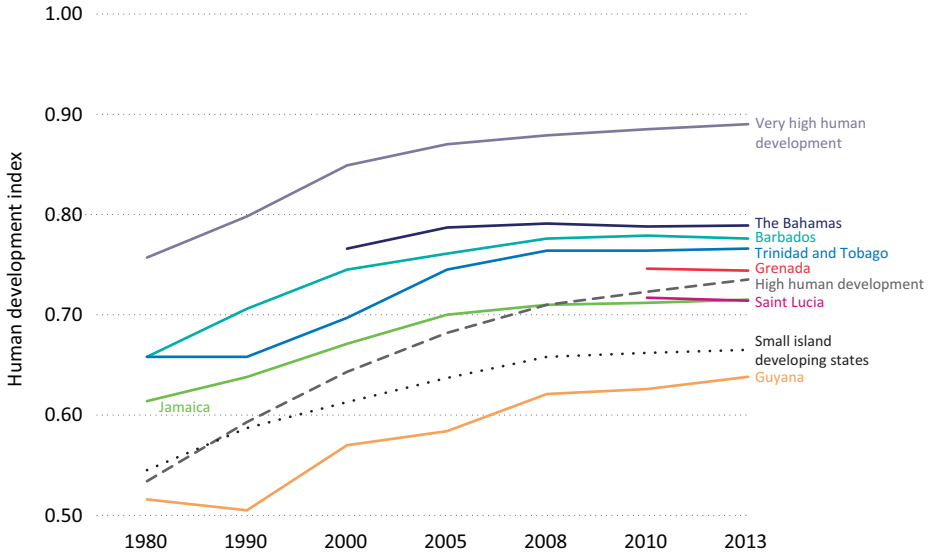
The islands of the Caribbean have made significant progress in economic and social development in the relatively short time that they have been independent countries. At the time of writing only two of the countries included in this study had been independent for more than 50 years – Jamaica and Trinidad and Tobago – and one had been independent for only 35 years (Saint Lucia). Nevertheless, from the 1960s onwards they have made good progress in social and economic development. The 2014 *Human Development Report* (UNDP 2014) considers all except Guyana to have ‘high human development’. These human development indices were well above the average for other countries of ‘high human development’ for every year that the report was produced until 2008, when Jamaica and Saint Lucia started to slip behind (see Figure 2.1). The year 2008 appears to be a turning point in the development progress of the region. While the average index score for countries of ‘very high human development’ and ‘high human development’ continued to increase, the countries of the Caribbean plateaued or started to dip (except Guyana, which remained on an upward trajectory).

There are three main components of the Human Development Index: the health dimension, the education dimension and the standard of living dimension. The indicator for the health dimension is life expectancy at birth and, as shown in Figure 2.2, the countries of the Caribbean have continued to steadily improve their index scores over the last three and a half decades.

A similar, though slightly less positive, trend can be found when assessing the scores for the education index (see Figure 2.3). Since the average scores for the countries with ‘very high human development’ and ‘high human development’ also plateaued during the period, the region did not appear to lose ground.

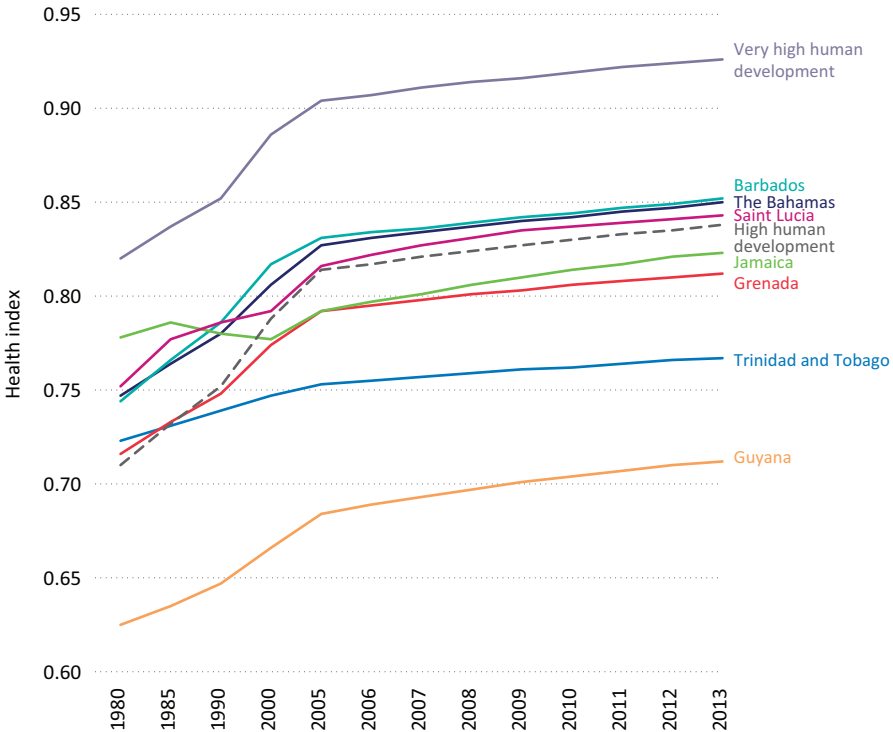
However, in the standard of living dimension, where the indicator is the income index shown in Figure 2.4, only Guyana continued to improve after 2008; Trinidad and Tobago and Jamaica flat-lined, while all of the other countries dipped. The main reason for the deteriorating performance of the other islands lies in their dependence on tourism as the main driver of growth in their economies. The tourism industry in the region has struggled since the global financial crisis in 2007/08 and, as a result, economic growth in tourism-dependent countries has been constrained.

