



Organisation of Eastern Caribbean States Systematic Regional Diagnostic

June 27, 2018

Antigua and Barbuda



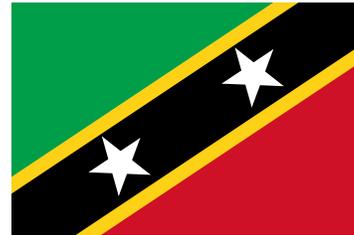
Commonwealth of Dominica



Grenada



Federation of Saint Kitts and Nevis



Saint Lucia



Saint Vincent and the Grenadines



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Abbreviations and Acronyms

ALMP	active labor market program
ATG	Antigua and Barbuda
CARICOM	Caribbean Community
CARIFIS	Caribbean Fisheries Information System
CARPHA	Caribbean Public Health Agency
CBF	Caribbean Biodiversity Fund
CDB	Caribbean Development Bank
CLASS	Classroom Assessment Scoring System
CRFM	Caribbean Regional Fisheries Mechanism
CSEC	Caribbean Secondary Education Certificate
CSOs	combined sewer overflows
DMA	Commonwealth of Dominica
ECCB	Eastern Caribbean Central Bank
ECCU	Eastern Caribbean Currency Union
ECE	early childhood education
ECD	early childhood development
EPI	Environmental Performance Index
EVI	Environmental Vulnerability Index
GRD	Grenada
FDI	foreign direct investment
HIC	high-income countries
IBRD	International Bank for Reconstruction and Development
KNA	Federation of Saint Kitts and Nevis
PISA	Programme for International Student Assessment
LAC	Latin America and the Caribbean
LCA	Saint Lucia
LIPI	Labor Income Poverty Index
LFS	labor force survey
NCTFs	National Conservation Trust Funds
OECS	Organisation of Eastern Caribbean States
OESS	OECS Education Sector Strategy
OOPS	out-of-pocket spending
PAHO	Pan-American Health Organization
PDNA	Post Disaster Needs Assessment
PPP	purchasing power parity
RHIM	Regional Health Insurance Mechanism
SIDS	small-island development states
SLC-HBS	Survey of Living Conditions/Household Budget Survey
SSOs	sanitary sewer overflows
SST	small states
TVET	Technical and vocational education and training
UHC	universal health coverage
UMI	upper-middle income country
USDW	underground sources of drinking water
VCT	Saint Vincent and the Grenadines
WCR	Wider Caribbean Region
WDI	World Development Indicators
WTO	World Trade Organization
WEO	World Economic Outlook

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1. Overview

Eastern Caribbean countries are among the region’s top performers in per capita income, poverty reduction, access to services, and gender inclusion, despite the constraints imposed by their small size. Geography and economic specialization make them vulnerable to external shocks, contributing to low and volatile GDP growth since 2000. High debt, limited job opportunities, and climate change present important development challenges for OECS countries. Strengthening their resilience to shocks is a prerequisite for poverty reduction, inclusive growth, and sustainability. The natural capital of the oceans provides opportunities for OECS countries to embed growth in the “blue economy.” Realizing these opportunities will require harnessing human capital, embracing new technologies, and continued regional cooperation.

A unique set of countries

1. This Systematic Regional Diagnostic (SRD) focuses on the development challenges of the six World Bank Group members that belong to the Organisation of Eastern Caribbean Countries (OECS): Antigua and Barbuda, Dominica, Grenada, St. Kitts and Nevis, St. Lucia, and St. Vincent and the Grenadines (hereafter referred to as “OECS countries”). The objective of the SRD is to identify the constraints and opportunities facing these six countries as they seek to meet the goals of inclusive and sustainable growth. While there are variations across the OECS countries, the regional approach of this SRD is motivated by the shared development challenges faced by the OECS, as well as the regional strategies available to overcome these challenges.
2. **Size and geography are distinguishing characteristics.** The OECS countries are among the smallest countries in the world, ranking in the bottom 15th percentile whether measured in terms of population, land area, or gross domestic product (GDP). Taken together, their population in 2016 was just under 625,000—roughly the size of a mid-size city in many countries. Their geography and natural assets have made them a top global tourist destination, but also expose them to natural disasters, as was made evident during the devastating 2017 Atlantic hurricane season.
3. **Like other small states, OECS countries have overcome the challenge of their small internal markets and labor forces by leveraging external demand.** Openness and specialization have helped them achieve fast economic growth during good times, but have exposed them to economic volatility. Over recent years they have worked to develop new ways to remain competitive in a rapidly changing global economy.
4. **Unlike many other small states, OECS countries have successfully used regional integration to overcome many challenges of size.** They have formed strong regional institutions, with the Eastern Caribbean Currency Union (ECCU) the most prominent. With a common currency and regional central bank, it has proved one of the world’s most successful monetary unions. Other important regional initiatives include CARICOM, the Caribbean Court of Justice, the Caribbean Development Bank, and the University of the West Indies.
5. **Their large diasporas also set OECS countries apart.** Migration is considerably higher than the average for other small states. The size of the OECS diaspora equals 55 percent of the

total population residing in the OECS, compared to the small state average of 15 percent. Remittances sent home by the OECS diaspora have provided steady support for the balance of payments and poverty reduction. Between 2005 and 2008, remittances accounted for 10 percent of household income and a significantly larger share of poor household income (20 percent in Dominica). In 2015, 18 percent of OECS households reported remittances as part of their gross income. Remittances, however, contribute to low competitiveness when spent mostly on private consumption. Moreover, the countries' populations have undergone a "brain drain" as highly-skilled citizens emigrate due to a lack of economic opportunities.

6. **These characteristics set the stage for the SRD's analysis of opportunities and challenges associated with growth, inclusion, and sustainability.** They have influenced countries' development trajectories in the past, positively and negatively. However, as will be summarized below, lessons from other small countries show that these characteristics need not be definitive, and that their challenges can be overcome. Finally, the SRD offers solutions as to how OECS countries can seize opportunities to reduce poverty and promote shared prosperity.

OECS countries have been strong performers

7. **Despite slow growth in recent years and frequent natural disasters, the OECS includes some of the wealthiest countries in the region.** Per capita gross national income (GNI) in St. Kitts and Nevis is US\$15,690—the sixth highest in the Western Hemisphere (including Canada and the United States).

8. **OECS countries have made significant strides towards achieving equity and inclusion.** The countries perform as well or better than peers along several dimensions, including labor-force participation, basic education, gender inclusion, and access to basic services such as electricity, improved water sources, improved sanitary facilities and internet. They also perform comparatively well in certain health outcomes and areas of social protection.

9. **They have enjoyed a measure of success in reducing poverty and inequality.** Extreme poverty is extremely low. Measured at the international poverty line—US\$1.90 per day, adjusted for 2011 purchasing power parity (PPP)—the incidence of extreme poverty ranged from 0 percent in St. Kitts and Nevis to 3.2 percent in Antigua and Barbuda. When compared to countries within the same income group, the incidence of poverty (measured at US\$5.50 per day 2011 PPP) in the OECS was moderate, and lower than many countries in Latin America and the Caribbean (LAC). About 22 percent of the OECS population in the Windward Islands were poor during 2005–2008, while poverty rates in the Dominican Republic, Panama, and Brazil all were above 32 percent during the same period. Nevertheless, all findings concerning poverty reported in the SRD must be assessed in the context of limited poverty-related data in the OECS.¹

¹ Household surveys of income or consumption—the mainstay of poverty analysis—are available for OECS countries only once every ten years on average, and the most recent was conducted in 2008. New data will not be available until 2019. The SRD has drawn on labor force surveys and other sources. Caution needs to be taken when using labor force surveys as a stand-in for household surveys. As will be discussed in the context of social protection, household survey data are crucial for targeting social assistance effectively.

10. **They have made significant progress in providing basic education.** Enrollment in early childhood education is relatively high (over 80 percent in Grenada and St. Vincent and the Grenadines), primary school enrollment is close to universal in all countries except Antigua and Barbuda, access to secondary education is more inclusive than the LAC average, and school completion rates in most countries are higher than for countries of similar size and income.

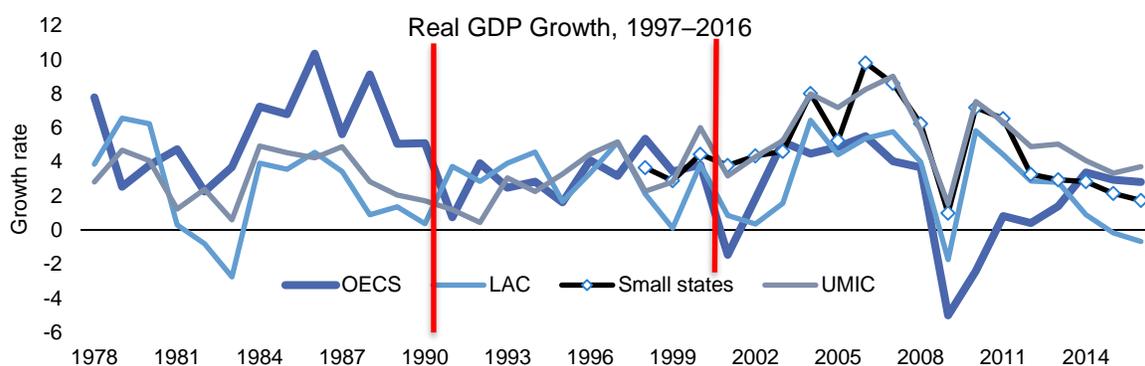
11. **They have also made advances in childhood immunization, antenatal care, and other key areas of health.** Neonatal mortality rates are low and falling in all countries except for Dominica, where the rate has increased from 10 to 25 per 1000 live births in the last two decades. Non-communicable diseases, however, are becoming a greater burden in OECS countries. Several OECS countries compare favorably to size, income and regional comparator groups in their spending on health care, but on average the OECS countries fall somewhat short. In addition, public spending on health care in OECS countries, at 2.7% of GDP, lies below the benchmark of 4–5 percent of GDP that the World Health Organization suggests is needed to finance universal health coverage. This is also lower than the LAC regional average, at 3.8 percent of GDP.

12. **Gender equality and inclusion have improved across the OECS.** Boys and girls are enrolled at equal rates in basic education. Women outnumber and outperform men in tertiary education. There is close-to-universal access to pre-natal care. Adolescent fertility rates are far below the regional average.

Economic growth has been low since 1990 and is increasingly volatile

13. **OECS countries enjoyed rapid economic growth in the 1970s and 1980s.** On average the OECS outperformed the LAC region and countries of similar income (Figure 1-1). Rising world prices for bananas—a major export for most OECS countries, and a product that enjoyed preferential access to the British market—stimulated a 270 percent increase in the volume of banana exports from the Windward Islands between 1977 and 1990.² The 1970s and 1980s were also a period of steady growth in the Caribbean tourism industry.

Figure 1-1. OECS Countries outperformed comparators in the 1980s, but have lagged behind since 2000



Source: World Development Indicators.

² Cashin, Paul. Montfort Mlachila and Cleary Haines (2010). “Caribbean Bananas; The Macroeconomic Impact of Trade Preference Erosion.” IMF Working Papers 10/59, Washington, DC: International Monetary Fund.

14. **However, GDP growth subsided in the 1990s in the OECS and in the comparator country group.** Since 1990, GDP growth rates have been low, despite high levels of external financing in the form of foreign direct investment (FDI) and remittances. Successive changes in the European Union trade preference regime, starting in 1993, eroded OECS countries' preferential access to European markets, especially for bananas.

15. **Moreover, output growth became much more volatile after 2000, as the region was hit by successive shocks.** Some emanated from the global economy and others were caused by natural disasters. OECS countries were hit especially hard by the 2007–08 global financial crisis. The tourism industry, which had replaced agriculture as the leading generator of export revenue in the OECS, suffered from the recession in Europe and the United States. Figure 1-1 shows that output declined more deeply and recovered more slowly in OECS countries than in their major comparator groups.

16. **OECS countries have struggled to save during good times to build the fiscal buffers needed for countercyclical responses.** Since 1990, all countries except St. Kitts and Nevis have tended to follow procyclical fiscal policies during both upturns and downturns. Persistent fiscal deficits and the realization of contingent liabilities led to the accumulation of public debt. During the past twenty years, only St. Lucia and St. Vincent and the Grenadines have succeeded in continuously holding debt below 100 percent of GDP. Establishing a robust fiscal responsibility framework (as Grenada is doing) is critical for promoting resilience to shocks—including to natural disasters and the effects of climate change—and creating the preconditions for economic growth.

17. **Complex business regulations add to a high-cost business environment that undermines competitiveness and growth.** Most OECS countries' business regulations lie far from the global frontier. As small, island economies, it is especially important for OECS countries to reduce compliance costs associated with customs and international trade, improve port efficiency, and increase connectivity. Reducing OECS countries' dependence on oil for power generation would reduce economic volatility as well as benefit the climate.

18. **The region's tourism industry is losing competitiveness relative to other regions of the world.** The world tourism market is changing rapidly. Once a pioneer in tourism, the Caribbean (and especially OECS countries) now lags behind all other regions of the world in industry growth. International tourist arrivals in the OECS grew by an average annual rate of 0.6 percent between 2005 and 2017, compared to the world average of 4.2 percent and to growth of 6.4 percent per year in Asian and Pacific countries.³ To regain competitiveness, OECS countries will need to exploit emerging technologies and develop new tourism offerings that meet the tastes of new demographic segments of the market.

³ The OECS growth rate is computed using data compiled by the Caribbean Tourism Organization. World and regional growth rates use data published by the UN World Tourism Organization. See Figure 4-27 on page 57.

High unemployment, rising health costs, and gaps in social protection temper poverty reduction achievements

19. **Limited job opportunities have hindered poverty reduction.** Unemployment rose after the global financial crisis and has remained high in all countries except St. Kitts and Nevis. Unemployment rates in 2016 ranged from 19 to 23 percent in Grenada, St. Lucia, and St. Vincent and the Grenadines—well above the 10 percent average for all small states globally. A decomposition analysis of changes in household-level per capita labor income shows that unemployment stymies the capacity of the labor market to lift people out of poverty in Grenada and St. Lucia.

20. **OECS tourism and agriculture, which employ most of the poor, have been highly volatile and sensitive to fluctuations in world market conditions.** The loss of trade preferences for OECS banana exports to Europe disrupted progress in poverty reduction, most notably in Grenada, St. Lucia, and St. Vincent and the Grenadines. Tourist arrivals fell sharply during the global financial crisis, and in 2017 were still below 2007 levels in St. Kitts and Nevis and in St. Vincent and the Grenadines. Arrivals in Antigua and Barbuda exceeded their pre-crisis level in 2016, but then declined in 2017 due to Hurricane Irma.

21. **High unemployment—especially among young people—a large skills gap, and a trend towards households shouldering a greater share of total health spending create obstacles to shared prosperity.** The key challenges facing OECS countries are addressing rigidities and constraints in their labor markets, orienting their education systems towards meeting labor-market demand, and strengthening social protection systems—including making them respond more quickly during natural disasters. Unemployment is high in most countries (St. Kitts and Nevis being a notable exception), with youth unemployment rates exceeding 40 percent in Grenada, St. Lucia, and St. Vincent and the Grenadines.

22. **High levels of public debt consume fiscal space needed for social protection.** In addition, countries face challenges in program targeting, coverage, and responsiveness. Duplication and fragmentation of programs impede effectiveness. Many programs tend to use geography or categorical characteristics (e.g., age) to target beneficiaries. Grenada and St. Lucia have recently adopted the proxy means test, a tool developed by the World Bank, as their targeting method. The scarcity of recent poverty data makes it difficult to focus social protection programs on effective poverty reduction.

23. **OECS countries stand out for their households' high levels of out-of-pocket spending on health.** Private spending on health has been growing as a share of total spending in the OECS since the mid-2000s, while this share has been declining steadily in upper-middle income countries, small states, and in the LAC region. High out-of-pocket spending is correlated with the prevalence of non-communicable diseases. In a context of high economic volatility, high and growing out-of-pocket spending places many households at risk of not meeting their health needs in the event of natural disasters or other major shocks.

24. **Hurricanes and other major storms have placed additional strain on poor and vulnerable populations.** The vulnerable were twice as likely to need their house rebuilt after

Hurricane Irma in 2017. Few have insurance coverage for their housing. Many depend on employment in agriculture, tourism, or other weather-sensitive industries. Natural disasters also disrupt social assistance programs.

Sustainability is threatened

25. **Several factors threaten the sustainable management of the OECS countries' natural capital endowment.** On the one hand, their location and geography provide for a challenging natural environment, with a high propensity for hurricanes and earthquakes. Changes in the global climate are meanwhile increasing the frequency and magnitude of some weather-related effects and creating others, such as rising sea levels and coral bleaching. On the other hand, the overexploitation of the natural environment for economic purposes, not least for tourism, pose a threat to the same environment. Solid-waste generation, high levels of water use, and frequent blockages of sewer and sanitation systems all impact the sustainable provision of environmental amenities that are central to the tourism sector.

26. **Human capital is also threatened.** Brain drain, high youth unemployment, and skills erosion degrade the stock of human capital in OECS countries. Harnessing the region's human capital will require improving countries' records in attracting, training, and retaining teachers, as well as boosting access to quality early childhood education. Countries will also need to address the skill-jobs mismatch and capacity constraints in labor markets through training, direct job creation, and start-up incentives.

27. **Fiscal policy can provide a foundation for sustainability.** Public debt is high in all countries. This constrains long-term growth and economic stability. Strong fiscal responsibility frameworks can help governments contain spending growth, reduce debt, and build fiscal buffers. In addition, fiscal policy can contribute directly to climate change mitigation and making countries more resilient to its effects, e.g., through carbon-related taxes, incorporating disaster and climate risks into standard fiscal risk management, and through mainstreaming resilience into public investment management systems.

Priorities for reducing poverty and increasing shared prosperity

Building on comparative advantage while overcoming small size and vulnerability

28. **The diagnostic shows that opportunities for accelerating growth, reducing poverty, and sharing prosperity in OECS countries lies in leveraging their natural capital and human endowment.** Size and geography do not condemn OECS countries to low growth and limited job opportunities. They grew more rapidly than comparator countries in the 1970s and 1980s. Despite the volatile and slow growth during more recent decades, OECS countries continue to boast higher average incomes than many other countries in the region.

29. **The natural capital of the blue economy is a potential source of comparative advantage.** The OECS have relatively rich natural assets. Tourism contributes significantly to GDP and employment and has been an engine of growth. Although OECS countries have undergone a structural transformation from agriculture to services, much of the population still

relies on agriculture. Harnessing the natural capital of the countries, especially in marine and coastal resources, can contribute to jobs and incomes in the region's major industries, such as tourism and recreation, agriculture, fishing and aquaculture, and transport.

30. To fully exploit the potential of the blue economy in reigniting economic growth, the diagnostic also identifies a set of constraints to growth and inclusion that needs to be tackled.

First, location and geography expose the OECS to several natural hazards. Secondly, small size results in lack of scale and lack of diversification, increasing vulnerability to external shocks. Thirdly, institutional factors including pro-cyclical fiscal policy, a high public debt burden, and constrained government capacity and effectiveness hamper potential growth and add to volatility. Lastly, limited job opportunities and high unemployment encourage brain drain, erode skills, and make growth less inclusive.

31. The SRD identifies five priorities area for regaining high-growth trajectory in an inclusive and sustainable manner, reinforced by areas that will address the identified constraints.

The prioritization is based on the diagnostic presented throughout the report. The analysis relies on findings from the existing literature and cross-country benchmarking. The findings were also validated with in-country knowledge through consultation with national stakeholders and regional organizations.

32. Priority #1: Build resilience to external shocks from a 360-degree perspective. This area provides the environment that protects the development path from external shocks and natural hazards, setting the foundation for stable growth. OECS countries have strengthened their disaster-management systems considerably. Building resilience to external shocks requires taking a broad and comprehensive view of resilience that builds on the traditional disaster risk-management agenda and encompasses fiscal risks, financial sector resilience, and preservation of human and natural capital.

33. Priority #2: Embed growth in the blue economy. This area builds on comparative advantage as a key engine for growth. To fully leverage the economic potential of the natural assets contained within their oceans, OECS countries have to invest in their sustainable management and create increased added value for their island economies.

34. Priority #3: Strengthen and harness human capital. Human capital is key to inclusive growth. In particular, to break the cycle of unequal growth and limited employment opportunities, it is vital to maximize investment in and return on human capital. This area supports economic growth and ensures economic inclusion.

35. Priority #4: Embrace new technologies. The availability of disruptive technologies enables small states to reduce costs and normal dependence on economies of scale. Many "disruptive" technologies, such as social media or "sharing economy" platforms, are eroding advantages previously enjoyed by countries and major firms. But embracing these can help transform private-sector productivity and government effectiveness.

36. Priority #5: Strengthen regional integration. The small size of OECS countries is at the heart of many capacity constraints in both the public and private sectors. Increasing connectivity

between islands, harmonizing regulations and government procedures, and boosting regional cooperation are some of the many ways to achieve economies of scale in the region. Joint action is also needed to address cross-country externalities, such as in ocean governance.

37. **Going forward, the SRD provides a set of policy actions for each priority area and the country-specific priority scale for each policy action.** Policy actions provide a possible timeframe in which the impact could be realized, from “low-hanging fruits” to longer-term reforms. The SRD acknowledges variations across the OECS countries and identifies the country-specific priority scale for a set of policy actions in five priority areas, based on cross-country benchmarking within the region. The matrix of policy actions and country-specific priority scale is reported in Annex II.

Data and knowledge gaps

38. There are several areas where OECS countries need to advance their data and knowledge base to inform decision making and improve strategic planning. Without a robust framework of data and analytics, OECS are in a weak position to understand the constraints and challenges of the current development model and direct public policy and investments to address those shortcomings. As for many other aspects highlighted in this document, data and knowledge challenges may be best tackled at a regional level rather than by individual countries alone. Data on poverty are significantly outdated, prohibiting a thorough analysis of poverty prevalence, root causes of poverty, distributional aspects, and other elements that would allow a much more profound analysis of poverty aspects in OECS. Without such data readily available, OECS countries are in a weak position to design public policy interventions that would address poverty. Given the centrality of poverty data to other analyses, such as education, labor markets and skills, and health services, the lack of up-to-date statistics weakens these sectoral analyses in their analytical power and depth.

39. Closely related to poverty is the issue of high unemployment and skills mismatch in most of the OECS countries. Understanding the functioning of the labor market and barriers to entry is critical for policymaking. Barriers to women’s and youth’s economic empowerment—including lower labor force participation, higher unemployment and lower wages—deserve deeper analysis. The link between youth at risk of social exclusion, youth crime, and youth unemployment is another area of concern. Designing preventive measures for youth at risk will require more data and research.

40. Given the size of OECS diaspora, an integrated analysis of migration and remittances would have significant policy implications. While there is broad, macro-level data available on both, the issue is so pivotal to public policy making that OECS would benefit from data at a more granular and disaggregated level. If data on remittances were available at the household level, it would improve understanding of the overall decision-making of households with respect to economic opportunities, migration, and educational choices. It would improve understanding of the role of remittances as a safety net, especially in times of shocks (e.g., natural disasters), and how much of a role remittances play in decisions to migrate. Innovative surveys on remittances would further allow for distinguishing different types of remittances, their scale, and impacts.

41. Data and analytics on tourism should be significantly advanced. OECS countries require more data and analytics to be better placed to fully exploit the industry's opportunities. For example, recording tourist preferences and choices in a structured manner, as well as the economic impact of different forms of tourism, is required to lay the ground for strengthening the comparative advantage of OECS countries in the industry in the medium- to long-term.

42. There remain many unanswered questions about the role of country size in development: for example, the causal channels through which size is decisive, the relationship between size and vulnerability, and how policy-makers can best overcome constraints related to country size. Answering these is important not only for OECS countries, but for small countries and international institutions around the world.

Structure of the report

43. The remainder of the SRD develops the analysis and recommendations summarized in this overview chapter. Chapter 2 reviews ways that OECS countries stand out from the LAC region and from other countries of similar size and income. This review of country characteristics and how countries have responded to them sets the stage for the subsequent discussion. Chapter 3 presents a detailed analysis of poverty and shared prosperity (within the constraints posed by limited data). Chapter 4 presents trends in growth and the role that fiscal policies play in growth and stabilization. It also investigates possible methods to break the vicious cycle of low growth and high debt by overcoming constraints on private-sector competitiveness. Chapter 5 looks at the role that labor markets, education, and health systems play in reducing poverty and boosting shared prosperity. It investigates ways to break the vicious cycle of skills mismatch, limited employment opportunities, and less inclusive growth through labor market policies, resilient social assistance programs, and demand-driven education. Chapter 6 analyzes sustainability—fiscal, social, and environmental. It investigates how reducing vulnerabilities in these areas and using natural assets more efficiently can break the macroeconomic and microeconomic vicious cycles. Critical knowledge and information gaps are identified throughout the SRD. Chapter 7 concludes the SRD with a presentation of the priority areas and policies that can help OECS countries reduce poverty and boost shared prosperity.

2. Setting the Stage

44. The OECS countries are striking outliers along several dimensions, which present unique development challenges and opportunities to the countries. Most notably they are small, located far from major markets, and prone to natural disasters. The combination of these structural characteristics generates multiple challenges for the OECS countries. Given a small labor force, their economies are highly specialized. Given relatively small internal markets, their economies rely on external demand. The combination of these factors subjects them to considerable volatility. In many cases there are almost as many emigrants in the diaspora as inhabitants at home. Public debt is high. The public sector faces challenges achieving economies of scale, creating challenges for government effectiveness compared to larger peers.

Small size

45. The OECS countries are among the smallest countries in the world, whether measured in terms of population, land area, or GDP (Table 2-1). None is higher than the 15th percentile along any dimension when ranked among all countries globally. On average, they are in the bottom decile of countries in terms of total population and economic activity. Taken together, they had 625,000 inhabitants in 2016.

Table 2-1. Land area, population, and GDP of OECS countries, 2016

	Land area (sq km)	Population	GDP (US\$ million)
	(percentile ranking in parentheses)		
Antigua and Barbuda	440 (9.4)	100,963 (9.4)	1.460 (10.6)
Dominica	750 (15.1)	73,543 (7.5)	0.581 (3.7)
Grenada	340 (7.5)	107,317 (11.3)	1.056 (7.9)
St. Kitts and Nevis	260 (6.1)	54,821 (4.7)	0.910 (6.9)
St. Lucia	610 (13.2)	178,015 (14.6)	1.667 (12.2)
St. Vincent and the Grenadines	390 (8.5)	109,643 (12.3)	0.768 (5.3)
OECS average	465 (11.6)	104,050 (9.8)	1.074 (8.0)

Source: World Development Indicators.

46. As will be elaborated throughout the report, size has far-reaching implications for the development challenges that the OECS countries face and how they address these challenges. Small size limits access to economies of scale. This in turn shapes the structure of the economy, the composition of international trade, and exposure to volatility. Small size has implications for the prevalence of natural disasters. Size also affects returns to scale in the public sector, which has implications for government capacity.

47. Size should not be seen as an insurmountable barrier, however. Per capita income and GDP growth rates do not appear to be correlated with population size. Even if governments in small countries find it hard to realize economies of scale, smallness allows them to be more nimble and responsive to regional and global trends.

48. Large gaps remain in our knowledge about the effects of country size on development, despite extensive empirical research. Even consensus on the definition of “small” can be challenging. Filling these knowledge gaps is important not only for policy-makers in the OECS

countries, but also for their counterparts around the world, as well as for the World Bank Group and other development institutions.

Box 2-1. Knowledge Gap: How does country size matter for development?

Understanding the effects of country size on policy choices and development outcomes requires much more cross-country research. Through which causal channels is size most important? What is the relationship between size and vulnerability? How can policy-makers best overcome constraints related to country size? Answering these questions is important not only for OECS countries, but for small countries and international institutions around the world.

Prone to natural disasters

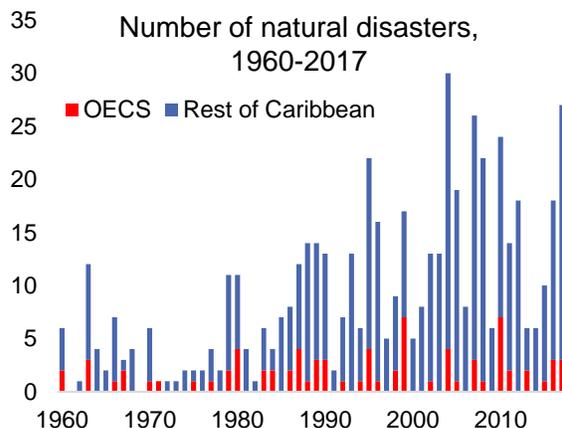
49. Location and geography expose OECS countries to a range of natural hazards. Along with other Caribbean islands, the OECS countries lie in the Atlantic hurricane belt, as depicted in Figure 2-1. As such, they are highly exposed to the effects of climate change, including rising sea levels and ocean acidification. As will be discussed in Chapter 5, these threaten the natural capital that creates livelihoods and economic growth. In addition, the OECS are also subject to earthquakes and volcanic activity. The frequency of natural disasters in the Caribbean has been increasing over the past several decades (Figure 2-2).

Figure 2-1. Paths of Atlantic hurricanes since 1851



Source: National Oceanic and Atmospheric Administration.

Figure 2-2. The frequency of natural disasters in the Caribbean has increased



Source: EM-DAT database.

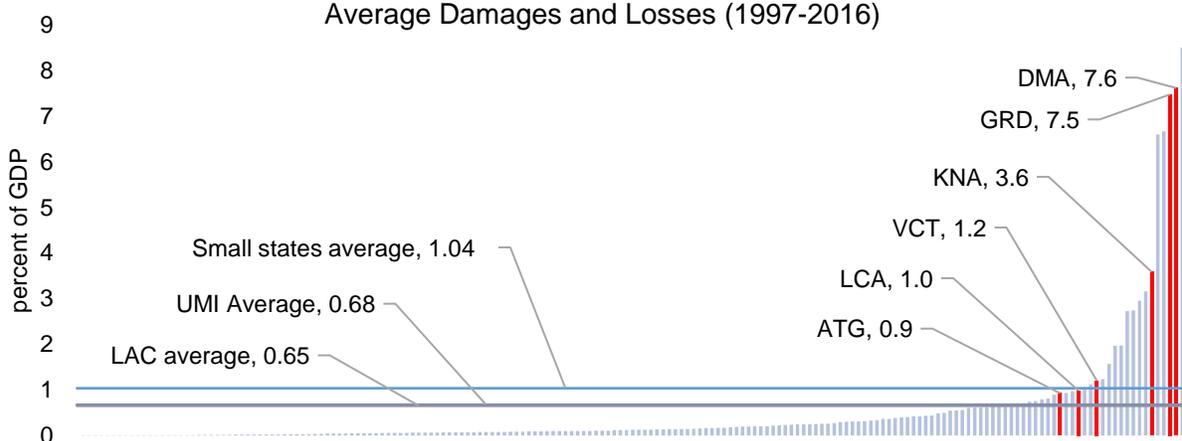
50. The OECS countries’ small size contributes to weather-related damages and losses that are high relative to GDP because when a hurricane strikes, virtually all economic activity lies in its path. Early warning systems, the state of building construction, land use practices, government response systems, social safety nets, public awareness, and other factors also influence the magnitude of damages and losses.⁴ Natural disasters are estimated to have cost the OECS countries

⁴ “Damages” refer to the total or partial destruction of physical assets caused directly by an event, while “losses” refer to the reduction in economic flows of income or of the production of goods and services resulting from the disaster.

an average of 3.6 percent of GDP between 1997 and 2016.⁵ This places the OECS well above the average for all small states (Figure 2-3). In Dominica and Grenada, damages and losses related to extreme weather events between 1997 and 2016 have been estimated at almost 8 percent of GDP. These countries rank second and third globally, respectively, in terms of the relative amount of damages and losses over the past two decades. Damages and losses from individual events can exceed annual GDP. Hurricane Georges cost St. Kitts and Nevis over 220% of GDP in 1998, and Hurricane Maria cost Dominica a similar amount of economic output in 2017. Hurricane Ivan similarly cost Grenada 150 percent of GDP in 2010.⁶

51. The 2017 Atlantic Hurricane Season has further underlined the vulnerability of the region to extreme weather events. Irma and Maria, both Category 5 hurricanes, hit the Caribbean within a week, causing severe destruction on multiple islands. Many lives were lost, although early warning systems and timely evacuations helped save many. Many survivors lost lifelong savings, homes, and livelihoods. The entire island of Barbuda had to be evacuated for the first time in history.

Figure 2-3. OECS countries have been hit hard by natural disasters during the past two decades



Source: Germanwatch Climate Risk Index 2018.

52. Aside from the human loss and devastation, the sheer magnitude of disasters relative to the small island economies also contributes to trade and fiscal imbalances. Correspondingly, these dynamics contribute to the region’s low savings and investment rates, through heightened

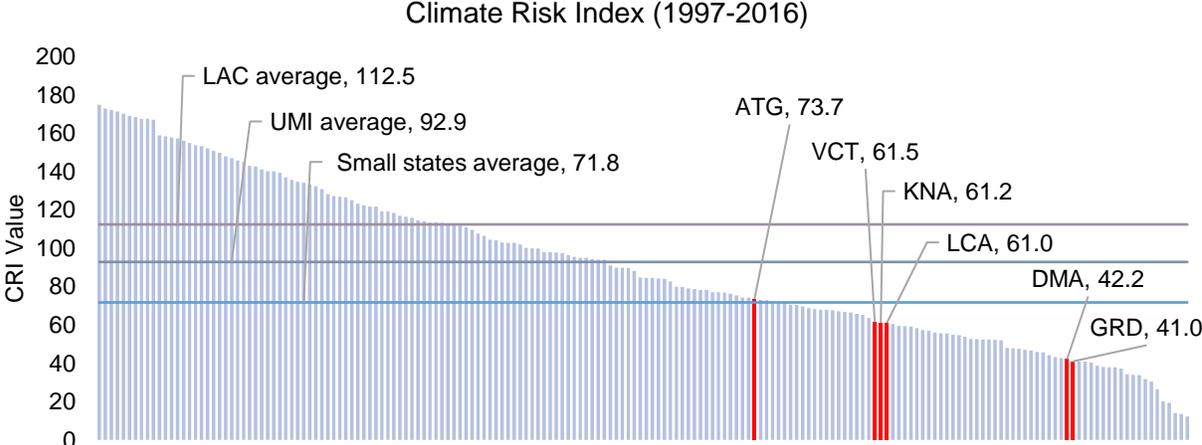
See Roberto J. Jovel and Mohinder Mudahar, “Damage, Loss, and Needs Assessment Guidance Notes,” World Bank, Washington, D.C., 2010.

⁵ OECS average computed using data from David Eckstein, Vera Künzel and Laura Schäfer, “Germanwatch 2018 Climate Risk Index: Who Suffers Most from Extreme Weather Events? Weather-related Loss Events in 2016 and 1997 to 2016,” Briefing Paper, Germanwatch, Bonn, November 2017.

⁶ Estimates for Hurricanes Georges and Ivan are from Sebastian Acevedo, “Gone with the Wind: Estimating Hurricane and Climate Change Costs in the Caribbean,” International Monetary Fund Working Paper No. WP/16/199, October 2016. The estimate for Hurricane Maria is from Commonwealth of Dominica, “Post-Disaster Needs Assessment: Hurricane Maria, September 18, 2017,” Roseau, November 2017.

uncertainty about disasters that may be exacerbated due to fears of possible deterioration in the macroeconomic policy framework in the aftermath of disasters.

Figure 2-4. OECS countries face greater risks from climate change than most countries



Source: Germanwatch Climate Risk Index 2018. Lower values indicate higher risk, based on cumulative human and economic losses over the preceding twenty years.

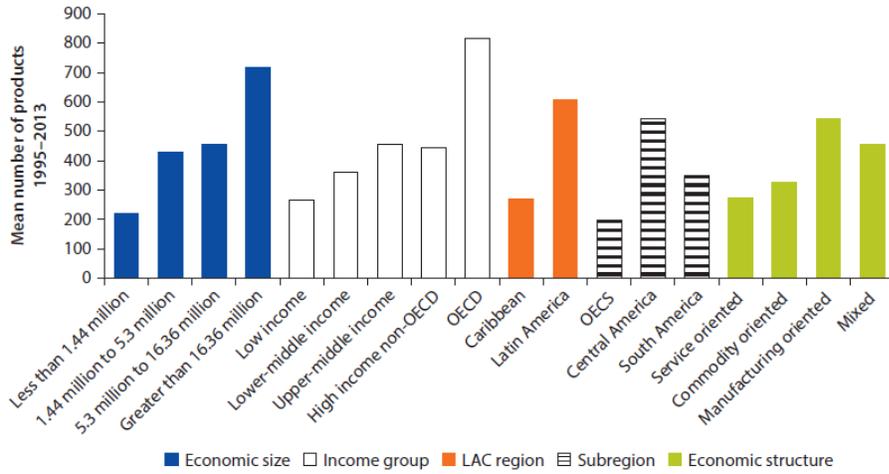
Economic openness and specialization

53. Size and geography have shaped the structure of economic production and trade in OECS countries. Like many other small economies, OECS countries are open to international trade and investment, and they have succeeded in harnessing demand from the world market to grow and develop. With small land and labor endowments, and facing a degree of geographic isolation as islands, the OECS countries have found it difficult to be globally competitive in agriculture or manufacturing. Plantation-based economies in sugar and bananas were facilitated over centuries by preferential access to European economies and an enslaved or indentured workforce. These exports largely collapsed when trade preferences were eroded. As in many other Caribbean economies, tourism and other services are the mainstay of economic growth in the OECS and dominate international trade.

54. For similar reasons, OECS countries have more concentrated export baskets. Small countries and service-oriented countries tend to have more specialized exports in terms of the number of unique goods and services exported (Figure 2-5 and Figure 2-6).⁷ Even within tourism, OECS countries tend to offer a narrow range of products to a few tourism markets (Table 2-2). The United States was the largest source of overnight tourist arrivals in four of the six countries. Slightly more tourists visiting Dominica and St. Vincent and the Grenadines come from the Caribbean than from the United States. Whether exporting goods or services, exporters generally face high fixed costs in developing new products or securing new markets.

⁷ Daniel Lederman and Justin T. Lesniak (2017). “Open and Nimble: Finding Stable Growth in Small Economies.” Washington, DC: World Bank Group.

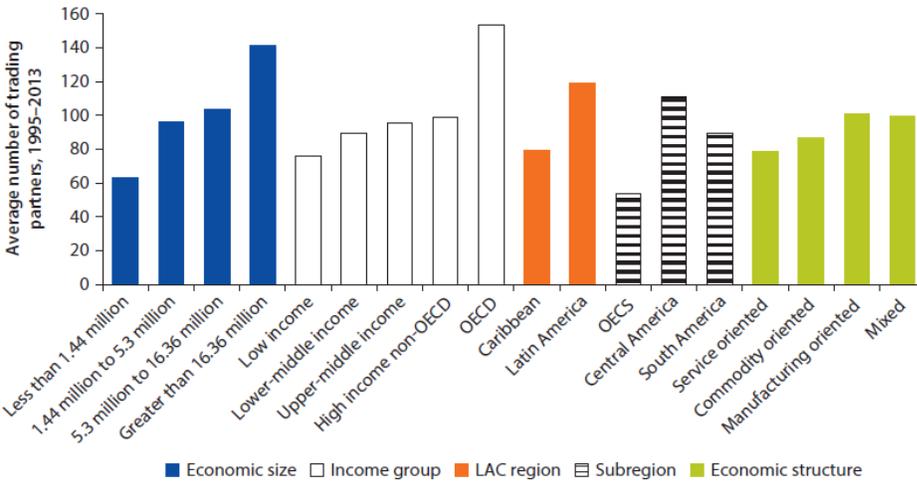
Figure 2-5. Number of export product lines, 1995–2013



Source: Lederman and Lesniak (2017), based on data from UN COMTRADE for trade in goods data and the World Bank’s Consolidated Data on International Trade in Services v8.8.

Note: Bars are calculated first by taking the average number of export lines from 1995–2013 among countries within each grouping.

Figure 2-6. Number of export markets, 1995–2013



Source: Lederman and Lesniak (2017), based on data from UN COMTRADE for trade in goods data and the World Bank’s Consolidated Data on International Trade in Services v8.8.

Note: Bars are calculated first by taking the average number of trading partners per country over the period 1995–2013. The bar then represents the median value of that series for a given grouping of countries.

Table 2-2. Tourism markets and product offerings are concentrated

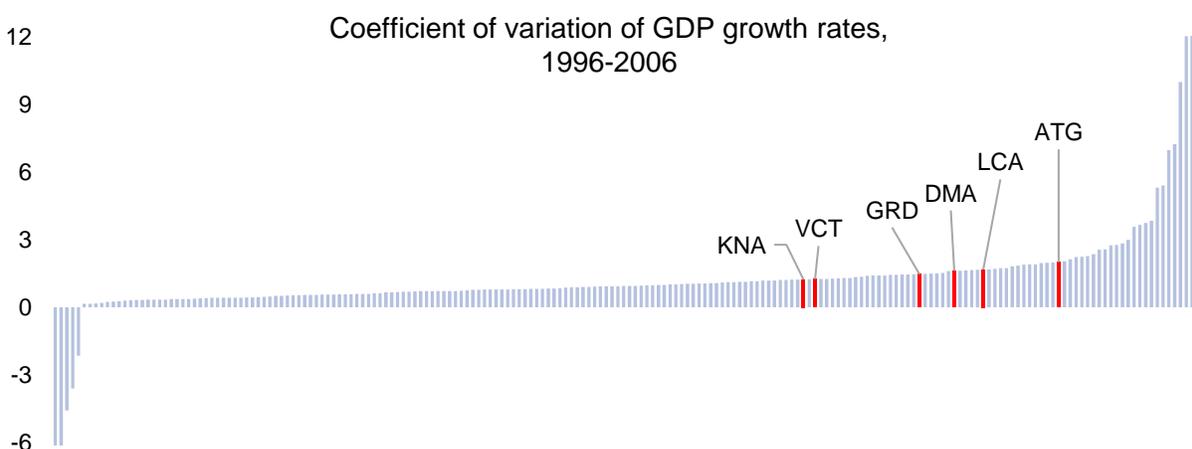
Country	Main market	Primary offerings
Antigua and Barbuda	U.S. (41%)	Beach, water activities, cruising and sailing, cultural heritage
Dominica	Carib. (49%)	Beach, water activities, ecotourism/outdoors
Grenada	U.S. (33%)	Beach, water activities, culture and culinary
St. Kitts and Nevis	U.S. (60%)	Beach, water activities, wedding & honeymoon
St. Lucia	U.S. (45%)	Beach, water activities, sailing, weddings & honeymoon
St. Vincent and the Grenadines	Carib. (31%)	Beach, water activities, sailing, island hopping

Sources: Market-share data from UN World Tourism Organization (2016 data). Primary offerings are drawn from national tourism portals and publications.

Economic volatility

55. Economic volatility is another distinguishing characteristic of the OECS countries and has important implications for growth, inclusion and sustainability. GDP growth is more volatile in the OECS than in most other countries (Figure 2-7).⁸ This is a boon when those countries are booming. But the spillovers to the OECS during the global financial crisis underscore the risks of this close interconnection.

Figure 2-7. OECS countries exhibit more output volatility than most other countries



Source: World Development Indicators

Notes: Values of extreme observations are truncated to the enhance visibility of other observations. These are -19.8 (Libya), -6.2 (Northern Mariana Islands), +13.7 (Central African Republic), and +29.9 (Federated States of Micronesia).

56. Fiscal policies in most OECS countries have tended to exacerbate output volatility. As will be discussed in Chapter 4, governments have generally taken an expansionary fiscal stance during economic booms. This has made it hard to build up fiscal buffers that can cushion the economy during downturns. High levels of public debt have further constrained governments' fiscal space.

⁸ Auguste Tano Kouame and M. Ivanova Reyes, "Before and After the Global Financial Crisis: Evaluating the Caribbean's Synchronization with Global Engines of Growth." World Bank Policy Research Working Paper No. WPS7544, January 2016.

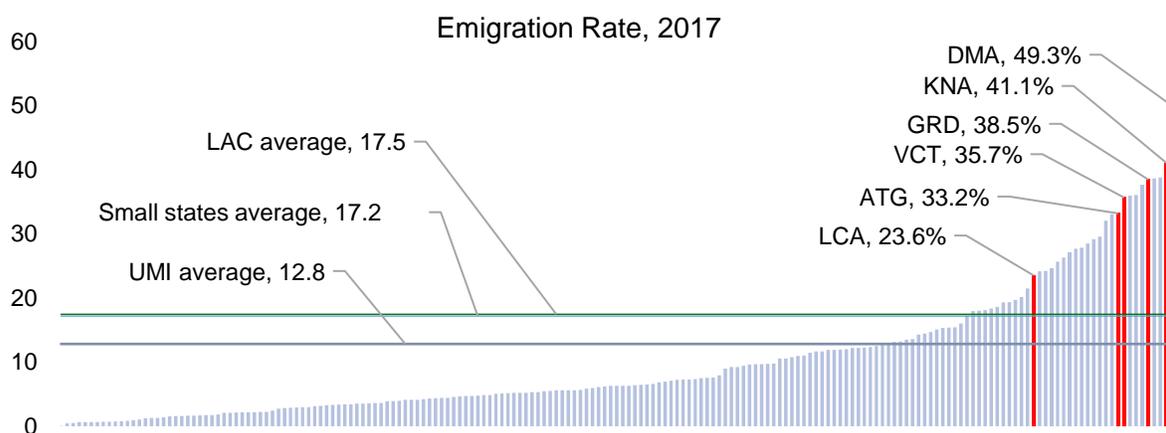
As a consequence, most have had to adjust to falling revenue by reducing expenditures.⁹ When fiscal policy is procyclical, external shocks are magnified rather than dampened.¹⁰

57. Volatile growth rates are associated with lower levels of long-term growth.¹¹ In the Caribbean context, high levels of public debt combined with volatile growth contributes to a low savings rate.¹² The welfare costs of volatility fall heaviest on the poor and others who lack access to financial assets that can be used to smooth consumption in the face of shocks.

Emigrant diaspora

58. As with other Caribbean countries, the OECS countries are characterized by a large emigrant diaspora. The Dominican diaspora is virtually the same size as the resident population, and the number of emigrants is at least half the size of the local population for the other OECS countries except for St. Lucia (Figure 2-8).

Figure 2-8. OECS countries have large diasporas



Sources: UN Population Division (emigrant stock) and World Development Indicators (population).

59. Emigration provides an important source of capital for OECS countries in the form of remittances. To some extent, these remittances can compensate for low domestic savings and finance new investment. Other effects of the large diaspora may be less salutary. “Brain drain” is an often-cited constraint to OECS growth, although it should be acknowledged that the flow of remittances and the size of the diaspora reflect favorably on the education systems of the OECS. In Chapters 3 and 5, we explore the effects of remittances on labor markets and poverty. Chapter 4 also considers the implications of remittances for economic growth.

⁹ St. Kitts and Nevis is the exception, in that it has been able to adopt a counter-cyclical stance during downturns. Francisco Galrao Carneiro and Leonardo Garrido, “New Evidence on the Cyclicity of Fiscal Policy,” World Bank Policy Research Working Paper No. 7293, June 2015.

¹⁰ Francisco Galrao Carneiro and Rei Odawara, “Taming Volatility: Fiscal Policy and Financial Development for Growth in the Eastern Caribbean,” World Bank Group, June 2016.

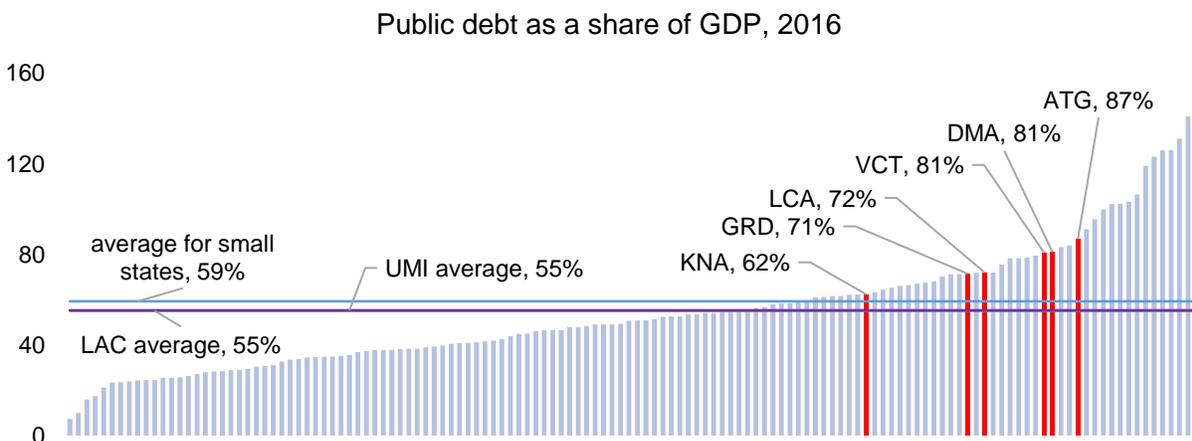
¹¹ The classic analysis of this is in Garey Ramey and Valerie A. Ramey, “Cross-Country Evidence on the Link Between Volatility and Growth,” *American Economic Review* 85 (December 1995).

¹² Lederman and Lesniak (2017).

Public debt burden

60. Public debt owed by the OECS countries is among the highest in the world. All OECS debt levels are above the regional average and the averages for small states and upper-middle income countries (Figure 2-9). All countries have debt stocks above the ECCU target of 60 percent of GDP, although Grenada and St. Kitts and Nevis have made significant progress in reducing their debt in recent years, in part through debt exchanges and forgiveness.

Figure 2-9. Public debt in the OECS is high compared to other developing countries



Source: World Economic Outlook.

Note: IDA and IBRD countries.

61. Procyclical fiscal policies, high budget rigidities, persistently large fiscal deficits, and contingent liabilities have led to a buildup in public debt and an erosion of fiscal space in the OECS and in the Caribbean more generally (discussed in Chapter 4). A Caribbean Development Bank breakdown of debt accumulation since the 1990s found that most of the increase in the debt/GDP ratio during periods of sustained debt accumulation resulted from the realization of contingent liabilities stemming from both the private sector (e.g., effects of the 2008 collapse of CL Financial Group in Trinidad and Tobago) and the public sector (e.g., the bailouts of state-owned sugar companies in St. Kitts and Nevis).¹³

62. Disasters have been one factor contributing to high public debt. For example, the Government of St. Vincent and the Grenadines estimates that 15 percent of debt it accumulated between 2010 and 2017 is directly attributable to post-disaster reconstruction and investments in building disaster resilience.¹⁴ Using a vector auto-regression analysis of Caribbean data for 1970–2009, one recent study finds an initial mean increase in the debt/GDP ratio of nearly 20 percentage points after severe floods, although the cumulative response is a debt/GDP ratio around 15

¹³ Caribbean Development Bank, “Public Debt in the Caribbean: An Agenda for Reduction and Sustainability,” 2013

¹⁴ Government of St. Vincent and the Grenadines, Ministry of Finance, “Continuity and Change: Job Creation, Resilience, Sustainable Development and New Opportunities in a Rapidly Changing Global Environment,” February 2018.

percentage points higher 4–8 years after severe floods, as reconstruction stimulates a recovery in GDP around 3 years afterwards.¹⁵

63. The consequences of high debt are widely known. Large debt-service obligations rob fiscal space that could be used for social programs. High debt reduces resilience to shocks—the presence of a large debt overhang weakens the government’s hand when seeking new loans to finance reconstruction after a natural disaster. Government borrowing can crowd out private credit, especially in small markets. High levels of debt are associated with low GDP growth.¹⁶ Large levels of external debt expose governments to risks from exchange rate and interest rate shocks. And when levels are high enough, creditors become unwilling to roll over debt or provide new financing.

Public sector capacity, governance, and effectiveness

64. Size has implications for public sector operations as well. Governments of small countries are closer to the public. Without the complex and slow-moving bureaucracies of larger countries, OECS governments can be more responsive and nimble. Small size also reduces the scope for scale economies in the public sector, however. Public procurement provides a straightforward example. A government with 50,000 citizens cannot obtain the same volume discounts in its procurement that a government of a jurisdiction with 50 million inhabitants can negotiate. Similarly, the scale economies in tax administration, provision of public goods, delivery of government services, expenditure management, and other state activities that governments of large countries enjoy are often beyond the reach of OECS governments. These factors contribute to relatively high levels of government spending in these countries, as well as making budgets more rigid.

65. The nature of broader governance frameworks, and not merely economies of scale, also play an important role in how OECS countries address development challenges and how successful they are.¹⁷ The lack of broad consensus within society and a commitment to predictable, long-term, pro-growth policies is reflected in the persistence of macroeconomic structures characterized by cycles of high debt and low savings. Consensus and commitment to a consistent and stable

¹⁵ Sebastian Acevedo, “Debt, Growth and Natural Disasters: A Caribbean Trilogy,” IMF Working Paper No. WP/14/125, International Monetary Fund (July 2014). He finds contradictory effects in hurricanes and other severe storms, however. Debt relief and donor-funded reconstruction spending tend to be higher after hurricanes than after flooding, possibly because they attract greater international publicity. In the full sample of Caribbean countries, these contribute to a speedy recovery of GDP after severe storms and reduced need for governments to finance disaster response activities with increased borrowing. The GDP recovery in the sub-sample of eastern Caribbean countries, on the other hand, is minimal, and the cumulative mean response is a debt/GDP ratio that is around 5 percentage points higher 4–8 years after a severe storm.

¹⁶ One study estimates that the relationship between the debt stock and long-run economic growth in developing countries turns negative when debt is at 64 percent of GDP. See Mehmet Caner, Thomas Grennes, and Fritzi Koehler-Geib, “Finding the Tipping Point—When Sovereign Debt Turns Bad.” World Bank Policy Research Working Paper 5391, July 2010.

¹⁷ In this sub-section we follow the framework of the 2017 World Development Report on “Governance and the Law,” proposes a framework in which commitment, coordination, and cooperation are the core attributes of institutions that ensure rules and resources yield the desired outcomes. In this context, “commitment” refers to the level of support by institutions for consistent policies over time to ensure that promises are delivered; “coordination” refers to shaping expectations to enable complementary action; and “cooperation” is about limiting opportunistic behavior to prevent free-riding.

reform narrative, in which firms and individuals feel secure in investing their resources in productive activities, is essential to promoting macroeconomic stability and enhancing the business environment.

66. Consensus and credible commitment to a reform process alone is not sufficient, however. Effective coordination between institutions and key stakeholders is also needed. The OECS is characterized by fragmented institutions that operate under outdated regulatory frameworks for civil service administration, public financial management, customs and revenue administration, governance of information and communications systems, citizen participation, and the business environment.

67. Moreover, the achievement of policy outcomes further requires cooperation from non-state actors, particularly from businesses and citizens, in the form of refraining from non-committal and free-riding behavior. Such a lack of cooperative behavior can be observed through the low tax compliance that characterizes the revenue collection environment in all OECS countries, as well as inefficiencies in public service delivery that discourage cooperative behavior by citizens and other stakeholders. In this context, the lack of reliable data in the OECS further limits the extent to which institutions enact policies informed by evidence and incentivize citizens to hold elected officials accountable.

68. Government effectiveness—in addition to the structure of governance—also contributes to the enabling environment for inclusive growth. Efforts to enhance fiscal space in the Eastern Caribbean have been largely reactive, undertaken in response to debt crises and natural disasters. Noticeably absent have been approaches that systematically balance sustainable expenditure containment measures with public investment strategies that reflect strategic prioritization. Public investment accounts for around 10 percent of GDP in the Eastern Caribbean, much higher than the average 4 percent observed in higher income countries. Yet, the experience with public investment in the Eastern Caribbean has largely been characterized by ad hoc, supply-driven interventions that respond to donor preferences and by post-disaster reconstruction activities.

69. Government effectiveness shapes the ability of OECS governments to mobilize the public-sector machinery for climate change adaptation, and for post-disaster response, recovery, and reconstruction activities. Each of these areas has implications for “resilient governance,” which requires a more holistic approach to improving the public-sector management cycle. To this end, it is crucial to mainstream resilience considerations into national development planning, budgeting, public investment, and accountability and transparency mechanisms. To date, the OECS has not systemically adopted protocols governing how resources will be mobilized in the event of a disaster. Such protocols are important to ensure that resource deployment in times of crisis is transparent and free from corruption. Electronic public-service delivery systems can preserve the continuity of critical public sector functions in the aftermath of a natural disaster. But in the OECS context these suffer from lack of core foundational infrastructure and processes, including such systems as identity management, electronic payments, and systematic and open access to spatial data. A focus on making revenue collection more efficient and broadening the tax base, rather than simply increasing tax rates, can serve to mitigate fiscal constraints that limit contingency financing.

70. A primary challenge facing governance in the OECS is to improve public sector productivity in an evolving environment characterized by macroeconomic uncertainty, climate change, technological innovation, and clientelist behavior.

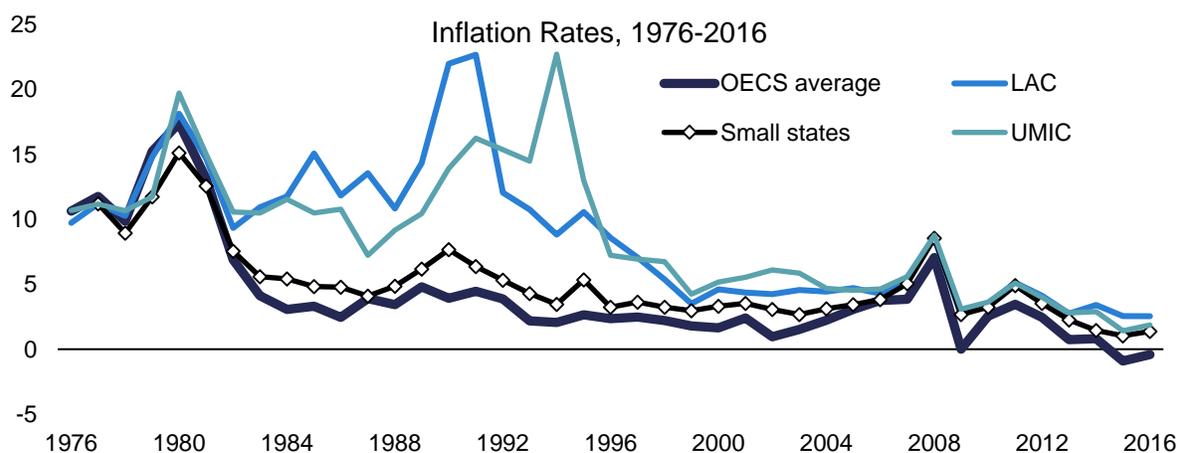
Box 2-2. Knowledge Gap: What determines the effectiveness of public institutions in OECS countries?

Analyze the effectiveness of public sector institutions by looking beyond symptomatic deficits and dysfunctions to identify functional constraints and enablers and the underlying governance determinants (i.e. through policy formulation, inter-ministerial coordination and support structure).

Strong regional institutions

71. OECS countries have maintained a strong track record on regional integration that dates back more than half of a century and which mitigates some of the challenges of their small size. The OECS itself was established in 1981 (in St. Lucia), building on more than twenty years of intergovernmental collaboration in the West Indies.¹⁸ The organization’s strong central administrative body—the OECS Commission—and the Economic Affairs Council have been instrumental in achieving greater regional economic integration than has been the norm for most regional arrangements in the LAC region and around the world.