**Figure 2.1 Human Development Index trends, 1980–2013**



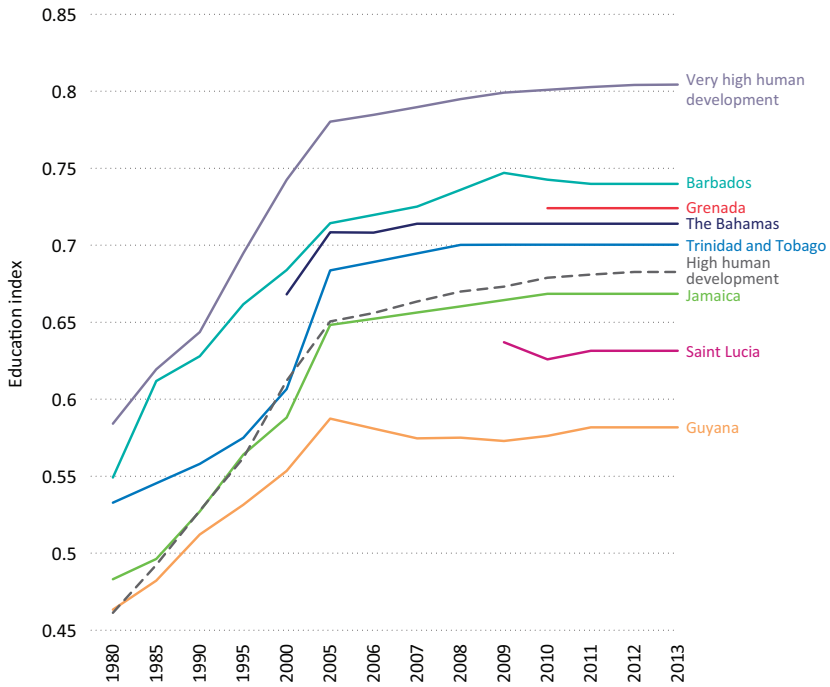
Source: United Nations Development Programme

**Figure 2.2 Health index of Human Development Index, 1980–2013**



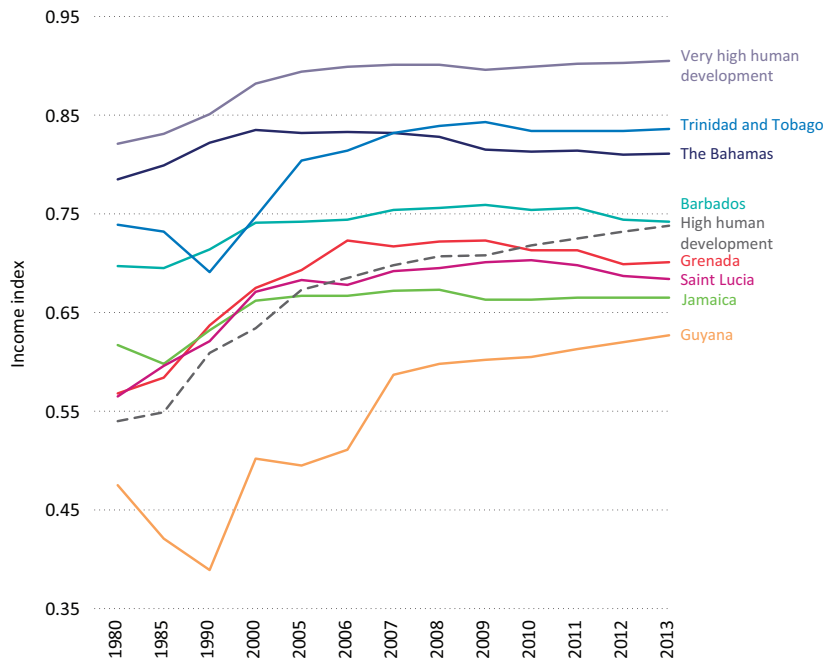
Source: United Nations Development Programme

**Figure 2.3 Education index of Human Development Index, 1980–2013**



Source: United Nations Development Programme

**Figure 2.4 Income index of Human Development Index, 1980–2013**



Source: United Nations Development Programme

The impact of external shocks on long-term development targets has long been a challenge in the region, mainly due to the effect on financing. Traditionally, the governments of the region have funded their development goals through a combination of funding from domestic and external sources and fiscal expenditure. Direct project funding usually takes the form of grants or loans from development agencies. These funds are typically used for large projects, such as the construction of highways, hospitals and prisons and improvements of airports and seaports. Domestic financing and fiscal expenditure usually support incremental gains, wages and salaries in the public sector, paying teachers in public schools, and improving government systems and processes. When countries face economic and natural disaster crises, not only does the fiscal purse come under significant strain, but also development funds typically get redirected to supporting the government through the crisis. This is not unique to the Caribbean, but back-to-back crises appear to characterise the region in a way that is vastly different from other regions in the world; and, as clearly demonstrated in the post-2008 period, progress towards development targets starts to fall behind once the economies struggle.

Indeed, the economic vulnerability of small states, the Caribbean included, has long been a topic of academic research. High degrees of economic openness and concentration in only a few export products make small states highly vulnerable to external shocks. argued that this vulnerability could be managed by building economic resilience, which he defines as: ‘The extent to which an economy can withstand or bounce back from the negative effects of external shocks’. Economic resilience stems from deliberate policy actions to ‘(a) absorb the effects of external economic shocks and (b) counteract the harmful effects of such shocks’. This reflects the high potential for the economic and social gains of small states, such as those in the Caribbean, to be eroded.

Briguglio (2014) proposed both an economic vulnerability index as well as an economic resilience index. The Caribbean countries included in the study were classified as having ‘high vulnerability’, with different degrees of resilience (Table 2.1). The extent of economic vulnerability experienced by a country is assumed to be a permanent or quasi-permanent feature of that country, and does not include policy-related measures. Briguglio considered the example of small island developing states (SIDS), which have small domestic markets as inherent features. Economic resilience, on the other hand, encompasses those features that are policy induced and can be used to mitigate against economic vulnerability. Development strategies should, therefore, be aimed at strengthening the economic resilience of the region.

Briguglio’s (2014) results, while confirming the vulnerability of Caribbean economies, also suggest that most have sufficiently adequate policy frameworks that would allow them to bounce back from an adverse event. In this study, the indicators of resilience are macro-economic stability; market efficiency; governance; and sound environmental management. These measure resilience at a point in time, giving a snapshot of a country’s policy framework, which would be more accurately reflected as changes over time.

**Table 2.1 Economic vulnerability and resilience indices (Commonwealth Caribbean countries *italic*)**

<b>High vulnerability, low resilience</b>	<b>Borderline cases: high vulnerability, medium resilience</b>	<b>High vulnerability, high resilience</b>
Algeria	Azerbaijan	Antigua and Barbuda
Angola	Cape Verde	Kuwait
Belarus	<i>Grenada</i>	<i>The Bahamas</i>
Bhutan	<i>Guyana</i>	<i>Barbados</i>
Bolivia	<i>Jamaica</i>	Belgium
Central African Rep.	Jordan	<i>Belize</i>
Chad	Kiribati	Malta
Comoros	Maldives	Mauritius
Congo, Dem. Rep.	São Tomé/ Príncipe	Netherlands
Congo, Republic	Sierra Leone	Oman
Côte d'Ivoire	Solomon Islands	<i>Saint Lucia</i>
Djibouti	Tajikistan	Samoa
Ecuador	Turkmenistan	Saudi Arabia
Equatorial Guinea	Ukraine	Singapore
Guinea	Yemen	Slovak Republic
Guinea-Bissau	Zimbabwe	Taiwan
		Tonga
		<i>Trinidad and Tobago</i>
		UAE
		Vanuatu
<b>Low vulnerability, low resilience</b>	<b>Borderline cases: Low vulnerability, medium resilience</b>	<b>Low vulnerability, high resilience</b>
Afghanistan	Albania	Australia
Argentina	Armenia	Austria
Brazil	Bangladesh	Bahrain
	Kazakhstan	New Zealand
	Kenya	Norway
	Latvia	Poland

(continued)

**Table 2.1 Economic vulnerability and resilience indices (Commonwealth Caribbean countries *italic*) (continued)**

	High vulnerability, low resilience	Borderline cases: high vulnerability, medium resilience	High vulnerability, high resilience
Burundi	Myanmar	Benin	Lesotho
Egypt	Nepal	Bosnia/Herz.	Macedonia, FYR
Eritrea	Niger	Bulgaria	Mexico
Ethiopia	Pakistan	Burkina Faso	Morocco
Gambia	Russia	Cambodia	Namibia
Iran	Senegal	Cameroon	Panama
Kyrgyz Republic	Sudan	China	Paraguay
Lao P.D.R.	Syria	Colombia	Peru
Lebanon	Tanzania	Costa Rica	Philippines
Liberia	Togo	Croatia	Portugal
Madagascar	Uzbekistan	Cyprus	Romania
Malawi	Venezuela	Dominican Republic	Rwanda
Mali	Vietnam	El Salvador	Serbia
		Georgia	South Africa
		Ghana	Spain
		Greece	Sri Lanka
		Guatemala	Suriname
		Honduras	Thailand
		India	Tunisia
		Indonesia	Turkey
		Israel	Uganda
		Italy	Uruguay
			Zambia
			Canada
			Denmark
			Finland
			France
			Germany
			Japan
			Qatar
			Slovenia
			Sweden
			Switzerland
			United Kingdom
			United States

**Source:** Briguglio 2014

## 2.2 Recent economic and social performance

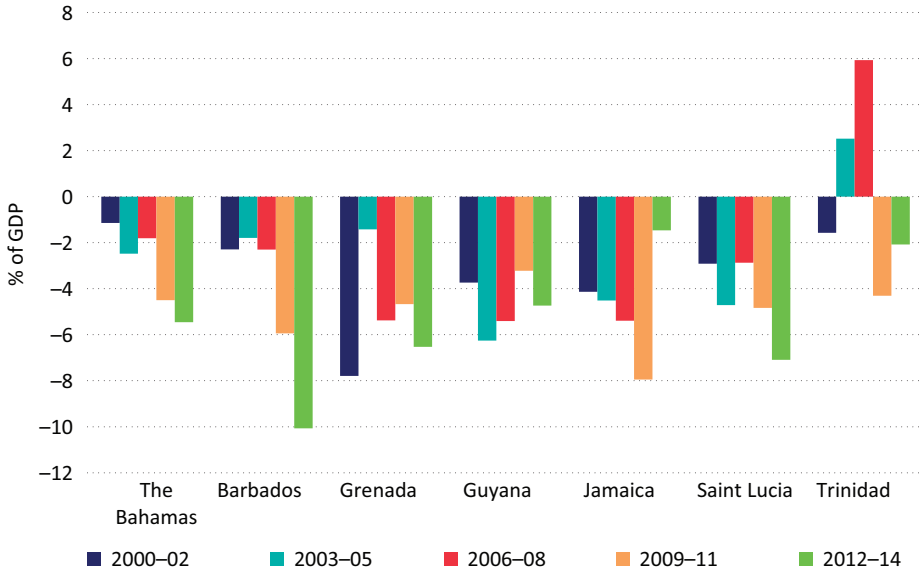
The Caribbean region has been hit by a number of crises in recent years, from natural to financial and those stemming from demographic societal change. Although efforts have been made to create systems to provide emergency support – such as the Caribbean Catastrophe Risk Insurance Facility (CCRIF) instituted in 2007 – regional governments are still forced to bear the brunt of the impact. Since its establishment, 12 member countries have been affected by natural disasters that triggered a disbursement from the CCRIF, and Saint Lucia and Grenada have been forced to seek financial support from the International Monetary Fund (IMF), partly to help recover from natural disasters.