Figure 2-10. OECS countries have enjoyed lower inflation than comparator countries.



Source: World Development Indicators

Note: Inflation is computed as the annual change in the consumer price index, except for Antigua and Barbuda for the years 1978–98, where inflation is computed as the annual change in the GDP deflator.

72. The six OECS members covered by this SRD are also members of a monetary union and share a common currency—the Eastern Caribbean dollar—which was created in 1965 and has been pegged to the U.S. dollar since 1976.¹⁹ In collaboration with others in the common currency area (Anguilla and Montserrat), they established a regional central bank, the Eastern Caribbean Central Bank (ECCB) in 1983 (in St. Kitts and Nevis). The ECCB ensures price stability,

¹⁸ Founding members include the six countries covered by this SRD plus Montserrat. Anguilla, the British Virgin Islands, and Martinique are associate members of the OECS, but are treated as full members in many OECS activities.

¹⁹ Prior to 1976, the EC dollar was pegged to the British pound.

supervises local banks, coordinates the regional market for government debt, and promotes data transparency. The currency peg has helped OECS countries lower inflation rates than comparator countries. Figure 2-10 shows that the average inflation rate in OECS countries has been below other countries in the LAC region and countries of similar size and income every year since 1981. OECS countries' monetary discipline during the 1980s and early 1990s is especially striking when compared to the LAC region.

73. The OECS countries are also members of the Caribbean Development Bank (CDB), a regional financial institution established in 1969.²⁰ The CDB not only mobilizes financing and technical assistance to individual member countries, but also supports regional capital market integration.

74. In addition, they are members of other regional bodies, most notably the Caribbean Community (CARICOM), as well as specialized institutions relevant to development challenges addressed in this SRD, such as the Caribbean Disaster Emergency Management Agency, the Caribbean Regional Fisheries Mechanism, and the Caribbean Tourism Organisation.

²⁰ All OECS members except Martinique are regional members of the CDB, entitling them to borrow funds. Other regional members entitled to borrow from the CDB are Bahamas, Barbados, Belize, Cayman Islands, Guyana, Haiti, Jamaica, Suriname, Trinidad and Tobago, and Turks and Caicos Islands.

3. Poverty and Shared Prosperity

The latest poverty data (2005–2008) point to diverse poverty rates across the region. Poverty was lower in Antigua and Barbuda and St. Kitts and Nevis—the first countries to make the shift out of agriculture and towards services and industry with less than 10 percent of agricultural employment in the early 2000s. Poverty reduction lagged behind in the other countries, which continued to rely more on agriculture. The agricultural sector employed most of the poor, while the tourism industry was a driver of poverty reduction. Overall, OECS countries made significant progress in eliminating extreme poverty and fared better than other nations in terms of reducing inequality. Recent labor market data suggest that progress in poverty reduction has slowed in the last decade, however. High unemployment, vulnerability to external (including climatic) shocks, and the large OECS diaspora and its remittances affect poverty reduction in various ways.

Poverty and shared prosperity in the OECS

Poverty rates

75. Poverty data are outdated in the OECS.²¹ The latest poverty data dates to 2005–2008, before the OECS economies were hit by the global financial crisis, which has since posed a serious challenge to poverty reduction. Existing evidence points to diverse poverty rates across the region, with lower poverty incidence in Antigua and Barbuda (18.4 per cent) and St. Kitts and Nevis (21.8 per cent) and higher rates in St. Vincent and the Grenadines (30.2 per cent) and Grenada (37.7 per cent) (Figure 3-1). Extreme poverty rates were also diverse but showed a slightly different pattern. The official indigence rate was in fact highest in Antigua and Barbuda at 3.7 percent of the population, where 20.3 percent of the poor lived below the indigent line. Extreme poverty was lowest in St. Kitts and Nevis, where only 1 percent of the population could not afford a minimally nutritious basket of food (see Box 3-1 for definitions).

76. Consumption-based poverty rates, defined as the proportion of individuals with household-level per-capita consumption lower than the international poverty line (US\$5.5 a day in 2011 PPP), allow more accurate international comparison.²² Estimates are lower than the official poverty rates, but they exhibit a similar heterogeneous pattern (Figure 3-2). The Leeward Islands countries of St. Kitts and Nevis and Antigua and Barbuda, which are classified as high-income countries, had relatively low levels of poverty at 10.3 per cent and 13.2 per cent, respectively.²³ Poverty rates in the Windward Islands—Dominica, Grenada, St. Lucia, and St. Vincent and the Grenadines—were more pronounced, ranging between 20 percent to 30 percent. Extreme poverty, defined as having household-level per-capita consumption lower than the international poverty line (US\$1.9 per day

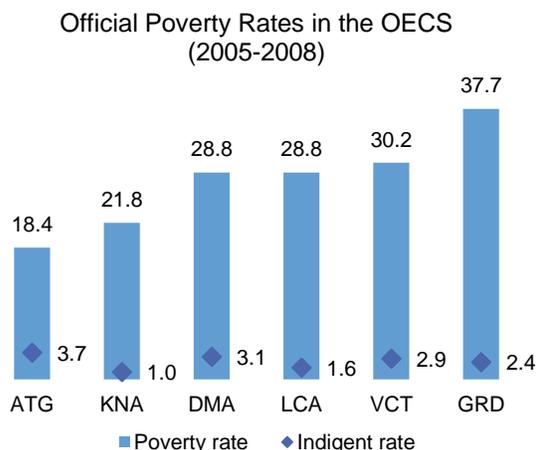
²¹ The OECS are currently conducting a new round of poverty assessment based on the harmonized regional household survey. The data collection is expected to be completed by 2019 except for Dominica due to the impact of Hurricane Maria in 2017.

²² US\$5.5 per day in 2011 PPP is an upper middle-income international poverty line. All OECS countries were upper middle-income countries during 2005–2008 except Antigua and Barbuda which graduated from being an upper middle-income country to a high-income country in 2005.

²³ The Leeward Islands are a group of islands situated where the northeastern Caribbean Sea meets the western Atlantic Ocean. The Windward Islands lie south of the Leeward Islands. Antigua and Barbuda and St. Kitts and Nevis are part of the Windward Islands. Dominica, St. Lucia, Grenada and St. Vincent and the Grenadines are part of the Leeward Islands.

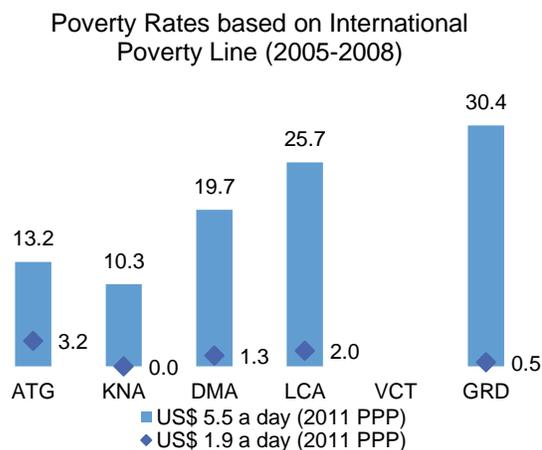
in 2011 PPP), was below 3.5 percent of the population in all OECS countries. St. Kitts and Nevis stands out when compared to other OECS countries, with the lowest poverty rate and no incidence of extreme poverty. Conversely, extreme poverty was most pronounced in Antigua and Barbuda despite its second lowest poverty rate. The significant disparity between high poverty and low extreme poverty in Grenada suggests that Hurricane Ivan, which hit the country in 2004, saw much of the vulnerable population slip back into poverty.

Figure 3-1. Poverty and extreme poverty were largely diverse across the OECS



Source: Country Poverty Assessment Reports. Survey year: 2005 (Antigua and Barbuda, St. Lucia), 2007 (St. Kitts and Nevis), 2008 (Dominica, Grenada, St. Vincent and the Grenadines).

Figure 3-2. Poverty incidence was moderate while extreme poverty ranged from 0 to 3.2 percent



Source: World Bank staff estimates based on per-capita consumption from the OECS Survey of Living Conditions/Household Budget Survey (SLC-HBS), consumer price index and purchasing power parity conversion factor for private consumption. Survey years: 2005 (Antigua and Barbuda, St. Lucia), 2007 (St. Kitts and Nevis), 2008 (Dominica, Grenada).

77. International comparison shows moderate poverty incidence in the OECS. Poverty incidence in the OECS was not extreme when compared to countries within the same income group. In fact, poverty rates in the Windward Islands were lower than in most LAC countries. About 22 percent of the OECS population in the Windward Islands were poor during 2005–2008, while poverty rates in the Dominican Republic, Panama, and Brazil all were above 32 percent during the same period (Figure 3-3).²⁴ The poverty rates in Antigua and Barbuda and St. Kitts and Nevis, a higher income group, were slightly higher than in countries with similar per capita incomes.

²⁴ The World Development Indicators' internationally comparable poverty measurements are based on income or consumption data. Collection of consumption data is more complete than income data in OECS countries. The welfare measure used for comparison purposes is per capita consumption.

Box 3-1. Poverty measurement in the OECS

Official poverty and extreme poverty estimates in the OECS are produced by the Central Statistics Office (CSO) or the Department of Statistics based on the Survey of Living Conditions/Household Budget Survey (SLC-HBS). The OECS countries estimate poverty based on the Cost of Basic Needs method. The poverty line represents the minimum level of per-capita consumption required to meet the basic food and non-food requirements of an average adult. The extreme poverty line (or the indigent line) is the cost of a basket of food which contains the minimum nutritional requirement of 2,400 Kcal a day at the lowest possible cost. The nutritional content is calculated using software developed by the Caribbean Food and Nutrition Institute. Because households differ in composition and size, adult-equivalent per capita consumption is used to reflect different consumption needs among individual members of the household. A person is considered poor (extremely poor) if he or she lives in a household whose adult equivalent per capita consumption falls below the poverty line (the indigent line). Table 3-1 shows the latest survey year, the indigent line and the poverty line in EC\$ of the OECS countries.

Table 3-1. The latest SLC-HBS survey year, the indigent line and the poverty line

Country	Latest survey year	Indigence line	Poverty line
Antigua and Barbuda	2005/2006	2449	6318
Dominica	2008	2435	6230
Grenada	2008	2394	5842
St. Kitts ²⁵	2007	2595	7329
Nevis	2007	2931	9788
St. Lucia	2005	1570	5086
St. Vincent and the Grenadines	2007/2008	2445	5523

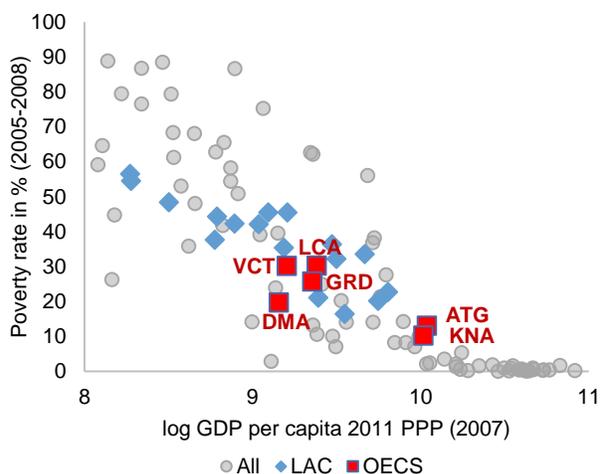
Source: Country Poverty Assessment Reports.

78. The available poverty data show varying progress in poverty reduction across OECS countries during the decade before the 2008 global financial crisis (Figure 3-5). Between the mid-1990s and the mid-2000s, while extreme poverty fell substantially across all OECS countries, poverty reduction was slower or even grew when compared to other LAC countries. All countries managed to lift most of the population out of severe poverty, with St. Vincent and the Grenadines making inroads in particular. At the same time, official poverty rates rose in Grenada and St. Lucia even before the negative impact of the global financial crisis was realized. In Dominica and St. Vincent and the Grenadines, poverty reduction was slower than overall LAC progress. Only St. Kitts and Nevis was able to follow a similar poverty reduction trend to LAC as a whole.

79. It is not the pace of economic growth but rather the extent to which growth translates into poverty reduction that explains the diverse trends in poverty reduction across the OECS. Economic growth resulted in poverty reduction in St. Kitts and Nevis, Dominica, and St. Vincent and the Grenadines (Figure 3-4). Although the pace of economic growth was faster in Dominica and St. Vincent and the Grenadines, at an average annual growth of 4 percent, growth-poverty elasticity here is estimated to be less than 1, well below the LAC average of 1.3.

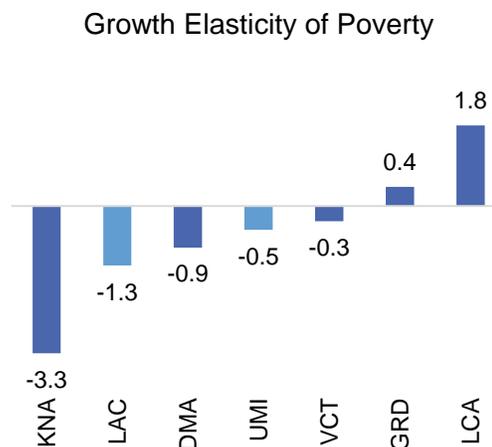
²⁵ St. Kitts and Nevis have separate indigence and poverty lines for each of the islands as per the 2007 Household Budget Survey.

Figure 3-3. Poverty incidence in the OECS was moderate when compared to countries with similar incomes (2005-2008)



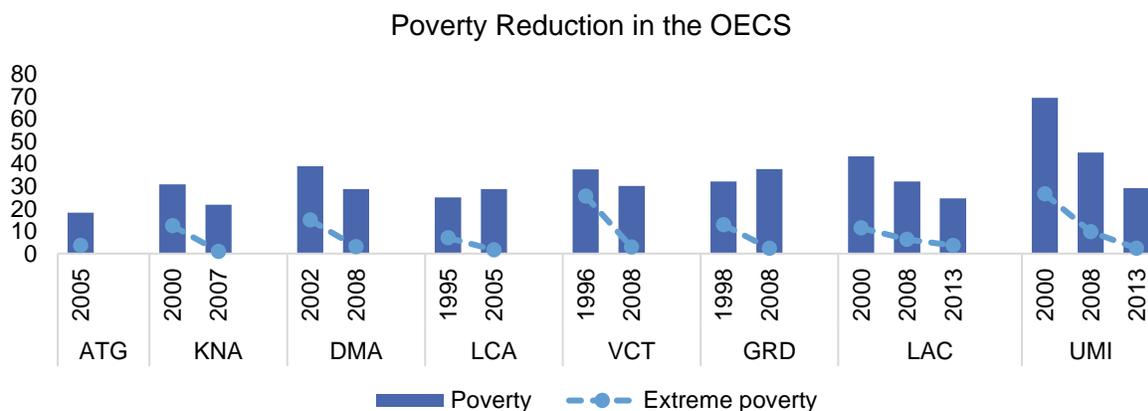
Source: World Bank staff estimates based on the international poverty line US\$5.5 a day in 2011 PPP, except for St. Vincent and the Grenadines in which official poverty rate is used due to data limitations.

Figure 3-4. Diverse trends in poverty reduction were determined by differing responses of poverty to economic growth



Source: World Bank staff estimates based on official poverty rates and GDP per capita (2011 PPP) from World Development Indicators. The two periods are 1995–2002 and 2005–2008.

Figure 3-5. Poverty reduction has slowed or reversed when compared to LAC

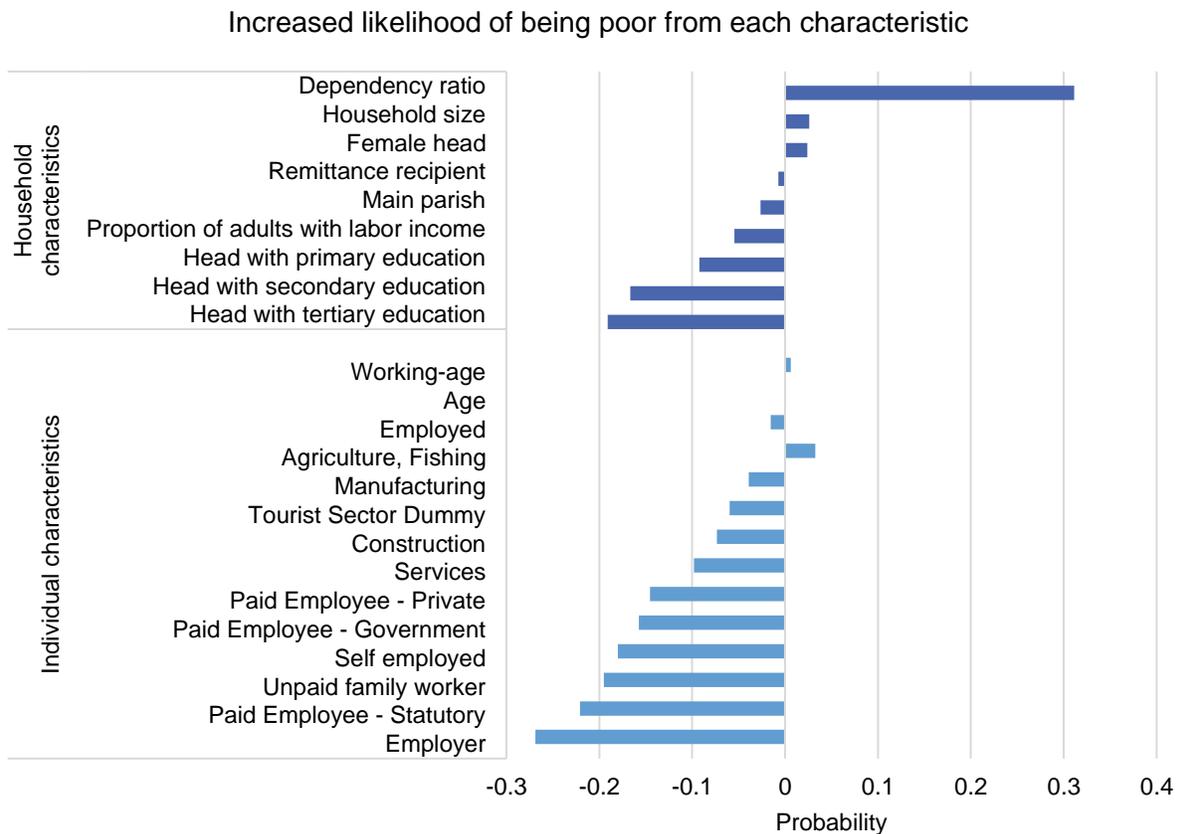


Source: Country Poverty Assessment Reports for the OECS based on the national poverty and indigence lines. World Development Indicator for LAC based on the international poverty lines of US\$5.5 and US\$1.9 per day in 2011 PPP. Note: For two-period analysis, official poverty rates are used for the OECS due to data limitations.

80. The negative link between growth and poverty reduction observed in Grenada and St. Lucia is due in part to disaster shocks in Grenada and terms-of-trade shocks in St. Lucia. Although Grenada’s economy grew at an average annual rate of 3.4 percent, Hurricane Ivan, which inflicted estimated damage of more than 200 percent of GDP in 2004, likely brought many of the vulnerable population into poverty. Stagnant growth in St. Lucia, driven by a decline in its banana and agricultural industries, led to an increase in poverty between 1995 and 2005. Both external shocks—the disaster shock in Grenada and the terms of trade shock in St. Lucia—were expected to disproportionately affect the poor and weakened the power of growth in reducing poverty. The

poor were more likely to live in a female-headed household, a larger family with a high dependency ratio (i.e., more children than adults), and a household with poorly-educated head. Overall, the gender gap in poverty was small in Antigua and Barbuda, Dominica, and St. Lucia. The poverty rates of men and women were not significantly different across OECS countries. Nevertheless, a larger share of female-headed households were poor compared to their male counterpart in Grenada and St. Kitts and Nevis, suggesting that women are less economically independent in these two countries (Figure 3-7). Each level of completed primary and secondary education by a household head decreased the chance of the household living under the poverty line by 10 percent. Households living in same district as the capital city were less likely to be poor.

Figure 3-6. The services sector had the largest impact on lifting employed people out of poverty, with tourism-related jobs reducing further the likelihood of poverty



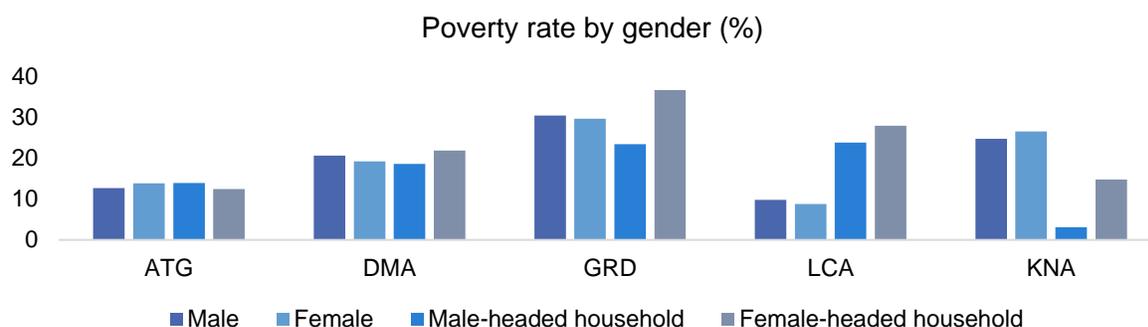
Source: World Bank staff estimates from the OECS SLC-HBS 2005–2008. Data are pooled from all OECS countries except St. Vincent and the Grenadines.

Note: Poverty is defined based on the international poverty lines US\$5.5 per day in 2011 PPP. Change in the likelihood is an average marginal effect from a logistic regression analysis.

81. Employment is also critical for poverty reduction. The poor were more likely to be unemployed and live in a household in which fewer adults had jobs. The agricultural sector employed most of the poor while the services sector lifted employed people out of poverty, with tourism-related jobs reducing further the likelihood of poverty. Although employment reduced the likelihood of being poor, this effect is almost wiped out when an individual works in the

agricultural sector (Figure 3-6). Increasing climate variability and natural disasters were expected to have greater impact in the agricultural sector by destroying crops, livestock and fisheries, exacerbating the incidence of poverty in the OECS. The services sector had the largest impact on poverty, reducing the likelihood of being poor by 10 percent. Tourism-related jobs added another 5 percent chance of escaping poverty. Paid employees were more likely to be poor than employers or the self-employed, both in the public and private sector. Entrepreneurship provided a way to move out of poverty: becoming an employer reduced the chance of being poor by about 10 percent.

Figure 3-7. The OECS on average had a small gender gap in poverty, except for Grenada and St. Kitts and Nevis



Source: OECS SLC-HBS 2005–2008. Data is not available for St. Vincent and the Grenadines.

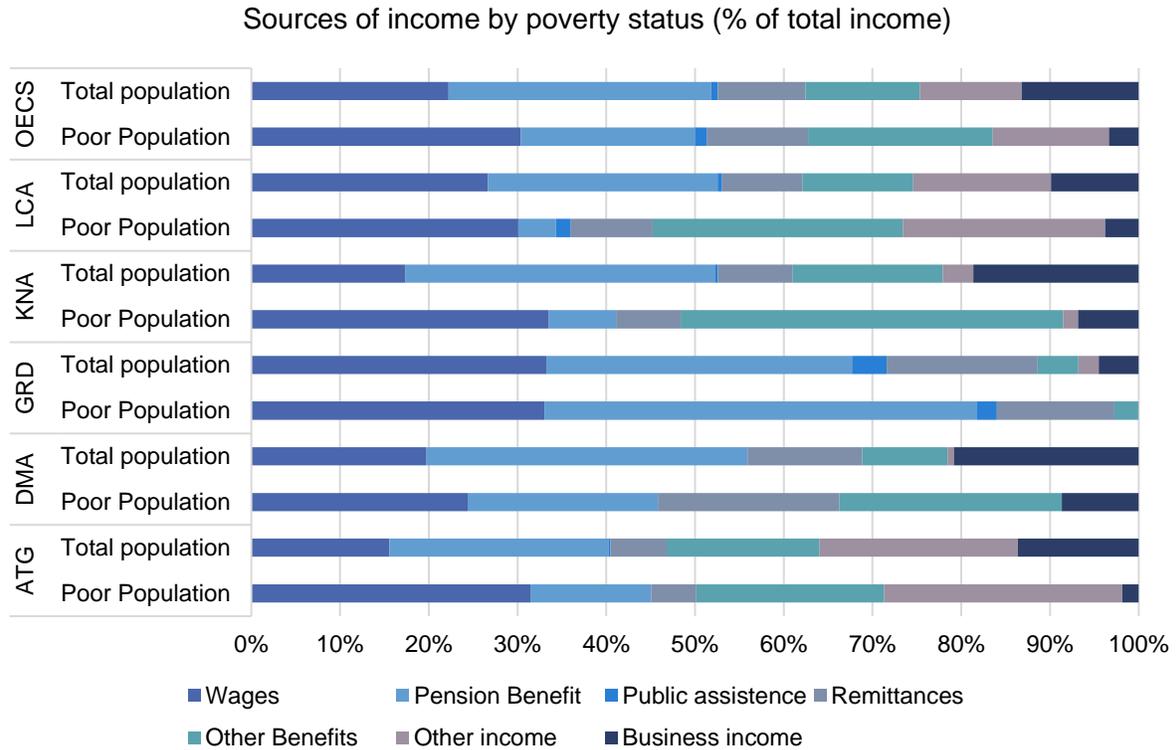
Note: Poverty is defined based on the international poverty lines US\$5.5 per day in 2011 PPP.

82. While individuals with lower earnings potential or without a job were more likely to be poor, the poor still relied heavily on labor income. This is because the poor in general have less physical capital, making human capital their main income-generating asset. The overall picture shows that, although poor households relied more on labor income and characteristic-based benefits such as child support and alimony, the non-poor received a significant amount of income from business profits, assets, and social insurance (Figure 3-8). Labor market activities and household characteristics might explain these differences. The poor were more likely to work in the informal sector and had a higher dependency ratio, so they were typically not covered by social insurance schemes but received a large amount of child support. The non-poor clustered in formal employment, so they contributed systematically and were entitled to social insurance and pension benefits.

83. Remittances accounted for approximately 10 percent of household income, with no difference between the poor and the non-poor. Public assistance constituted a small fraction of household income, even among the poor. Certain differences across countries merit attention. The relative importance of labor income among the poor was most prominent in Antigua and Barbuda and St. Kitts and Nevis—two countries with the highest per capita GDP and the lowest poverty rates. While the role of remittances was most significant in Dominica and Grenada, only in Dominica do the poor rely more on remittances than the non-poor, constituting 20 percent of their

income. Pension and social security accounted for a large fraction of household income in Grenada, especially among the poor.

Figure 3-8. Poor households relied more on labor income and characteristic-based benefits such as child support



Source: World Bank staff estimates based on the OECS SLC-HBS 2005–2008. Data is not available for St. Vincent and the Grenadines.

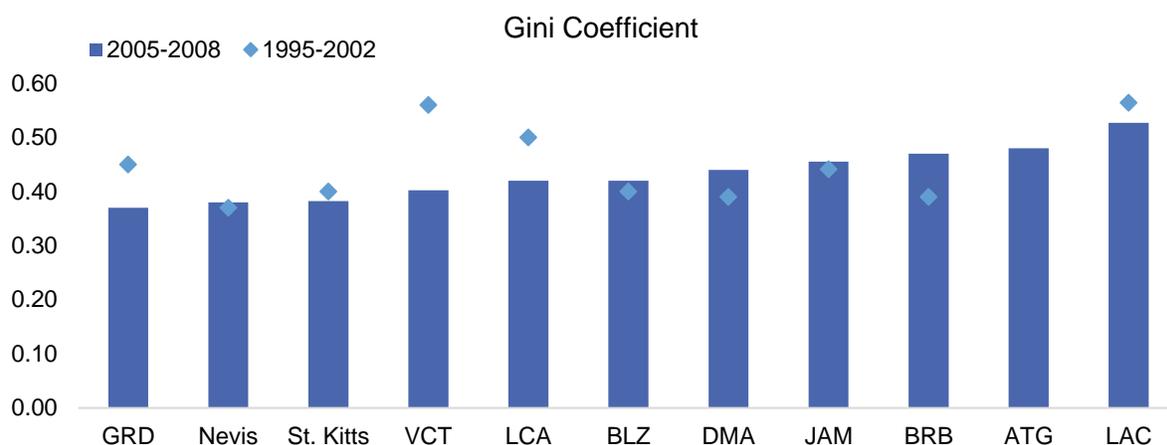
Note: Poverty is defined based on the international poverty lines US\$5.5 per day in 2011 PPP.

Inequality and shared prosperity

84. OECS countries fare better in reducing inequality when compared to the LAC regional average and to other countries.²⁶ Inequality as measured by the Gini coefficient decreased for most OECS countries between the late-1990s and the mid-2000s, except in Dominica (Figure 3-9). This fall in inequality was especially pronounced for St. Vincent and the Grenadines, where the Gini coefficient fell by 0.16. The latest Gini coefficients show that inequality varied across the OECS, and the pattern seems to be a reverse of the poverty incidence. In the mid-2000s, inequality in the OECS was highest in Antigua and Barbuda and lowest in Grenada with a Gini coefficient of 0.48 and 0.37, respectively.

²⁶ Data on shared prosperity is not available, limiting analysis of the bottom 40 percent and of inclusive growth.

Figure 3-9. Inequality decreased in most OECS countries from the late-1990s to the mid-2000s



Sources: Country Poverty Assessment Reports for OECS countries, Belize and Barbados, World Bank SEDLAC data for Latin America and the Caribbean, World Development Indicators for Jamaica.

Notes: Although OECS countries use consumption expenditures as a welfare measure, statistics for the Latin America and the Caribbean are based on income. Therefore, comparability cannot be inferred from the data, although it serves as an approximation for analyzing tendencies over time. Belize, Jamaica and Barbados are presented for comparison purposes as these countries also use consumption as a welfare measure. Data is not available for ATG in the late-1990s.

Box 3-2. Poverty Data Gap

Poverty analysis is the main challenge in the OECS. Household surveys of income or consumption, which are an important source of poverty data, have been collected two times—between 1995 and 2000 and between 2005 and 2008. The average frequency of household surveys is every 10 years, which is below the World Bank Group standard of 3 years. The OECS are currently conducting a new round of poverty assessment based on the harmonized regional household survey. The data collection is expected to be completed by 2019, except for Dominica (due to the impact of Hurricane Maria in 2017). More details on data gaps can be found in Annex I.

Recent development in poverty: Through the lens of the labor market

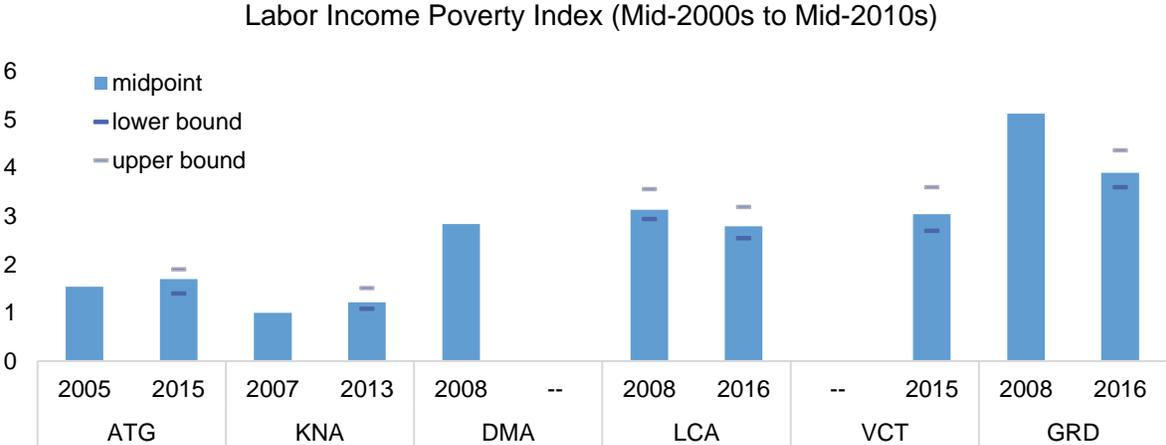
85. In the absence of updated poverty data, labor force surveys (2013–16) can provide an overall picture of recent development in poverty. International evidence suggests that in most countries labor income plays the largest role in contributing to poverty reduction. Poor households rely more on labor income and sustainable poverty reduction has been based on the expansion of economic activities and the absorption of most of the poor in income-generating activities. In the latest household surveys, the share of population with household-level labor income per capita below the poverty line followed the same pattern as poverty rates across the OECS (Figure 3-10).

86. The Labor Income Poverty Index (LIPI), which measures the share of population with household-level labor income per capita below the poverty line, was lowest in St. Kitts and Nevis and Antigua and Barbuda in the mid-2000s.²⁷ The two countries also had the lowest poverty rates during the same period. The LIPI was higher in Dominica, whose score was slightly lower than

²⁷ LAC Equity Lab. Labor Income Poverty Index (LIPI) measures the share of population that have less per capita labor income than the poverty line relative to a reference point.

the estimated LIPI measurement for St. Lucia, both consistent with the ranking of consumption poverty. Meanwhile, low-wage and high-unemployment labor markets meant many Grenadian households were below the poverty line, resulting in the highest LIPI among the OECS. During the same period, Grenada also experienced the highest poverty rate in the region.

Figure 3-10. The share of population that has less household-level labor income per capita than the poverty line has fallen in Grenada and St. Lucia



Source: World Bank staff estimates based on LFS 2008 and 2016 for St. Lucia, SLC-HBS 2005–2008 and LFS 2013–2016 for other countries. The lowest rate in St. Kitts and Nevis 2007 is used as a reference point.
 Note: Labor income is measured in 2011 PPP. Poverty line is US\$5.5 a day 2011 PPP. It is important to note that labor market information from the SLC-HBS and from the LFS is not strictly comparable due to sampling design.

87. Labor markets’ support for poverty reduction has been limited in the OECS during the period of stagnant growth after the 2008 global financial crisis. Over the last decade, the share of population with household-level labor income per capita below the poverty line has decreased by 20 percent in Grenada, but the LIPI is persistently higher than the rest of the OECS countries. Progress has been marginal in St. Lucia, with a slight decrease in the proportion of the population who earn less than the poverty line, putting St. Lucia’s labor income poverty incidence comparable to that of St. Vincent and the Grenadines in 2015–16. The index has marginally increased in the two high-income Leeward Islands countries, namely Antigua and Barbuda and St. Kitts and Nevis.

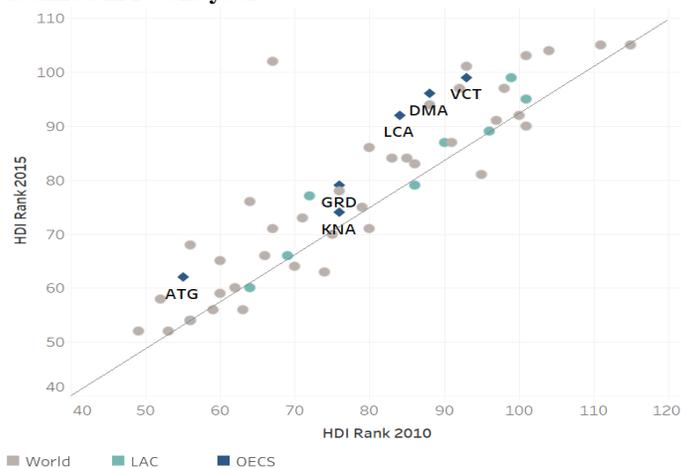
Box 3-3. The Human Development Index and Multidimensional Poverty Index in the OECS.

Traditional approaches to welfare measurement have focused on income or consumption as metrics for measuring poverty. This methodology focuses on measuring the households' capacity to meet basic dietary needs and acquire non-food staples to be able to function productively and participate in their communities.

This methodology has its shortfalls, however. Income or consumption expenditure can vary widely, which in turn can generate distortions in poverty measurement. This methodology also fails to capture many other aspects of living conditions that may have a prolonged effect on a household's welfare. To address these limitations, there has been an increasing recognition that poverty is multidimensional and that individuals experience multiple deprivations (in health or education for example) that limit their capacity to function and interact in their environments. This approach also suggests that policy interventions should have a broad-based focus in reducing poverty, encompassing a broad conception of human welfare. This is especially relevant for many Caribbean countries, where consumption-based approaches to measuring poverty have seen the increasing use of targeted cash transfers that have failed to sustainably reduce poverty.²⁸

The Human Development Index provides an initial approach to capturing a measure of welfare derived from multiple dimensions. All OECS countries are categorized under the high development group in terms of income, education and health, but saw a decline in their HDI ranking between 2010 to 2015 (Figure 3-11). The decline has been less marked for St. Kitts and Nevis.

Figure 3-11: The HDI shows that progress in human development has declined in recent years



Source: United Nations Development Programme (UNDP)

With respect to other relevant welfare characteristics, the OECS plans to incorporate questions pertaining to a larger scope of dimensions in their next round of household budget surveys to better capture their populations' needs in different fields, and target policy interventions towards them. In addition to incorporating questions related to the fields that make up the global Multidimensional Poverty Index (including education, health, and living standards), other fields will be included focused on measuring the countries' progress towards the Sustainable Development Goals. These new dimensions include environment and disaster risk-related issues, violence and safety, and social protection.

²⁸ Caribbean Development Bank (2016). *The changing nature of poverty and inequality in the Caribbean: new issues, new solutions*. St Michael, Barbados.

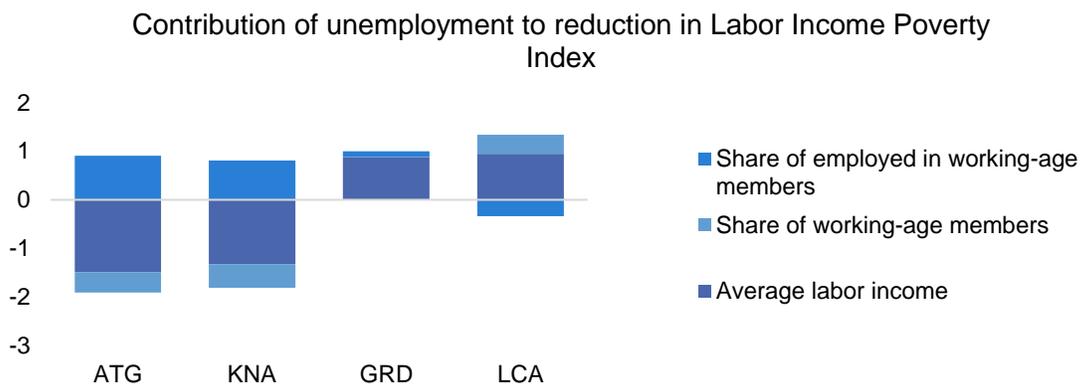
Key features affecting poverty reduction

88. The OECS countries have made substantial progress in eliminating extreme poverty. Lessons from this experience make apparent opportunities for and challenges to future poverty reduction. One major commonality across the islands is that progress in poverty reduction is affected by unemployment, vulnerability to external and climatic shocks, and large diasporas.

Unemployment

89. Limited job opportunities have played a major role in preventing progress toward poverty reduction, especially in countries where unemployment has been rising. Following the global financial crisis, unemployment rose and remains particularly high in Grenada, St. Lucia, and St. Vincent and the Grenadines. In these countries, unemployment rates range from 19 percent to 23 percent, compared to the small state average of 10 percent. The unemployed and the underemployed together account for over 40 percent of the working-age population in St. Lucia and Grenada. While the labor income poverty index has decreased in Grenada and St. Lucia, a decomposition analysis suggests that a significant contribution of growth in average labor income is largely behind this change, rather than growing employment (Figure 3-12). In St. Lucia, a lower proportion of employed household members hampered the progress in poverty reduction.

Figure 3-12. Unemployment is a significant factor preventing poverty reduction in St. Lucia and Grenada



Source: World Bank staff estimates based on HBS 2005–2008 and LFS 2013–2016.

Note: Azevedo, Joao Pedro, Minh Cong Nguyen, and Viviane Sanfelice, (2012). ADECOMP: Stata module to estimate Shapley Decomposition by Components of a Welfare Measure. *Statistical Software Components S457562*, Boston College Department of Economics. It is important to note that labor market information from the SLC-HBS and from the LFS is not strictly comparable due to sampling design.

90. Unemployment remains low in Antigua and Barbuda and St. Kitts and Nevis, which made significant progress in poverty reduction prior to the crisis. Nevertheless, sluggish growth in average labor income presents a challenge for further poverty reduction in these two high-income countries (Figure 3-12).

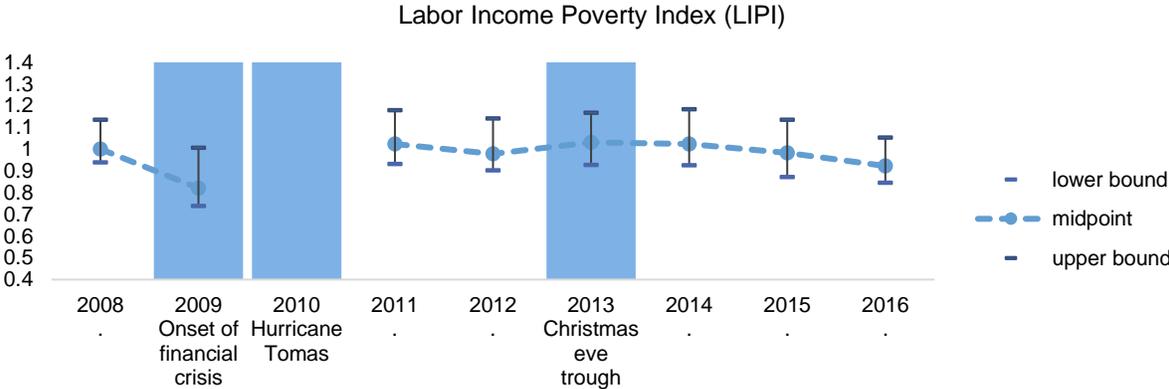
Vulnerability to external and climatic shocks

91. Vulnerability to external and climatic shocks is typical and unique to the OECS. Constrained by limited state capacity, the OECS relies heavily on tourism and a few agricultural exports. Both sectors are vulnerable to fluctuations in external demand and natural hazards. The

agricultural sector employs most of the poor, while tourism is a key driver of poverty reduction. International evidence shows that the poor and vulnerable population are disproportionately affected by extreme weather events.²⁹ As a result, terms-of-trade shocks and extreme weather events can impede the progress countries make in reducing poverty.

92. Loss of trade preferences for banana exports to European markets contributed to low elasticity between growth and poverty in the Windward islands between 1995 and 2008. The impact is most prominent in St. Lucia, the largest banana exporter among the OECS countries. By 2000, banana production in St. Lucia had dropped to 50 percent of 1990 levels. Subsequently, in 2002, Tropical Storm Lili destroyed about half of the banana crop. The agricultural sector employed most of St. Lucia’s poor population. During the same decade, the poverty rate increased by 3 percent.

Figure 3-13. The financial crisis disrupted poverty reduction in St. Lucia



Source: World Bank staff estimates based on LFS 2008–2016.
 Note: Poverty is based on US\$5.5 a day 2011 PPP. The year 2008 is used as a reference point.

93. As the services sector—particularly tourism and hospitality services—has replaced agriculture in creating employment opportunities, countries’ progress in poverty reduction has become more vulnerable to external demand for services. Although the Leeward islands avoided the banana-trade shock by their heavy reliance on tourism, the 2008 financial crisis is believed to have contributed to a slowdown in poverty reduction across OECS countries through a fall in demand for tourism and exports. In St. Lucia, evidence from labor markets suggests that the crisis might have disrupted poverty reduction (Figure 3-13). The share of population with per capita labor income below the poverty line decreased by 20 percent in 2009, before the crisis struck. It subsequently reversed, following the financial crisis, to the 2008 level in 2011 and has remained stagnant since.

94. OECS countries are frequently hit by storms and extreme weather events that disproportionately affect the poor and the vulnerable, pushing them back into poverty. Natural disasters caused problems for countries dependent on tourism and agriculture. In Grenada, for example, Hurricane Ivan (2004) caused estimated damage of more than 200 percent of GDP and

²⁹ Baez et al. (2015) and Hallegatte et al. (2016)

severely affected the vulnerable. Almost 20 percent of the vulnerable suffered severe housing damage and had to rebuild their homes during 2004–2005 (Figure 3-13). About 10 percent of the non-vulnerable group built their house during the same period. Although in absolute terms, asset losses tend to be lower among the vulnerable, in relative terms the cost of recovering damaged assets is much larger for the vulnerable. This negative impact can be exacerbated by a lack of insurance among the poor and the vulnerable. In St. Lucia, 30 percent of the non-vulnerable possess home insurance, but only 17 percent of vulnerable households have their houses protected in the event of extreme weather (Figure 3-14). In 2017, Hurricane Maria damaged the employment and livelihoods of Dominica’s population. With an estimated damage of more than 200 percent of the GDP, this extreme natural disaster was expected to slow poverty reduction in Dominica.

Figure 3-14. The vulnerable were disproportionately affected by extreme weather events.

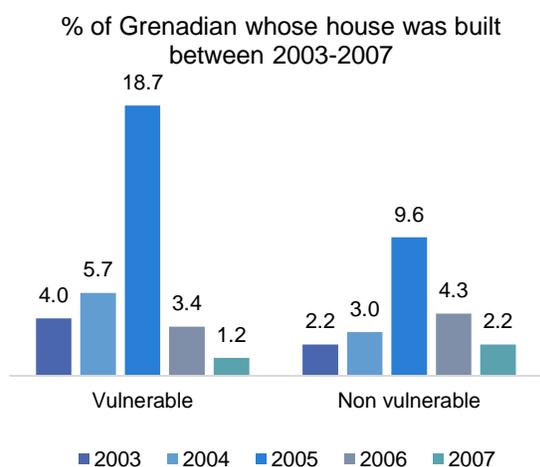
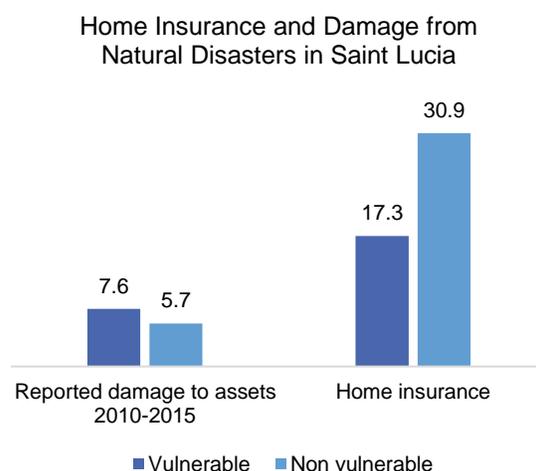


Figure 3-15. The vulnerable were less protected from asset losses.



Source: 2008 SLC-HBS for Grenada and 2016 SLC-HBS for St. Lucia. A vulnerable group includes households whose per capita consumption is below the vulnerability line which is set at 25 percent above the poverty line (US\$5.5 a day 2011 PPP) following the definition used among the OECS.

Box 3-4. Knowledge Gap: What is the causal impact of external shocks on the poor and vulnerable?

International evidence suggests that poor and vulnerable population are disproportionately affected by economic shocks and extreme weather events, impeding poverty reduction.³⁰ Rigorous studies on the consequence of natural disasters or terms of trade shocks on poverty and livelihoods are constrained by infrequent data collection and the lack of comparable data before and after the weather events.

Diaspora and remittances

95. Remittances sent by the diaspora provide income for many OECS households and contribute to reducing poverty. As in most small states, limited job opportunities and vulnerability to natural disasters are a push factor for emigration. OECS emigration rates are among the highest in the world, as shown in Figure 2-8 on page 16. The OECS diaspora is mostly located in the United States, Canada, and Europe. These emigrants play a role in OECS economic development mainly through remittances. Although remittances to the OECS are low relative to the large size

³⁰ Baez et al. (2015) and Hallegatte et al. (2016)

of the diaspora, they nevertheless account for 1.9 to 6.8 percent of GDP, and 18 percent of OECS households reported remittances as part of their gross income in 2015 (Figure 3-16).

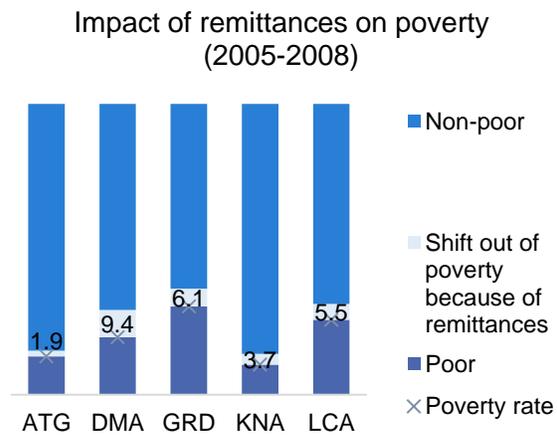
96. As stated in chapter 2, poverty rates would have been higher without remittances. Remittances on average accounted for 10 percent of household income between 2005 and 2008. Poverty rates would have increased by 10 percentage points in Dominica and 5 percentage points in Grenada and St. Lucia if recipient households had not received remittances (Figure 3-17). Although remittances had a smaller impact in high-income countries, the poverty rate would have increased from 10.3 percent to 14 percent in St. Kitts and Nevis without them.

Figure 3-16. Remittances to the OECS are relatively low given their large size of the diaspora



Source: International migrant stock (UN Population Division) and World Development Indicators.
 Note: Emigration rate is migrant stock as a share of the sum of total population and migrant stock.

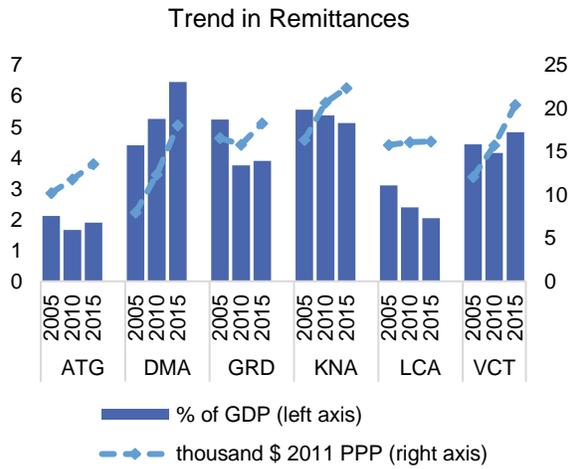
Figure 3-17. Remittances played a significant role in poverty reduction



Source: World Bank staff estimates based on per capita expenditure from SLC-HBS 2005–08.
 Note: Assuming the same share of remittances in income and consumption.

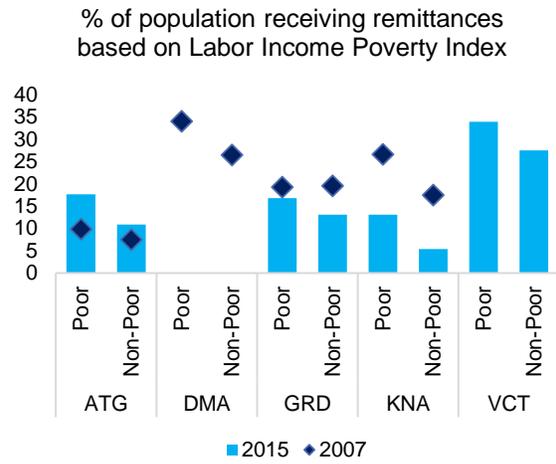
97. Over the past decade, remittances have become more important for economic development and poverty reduction in Dominica, St. Vincent and the Grenadines, and Antigua and Barbuda, but their importance has declined in Grenada, St. Kitts and Nevis, and St. Lucia (Figure 3-18). While remittance flows faltered during and recovered after the 2008 global financial crisis in Antigua and Barbuda and St. Vincent and the Grenadines, they have always been on an upward trend in Dominica. These trends are also reflected in the share of OECS households receiving remittances. Households in Grenada and St. Kitts and Nevis have become less reliant on remittances in the past decade (Figure 3-19). In 2015, approximately 30 percent of the population in St. Vincent and the Grenadines lived in a household that obtained part of its income from remittances. The number is expected to be significantly higher in Dominica. Regardless of the trend, individuals whose household-level labor income per capita is below the poverty line are more likely to receive financial support from abroad than their counterparts, emphasizing the role of the OECS diaspora and remittances in poverty reduction.

Figure 3-18. In the past decade, remittances have become more important in Dominica and St. Vincent and the Grenadines



Source: World Development Indicators
 Note: Data are a 5-year average.

Figure 3-19. Households in Grenada and St. Kitts and Nevis have become less reliant on remittances



Source: HBS 2005–08 and LFS 2013–16. Data are not available for St. Lucia.

4. Growth Performance

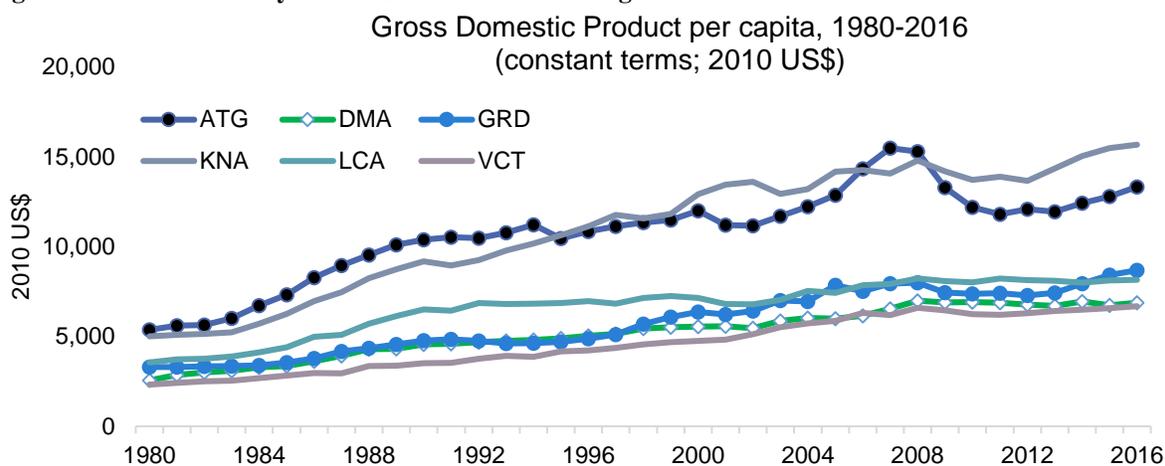
Economic growth has been slow and volatile since 1990s, as the region has been hit by successive shocks, both economic and natural. Reducing public debt and strengthening the framework for counter-cyclical fiscal policies would make important contributions to stability and growth. It is also important that OECS countries strengthen the banking system and improve access to credit. The tourism industry has become the mainstay of growth, but its growth has lagged behind other regions of the world. Regaining market share will require developing new products that appeal to fast-growing segments of the world market and improving connectivity to and within the region.

Trends in growth and economic performance

Growth has been low since 1990

98. Eastern Caribbean countries registered strong economic and social outcomes after attaining independence, as was discussed in Chapter 1. Real per capita GDP in OECS countries grew at an average annual rate of 5.6 percent in the 1980s, which was well above the world average. Figure 4-1 shows that momentum has slowed since 1990, however, when OECS countries' average annual growth rates dipped to 2.5 percent or lower. Recovering from the global financial crisis has been particularly challenging in St. Kitts and Nevis and Grenada, where real per capita GDP did not exceed 2007 levels until 2013 and 2015 respectively, and in Antigua and Barbuda, where per capita GDP is still below its 2007 peak, despite a recovery starting in 2014.

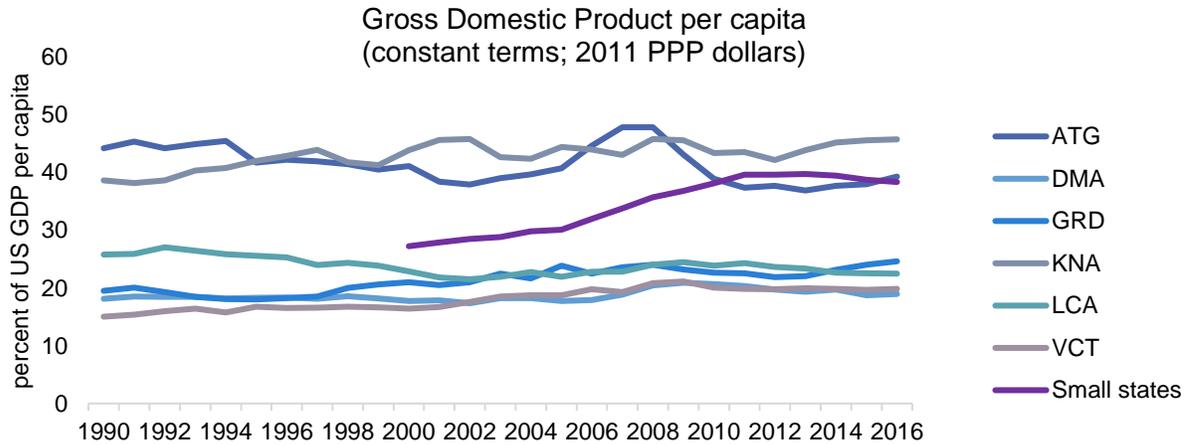
Figure 4-1. Weak recovery in OECS countries after the global financial crisis



99. The progress of OECS countries in converging with the living standards of advanced economies has stalled and, in some cases, reversed. This contrasts starkly with the rapid convergence experienced in other small states since the 2000s. Real PPP-adjusted GDP per capita in Antigua and Barbuda was roughly US\$16,381 in 1990, which was 44.2 percent of that in the United States (Figure 4-2). This share fell to 39.3 percent in 2017, showing a significant divergence in relative per capita income. Countries like St. Kitts and Nevis and Grenada have made marginal

progress towards closing the gap in recent years, but the rest of the OECS countries have remained relatively stationary in terms of relative income to the US.