Energy crises are also common in the region. The only significant producer of oil in the Caribbean is Trinidad and Tobago. All other countries are net importers of fuel, and the cost of fuel is as high as 9 per cent of imports in some countries. The indirect impact is even greater, as most islands in the region import most of what they consume. In the mid- to late 2000s, international oil prices almost tripled from the average at the beginning of that decade, and the foreign reserves of many islands came under severe pressure. While the private sector in these countries was spared the brunt of the impact, since most governments subsidise fuel prices, the governments' accounts came under pressure once again. Many islands are working to reduce their vulnerability to movements in international oil prices by including alternative energy sources in their energy mix. Barbados is among the world's leaders in the use of solar energy, while Saint Lucia and Grenada are investigating the use of geothermal and wind energy.

During the 2000s and 2010s, governments have also faced shocks to the financial sector. In the late 2000s and early 2010s, two regional financial conglomerates, CL Financial Group and Stanford Financial Group, and one local bank, ABI Bank, failed. Trinidad and Tobago was home to the largest insurance company, the CL Financial Group, and by the end of 2008 the country was estimated to have CL assets worth US\$2.9 billion (see IMF 2011). This entity operated throughout the Caribbean, and, while the exact financial impact on other affected countries is not known, it is clear that any funds these governments were forced to use to ameliorate the situation could not go towards development goals. These events compound the already challenging situation of an economic downturn and constrained fiscal earnings.

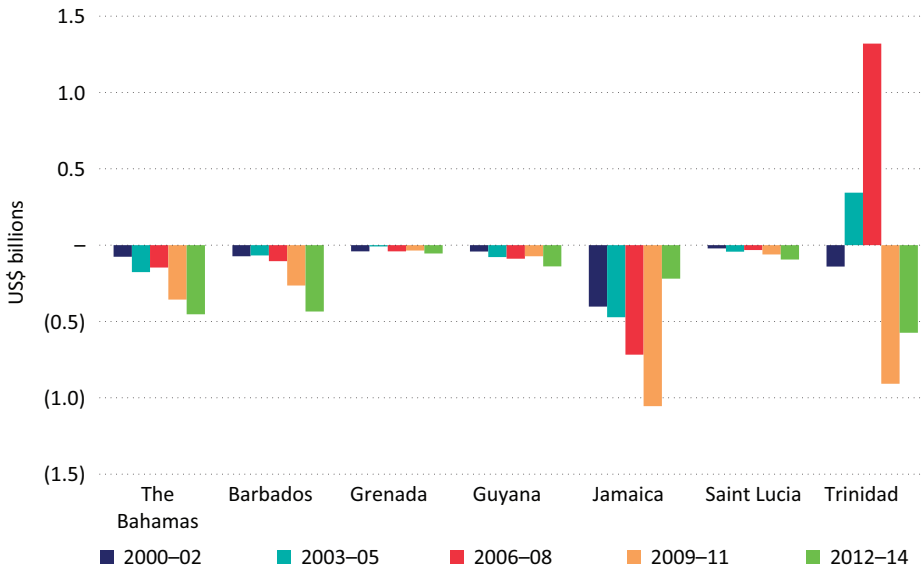
Apart from Trinidad and Tobago, which frequently records a fiscal surplus, the operations of Caribbean governments generally yield fiscal deficits. The trends in both the fiscal balance-to-GDP ratios and the absolute fiscal balance (see Figures 2.5 and 2.6) illustrate that the fiscal situation has been deteriorating. The years immediately following the global financial crisis were particularly challenging. The reduction in GDP has translated into lower revenue collections from the corporate sector and households, forcing governments to drastically cut their spending on both working capital and investment activities. Governments' capital spending has been particularly hard hit, which has been to the detriment of development projects. To compensate for the fall-off in revenue, governments have also been forced to borrow

**Figure 2.5 Trends in general government net lending/borrowing (% of GDP), 2000–2014**



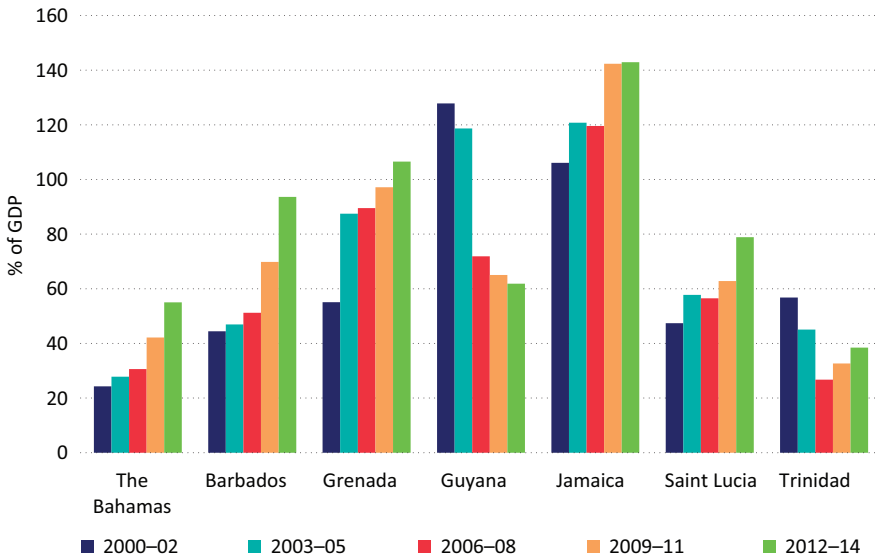
Source: IMF World Economic Outlook Database April 2015

**Figure 2.6 Trends in general government net lending/borrowing (US\$ billions), 2000–2014**



Source: IMF World Economic Outlook Database April 2015

**Figure 2.7 Trends in total debt-to-GDP ratios, 2000–2014**



**Source:** IMF World Economic Outlook Database April 2015

at a faster rate. As shown in Figure 2.7, there was a sharp increase in total debt-to-GDP ratios between the 2006–08 and 2009–11 periods. With the exception of Guyana, which has been receiving debt forgiveness since the mid-2000s, the debt situation in most islands has worsened notably since the onset of the economic slump. Much of the additional debt has been aimed at assisting in the recovery from national disasters and addressing balance of payments and fiscal weaknesses. In other words, it has generally not been directed towards development projects.