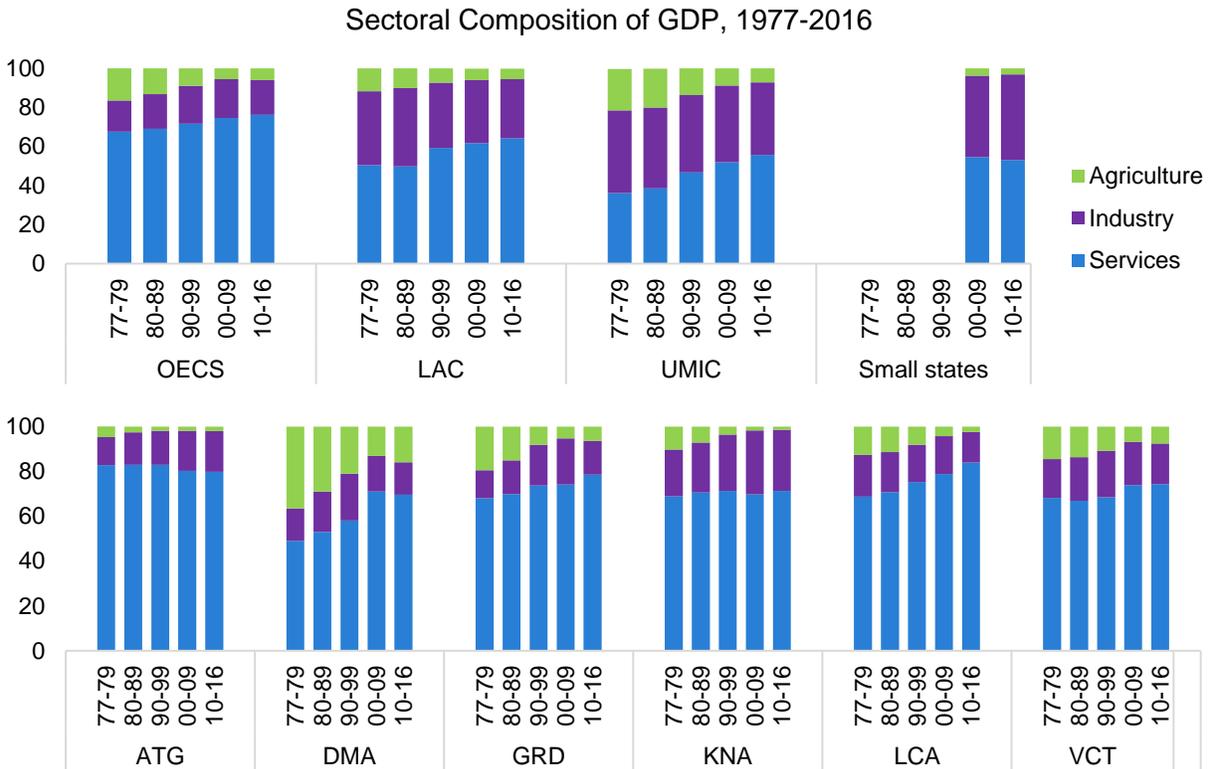
Figure 4-2. Slow convergence between OECS and U.S. incomes



Sectoral transformation and contribution to growth

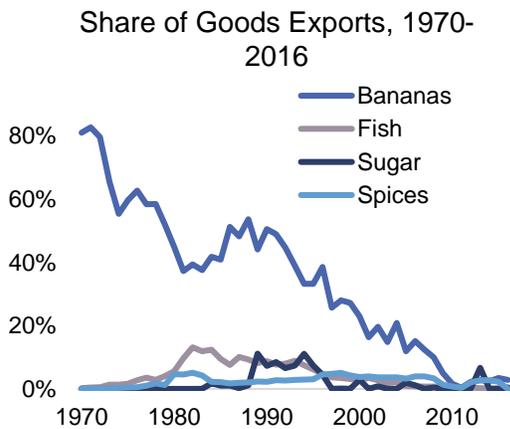
100. Like many other countries with similar levels of income, OECS economies transitioned out of agriculture in the latter part of the twentieth century (Figure 4-3). Sugar, bananas, cotton, and other plantation crops had been the mainstay of exports during the colonial era and benefitted from preferential access to European markets after independence. After the European Union began phasing out these trade preference schemes, OECS countries proved unable to compete with more efficient producers (of bananas in Africa and Latin America, for example). Bananas comprised over 80 percent of OECS countries’ total merchandise exports in the early 1970s and now are negligible (Figure 4-4). Agriculture has remained a relatively important in Dominica, contributing around 13 percent of GDP in 2017, compared to 1–2 percent in Antigua and Barbuda, St. Kitts and Nevis, and St. Lucia (Table 4-1). As discussed in Chapter 3, agriculture has remained an important source of employment, even if its contribution to national income is now small.

Figure 4-3. OECS countries are more services-oriented than comparators



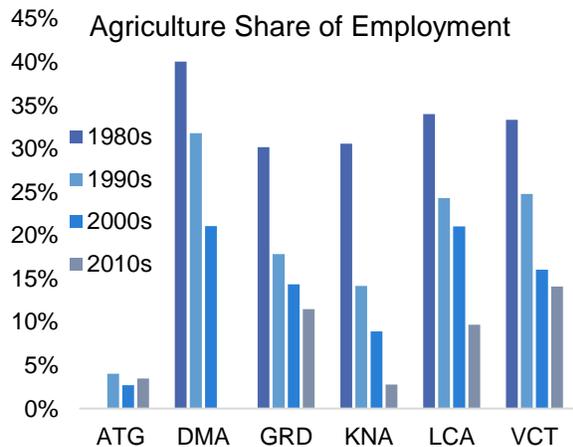
Source: World Development Indicators

Figure 4-4. Bananas and other agricultural exports have declined in importance



Source: UN Comtrade
Notes: Mirror trade statistics

Figure 4-5. Agricultural employment has also declined



Sources: Census and labor force surveys

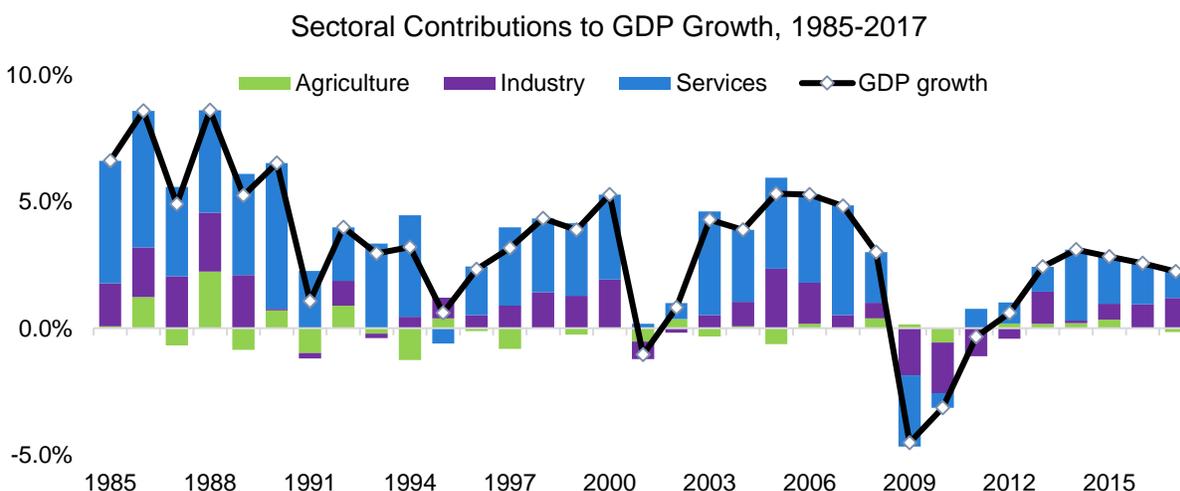
Table 4-1. Sectoral composition of GDP, 2017

Sector	ATG	DMA	GRD	KNA	LCA	VCT
Agriculture, fishing and forestry	1.7	13.3	7.6	1.1	2.3	6.8
Industry	18.5	14.4	16.6	24.7	16.9	17.1
o/w Construction	11.4	6.6	8.8	19.3	9.1	8.1
Services	79.7	72.3	75.9	74.2	78.5	76.1
o/w Hotels and restaurants	12.9	1.5	5.9	8.1	10.2	2.1
o/w Real estate	14.0	8.7	13.1	15.5	22.7	16.6

Source: Eastern Caribbean Central Bank.

101. Unlike comparator groups, however, OECS economies did not transition into manufacturing as their agricultural sectors declined. Countries made some efforts to develop export processing enclaves during the 1970s and 1980s, in part to take advantage of Canadian and U.S. tariff preferences targeted at the Caribbean. With a few exceptions (e.g., St. Kitts and Nevis produces electronics for Boeing), OECS countries have not been able to compete with larger economies, which are able to realize economies of scale.

Figure 4-6. Services have been the driver of growth since the 1980s



Source: ECCB national accounts data

102. Instead, OECS economies have transitioned into services. Figure 4-3 shows that services account for a larger share of output in the OECS than in comparator groups, and industry makes a smaller contribution. Antigua and Barbuda and St. Kitts and Nevis were among the first to develop tourism. For many years Antigua served as an air transport gateway for tourists bound for the Eastern Caribbean. Services have consistently made the largest contribution to annual GDP growth over the past three decades (Figure 4-6)

103. Many citizenship-by-investment (CBI) programs (described below in the context of fiscal policy) have provisions that grant citizenship to those investing in real estate.³¹ These have

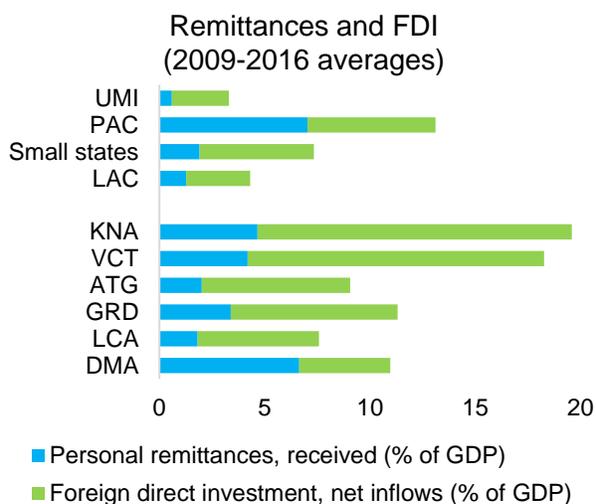
³¹ Dominica engaged in major outreach activities worth 1.1 percent of GDP in FY2015/16 to promote its CBI program. It also amended its CBI program requirements by lowering the government fee involved in the real-estate investment option, a measure aimed at boosting hotel construction.

stimulated real-estate activity across the region. Much of tourism-related construction activity is associated with increased real-estate investment under CBI programs.

Growth has been low despite large inflows of FDI and remittances

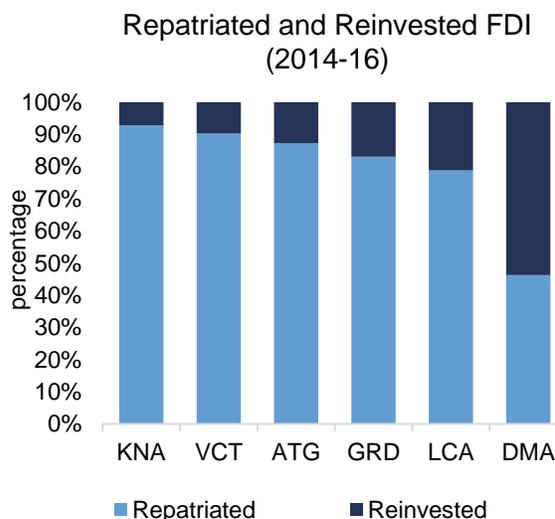
104. The OECS countries successfully tapped two important sources of external financing: remittances from the diaspora and foreign direct investment (Figure 4-7). Remittances as a share of GDP in the OECS countries in the years after the onset of the global financial crisis were higher than the average for other countries in the region or for other countries of similar income. Similarly, FDI inflows into OECS countries generally exceed averages for the region and for upper-middle income countries and small states. These high levels of FDI reflect well on the openness of OECS countries’ investment policies.

Figure 4-7. Remittances and foreign direct investment are important in the Caribbean



Source: World Development Indicators.
Note: PAC refers to the small Pacific Island states.

Figure 4-8. Repatriation of FDI profits is high



Source: World Development Indicators.

105. One might expect that FDI inflows would be associated with higher growth rates, due to knowledge transfers and spillover effects.³² However, this is not usually the case in the Caribbean, and particularly in the OECS. One recent study demonstrates that the service-oriented economies of the Caribbean have received more FDI than other countries in the region, but they have not seen significantly elevated growth rates, and that this lack of growth spillover is associated with the small size of these economies. In addition, it finds that the foreign firms investing in the service-oriented countries in the Caribbean tend to rely mostly on foreign technologies, which they find is associated with a lower propensity for backward linkages.³³ Although this could be an indication that the OECS economies do not have the skilled labor force required to develop backward

³² See, for example, the analysis of spillovers from FDI in Beata Javorcik, “Does Foreign Direct Investment Increase the Productivity of Domestic Firms?” *American Economic Review* 94 (2004):605–27.

³³ Miguel Eduardo Sánchez-Martín, Jaime De Piniés, and Kassia Antoine. “Measuring the determinants of backward linkages from FDI in developing economies: is it a matter of size?” Washington, DC: World Bank, 2015.

linkages in more advanced services, others do not find evidence in support of this argument and show that the small size of these economies is a more compelling reason behind the lack of FDI-related growth.³⁴ In addition, even though FDI in the region is high, repatriation of FDI profits is also high, especially in the Eastern Caribbean (Figure 4-8).

106. In a similar vein, low growth persists even with large inflows of remittances because, as remittances only partially offset the negative effects of migration of skilled and highly educated labor from the Caribbean region.³⁵ Furthermore, even though levels of remittances received by OECS countries are higher than those received by many other countries of similar size and income, they are lower than what one might expect, relative to the large size of the OECS diaspora, as discussed in the previous chapter.

Output has been highly volatile

107. Slow recovery in the wake of the global financial crisis in 2009 has been exacerbated by substantial output volatility, typically exceeding the average for the region and other small states (Figure 4-9). As with other small countries, the OECS economies are prone to volatility in general because of their small size, high openness to trade and investment, and concentration of production and exports. Several additional factors have increased the degree of volatility. First, as noted in the introduction to this report, the frequency of natural disasters striking the Caribbean has been increasing and, unlike other shocks, those resulting from natural disasters are asymmetric.³⁶ While positive and negative market shocks might generally be equal in magnitude, damages from hurricanes can exceed 150–200 percent of GDP in small Caribbean islands and are unmatched by positive shocks from good weather. Second, large fluctuations in world prices for food and fuel since 2007 have also contributed to output volatility. Food and fuel imports make up a large share of total imports in the OECS and are equal to 10–14 percent of GDP in most countries (Figure 4-10). Remittances received in the Caribbean tend to be correlated with business cycles in the diaspora countries.³⁷ As these countries are also major sources of tourists, the remittance connection tends to reinforce export market shocks. As will be discussed below, countries' fiscal policy stance has tended to magnify rather than dampen volatility.

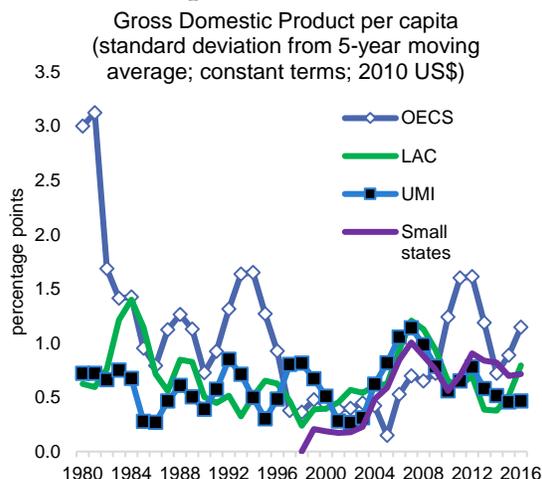
³⁴ Lederman and Lesniak (2017).

³⁵ Beaton, Kimberley. et al. "Migration and Remittances in Latin America and the Caribbean: Engines of Growth or Macroeconomic Stabilizers?" IMF Working Paper, International Monetary Fund, Washington, DC, 2017.

³⁶ One should note that OECS economies face spillovers from natural disasters occurring elsewhere in the Caribbean. For example, Azevedo (2016) documents that hurricanes have imposed considerable negative impacts on Caribbean economies even when the hurricanes made landfall elsewhere.

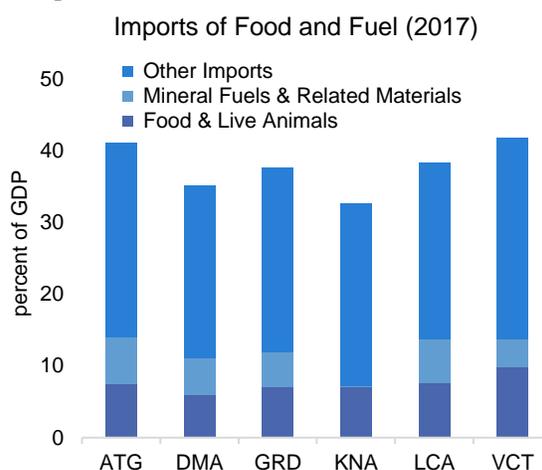
³⁷ Lederman and Lesniak (2017).

Figure 4-9. Output volatility in the OECS has increased since the global financial crisis



Source: World Development Indicators.

Figure 4-10. Food and fuel constitute a large share of imports



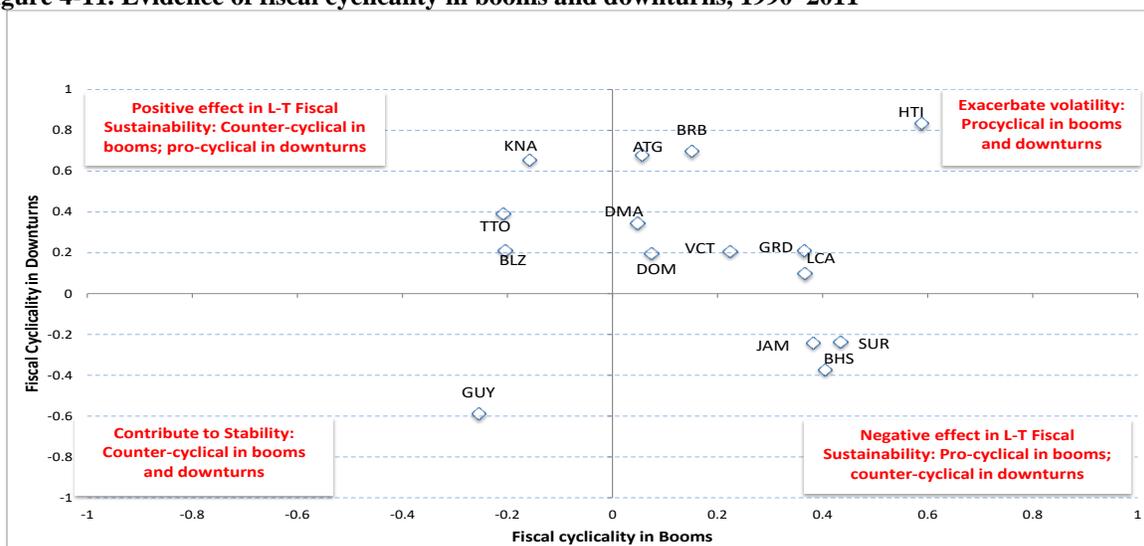
Source: Eastern Caribbean Central Bank.

The role of fiscal policy

108. Most Caribbean countries, including OECS members, have followed procyclical fiscal policies that tend to exacerbate output volatility. The only exception in the OECS is St. Kitts and Nevis, which joins Trinidad and Tobago and Belize in the group of countries that adopt counter-cyclical behavior during economic booms—a good indication that they are saving for a rainy day—but still display procyclical behavior in downturns (Figure 4-11). As members of the ECCU, the OECS countries can rely only on fiscal policy (and not monetary policy) as an economic stabilization tool, which makes a counter-cyclical fiscal stance even more important to control output volatility. Recently, Grenada has adopted a counter-cyclical fiscal policy stance, committing to predetermined fiscal rules and enacting a fiscal responsibility law.

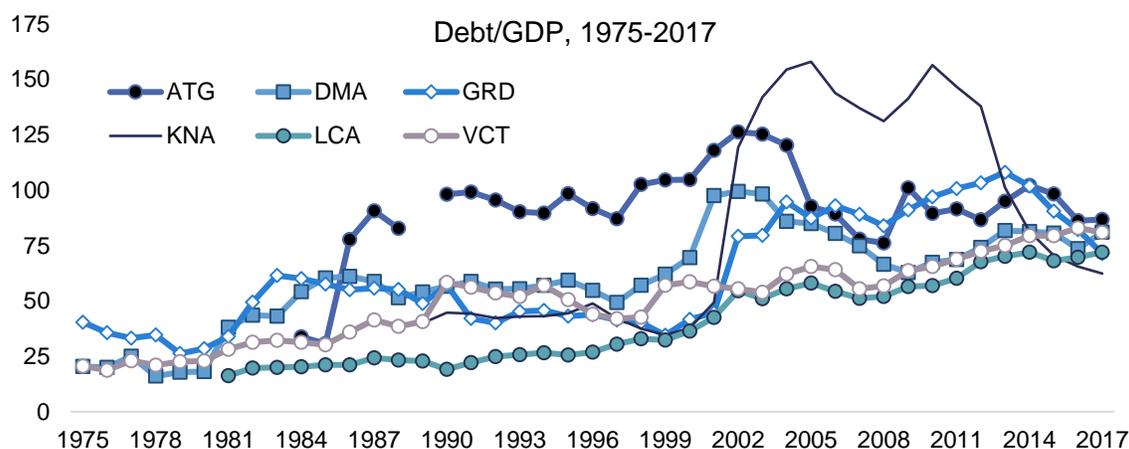
109. An important implication of the procyclical fiscal policy stance undertaken by most of the OECS is that the countries have not been able to build fiscal buffers during good times. The lack of adequate contingency funds in the region makes it difficult for the countries to respond to emergencies, such as pandemics and natural disasters. Procyclical fiscal policies, persistently large fiscal deficits, and contingent liabilities have led to a heavy buildup of public debt and an erosion of fiscal space.

Figure 4-11. Evidence of fiscal cyclicity in booms and downturns, 1990–2011



Source: Carneiro and Garrido (2015) based on IMF’s World Economic Outlook (WEO). Note: Proxy for fiscal cyclicity based on correlation coefficients for time series of real government expenditures and real GDP smoothed by the Baxter-King filter.

Figure 4-12. Public debt across the OECS countries remains high and above the OECS regional target of 60 percent of GDP



Source: IMF Historical Public Debt Database and World Economic Outlook; Antigua and Barbuda data for 1984–88 are from World Bank 1990.

110. Public debt grew steadily in OECS countries through around 2000, as shown in Figure 4-12. By 2002, four countries had breached the regional debt limit of 60 percent of GDP, and all were above this threshold after the global financial crisis. The pace of debt accumulated was gradual in St. Lucia and St. Vincent and the Grenadines, while in the other countries debt tended to ratchet up periodically. The most striking of these accumulation episodes occurred in St. Kitts and Nevis, where debt increased to 158 percent of GDP in 2005 from 89 percent in 1999. Assumption of debts owed by the state-owned sugar company (equivalent to 29 percent of GDP)

and by other public bodies made a large contribution to the increase.³⁸ Borrowing to cover revenue losses caused by hurricanes in 1998 (Georges) and 1999 (Lenny) and to finance post-disaster reconstruction were a second major contributor. Finally, pay raises for the government employees and increased spending during the 2000 election cycle added to the government's financing needs. State support for the declining sugar industry, government pay raises combined with an expansion of the public work force, and natural disasters (Hurricane Hugo in 1989) were also the major factors behind the escalation of debt during the late 1980s in Antigua and Barbuda, as was commercial borrowing to finance large infrastructure projects in water and tourism.³⁹ More recently, assumption of private sector liabilities in the wake of the global financial crisis also contributed to debt accumulation. For example, the failure of the British American Insurance Company Limited and Colonial Life Insurance Company (subsidiaries of the CL Financial Group, which offered high rates of return on deposits backed by investments in sub-prime mortgages in the United States) led to costly government interventions by OECS countries, estimated at 15 percent of GDP.⁴⁰ A Caribbean Development Bank decomposition of debt accumulation since the 1990s found that most of the increase in the debt/GDP ratio during periods of sustained debt accumulation resulted from the realization of contingent liabilities stemming from both the private sector and the public sector.⁴¹

111. The long-term growth in public debt during the past four decades is also associated with a secular decline in external grant financing. Although there have been frequent transitory spikes in receipts of official development assistance (ODA)—typically following natural disasters—ODA received by OECS countries as a share of their combined gross national income (GNI) has declined from an average of 6.4 percent of GNI in 1977–89 to an average of 2.1 percent in 2000–16 (Figure 4-13).⁴² Most governments increased their use of non-concessional borrowing during the late-1990s and 2000s (Figure 4-14). In an effort to boost growth in the late-1990s, governments expanded their public investment programs, which they financed largely with commercial debt.⁴³ Concessional financing provided by Venezuela and Taiwan, China, during the past decade has reversed this trend in some countries (e.g., St. Vincent and the Grenadines).

³⁸ IMF, “St. Kitts and Nevis: 2006 Article IV Consultation—Staff Report,” IMF Country Report No. 07/141, April 2007. In 1999, debt owed by public bodies (excluding their debt to the central government) was estimated at 50 percent of GDP. World Bank, “Saint Kitts and Nevis: OECS Fiscal Issues--Policies to Achieve Fiscal Sustainability and Improve Efficiency and Equity of Public Expenditures,” Report No. 25185-LCR, Washington DC: World Bank, December 2003.

³⁹ World Bank, “Antigua and Barbuda: Recent Economic Performance and Prospects,” Report No. 10483-AB, Washington DC: World Bank, May 1992. These infrastructure projects pushed government capital spending to 56 percent of GDP in 1986.

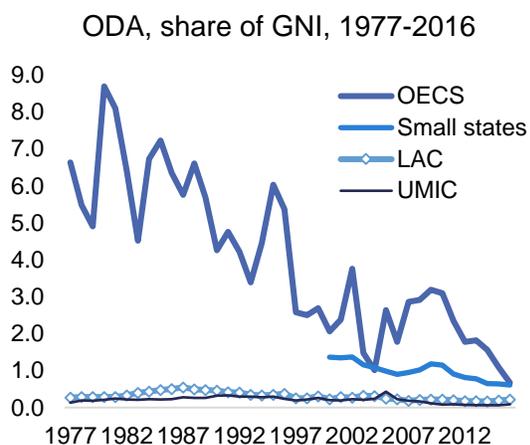
⁴⁰ Alfred Schipke, Aliona Cebotari, and Nita Thacker (eds.), *The Eastern Caribbean Economic and Currency Union: Macroeconomics and Financial Systems*, Washington DC: International Monetary Fund, 2013.

⁴¹ Caribbean Development Bank, “Public Debt in the Caribbean: An Agenda for Reduction and Sustainability,” 2013.

⁴² For example, ODA receipts reached 30 percent of Dominica's GNI in 1980, following Hurricane Allen.

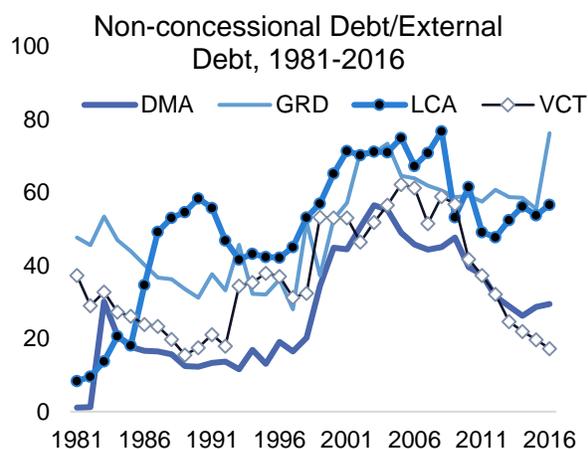
⁴³ World Bank, “Organization of Eastern Caribbean States: Towards a New Agenda for Growth,” Report No. 31863-LAC, Washington DC: World Bank, April 2005.

Figure 4-13. Official development assistance to OECS countries is converging to volumes received by comparator countries



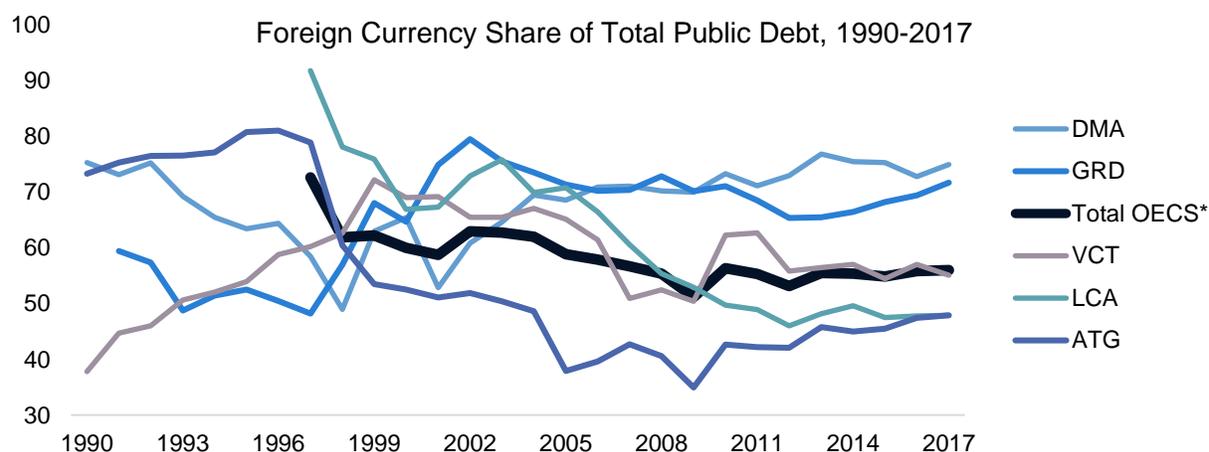
Source: World Development Indicators

Figure 4-14. Commercial borrowing increased during the late-1990s and 2000s



Source: World Development Indicators

Figure 4-15. Many governments shifted away from foreign currency borrowing in the 2000s



Source: IMF World Economic Outlook

Note: Total OECS excludes St. Kitts and Nevis, due to data limitations.

112. Many governments have reduced their foreign currency borrowing since the 1990s, although there is considerable variation across countries (Figure 4-15). The creation of the Regional Government Securities Market by the ECCB in 2002 provided the opportunity for OECS governments to borrow in EC dollars at more favorable rates than were available in their individual domestic markets. St. Lucia and St. Vincent and the Grenadines have been the heaviest users of this market. Local commercial banks increased their lending to governments in the year leading up to the global financial crisis.⁴⁴ National insurance schemes and other statutory funds became an

⁴⁴ World Bank, "OECS: Diversifying the Financial System," Report AUS15520, Washington DC: World Bank, October 2017.

increasingly important source of financing for OECS governments after the 1990s.⁴⁵ Government securities account for over half of Antigua and Barbuda’s social security reserve assets, for example, and between 20 and 30 percent of assets in other OECS countries⁴⁶

113. Debt is now a downward trajectory in several countries. Four out of the six OECS countries have undertaken sovereign debt restructuring operations in the past 15 years with the objective of restoring debt sustainability or securing temporary reprieve from onerous debt-service obligations.⁴⁷ Recent debt-restructuring efforts by Grenada and St. Kitts were particularly successful in reversing a trend towards over-indebtedness. Grenada’s 2013–15 debt restructuring exercise included a 50 percent principal haircut on both domestic and external debt to private and bilateral official creditors. This helped Grenada bring the debt-to-GDP ratio down to 72 percent in 2017 from 108 percent in 2013, putting it on track to achieve the regional target of 60 percent by 2020. In St. Kitts and Nevis, an aggregated 65 percent net present-value haircut on exchanged debt resulted in the debt-to-GDP ratio falling from 157 percent in 2010 to 62 percent at end-2017. Both cases were underpinned by IMF programs that supported comprehensive fiscal adjustment. In addition, the restructuring operations had some innovative features built into new debt contracts, such as a “clawback” feature and a two-step haircut approach that provided incentives for sustained prudent fiscal policy.⁴⁸ Grenada’s restructuring also included a hurricane clause which provides automatic liquidity relief in the event of a qualifying disaster.

Citizenship by investment

114. As noted above, all countries except St. Vincent and the Grenadines operate immigrant investor programs that provide citizenship to those making qualifying investments in the country or a contribution to a designated special fund. Programs in Dominica and St. Kitts and Nevis date back more than three decades and have generated FDI inflows reaching 10–15 percent of GDP in some years. Antigua and Barbuda, Grenada, and St. Lucia established their programs between 2012 and 2015, which to date have generated more modest inflows. Governments have used the funds raised through these programs to finance a mix of current expenditures, capital projects (including post-disaster reconstruction), and debt reduction.⁴⁹ These programs have macroeconomic and fiscal effects that in some ways resemble exports of natural resources. They generate potentially large inflows of revenue for governments, but these are unpredictable and volatile. Management of citizenship-by-investment revenue therefore needs to be incorporated into a country’s fiscal responsibility framework. Some OECS countries are contemplating creating

⁴⁵ Caribbean Development Bank, 2013.

⁴⁶ Koffie Nassar, Joel Okwuokei, Mike Li, Timothy Robinson and Saji Thomas, “National Insurance Scheme Reforms in the Caribbean,” IMF Working Paper No. WP/16/2016, Washington DC: International Monetary Fund, October 2016. National insurance schemes also finance governments indirectly through their deposits at locally incorporated commercial banks, which in turn invest in government securities. In St. Kitts and Nevis, commercial bank deposits account for 57 percent of social security reserve assets.

⁴⁷ Debt restructuring episodes include Dominica (2003–04), Antigua and Barbuda (2010), Grenada (2004–06, 2013–15), and St. Kitts and Nevis (2011–12).

⁴⁸ The clawback feature (St. Kitts) allowed creditors to receive additional bonds if the authorities failed to follow through on the structural reform program. Staggering the principal haircut meant that its size was contingent on reform implementation.

⁴⁹ Use of these programs is summarized in Annex II of IMF, “Eastern Caribbean Currency Union: Staff Report for the 2017 Discussion of Common Policies of Member Countries,” IMF Country Report No. 17/150, June 2017.

sovereign wealth funds that—like funds created by exporters of minerals and oil—can be used to contribute to long-term growth as well as to support counter-cyclical fiscal policy.

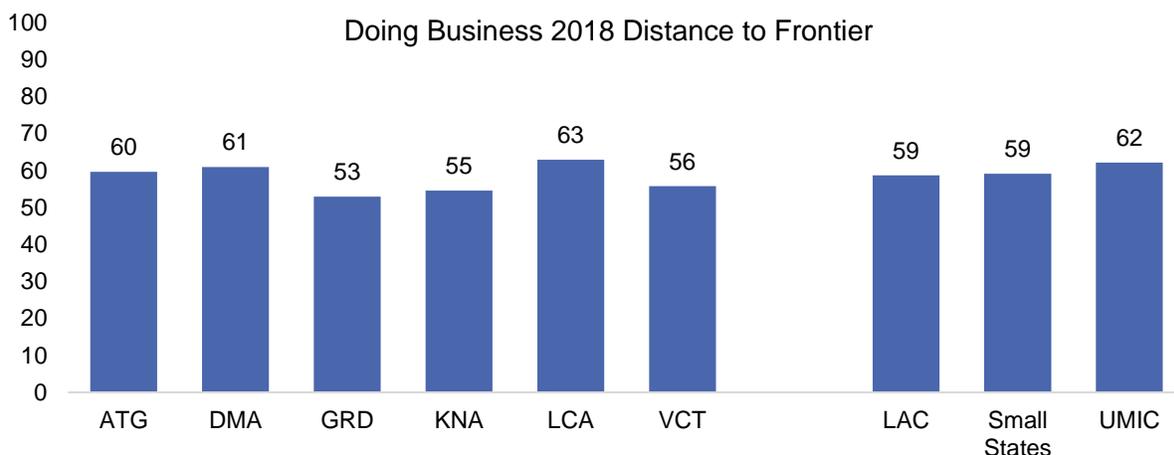
Private sector constraints and contributions

115. Several constraints on private sector activity have contributed to the vicious cycle of low growth, economic volatility, and high debt. Chapter 2 discussed the effects of market size, access to economies of scale, and economic specialization. In this section, the SRD examines the roles of the investment climate and financial intermediation on private-sector growth.

The investment climate and competitiveness

116. Improving the investment climate in the OECS would help to cut the vicious cycle of low growth by increasing firm competitiveness. Complex business regulations, high costs associated with trade and logistics, and high energy costs are some of the major impediments to competitiveness. Figure 4-16 shows that, although St. Lucia and Dominica are among the closest to the global frontier of business regulations among Caribbean economies, others perform less well and fall below the LAC regional average. Small states and upper-middle income countries also outperform several OECS countries.

Figure 4-16. Complex business regulations are reflected in Doing Business scores and rankings



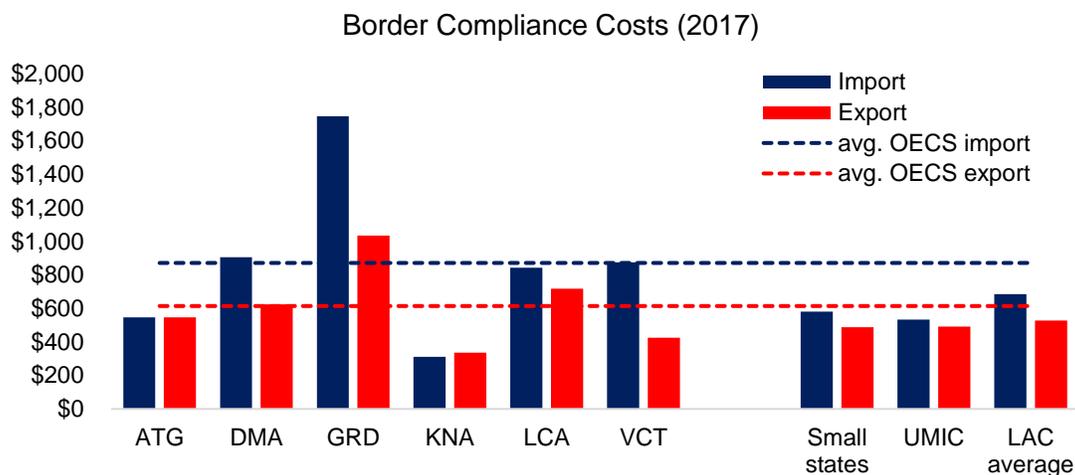
Source: Doing Business

117. Reducing electricity costs would also increase private-sector competitiveness and contribute to economic growth. Although firms in OECS countries enjoy easy access to electricity, costs are higher than the LAC regional average, and many firms identify electricity as a major constraint to competitiveness (Figure 4-18). As hotels and other tourism establishments are among the largest consumers of electricity in OECS countries, high electricity costs are an important drag on GDP growth rates. Imported petroleum fuels are the dominant source for power generation, which increases the exposure of OECS economies to global market volatility. A recent IMF

analysis estimates that movements in real oil prices explain as much as 15 percent of the variation in real GDP growth in Dominica and 14 percent in Grenada between 1976 and 2013.⁵⁰

118. Costs associated with trade procedures undermine firms’ capacity to integrate into global and regional value chains, reduce trade competitiveness, and act as a drag on the momentum towards regional economic integration in the OECS. Doing Business estimates that direct costs arising from fees and other charges associated with border compliance for importing into OECS countries are, on average, 27 percent above the LAC regional average and border compliance costs of exporting are 17 percent higher (Figure 4-17). Average compliance costs in OECS countries also exceed those for small states and upper-middle income countries. There is considerable variation—trade costs in St. Kitts and Nevis are only around half the regional average, while the costs of trading in Grenada are double the regional average. The 2010 World Bank Group Enterprise Surveys found that many firms in OECS countries rank trade and customs regulations among their biggest constraints, most notably in Antigua and Barbuda (16 percent of firms, compared to 7 percent of firms surveyed in OECD countries) and St. Vincent and the Grenadines (10 percent).

Figure 4-17. Border compliance costs in many OECS lie above those in comparator countries



Source: Doing Business 2018.

119. High port costs and low connectivity also reduce trade competitiveness. Costs are high in part due to market size. OECS seaports are among the smallest in the LAC region and they move a small fraction of goods moved at the larger ports in Caribbean islands (Table 4-2). The low volume of cargo traffic does not offer the same opportunities as elsewhere to achieve low average costs through economies of scale. Furthermore, OECS countries are less connected with other

⁵⁰ Arnold McIntyre, Ahmed El-Ashram, Marcio Ronci, Julien Reynaud, Natasha Che, Ke Wang, Sebastian Acevedo, Mark Lutz, Francis Strodel, Anayo Osueke, and Hanlei Yun, “Caribbean Energy: Macro-Related Challenges,” IMF Working Paper No. WP/16/53, Washington, D.C.: International Monetary Fund, March 2016. The authors report that hydropower accounts for an estimated 30 percent of generation capacity in Dominica and around 10 percent in St. Vincent and the Grenadines, and that wind and solar power accounts for around 10 percent in St. Kitts and Nevis.

ports in the world, as measured by UNCTAD’s Liner Shipping Connectivity Index.⁵¹ OECS islands are served mainly by a few established intra-regional routes emanating from regional transshipment hubs. Intra-regional cargo volumes are minimal and carried in informal schooners (small, old metal boats). In addition, goods vessels must compete with cruise ships at ports.

Table 4-2. OECS port traffic and connectivity are low

Port	Country	Port traffic, 2017		Connectivity
		TEUs	LAC rank	LSCI, 2017
Castries	St. Lucia	28,549	89	4.4
St. George	Grenada	21,914	92	6.6
Campden Park Container Port	St. Vincent and Grenadines	17,502	96	7.4
St. John	Antigua and Barbuda	17,311	97	6.9
Rosseau	Dominica	7.7
Basseterre	St. Kitts and Nevis	4.2
<i>Comparators</i>				
Colón	Panama	3,891,209	1	52.0
Kingston	Jamaica	1,560,000	8	30.3
Caucedo	Dominican Republic	1,235,801	11	33.9
Freeport	Bahamas	850,426	19	30.4

Source: ECLAC Ports Database; UNCTAD Liner Shipping Connectivity Index.

Notes: TEUs are 20-foot equivalent units. Port traffic data are not available for Rosseau in Dominica and Basseterre in St. Kitts and Nevis (only the top 100 seaports in LAC are included in the ECLAC database). LSCI = the UNCTAD Liner Shipping Connectivity Index.

120. There is scope for reducing transport costs by increasing the efficiency of port operations. A recent CDB analysis of Caribbean port operations finds that efficiency lies below the Caribbean regional average at all OECS ports. In addition to upgrading infrastructure, which is an obstacle to efficiency at almost all ports except that of St. Lucia, the report recommends that OECS countries can modernize or optimize the use of information technologies, reform port management institutions (especially Dominica and St. Lucia), and improve labor relations (especially Antigua and Barbuda and Grenada) as a means of boosting efficiency.⁵²

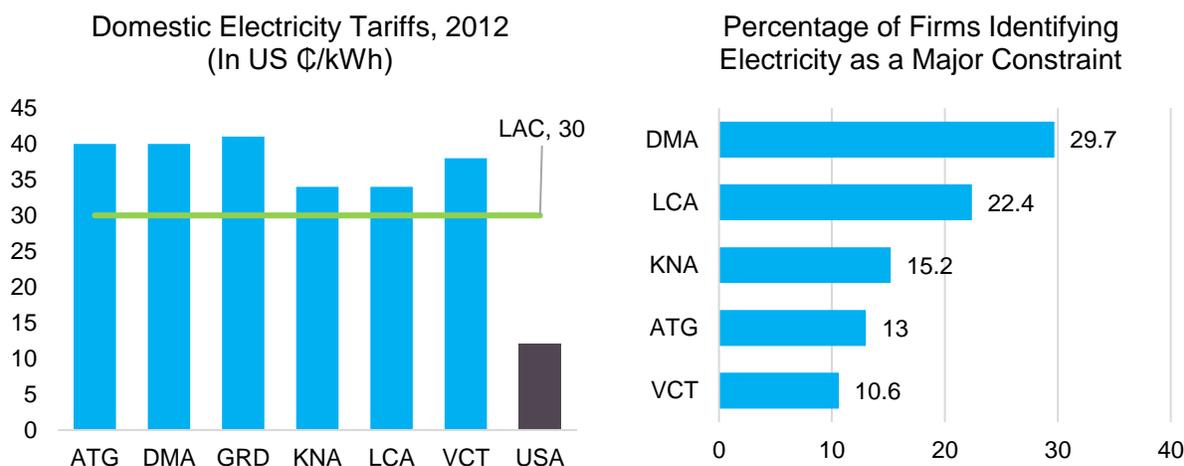
121. The maritime transport industry is undergoing a major transformation involving larger vessels, greater concentration in shipping and port operations, and a looser linkage between GDP and international trade growth after the global financial crisis.⁵³ The CDB port analysis suggests that one Eastern Caribbean port could potentially emerge as a new regional transshipment hub as this transformation unfolds, even as shipping volumes are not likely to grow massively in the coming decades.

⁵¹ UNCTAD’s Liner Shipping Connectivity Index (LSCI) incorporates (a) the number of ships; (b) the total container-carrying capacity of those ships; (c) the maximum vessel size; (d) the number of services; and (e) the number of companies that deploy container ships on services from and to a country’s ports. The index ranges from 0 to 100. Higher values indicate greater connectivity.

⁵² Caribbean Development Bank, “Transforming the Caribbean Port Services Industry: Toward the Efficiency Frontier,” 2016.

⁵³ See Gordon Wilmsmeier and Jason Monios, “Container ports in Latin America—challenges in a changing global economy,” in P. T-W. Lee, and K. Cullinane (eds), *Dynamic Shipping and Port Development in the Globalized Economy*. Palgrave Macmillan, 2016.

Figure 4-18. High power costs constrain competitiveness



Source: McIntyre, et al. (2016).

Source: World Bank Enterprise Survey, 2010.

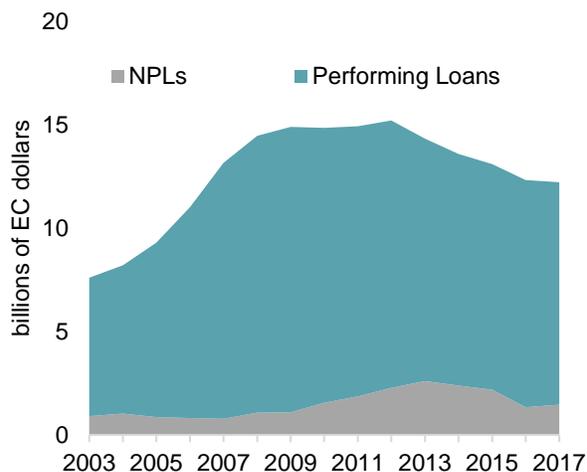
Financial intermediation and the efficiency of risk allocation

122. The financial sector plays a critical role in supporting sustainable economic growth in OECS countries. With service-based economies, a fixed exchange rate regime, high debt-to-GDP levels, and a high degree of vulnerability to shocks, the financial sector plays a catalytic role in promoting private sector development. Ensuring that financial intermediation and the allocation of risk is efficient will allow OECS economies to establish a sound local foundation for economic growth. Furthermore, the financial sector can also help in the management of shocks, provided that the risks are socialized and fiscal contingent liabilities are not created.

123. Banking dominates the financial sector in OECS countries and is large relative to GDP. Credit expansion has been driven by public investments and, on the private sector side, by consumer loans. The countries have a high level of credit, and the banking sector is large in relation to GDP: banking-sector assets represented 166 percent of the region’s overall GDP in 2015.

124. The financial sector experienced an expansion of credit before the global financial crisis which led to a sharp increase in non-performing loans (NPLs). Total ECCU banking sector assets represent 193 percent of GDP, compared to an average across Latin America and the Caribbean of 54 percent. Between 2004 and 2008, ECCU credit grew at an average annual rate of 15 percent (Figure 4-19). The onset of the global financial crisis led to the failure of two insurance companies and an increase in NPLs; by 2013, NPLs had reached 18.3 percent (Figure 4-20). The region has begun to address these high NPLs through the resolution of three banks and the creation of the Eastern Caribbean Asset Management Company. This has restored stability to the system, and total growth of credit to the private sector picked up slightly in 2017. The highest share of private sector credit to GDP is credit taken on by individuals (54 percent of loans) for acquiring property and home construction and renovation.

Figure 4-19. Domestic credit to the private sector, 2003–17



Source: Eastern Caribbean Central Bank.

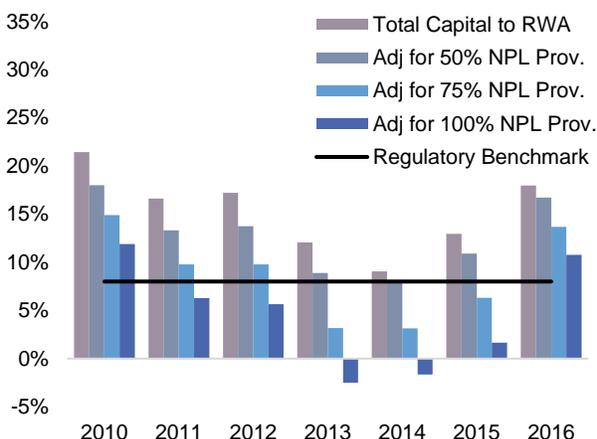
Figure 4-20. Non-performing loans, 2003–17



Source: Eastern Caribbean Central Bank.

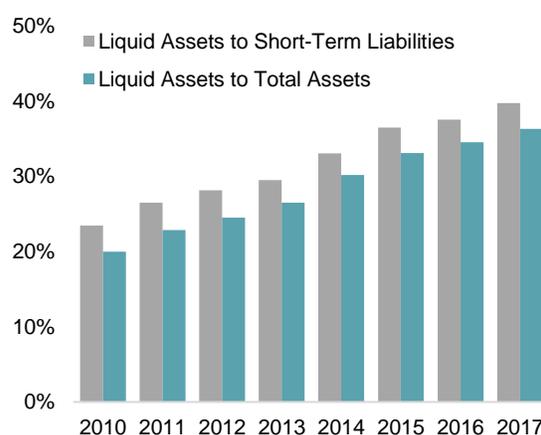
125. The New Banking Act has now been passed in each of the eight members of the Eastern Caribbean Currency Union (including all six countries covered by this SRD). This strengthens regulatory and supervisory frameworks by introducing higher minimum capital requirements, more effective liquidation or recapitalization of failed banks, and stronger depositor protection. The currency union will need to operationalize the Banking Act toward enhanced supervision and eventually strive to implement risk-based supervision and Basel II regulation for banks and non-banking financial institutions.

Figure 4-21. Capitalization of indigenous Banks, 2010–16



Sources: Eastern Caribbean Central Bank, International Monetary Fund.

Figure 4-22. Liquidity at commercial banks, 2010–17



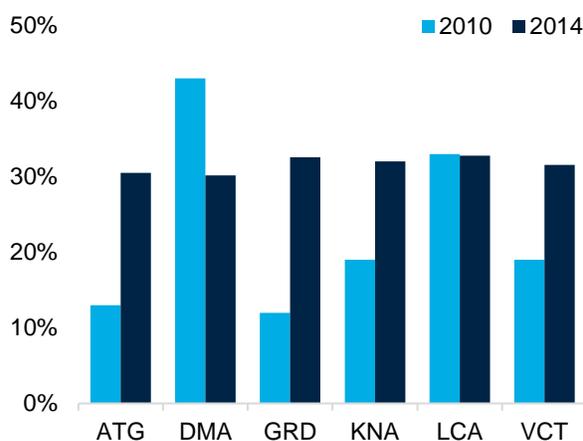
Sources: Eastern Caribbean Central Bank, International Monetary Fund.

126. Capitalization of indigenous banks has been improving since 2014 due to these recent measures (Figure 4-21), and liquidity remains high (Figure 4-22). Consequently, the ability to

endure climactic and financial shocks has improved. Indigenous banks' reported numbers have historically been above the regulatory benchmark for capital adequacy. Equity has yet to fully account for the entire provisioning of NPLs, however. After adjusting for this, capital adequacy worsens significantly but has started to improve—part of this is due to the final resolution of the three banks under conservatorship. Concurrently, liquidity has been increasing, as NPLs only affect a subset of banks, and the system's liquidity has moved to more sound institutions.

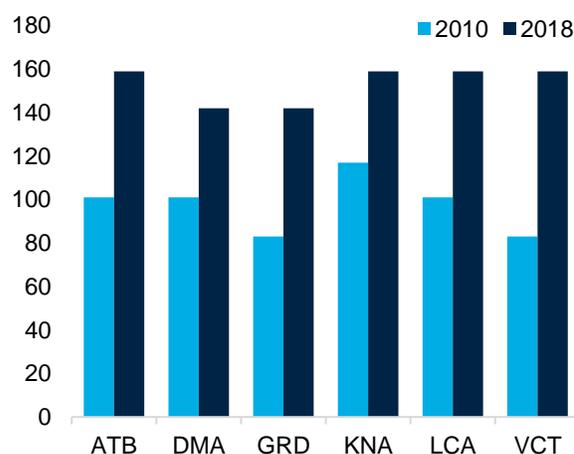
127. Access to finance is one of the top obstacles for enterprises and appears to have grown more important in most countries between 2010 and 2014 (Figure 4-23). All OECS countries have dropped in the global Doing Business rankings on this measure since 2010 (Figure 4-24).

Figure 4-23. Access to finance as a main constraint



Sources: World Bank Group Enterprise Survey (2010) and Compete Caribbean (2014).

Figure 4-24. Doing Business Getting Credit ranks



Sources: Doing Business.

128. The financial sector therefore needs to be strengthened to better address shocks and provide the intermediation and the multiplier effect that OECS economies need. The cyclical stress that emanated from the global financial crisis put pressure on the financial sector. Subsequently, the combination of an illiquid distressed asset market, shorter-maturity non-consumer loans, protracted insolvency regimes, and the lack of credit bureaus and credit registries have all contributed to a constrained lending environment, even though the regulatory framework for banking has been strengthened. As a result, credit has continued to contract across OECS countries. Total credit at the end of 2016 was 20 percent lower than the 2012 peak, as shown in Figure 4-19 (p.52). This is equivalent to a compound annual decrease of 5.4 percent per year. Excess liquidity has also been partially driven by a notable lack of investable instruments other than treasury securities and housing finance bonds. Lending in the ECCU tends to be over-collateralized, as there is little formal information on borrowers.⁵⁴ Governments are currently working to establish a new credit bureau to address this structural challenge.

⁵⁴ The 2014 Compete Caribbean survey found that 88 percent of all loans to enterprises were collateralized—well above the global average of 70 percent.

Tourism and economic growth

129. Tourism has become a mainstay of economic growth in OECS countries, and the challenges for growth in the tourism industry exemplify many challenges facing the broader economy. As with other industries, the high cost of energy and labor, import duties and VAT, and expensive connective infrastructure services (both for air and sea transport) in OECS countries increase costs of development and operation of tourism enterprises. Due to a lack of local diversification and scale, most tourist hotels rely completely on imports for supplies. This results in limited backward linkages from FDI and exposes the economy to external economic shocks. Small local firms lack capacity, information about potential consumer demand and other market intelligence, and the access to capital to grow into medium- and large-sized enterprises. Finally, industry performance is very sensitive to external market conditions.

130. Tourism contributes heavily to production, employment and exports. The industry directly or indirectly accounts for a large share of output, ranging from 23 percent of GDP in Grenada and St. Vincent and the Grenadines to 52 percent of GDP in Antigua and Barbuda in 2017 (Table 4-3). Indirect contributions to employment are of similar magnitude. Tourism receipts averaged more than half of total exports in OECS countries between 2010 and 2016, outweighing the shares of other small states, including such tourism-intensive regions as the Pacific Islands where tourism receipts averaged approximately 40 percent of exports (Figure 4-25). Such a high concentration of tourism in the export sector makes it the main foreign -exchange earner for the OECS economies.

Table 4-3. Contributions of travel and tourism to GDP, 2017

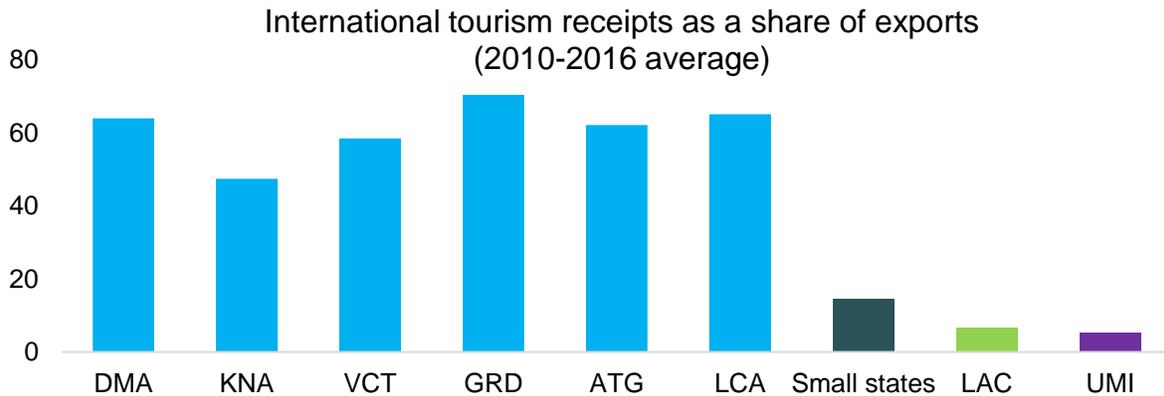
	GDP share		Employment share		Visitor exports/ Total exports
	Direct	Total	Direct	Total	
Antigua and Barbuda	13.0	51.8	13.5	46.1	60.4
Dominica	12.4	37.6	11.3	34.4	56.4
Grenada	7.0	23.3	6.4	21.4	60.8
St. Kitts and Nevis	6.6	26.8	6.5	25.6	33.4
St. Lucia	15.0	41.8	26.4	50.8	67.1
St. Vincent and the Grenadines	5.9	23.4	5.5	21.5	48.0

Sources: World Travel & Tourism Council, Country Economic Impact Analyses 2018

Notes: Direct contribution to GDP is the value-added generated by industries that deal directly with tourists, including hotels, travel agents, and airlines and other passenger transport services, as well as the activities of restaurant and leisure industries that deal directly with tourists. The total contribution to GDP also includes indirect contribution to GDP, which are capital investment spending by all industries directly involved in travel and tourism, government spending in support of general tourism activity, and purchases of domestic goods and services directly by different industries within travel and tourism as inputs to their final tourism output. The total employment similarly encompasses those directly employed in travel and tourism activities, plus those employed in supporting activities that are included in the indirect contribution to GDP.

131. Tourist arrivals in the OECS have been increasing since the downturn caused by the global financial crisis (Figure 4-26). St. Lucia and Grenada account for most of this growth. Stayover arrivals in 2017 in Antigua and Barbuda, St. Kitts and Nevis, and St. Vincent and the Grenadines were still below their pre-crisis peak. Despite the devastation caused by Hurricane Maria, stayover arrivals grew in Dominica in 2017 by 2 percent, which reflects strong growth during the quarters before the hurricane struck, although visitors arriving by cruise ships declined by 44 percent according to ECCB data.

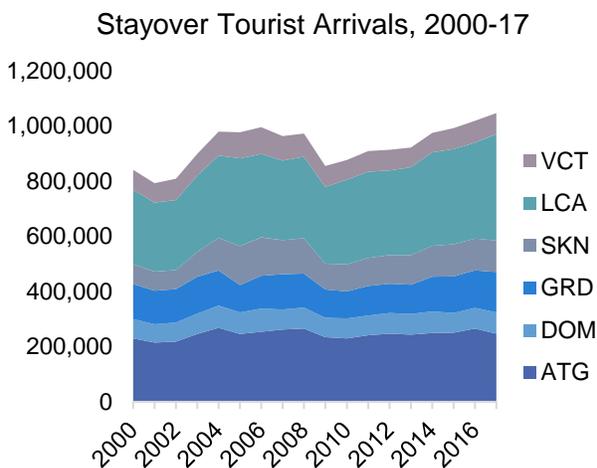
Figure 4-25. Tourism receipts make up the majority of export revenue in most countries



Source: World Development Indicators.