The business community has been unable to pick up the slack. In recent years, a large proportion of Caribbean businesses have struggled to stay afloat in the face of lower demand from both tourists and the local population. Many have been forced to reduce their workforce or close operations altogether. Yet, even before the economic slump began, the business community would have been hard-pressed to support their country’s development goals. Ahmed and Miller (2000) as well as Furceri and Sousa (2011) argue that Caribbean governments have crowded out the private sector, robbing them of any chance of playing a greater role in driving economic development. When you compare the size of the governments in the Caribbean, using their share of total value-added and total employment as a proxy, with private sector-led countries around the world, this suggests that the governments of the region may indeed be excessively large (Alleyne et al. 2004).

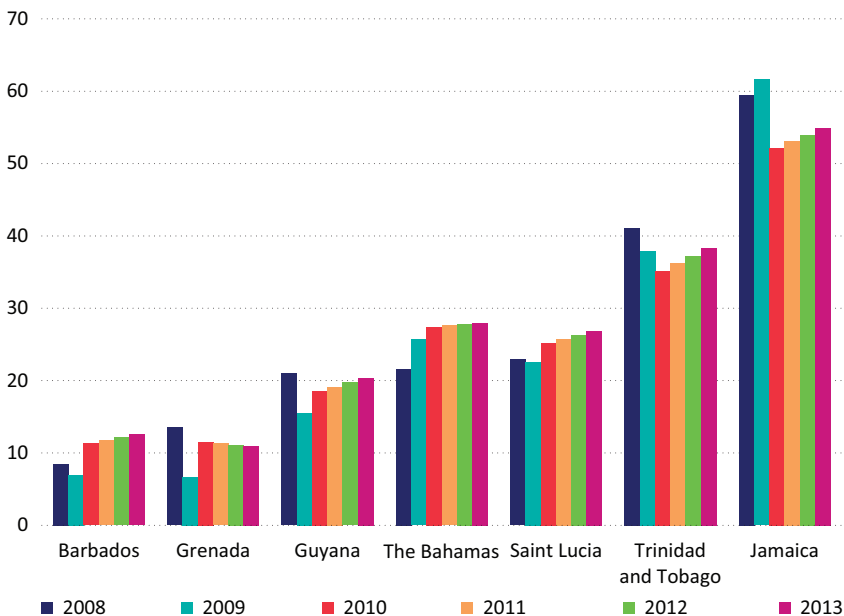
The Caribbean has been criticised for not being sufficiently innovative (Daude 2010). One of the causes of this situation may be the ‘brain drain’ being experienced (Mishra 2006). Mishra estimates that the Caribbean lost on average 10–40 per cent of its labour force from 1965 to 2000 to countries within the Organisation for Economic Co-operation and Development (OECD), with many countries having lost more than

70 per cent of their educated labour force. Further, Nurse and Jones (2009) showed that, in 2000, no country within the region had a tertiary education emigration rate to OECD countries of lower than 20 per cent. While emigration has always been a Caribbean concern – the Caribbean has one of the highest emigration rates in the world – it is only in recent years that its effect on overall development has been studied in depth.

It is difficult to pinpoint the economic cost of these events to society as a whole, and it is difficult to separate the impact on society of the economic slowdown, financial crises and natural disasters from the effects of a relatively weak private sector. However, it is clear that society has been affected. Crime rates, especially in the typically low-crime countries, have risen (see Figure 2.8). Only three countries in the sample have less than 20 homicides per year: Barbados, Grenada and Guyana, which was slightly above 20 in 2013. After falling in 2008 and 2009, crime in Trinidad and Tobago and in Jamaica is on the rise again.

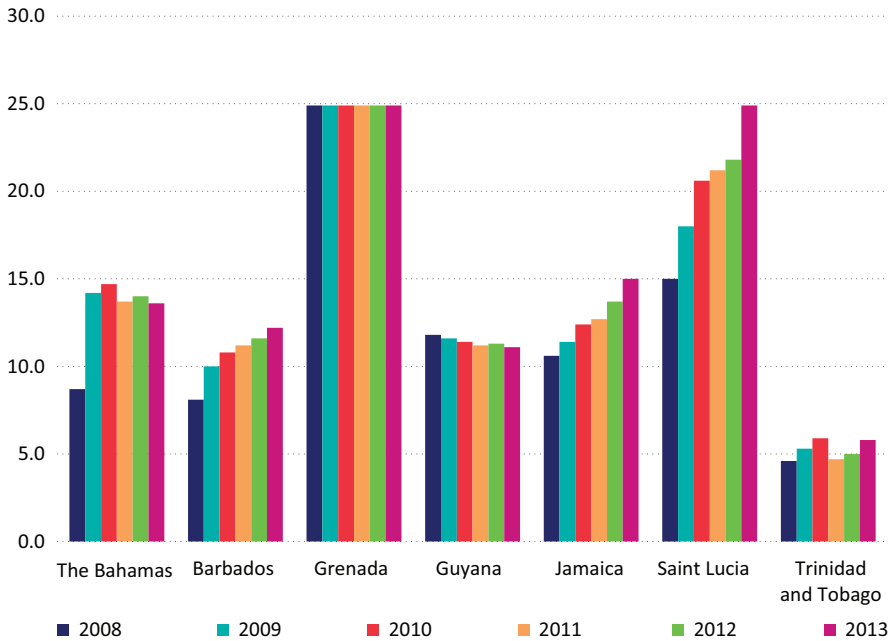
Along with this increase in the level of crime, unemployment rates within the region have also increased since 2010, with two countries (Saint Lucia and Grenada) reporting that one out of every four persons actively seeking employment is without a job. If one includes those people who have dropped out of the labour force, this number is even higher. Even those countries that made significant strides in improving employment opportunities in the 1990s and 2000s have experienced a significant rise in unemployment between 2005–2015. In 2008, Jamaica's unemployment rate hovered around 10 per cent, but by the end of 2013 the average rate of unemployment was just over 15 per cent. Similarly, Barbados, which began the period with a rate