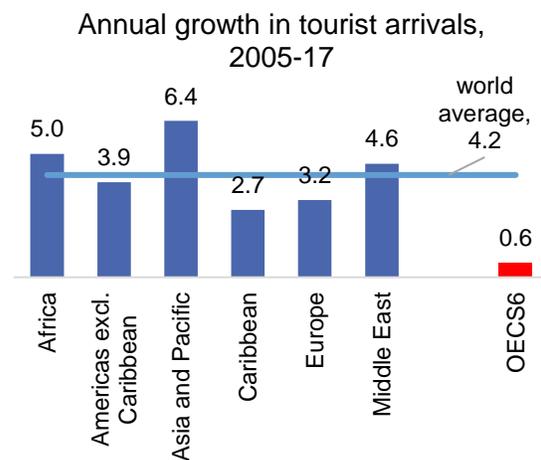
132. Despite these developments, tourism growth in the OECS lags behind other regions of the world (Figure 4-27), causing the OECS (like the Caribbean as a whole) to lose global market share. This decline reflects a lack of diversification across tourist source markets, the impact of the global financial crisis, the region’s high vulnerability to natural disasters, and high pricing. High pricing is reflective of a deeper issue of weak competitiveness, particularly relating to labor and electricity costs and a lack of adequate infrastructure.⁵⁵ With competition from new tourist destinations, such as China, addressing competitiveness challenges in the Caribbean is vital for reinforcing tourism as an engine of growth.

Figure 4-26. Arrivals in the OECS have grown since 2009



Source: Eastern Caribbean Central Bank.

Figure 4-27. Growth in tourist arrivals lags behind other regions

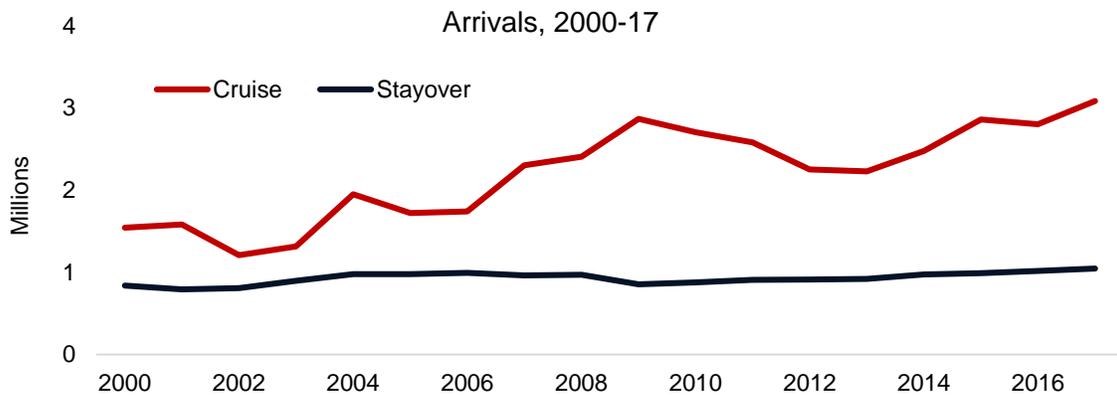


Sources: UN World Tourism Organization (regions) and Eastern Caribbean Central Bank (OECS).

⁵⁵ Alleyne, T., Ötoker, I., Ramakrishnan, U., & Srinivasan, K. (2017). Unleashing Growth and Strengthening Resilience in the Caribbean. International Monetary Fund, Washington, DC.

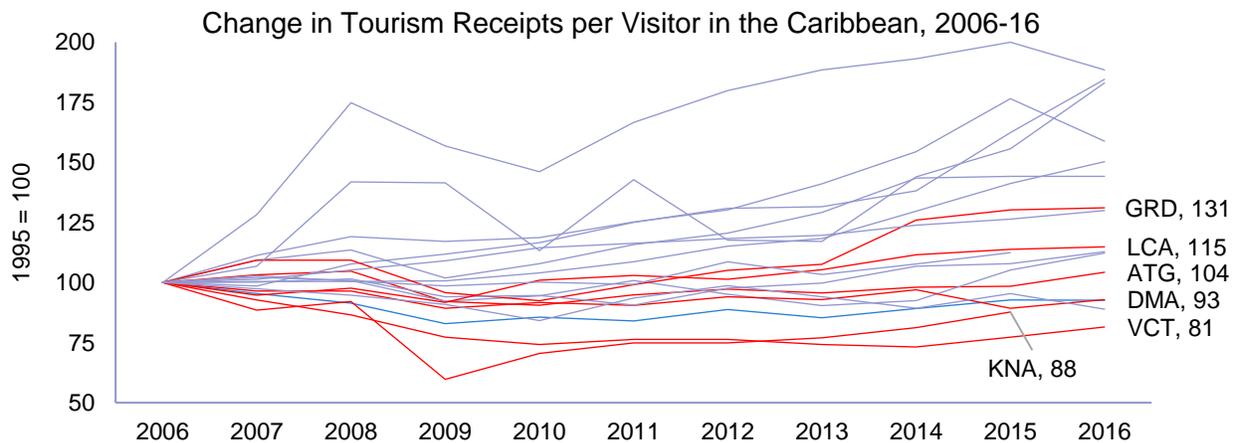
133. A key structural characteristic of OECS tourism is the growth in cruise ship visitors compared to the much lower number of stay-over visitors, which is also growing more slowly. Cruise visitor arrivals far exceed stayover visitors and grew rapidly during the 2000s until the global financial crisis (Figure 4-28). Between 2013 and 2017, total cruise visitor arrivals recorded by OECS have grown by an average of 8.5 percent per year, compared to average annual growth of 3.2 percent for stayover visitors. This is significant for growth, as cruise visitors spend less time and money when on land in general. Moreover, an extensive analysis of cruise passengers conducted in 2012 found that cruise ship passengers spend much less in the OECS than in comparator countries.⁵⁶ The survey concluded that there is little for cruise ship passengers to spend money on, and that the OECS has lacked the resources and capacity to strengthen and maintain the quality of tourism products that would attract more spending.

Figure 4-28. Cruise versus stay-over tourist arrivals in the OECS



Source: Eastern Caribbean Central Bank.

Figure 4-29. Growth of tourism receipts per visitor has lagged behind many other countries in the Caribbean.



Source: United Nations World Tourism Organization.

⁵⁶ Business Research and Economic Advisors, “Economic Contribution of Tourism to the Destination Economies,” Exton, Penn., September 2012.

134. Increasing tourism spending in general, not just among cruise visitors, is one of the key challenges facing the industry in the OECS. Figure 4-29 shows that receipts per overnight visitor dropped more sharply in OECS countries than in most other Caribbean countries. As of 2016, receipts were still below 2006 levels in Dominica, St. Kitts and Nevis, and St. Vincent and the Grenadines. However, Grenada has shown substantial growth since 2014, and receipts per visitor are now 31 percent above their pre-crisis level.

135. Increasing the contribution of tourism to growth of jobs and incomes in the OECS will require agility to identify new tourism offerings that appeal to growing and to high-spending segments of the world tourism market. The OECS has the assets to develop high-growth niche market segments to complement their existing product offering. These include natural assets—terrain, volcanos, biodiversity, and marine areas—as well as culture and heritage. Strengthening and appropriately packaging, communicating, and promoting the region’s nature and eco-tourism products, and complementing that with cultural and heritage tourism packages and products, could make the OECS an attractive destination for independent, adventurous travelers. Medical tourism is another promising option. (Box 4-1).

136. Increasing the contribution of tourism will also require improving transportation connectivity to the region, within the region, and within countries. Airport infrastructure is a binding constraint on increasing arrivals in some countries (e.g., St. Lucia). St. Vincent and the Grenadines opened a new international airport in 2017 and is in the early stages of attracting international flights. The cost of travel between islands is high by international standards. This all but prevents the development of multi-island vacations. Finally, travel by road between an island’s attractions is often hampered by narrow roads and congestion.

Box 4-1. The economic importance of medical education services

Medical education services

Medical education services in the OECS region have been evolving in partnership with the medical tourism industry to compensate for a global shortfall in medical education. In addition to traditional medical tourism, which provides health services at affordable prices, some governments of the OECS have been offering offshore education services with a focus on medical training.

St. George's University School of Medicine in Grenada is the pioneer of international medical education in the Caribbean, with almost 40 years of academic achievement. The university was the first to be accredited by the Caribbean Accreditation Authority for Education in Medicine and Health Professions. Affiliated with universities in the United States, Canada, and the United Kingdom, it has graduated over 15,000 physicians into the global health care system. Enrolment at SGU rose by 6.4 percent in 2016 on 2015 levels. Expansion efforts are also expected to support the continued upward trend in enrolment.⁵⁷ In general, the education sector expanded by 5.0 percent in 2017, partly driven by growth of 6.4 percent in private education.

The economic impact of medical education and St. George's University

Medical education services generate foreign exchange, create employment, and boost tourism performance. Along with the medical tourism market, earnings by the medical education services in the Caribbean region are estimated at US\$1–2 billion per year.⁵⁸ Private medical education services accounted for 19.4 of GDP in 2017 (data from ECCB, shares measured in current EC dollars), of which St. George's University was the major component. Offshore medical education services have significant linkages with sectors such as construction, and with local SMEs including agribusiness, so job creation in this sector leads to increased employment elsewhere. Furthermore, the presence of the university attracts sizeable investment in physical infrastructure such as roads and buildings.

Grenada's current account deficit reached approximately 3.2 percent of GDP in 2016, compared to a deficit of 4.4 percent in 2014. Real exchange-rate depreciation and strong tourism receipts supported this narrowing of the current account deficit. Around 40.9 percent of total exports came from visitor spending (including that of international medical students).⁵⁹ Notably, non-debt creating FDI inflows, particularly FDI associated with tourism receipts and spending by foreign students (together totaling 8.3 percent of GDP), served as the principal source of deficit-financing.⁶⁰

Potential spillover effects of medical education services in the OECS

Reinvestment of earnings from offshore medical and educational services improves the local healthcare and education sectors. Deepening linkages with tourism will create cross-market spillovers and contribute to the human capital of the local population, as investing in the health and education sectors has a positive impact on capital accumulation and productivity. The creation of high-quality jobs is expected to mitigate the level of brain drain. Grenada's local health and education sectors employ highly-educated populations, and a large proportion of the Grenadian diaspora in the US are well-educated and employed in the health sector. This creates a channel for diaspora engagement in both the transfer of skills and investment.

⁵⁷Projects worth around US\$20.0 million and US\$18.0 million will accommodate a replacement dormitory with 90 new beds on campus and a multi-use facility. The expected date of completion is August 2018.

⁵⁸ Source: Sanigest International (2013).

⁵⁹ World Travel & Tourism Council, Country Economic Impact Analyses 2018.

⁶⁰ Grenada IMF Staff report 2017.

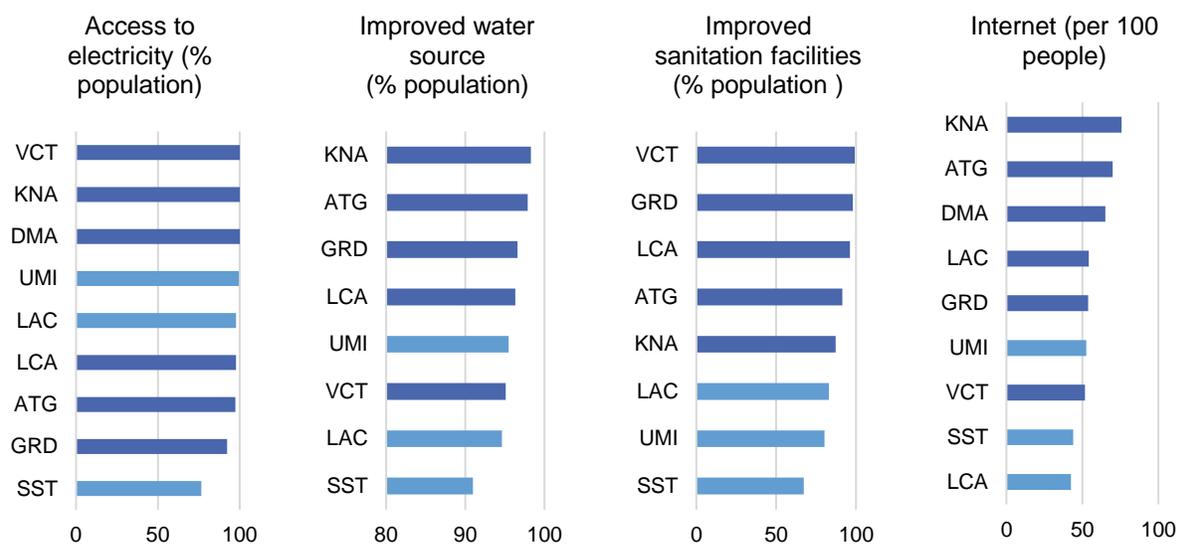
5. Equity and Inclusion

The OECS have made a significant progress in promoting gender equality, including an almost universal access to basic services and education, gender parity, and low teenage pregnancy and maternal mortality rates. Nevertheless, challenges remain in achieving inclusive growth. Human capital, the main asset available to the poor, plays a crucial role in connecting growth to economic inclusion. In most OECS countries, this link is limited by high unemployment, high out-of-pocket expenditures, and rudimentary social protection systems.

Education and basic services: Fostering human capital for economic inclusion

137. Human capital, the main asset available to the poor, plays a crucial role in connecting growth to economic inclusion. In recent decades, the OECS has made progress in several aspects of human development. Access to basic services such as electricity, improved water sources, improved sanitary facilities and internet are now above the LAC average (Figure 5-1). The OECS has also made strides in education, with enrollment in primary and secondary education between 75 to 95 percent with equal proportions of boys and girls.

Figure 5-1. Good progress has been achieved in access to basic services



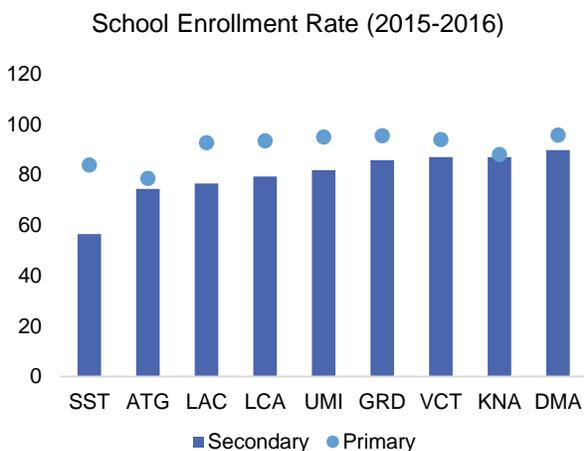
Source: World Development Indicators and Millennium Development Goals. Data for access to improved water source and improved sanitation facilities is not available for Dominica.

138. Education is the most important part of human capital accumulation. Equality in education translates into equal opportunity in accumulating human capital and thus in earning potential. It is a necessary condition for achieving inclusive growth. The OECS has made a substantial progress over the last few decades in terms of access to basic education. Primary school enrollment is almost universal and comparable with other Caribbean countries and LAC, except for Antigua and Barbuda, where primary school enrollment is the lowest among the OECS. Access to secondary education in the OECS is in general more inclusive than the LAC average (Figure 5-2). Secondary school enrollment ranges from 74 percent in Antigua and Barbuda to 93 percent in Dominica

compared to 57 percent in small states, 66 percent in the Dominican Republic and 76 percent in LAC.

139. Dropout rates are low in the OECS and high completion rates are high. For lower secondary education, completion rates in all OECS countries are significantly higher than the LAC average (Figure 5-3). Repetition rates in secondary schools are less than 3 percent in St. Kitts and Nevis and St. Lucia but reach 9–12 percent in the other countries. A higher percentage of children from lower socio-economic backgrounds tend to perform more poorly at school, repeat grades, and drop out before completing secondary level. The latest household budget surveys from 2005–08 suggest that educational attainment was much lower for students from the bottom consumption quintiles. Children from poor households also have a higher likelihood of completing school without passing any examinations. They are thus most likely to be excluded from labor markets on leaving school, continuing the cycle of poverty.

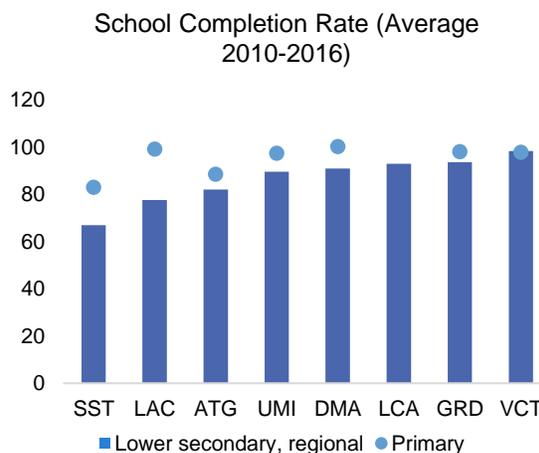
Figure 5-2. Access to secondary education in the OECS is in general more inclusive than the LAC average



Source: World Development Indicators and UIS for St. Kitts and Nevis.

Note: Net enrollment rate is the ratio of children of official school age who are enrolled in school to the population of the corresponding official school age. St. Lucia data primary enrollment data is from 2007.

Figure 5-3. Completion rates in the OECS are significantly higher than the LAC average



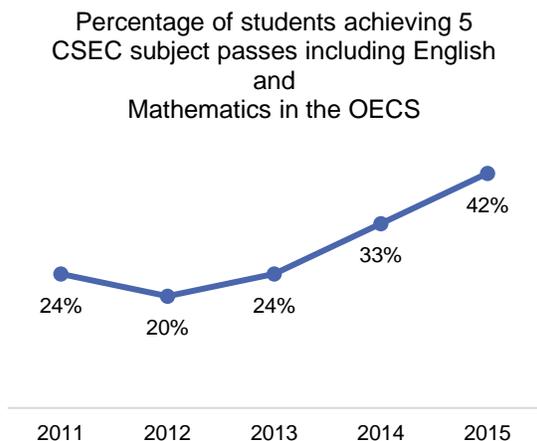
Source: World Development Indicators.

Note: Completion rate is the number of new entrants (enrollments minus repeaters) in the last grade, regardless of age, divided by the population at the entrance age for the last grade of educational level. The numbers are averaged over 2010–2016. Data is not available for St. Kitts and Nevis.

140. Improving the quality of education is a key to more inclusive growth in the OECS. While access to basic education ensures equal opportunities in obtaining human capital, it is the level and the quality of education that determine the returns to human capital, or particularly the extent to which individuals share in the prosperity of economic growth through labor markets. Primary school examination results show a large fraction of students not achieving the minimum levels of mastery in numeracy and reading at the end of primary education on national tests. More than half of the Grenadian and St. Lucian students did not take or pass the primary school examination in

mathematics, implying that many students entered Form One at the secondary level without the necessary requisite skills.⁶¹ This results in high repetition rates at the secondary level.

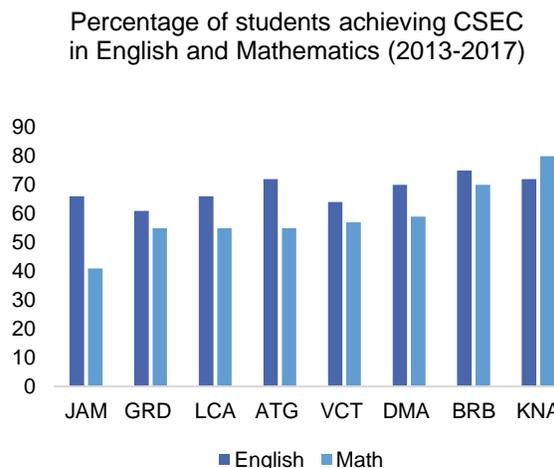
Figure 5-4. Performance at the CSEC examinations show a continued improvement



Source: Educational Statistical Digest 2016, Organisation of Eastern Caribbean States (OECS).

Note: CSEC is the Caribbean Secondary Education Certificate.

Figure 5-5. The passing rates in mathematics are between 55 and 60 percent except for St. Kitts and Nevis



Source: Educational Statistical Digest 2016, Organisation of Eastern Caribbean States (OECS); Ministry of Education, Science, Technology and Innovation, Barbados; Ministry of Education, Youth and Information, Jamaica.

Note: CSEC is the Caribbean Secondary Education Certificate.

141. Achievement in the Caribbean Secondary Education Certificate (CSEC) examinations reflects the quality of education and human capital close to the cohort in question entering the labor markets. There has been continued improvement in student performance. Nevertheless, the passing rates in mathematics are between 55 and 60 percent, except St. Kitts and Nevis, with the 80 percent passing rate in mathematics. (Figure 5-4 and Figure 5-5). These outcomes point to room for improvement in the quality of education at each level.

142. A key component of educational achievement is the quality of teaching. The OECS still struggles to attract and retain qualified teachers, especially at a higher level of education.⁶² While 76 percent of primary school teachers are trained, the share of trained secondary school teachers in the OECS is only 57 percent, and less than 45 percent in Antigua and Barbuda, Dominica, and Grenada. A study using the Classroom Assessment Scoring System (CLASS) shows that the weakest area in every country was instructional support, which includes skills such as the use of instructional discussions, activities to promote students' higher-order thinking skills, and the use of feedback to extend and expand learning; across OECS countries these scores were around 3, the

⁶¹Organisation of Eastern Caribbean States (2016). *Educational Statistical Digest 2016* available at <http://www.oecs.org/edmu-resources/educational-statistical-digest>

⁶² Matthews, Clark (2013). *Quality education counts for skills and growth (English)*. Caribbean Knowledge Series. Washington, DC: World Bank.

bottom of “mid-range.”⁶³ This suggests that pedagogical skills, which are closely linked to learning outcomes, are the area where teachers need most professional development and support.

143. Early childhood education (ECE) is another important factor that determines educational achievement. The foundation of human capital is established during the early years, when children’s minds are at their most receptive and investments in early learning—as well as good health and protection from chronic stress—have the highest returns.⁶⁴ Enrollments in early childhood education are relatively high in the OECS, but not uniformly so. Antigua and Barbuda and Grenada have net enrollment rates for 3–4 year-olds over 80 percent, while St. Vincent and the Grenadines and St. Lucia’s enrollment rates are 58 and 66 percent, respectively. Data on teachers’ qualifications at the ECE level in the region are sparse, but they tend to be lower than those of teachers at other levels. In countries for which data are available, only 4 percent of ECE teachers have a qualification higher than CAPE, A Levels or an associate degree, compared to 31 percent of primary-level teachers and 60 percent of secondary-level teachers. One consequence of a lack of access to quality ECE is overage enrollment in the early years of primary school, with students entering poorly prepared for learning. In the OECS, male students are more likely to be overage: 13 percent of boys are overage in first grade in the OECS countries, compared to 8 percent of girls, a proportion that increases to 27 percent of boys and 15 percent of girls by grade 6.⁶⁵

Box 5-1. Education initiatives at the regional level

The OECS countries coordinate education policy closely through the OECS Commission. The OECS Education Sector Strategy 2012–21 (OESS) provides a roadmap for education development both at the regional and country level. Several countries have already aligned their respective country education plans to the OESS while others are in the process of doing so. The OESS focuses on seven strategic imperatives: improving the quality and accountability of leadership and management, improving teacher professional development, improving the quality of teaching and learning, improving the curriculum and strategies for assessment, expanding access to quality early childhood development (ECD), increasing opportunities for technical and vocational education and training (TVET), and increasing access to and the relevance of tertiary education.

Among other projects, the Commission is coordinating several activities including capacity-building for evidence-based decision-making for education officials; a four-year Early Literacy Project; the development of learning standards, regional assessment strategies and teacher/headteacher professional development programming; and a partnership with UNICEF to support education programs for infant and primary level students.

⁶³Trained observers used CLASS to assess 134 teachers in Grenada, 93 in St. Lucia, 107 in St. Vincent and 95 in Dominica in 2017. The strongest area in assessments was emotional support, which includes positive classroom environment, sensitivity to student needs and regard for student perspectives, with average scores around 5 on CLASS’s 7-point scale.

⁶⁴ There is evidence that the benefits of early childhood education (ECE) extend throughout the life cycle. Attendance at ECE is associated with improvements in outcomes ranging from learning achievement as measured by internationally comparable examinations such as the Programme for International Student Assessment (PISA) to improved labor market outcomes. Shafiq, M. N., Devercelli, A., & Valerio, A. (2017, March). *The long-term benefits of early childhood education in low- and middle-income economies*; Washington DC: World Bank. Devercelli, A. (2017). *Starting off Right: Investing in the Early Years*; Washington DC: World Bank.

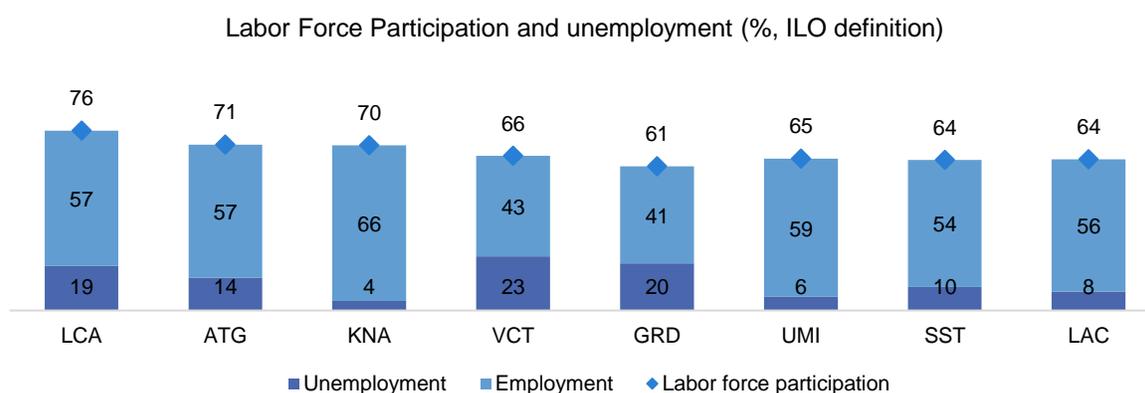
⁶⁵Organisation of Eastern Caribbean States (OECS) 2016. *Educational Statistical Digest 2016* available at <http://www.oecs.org/edmu-resources/educational-statistical-digest>.

Inclusive role of labor markets in harnessing human capital

144. The OECS have a relatively high stock of human capital. Labor markets harness this human capital by turning it into income and welfare, and thus determine how inclusive economic growth is. Because human capital is the main income-generating asset of the poor, the unemployed and non-participants in the labor market are the most likely to form a poor household. Among the employed, inequality is determined by labor-market returns on human capital. Therefore, despite rich human capital, social and economic inclusion in the OECS will be limited if economic growth does not generate equal job opportunities across different socio-economic groups. Identifying opportunities and addressing constraints to create a well-functioning labor market in the OECS is key to more inclusive growth.

145. The region has higher labor force participation rates than the LAC average, ranging from 61 percent in Grenada to as high as 76 percent in St. Lucia (Figure 5-6). Nevertheless, the bottom 40 percent of the labor force earns less than 3 percent of total labor income in Grenada, St. Lucia, and St. Vincent and the Grenadines (Figure 5-7). Labor markets are more inclusive in the Leeward Islands' OECS countries, where the labor income of the bottom 40 percent accounts for 17 percent of total labor income in St. Kitts and Nevis and 8 percent in Antigua and Barbuda. As described in Chapter 3, labor-market performance is one of the key features affecting poverty reduction. Just as Windward Islands nations show poorer and less inclusive labor-market indicators than their Leeward Islands counterparts, this disparity is replicated in poverty indicators.

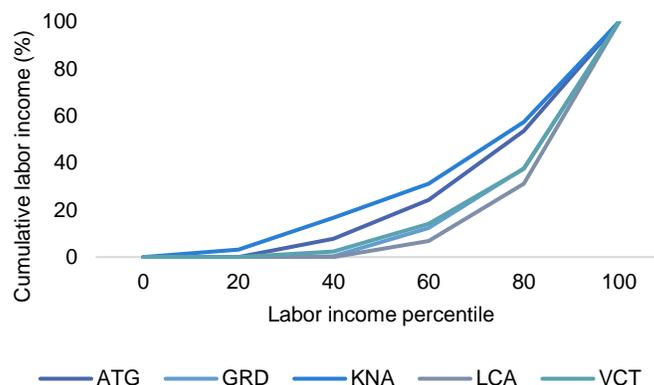
Figure 5-6. The OECS have relatively high labor force participation, but unemployment is high in some national contexts



Source: LFS 2013–2016. WDI for Small States, UMI and LAC. Labor market indicators by ILO definition are not available for Dominica.

Note: % of total population ages 15+. The labor force participation rate is the sum of the employment rate and the unemployment rate.

Figure 5-7. The bottom 40 percent of the labor force earns less than 5 percent of total labor income in Grenada, St. Lucia, and St. Vincent and the Grenadines.

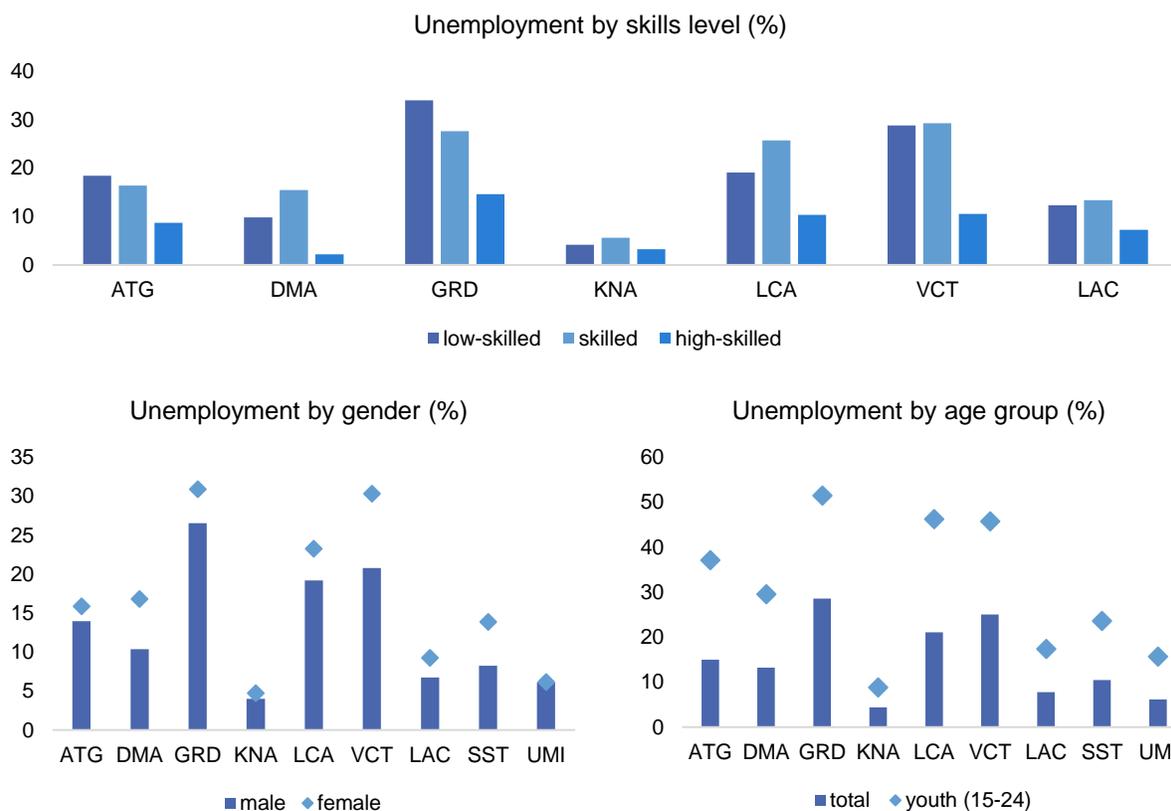


Source: World Bank staff estimates from LFS 2013–2016 using the median of the labor income range reported by individuals.