**Figure 2.8 Homicide rates, 2008–2013**



Source: United Nations (UN) 2014

**Figure 2.9 Unemployment rates, 2008–2013 (%)**



**Source:** UN 2014

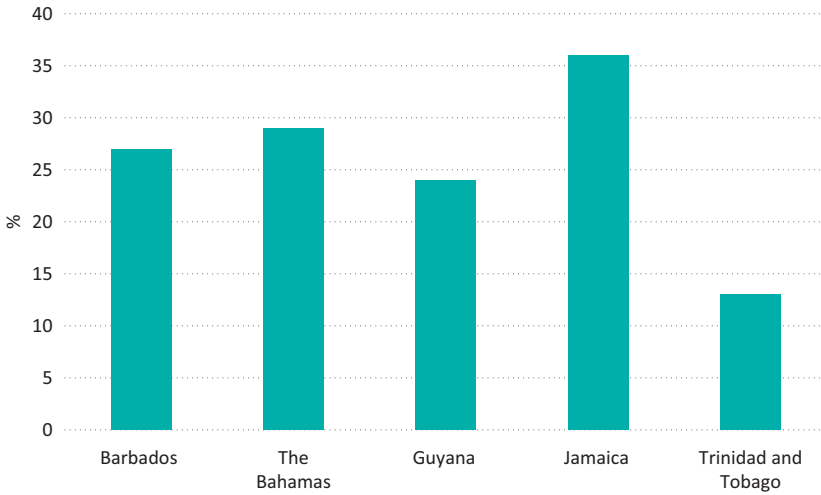
of unemployment below 10 per cent, saw the rate of unemployment increase to 12 per cent by the end of 2013. The only country to record a fall in unemployment was Guyana, where the rate of joblessness fell consistently over the period under review thanks to high commodity prices, foreign direct investment and expansion of private sector credit (IMF 2014).

While unemployment is a major problem, young people are at even greater risk of falling into the ranks of the unemployed (see Figure 2.9). Parra-Torrado (2014) notes that, in Barbados, Trinidad and Tobago, Jamaica and The Bahamas, youth unemployment is about 2.4 times higher than the total unemployment rate. In 2013, one in every three persons between the ages of 15 and 24 years in Jamaica was unemployed. In Barbados, The Bahamas and Guyana, one in every four young people was unemployed. Even in Trinidad and Tobago, where the ratio was lower than in the other countries, it was still twice the unemployment rate of the overall labour force (see Figure 2.10).

The slowdown in economic activity has negatively affected both households and businesses. Household consumption in most countries was below the level reported in 2008, while investment (as a proportion of GDP) is also lower (see Figure 2.11). In The Bahamas, Jamaica and Barbados, household consumption has declined by approximately US\$1 billion, while in Grenada and Saint Lucia there has been no growth since 2008.

Similarly, investment as a share of GDP has almost halved in Grenada and Trinidad and Tobago, while Saint Lucia, Barbados and Jamaica have experienced significant

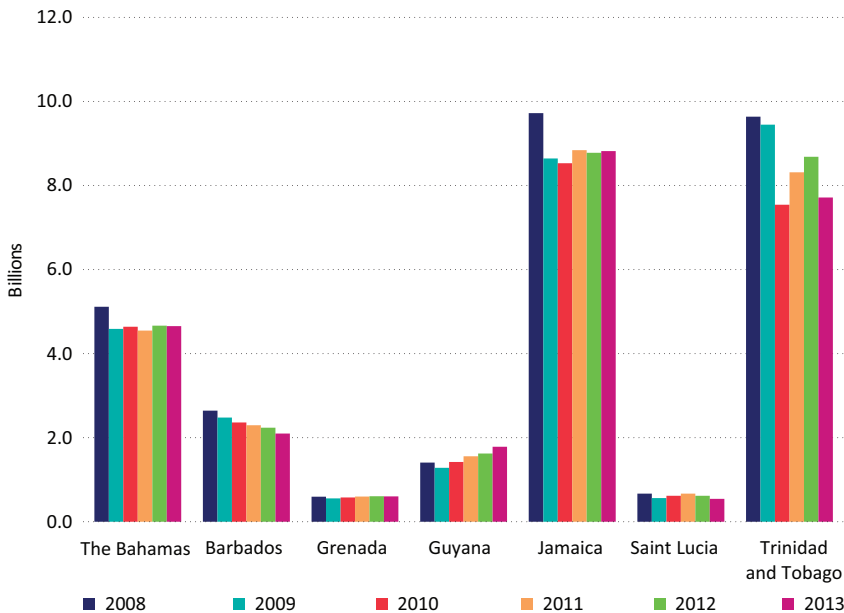
**Figure 2.10 Youth unemployment in 2013 (% of total labour force 15–24 years)**



Source: World Bank’s World Development Indicators

declines. Obviously part of this contraction reflects the fiscal adjustments made by governments in the region to restore fiscal balance, but part of the contraction has also occurred due to a reduction in the rate of investment, owing to uncertainty in these countries. The next section examines the future prospects for the region given global trends.

**Figure 2.11 Household consumption, 2008–2013 (US\$)**



Source: UN 2014

## 2.3 Global and emerging trends: threats or opportunities

### 2.3.1 Technological advances

Global economic, environmental, technological and social trends have served to indicate that, while the future may be uncertain, one inevitability is that there will be disruptions and discontinuities, some of which may have positive implications for the region, while others may test its resilience. The global financial and economic crisis that commenced in 2008, and the impacts of which were felt from 2009, is one such phenomenon. The previous review has highlighted the impact of global development on Caribbean economies. It is evidence of the interconnectedness of economies.

The single most significant feature of our time has been the pervasiveness of globalisation, facilitated by deregulation and technological advances that render economic systems almost borderless. This explains the types of financial products that have been developed and the rapidity of the transmission mechanisms that enabled a financial crisis commencing with the housing market collapse in the United States in 2008 to spread to Europe and the rest of the world and to precipitate an economic downturn, the effects of which are still evident.

In response to the crisis, regulations have been set in train. Global capital flows have declined in the aftermath of the crisis and a reversal of flows in Europe explains about 60 per cent of the decline. Foreign direct investment has declined to most countries. Emerging economies, which have been described as having relatively shallow financial depth, have nevertheless attracted capital and have increasingly provided loans and investments (Lund et al. 2013). Two future scenarios are possible. There may be a resurgence of domestic financial markets, which pose less systemic risks. Another scenario could be a re-set of the global financial markets, making them more sustainable (*ibid.*). Policy-makers are challenged to find the right balance in terms of how open their markets should be.

While globalisation has been occurring for many years, it has been accelerated by digitisation and communication technologies. Manyika et al. (2014) estimate that flows of goods, services and finance totalled US\$26 trillion, or 36 per cent of global GDP, in 2012 and could be doubled or tripled by 2025. An important finding from the perspective of this project is that, within each type of flow, 'knowledge-intensive ones are growing faster than the labour-intensive or capital-intensive variety'. The article also suggests that, while 'the last era of globalisation was driven largely by sourcing low-cost production, the next era will center on the rise of the global knowledge economy' (*ibid.*, 3).

This finding should inform policies and strategies geared towards repositioning Caribbean economies for effective participation in the changing global economic environment. An interesting aspect is that digitisation and communications technologies have made it possible for persons to work together from remote locations and have provided a space for the sole operator or microenterprise to conduct business across borders.

A more profound impact of technological and communications advances is their role in the emergence of what is being termed the 'on-demand' economy. The latter refers

to the ‘app-based’ and ‘cloud-based’ solutions that link the demand and supply of services, almost with the touch of a button. These app-based models of matching jobs to workers have been adopted by a range of enterprises, for instance Handy, which supplies domestic workers, Uber and Lyft, which provide readily available taxi services, Appirio, the cloud-based services company that provides freelance coders on demand, Eden McCallum, which has a network of consultants, and Medicast, the app-based medical services provider (*The Economist* 2015). *The Economist* (2015) holds that the ‘boom marks a striking new stage in a deeper transformation. Using the now ubiquitous platform of the smartphone to deliver labour services in a variety of new ways will challenge many of the fundamental assumptions of the twentieth-century capitalism, from the nature of the firm to the structure of careers’.

The attractiveness of the on-demand services is: no need for offices; no full-time contract employees; the clever use of computers to repackage one set of people’s needs into another set of people’s tasks; and an ability to access spare time and spare cognitive capacity all across the world (*The Economist* 2015).

The disadvantages of this emerging trend are the lack of job security and the absence of social interaction afforded by the traditional work arrangements. It is an open question whether this trend will continue unimpeded to 2050, it might be slowed by the human requirement for social interaction, or it will redefine social interaction altogether.

Technological advances have been taking place at a rapid pace and revolutionising the ways in which societies and economies function. While we cannot say with certainty what new technologies will be operational in 2050, we are fairly certain the future will be one that is integrally linked to technology. These and other innovations/disruptions point to skill requirements that are knowledge based. Caribbean economies must of necessity be strategically positioned to participate in and benefit from the opportunities and the challenges.

Strategic positioning requires the region to be cognisant of the skills and competencies required for meaningful participation in the knowledge economy. There is need to recognise that a ‘21st century education is the bedrock of competitiveness – the engine, not simply an input, of the economy’ (Partnership for 21st Century Skills 2008, 1). Engagement with the knowledge economy requires a combination of core education subjects with certain workplace competencies – identified as inter personal skills, intra personal skills and technological or ICT skills. Moreover, surveys of firms in the United States and the United Kingdom emphasise the importance placed by firms on these workplace competencies. In the United Kingdom, communications skills, learning ability, problem solving, teamwork and the capacity for self-management are more highly ranked than technical skills; while American firms also stress the importance of communications and intra personal skills (OECD 2001; Partnership for 21st Century Skills 2008). The knowledge economy also requires an emphasis on critical thinking, cognitive skills, creativity and entrepreneurial thinking. Emerging social trends include not only the change in the nature of work, but also shifting demographics, the tendency towards jobless growth and high youth unemployment (UNDESA 2007; UNDESA 2011; KPMG 2014). To the extent that Caribbean young

people, particularly boys, are considered to be at risk, this has the potential to destabilise society. Youth development is an area for priority attention in the Vision 2050 project.

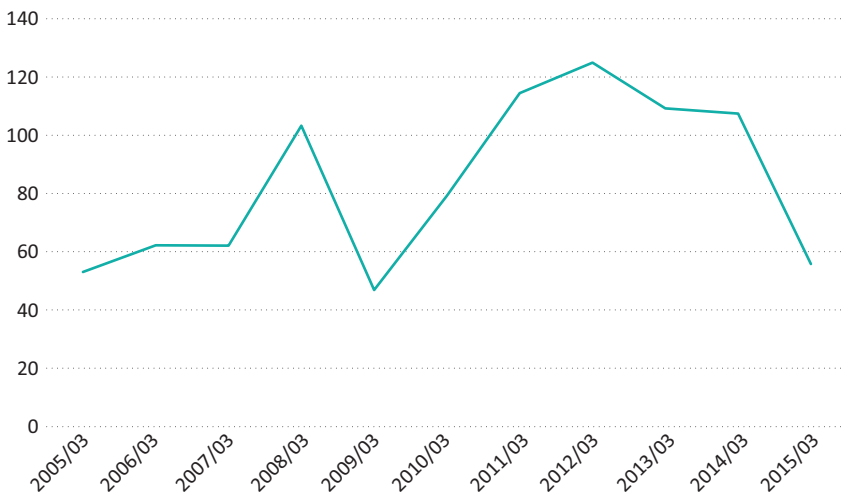
### 2.3.2 Food and oil volatility

There are opportunities in many of the key challenges facing the Caribbean. For example, the volatility of oil and food prices offers an incentive as well as an opportunity to strengthen food and energy security. Oil prices have shown volatility over an extended period, and are quite likely to continue in that trend into the future. Figure 2.12 illustrates a substantial price hike in 2008, resulting from supply factors linked to natural disasters and conflicts in supplier countries, as well as increased demand from emerging countries such as China and India. The dampening effect of the global crisis was evident by 2009. Subsequently prices rose again, but have fallen dramatically since, with the emergence of the United States as a significant producer of oil and gas, a feature that has influenced prices.

There are differing views concerning whether these low prices are sustainable, taking into consideration the relative costs of producing alternative forms of energy. Moreover, the World Bank has forecast that crude oil prices will rise in 2016 and should reach US\$103.4 per barrel by 2025 in nominal terms and US\$82.9 in real (2010) terms (Knoema 2015). The oil price volatility trends serve to support energy security as a vital component in planning for a resilient Caribbean.

Food price volatility has been triggered by the diversion of grains into the production of biofuels, as well as by extreme drought conditions in some regions. This raises food security concerns and points to the need for policies to buffer the region against over-dependence on imported foods.

**Figure 2.12 Crude oil prices 31 March 2005 to 31 March 2015 (US\$ per barrel)**



**Source:** Constructed on data from Quandl, Brent crude oil price, available at: [www.quandl.com/search?query=Brent%20crude%20oil%20price](http://www.quandl.com/search?query=Brent%20crude%20oil%20price)

### 2.3.3 Environmental issues

In areas of environmental health there have been many challenges, namely severe acute respiratory syndrome, avian flu and ebola. In addition, chikungunya virus, with its debilitating effects, has been one of the more serious health hazards that the Caribbean region has had to deal with. Moreover, the UN has warned that these health challenges are happening at an alarming rate of one per annum.

Other opportunities exist in exploiting the vast resources that surround Caribbean countries, namely the sea. Called the 'blue economy', the sectors covered include fisheries; tourism; shipping and port facilities; aquaculture; energy, including tidal, wave and wind, and oil; marine biotechnology products; and submarine mining. This is an area of relevance for Caribbean economies, some of which have ongoing initiatives for the management of marine resources and have long been dependent on the marine environment for fisheries, tourism and trade; yet they could still benefit from an increased emphasis on sustainable management of these marine resources.

Current threats to the Caribbean Sea have been identified as the unsustainable exploitation of fisheries resources, with 35 per cent of stocks being over exploited; pollutants in the form of oil hydrocarbons, sediments, pesticides, litter and marine debris, toxic wastes and sewage; poorly planned and regulated coastal development; sand mining; and the intensity of hurricanes and storm events. Concerted efforts are needed to diversify the economies of ocean states and increase the share in GDP of ocean sectors; assist in the creation of higher-value jobs; address the issue of food security; and support developing countries in the sustainable management of the marine environment. For the Caribbean to more fully exploit the potential of this vast resource, however, will require the honing of technical skills and data collection and research capabilities; the establishment of appropriate legal and institutional frameworks; and the strengthening of co-operation among countries (Roberts 2015).

Climate change issues are of growing concern given the regularity and intensity of global climatic and environmental disturbances, and are expected to have a disproportionate impact on island economies such as the Caribbean. In recent times, the world has experienced an intensifying of extreme weather patterns, namely extreme droughts and severe flooding, tsunamis, earthquakes and cyclones, which have led to the loss of lives, property, crops and environmental resources, as well as to adverse health impacts. Caribbean countries are vulnerable, as recent events have demonstrated in the case of Saint Lucia with the passing of Hurricane Tomas and the extreme floods that affected Dominica, Saint Lucia, and St Vincent and the Grenadines in December 2013.

The 2015 Global Assessment Report on Disaster Risk Reduction (GAR) (UNISDR 2015) focuses on the distinction between managing risk and managing disasters, inferring that disaster risk reduction requires managing the risks generated within the development process. Globally, economic losses are estimated at US\$250 billion–US\$300 billion. On the basis of a probabilistic assessment model, the GAR estimates that global annual average losses are US\$314 billion, this representing the contingencies related to the built environment. The model is future focused, rather

than based on historical data – for it is argued that this would not go back far enough to be used as a predictor of future patterns.

The GAR suggests that the average annual loss (AAL) for SIDS represents 20 per cent of annual social expenditure and that these countries face the highest potential losses in relation to capital stock, investment and social expenditure. Based on this report, four Caribbean countries have AALs in excess of 100 per cent of social expenditure, with The Bahamas and Antigua and Barbuda having by far the highest ratio of AAL to social expenditure. Cayman Islands and Antigua and Barbuda have the highest AAL in relation to cyclone wind, while The Bahamas, Montserrat and Dominica have the highest potential risk with respect to storm surge. Trinidad and St Kitts and Nevis have the highest potential risk with regard to earthquakes (UNISDR 2015).

That report is not only useful in terms of highlighting the threat to the existing capital stock, but is also critical in pointing to the opportunity cost of managing risk. It demonstrates that critical investments in public goods could be negatively affected by the diversion of resources to disaster response. Moreover, it illustrates countries' individual lack of capacity to provide the resources for contingency planning.

## Note

- 1 Inputs to this chapter were provided by Stacia Howard, Marsha Atherley-Ikechi, Anthony Clayton, Ryan Peterson, Tom Rogers, Denny Lewis-Bynoe and Alicia Matheson.

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