146. Unemployment is particularly high in the OECS even when compared to the small state average, except for in St. Kitts and Nevis. Unemployment rates range from 4 percent in St. Kitts and Nevis, via 14 percent in Antigua and Barbuda, to 23 percent in St. Vincent and the Grenadines (Figure 5-6). Employment opportunities are most limited in Grenada and St. Vincent and the Grenadines, the two countries with the highest unemployment and the lowest labor-force participation. Compounding the challenges of unemployment and exclusion, is the scale of working poor in several OECS countries, signaling low-quality jobs. The latest Country Poverty Assessments revealed that a large share of the poor in the OECS were employed, with more than 80 percent of the poor in Antigua and Barbuda, St. Kitts and Nevis, and St. Lucia employed. These trends signal that labor income may be insufficient to meet consumption needs, and highlight the importance of improvements in job quality and higher-earning opportunities in productive sectors.

147. Limited employment opportunities for disadvantaged and vulnerable groups such as the low-skilled, women, and young adults are less critical in the OECS when compared to the international standard. Unemployment is more frequent among low-skilled and skilled workers than high-skilled workers (Figure 5-8). Attaining tertiary education in St. Vincent and the Grenadines reduces the chance of being unemployed from 30 percent to 10 percent. The gender employment gap ranges from 0.7 percent in St. Kitts and Nevis to 10 percent in St. Vincent and the Grenadines. Labor market exclusion among young people is the most pressing issue in all OECS countries except St. Kitts and Nevis (Figure 5-8). Especially in Antigua and Barbuda, Dominica, and St. Lucia, the youth unemployment rate more than doubles the total unemployment rate. The lack of economic inclusion of disadvantaged and vulnerable groups also expose them to a high risk of social exclusion.

Figure 5-8. Unemployment is higher among disadvantaged and vulnerable groups



Source: LFS 2013–2016. SLC-HBS 2008 for Dominica. WDI 2016 for regional average.
 Note: Official unemployment rates. Skills are defined by a level of education: low-skilled (below secondary education), skilled (below tertiary education), and high-skilled (completed tertiary education).

148. The constrained economy of small states is often associated with limited employment opportunities due to a small domestic demand and an undiversified economic base. The lack of export diversification and frequent natural disasters make labor markets in the OECS vulnerable to external shocks. In the mid-1990s, banana-producing countries of the Caribbean lost preferential access to the EU market, with the Windward Islands among the most vulnerable to the erosion of trade preferences. Low-productivity farmers who started banana cultivation only because of the benefits enjoyed from trade preferences subsequently faced strong competition from more efficient producers in other countries. As a result, the number of registered banana growers in the Windward Islands fell from about 24,000 in 1993 to about 5,000 in 2005.⁶⁶ Unemployment and poverty rose in St. Lucia, the largest banana exporter, following the terms-of-trade shock as other agricultural exports were unable to replace bananas in terms of production and job creation.

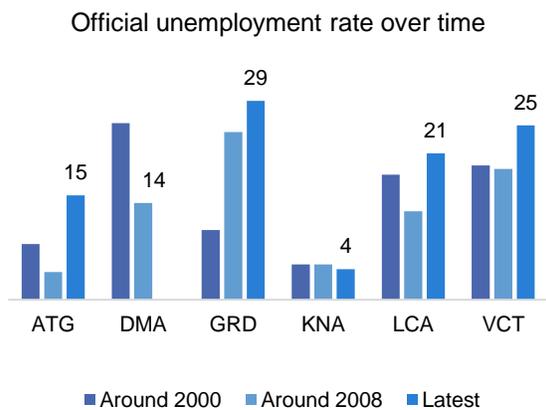
149. Services have replaced agriculture in creating employment opportunities. Nevertheless, this presents OECS labor markets with another type of external vulnerability. In most OECS countries, unemployment increased significantly following the 2008 global financial crisis before

⁶⁶ Cashin, Paul. Montfort Mlachila and Cleary Haines (2010). *Caribbean Bananas; The Macroeconomic Impact of Trade Preference Erosion*. IMF Working Papers 10/59, Washington, DC: IMF.

it began to tighten during the recent period of slow recovery (Figure 5-9). The labor markets of the Leeward Islands countries, which have fully transformed into service-based economies, were negatively affected by the 2008 global financial crisis. St. Kitts and Nevis managed to maintain their low unemployment rates, yet the country experienced a decline in wages. In Antigua and Barbuda, real wages have declined while unemployment is triple the pre-crisis rate, mainly due to a sharp decline in tourism demand and the collapse of Stanford International, the nation’s largest private employer.

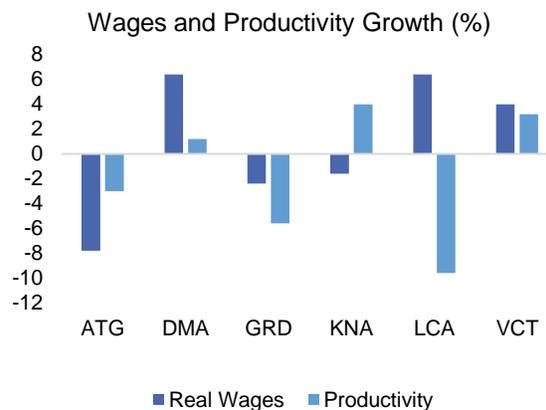
150. The disruption of a structural transformation toward a tourism-based economy in the Windward Islands due to a sharp decline in tourism demand adds to the challenges in creating inclusive service-based labor markets. Grenada’s unemployment has tripled since 2000 due to Hurricane Ivan (2004) and the global financial crisis (2008). Unlike in the Leeward Islands, real wages have grown faster than productivity in the Windward Islands (Figure 5-10). In fact, they have been rising in Dominica, St. Lucia, and St. Vincent and the Grenadines. When real wages are rising with unemployment, the labor markets become less inclusive. As more people are excluded from an opportunity to generate income, the gap between those who have access to employment opportunities and those who do not is also amplified.

Figure 5-9. Unemployment has risen since the global financial crisis



Source: Household surveys for 1995–2002 and 2005–08 and labor-force surveys for the latest (2013–15).
 Note: The rates are not strictly comparable. Unemployment rates prior to 2008 are obtained from household surveys.

Figure 5-10. Real wages have grown faster than productivity in the Windward Islands following the 2008 global financial crisis



Source: IMF ECCU country report (2016) using National Insurance Services (NIS)
 Note: Change between 2007–08 and 2012–13.

151. Internal, structural factors contribute to the level of unemployment in St. Lucia and Grenada. Labor-market rigidities prevent the real wage adjusting in a timely manner. In Grenada, large public-sector employment, accounting for more than one third of total formal employment, could have led to a public wage demonstration effect, whereby private sector workers and unions negotiate wages using public sector wages as a benchmark.⁶⁷ Combined with rigid wage setting

⁶⁷ See International Monetary Fund (2016, “Grenada: 2016 Article IV Consultation,” and “Eastern Caribbean Currency Union: 2016 Discussion on Common Policies of Member States,” Washington, DC: IMF.

practices, this may have contributed to inflexibility of labor costs. In St. Lucia, exclusion in the labor markets could also be explained by strong labor unions which are very well organized and cover large key sectors.⁶⁸ While strong labor unions tend to reduce wage inequality among union workers, they give rise to unemployment as well as wage inequality between union and non-union workers.

Box 5-2 Knowledge Gap: What are the main factors that drive wage-productivity disparity in the Windward Islands?

Grenada, St. Lucia, and St. Vincent and the Grenadines rank among the countries with the highest unemployment, which is mainly driven by a large wage-productivity gap. Given the importance of inclusive labor markets in promoting inclusive growth and poverty reduction, it is necessary to understand the factors determining structural problems in their labor markets.

Figure 5-11. Skills mismatch limits the inclusive role of labor markets

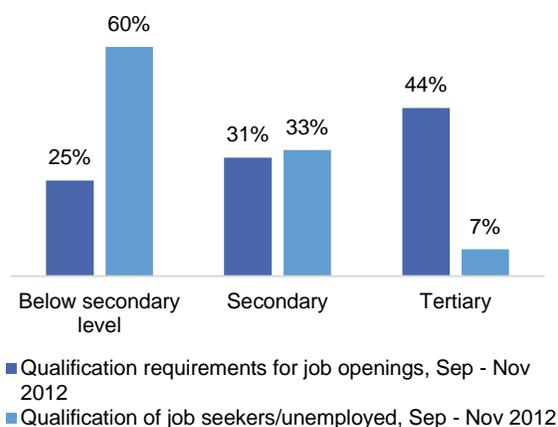
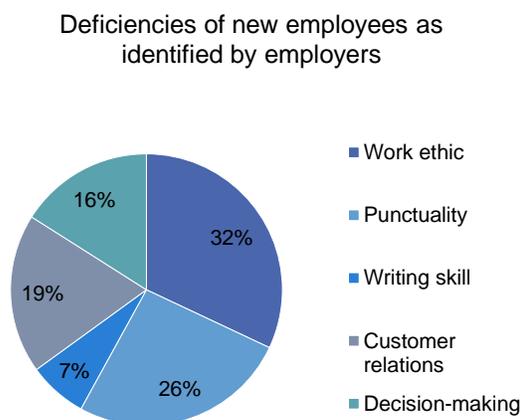


Figure 5-12. A lack of soft skills such as work ethics, punctuality, and decision making also contributes to structural unemployment



Source: St. Lucia Labor Market Needs Assessment Survey 2012, Central Statistical Office.

152. A rapid shift in skills demand due to external shocks—and quickly evolving skills demands resulting from ongoing structural transformation—lead to skills mismatch, limiting the inclusive role of labor markets. Especially in the Windward Islands, a structural transformation toward a service-based economy requires skill sets that are different from an agriculture-based economy. An inadequately educated workforce ranks as the second-biggest business obstacle identified by firms in Grenada and St. Vincent and the Grenadines.⁶⁹ Skills mismatch is a major problem in St. Lucia. While 44 percent of job openings require tertiary education, only 7 percent of job seekers have been to university. More than half of job seekers have not completed secondary education but 75 percent of job openings require secondary education as a minimum (Figure 5-11). A lack of soft skills such as work ethics, punctuality, and decision-making also contributes to structural

⁶⁸ International Monetary Fund (2017), “St. Lucia: 2017 Article IV Consultation,” Washington, DC: IMF.

⁶⁹ World Bank Enterprise Survey 2010.

unemployment (Figure 5-12). The education system and active labor market programs (ALMPs) are well-established in the OECS, but labor markets require more rapid responses from training and education systems.

153. The high rate of returns to education is another factor that contributes to labor income inequality. Returns to education refer to the earning potential of graduates in comparison to non-skilled workers. A shortage of skilled workers and oversupply of low-skilled workers not only result in higher unemployment among the latter, but also translate into higher earnings by the educated workforce. The labor markets of St. Kitts and Nevis and Antigua and Barbuda include a large proportion of highly-educated workers. There, the skill premium (the amount earned by skilled workers in comparison to lower-skilled ones) is lower, contributing to a lower degree of labor income inequality. Wages for skilled workers are higher in St. Vincent and the Grenadines and St. Lucia due to limited supply of skilled labor (Figure 5-13 and Figure 5-14). The high-skill premium reflects economic exclusion among the low-skilled and unemployed.

Figure 5-13. The high rate of returns to education is another factor that contributes to labor income inequality

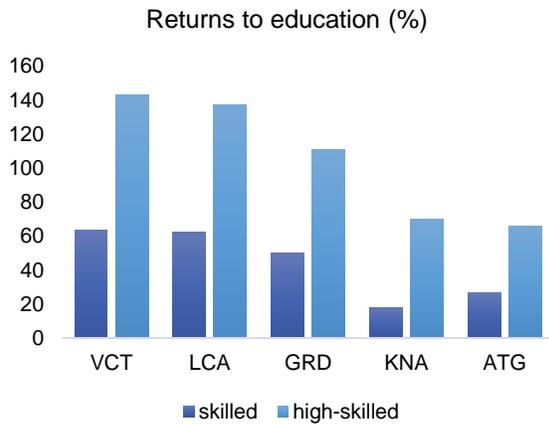
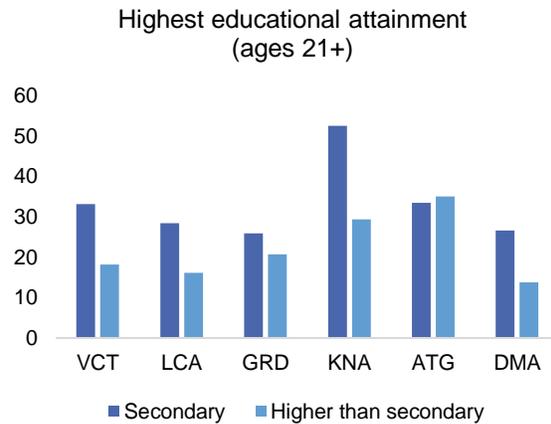


Figure 5-14. Returns to education can be explained by educational attainment or supply of skills



Source: WB Staff estimates from LFS 2013–2016 and SLC-HBS 2008 for Dominica.

Note: The numbers are obtained from the coefficients of a simple Mincerian equation using the median of the labor income range reported by individuals. Low-skilled is a reference base. Skills are defined by a level of education: low-skilled (below secondary education), skilled (below tertiary education) and high-skilled (completed tertiary education).

Box 5-3. Active labor-market programs in the OECS

Active Labor-Market Programs (ALMPs) are well-established in the OECS, seeking to address issues of skills mismatch and high unemployment, particularly among young people. For instance, in Grenada, technical vocational and educational training (TVET) programs have been reformed in partnership with the private sector to better address the skills mismatch. An assessment of ALMPs in St. Lucia in 2015 revealed that 1.61 percent of GDP was spent on ALMPs, including skills training, direct job creation, and start-up incentives.⁷⁰ At the time, this expenditure exceeded ALMP spending for the OECS, which was less than 1 percent of GDP in 2011. It was also higher than ALMP spending by other LAC countries, including Chile and Argentina (which spent 0.45 percent of their GDP in 2010), and Colombia, which spent 0.35 percent of GDP in 2010.⁷¹ However, outcomes have been limited as these programs remain fragmented, small-scale, and supply-side driven, with limited linkages to private-sector demand, and minimal assessment of program impact. Despite high spending, the 2015 St. Lucia assessment found significant gaps in coverage by several ALMPs, notably with skills training programs, which accounted for the largest share of expenditures by program type but only covered 11.5 percent of the unemployed population. Direct job creation by ALMPs conversely covered 53 percent of total unemployed.⁷² A similar assessment for Grenada found spending on ALMPs to be 1.97 percent of GDP, with training programs accounting for 60 percent of ALMP expenditure.⁷³

Notably absent for most OECS countries are well-established labor intermediation services to link job seekers with private sector opportunities and mechanisms to respond to labor market demand. Labor-market demand surveys are rarely conducted, and ensuring the responsiveness of training programs provided is often done on a discretionary basis. The mushrooming of multiple ALMPs implemented by various agencies is another challenge. For St. Lucia, this included nine programs delivered by 10 different institutions. For Grenada, 14 programs were implemented by 12 agencies. In Dominica, over 14 ALMPs were provided, including direct job creation, skills training and entrepreneurship support. The National Employment Program and 4H Program demonstrated good coverage, but other programs still suffered from low coverage.⁷⁴ Despite high spending and the proliferation of ALMPs, there is limited evidence on program impact on participants' employment outcomes.⁷⁵ This spending may therefore be inefficient.

Health: Protecting human capital for inclusive development

154. Health is a key component of an individual's welfare and living standards. It is also a complementary input to human capital. While education leads to higher productivity and wages, returns to human capital are expected to be higher for healthy workers. Just as disease depresses development in human capital and income, a lack of inclusive healthcare impedes progress toward equal living standards and inclusion in labor markets. Ill health and premature death also lead to wasted investment in human capital and reduce the incentive to invest in human capital.

155. Progress has been made in key areas such as childhood immunization, where rates exceed 90 percent in countries for which data is available (Table 5-1). Similarly, there has also been progress in antenatal care, and around 90 percent or more of pregnant women receive four or more

⁷⁰ Carlos Soto (2015). *Assessment of the Social Protection Sector in St. Lucia*. Washington, DC: World Bank.

⁷¹ Monica Parra-Torrado (2013). *Youth Unemployment in the Caribbean*. Washington, DC: World Bank.

⁷² Direct job creation refers to publicly-financed work for unemployed persons, usually on a short-term basis, but also on regular/recurring periods as well.

⁷³ Carlos Soto (2015).

⁷⁴ World Bank (2017). *Dominica Social Protection Assessment*.

⁷⁵ Asha Williams et al. (2013). *Tailoring Social Protection to Small Island Developing States: Lessons Learned from the Caribbean*. Washington, DC: World Bank.

visits. However, there is sizeable variation in the quality of care, as seen in neonatal mortality rates. Neonatal mortality rates in 2016 in Antigua and Barbuda and St. Kitts and Nevis are comparable to those seen in upper-middle-income and high-income countries, while rates in Grenada, St. Lucia, and St. Vincent and the Grenadines are comparable to the LAC regional average. Dominica represents a major outlier, with neonatal mortality rates that have doubled since 2006 to 24 per 1000 live births, in sharp contrast to other OECS countries where rates have declined or remained stable.⁷⁶

Table 5-1. Selected health indicators

Country	ATG	DMA	GRD	KNA	LCA	VCT	OECS [†]	Americas ^{††}
Antenatal care, 4+ visits (%), 2015	100	-	89	-	90	100	95	-
Child immunization (DTP3) (%), 2015	99	98	92	93	99	98	97	91
IHR Core Capacity Implementation Status, 2016*	81	63	66	-	77	65	70	80
Neonatal mortality (per 1000 live births), 2016	3.8	24	8.3	5.9	9.2	10.3	10.3	9
Normal blood pressure (%)	77	77	76	74	73	77	76	81
Diabetes Prevalence, 2016	11.8	11.4	9.8	14.9	14.6	10.3	12.1	8.7
Overweight Prevalence, 2016	62.1	58.6	55	59.1	57.4	55.9	58	63.4
Obesity Prevalence, 2016	31	25.9	24.6	28.4	27	24.1	26.8	29
Physical Inactivity Prevalence, 2010	-	26.2	30.2	37.3	41.5	-	33.8	32.4

[†] Simple average for countries with data availability.

^{††} Global Health Observatory data. Figures are for the Americas (WHO definition). For physical inactivity, data on insufficient physical activity from 2010 for the Americas is reported.

*IHC Core Capacity Implementation Status. This is the average of 13 core capacity indicators. Further details are available at WHO Global Health Observatory data. International Health Regulations (2005) Monitoring Framework. Available at <http://www.who.int/gho/ihr/en/>

Source: Antenatal care, child immunization, and blood pressure from Tracking Universal Health Coverage: 2017 Global Monitoring Report. IHC Core Capacity Implementation Status from WHO Global Health Observatory data. Diabetes, overweight, obesity and physical inactivity prevalence data obtained from the respective WHO Diabetes Country Profiles 2016 and WHO Global Health Observatory data.

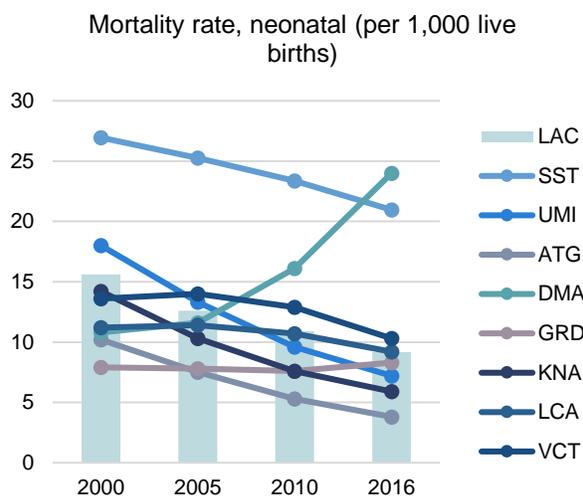
Note: Italicized figures reflect country estimates which were used by the authors absent primary country data.

156. Meanwhile, the burden of disease due to noncommunicable diseases has been growing. Among OECS countries, an average of 76 percent of the population has normal blood pressure. Diabetes prevalence rates are high, compared to the America average, with the highest rate of 15 percent observed in St. Kitts and Nevis (Table 5-1). The prevalence of overweight, obesity and physical inactivity is comparable to that of the Americas. Among OECS countries, the highest rates are observed in Antigua and Barbuda. Perhaps of greatest concern is the high rate of childhood obesity—regional data suggests that approximately 28–35 percent of children in the Caribbean between ages 4 and 20 are overweight or obese, and evidence suggests that the problem is escalating.⁷⁷

⁷⁶ The increase in neonatal mortality in Dominica is thought to be due to an increase in premature births and infections.

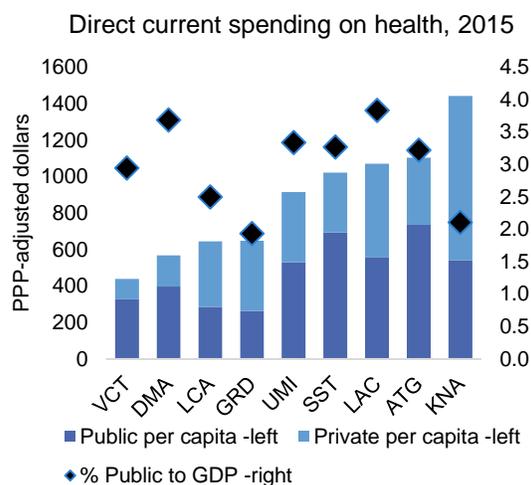
⁷⁷ This range includes figures from non-OECS countries, except for Antigua and Barbuda which has a prevalence of overweight/obesity among children aged 4-20 years of 26.8 percent.

Figure 5-15. Dominica represents a major outlier, with neonatal mortality rates that have doubled since 2005



Source: World Development Indicators.

Figure 5-16. Public expenditure on health continues to be low relative to the LAC average



Source: World Development Indicators.

Note: The number for the OECS is a simple average for countries with available data.

157. High levels of health expenditure in Antigua and Barbuda and St. Kitts and Nevis are associated with encouraging basic health indicators but also reflect a high incidence of noncommunicable diseases. Only in these two countries is total health expenditure per capita higher than the LAC average (Figure 5-16). Nevertheless, public expenditure on health (measured as a share of GDP and per capita) in all OECS countries continues to be low relative to the LAC average and below the recommended threshold for the attainment of universal health coverage (UHC).⁷⁸ The World Health Report 2010 notes that achieving UHC is difficult if less than 4–5 percent of GDP is allocated to health.⁷⁹ While the LAC regional average at 3.8 percent of GDP lags behind this target, the difference is greater with OECS countries, which spend an average of 2.7 percent of GDP on health (Figure 5-16).

158. Public expenditure on health is correlated with service coverage. Of the four countries (Antigua and Barbuda, Grenada, St. Lucia, and St. Vincent and the Grenadines) with available data, only Antigua and Barbuda (which has a high level of public health expenditure) has a service coverage index comparable to the LAC regional mean of 74 (Figure 5-17).⁸⁰ The challenge in

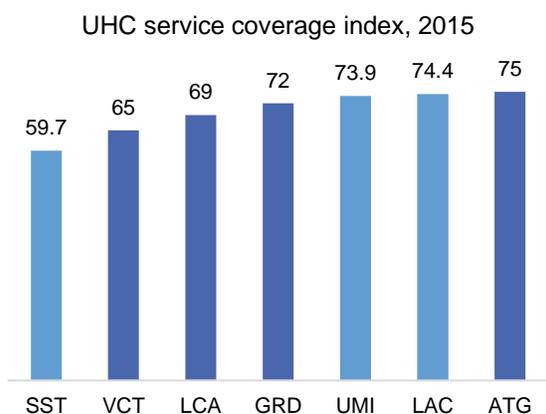
⁷⁸ World Health Organization and International Bank for Reconstruction and Development/The World Bank (2017). *Tracking Universal Health Coverage: 2017 Global Monitoring Report*. UHC means that everyone receives the health services they need irrespective of their living standards, and that using health services does not cause financial hardship.

⁷⁹ World Health Organization (2010). *World Health Report, 2010: Health Systems Financing the Path to Universal Coverage*.

⁸⁰ Coverage of essential health services is defined as the average coverage of essential services based on tracer interventions that include reproductive, maternal, newborn and child health, infectious diseases, noncommunicable diseases, and service capacity and access, among the general and the most disadvantaged population. See WHO/IBRD/WB (2017) *Tracking Universal Health Coverage*.

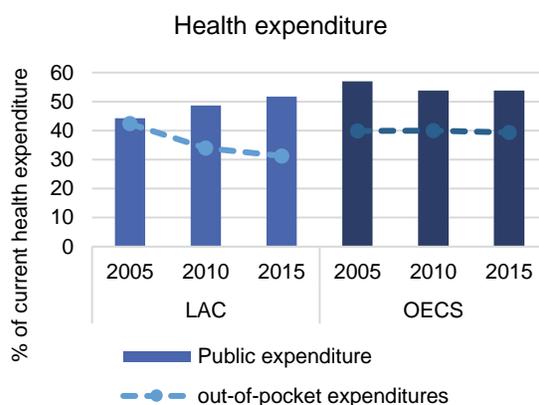
accessing health services is also reflected in high levels of out-of-pocket expenditures (OOPS), which are known to hurt the poorest most and reflect a lack of financial protection. While increased public expenditure on health resulting in LAC has resulted in a fall in OOPS, the opposite trend was observed in the OECS (Figure 5-18). The WHO recommends that OOPS are limited to no more than 20 percent of total health expenditures, noting limited incidence of financial catastrophe or impoverishment among countries with OOPS around this figure.⁸¹ However, among the OECS countries, average OOPS as a share of total health expenditures were double this figure, at 39.1 percent of total health expenditures, above the LAC regional average of 31.3 percent.⁸²

Figure 5-17. Service coverage indices in most OECS countries are below the LAC average but higher than the small state average



Source: Tracking Universal Health Coverage: 2017 Global Monitoring Report. Health Nutrition and Population Statistics, World Bank
 Note: SDG-UHC Indicator 3.8.1: Service Coverage Index, 2015. This index runs from 0 to 100.

Figure 5-18. OECS public health expenditure has fallen resulting in an increase in OOPS.



Source: World Development Indicators.
 Note: The number for the OECS is a simple average for countries with data availability.

159. Low levels of public health expenditure mean that health facilities may lack basic technologies, and thus be unable to conduct certain procedures.⁸³ As of 2016, all OECS countries exhibited several shortcomings in this regard where NCDs were concerned. At the household level, NCDs are linked to high levels of OOPS. At the same time, high OOPS also present a barrier for those with NCDs trying to access health services, with those in lower income quintiles likely to be disproportionately affected. Global evidence suggests that NCDs are likely to present a substantial economic impact due to cost of treatment, presenteeism at work, absenteeism from work and early retirement. Evidence which may apply to the broader region is available from Trinidad and

⁸¹ World Health Organization (2010). *World Health Report, 2010*.

⁸² OOPS as a share of total health expenditure in Antigua and Barbuda and Dominica is below 30 percent, though still above the recommended threshold of 20 percent.

⁸³ For example, in the case of diabetes, health facilities may not be able to conduct the oral glucose tolerance test, or a dilated-pupil fundus examination. Related to this is the lack of policies, guidelines, and monitoring of a national response to specific NCDs, which may also present challenges in the future. For more information, see the World Health Organization (2016) Diabetes Country Profiles.

Tobago, where it is estimated that the economic burden related to diabetes, hypertension, and cancer is approximately 4.3 percent of GDP.⁸⁴

Box 5-4. Health Initiatives at the Regional Level

Several health-sector initiatives have been attempted at the regional level with mixed results. The Caribbean Community (CARICOM) assessed the feasibility of a Regional Health Insurance Mechanism (RHIM) in 2010, taking into consideration the intraregional movement of patients, and the implications of the free movement of people on the demand for health services in the region. The study estimated the cost of a regional health insurance scheme at US\$930m or US\$132 per capita per year for a population of 7 million, a figure that increased to US\$1.15bn or US\$165 per capita once administrative and reserve costs were considered.⁸⁵ Efforts to develop the RHIM did not materialize, and many countries are instead trying to improve coverage of health services nationally.

The following year, CARICOM established a single regional public health agency, the Caribbean Public Health Agency (CARPHA), which began operations in 2013. The agency absorbs the functions of five former regional health institutes, namely the Caribbean Environmental Health Institute, the Caribbean Epidemiology Center, the Caribbean Food and Nutrition Institute, the Caribbean Health Research Council, and the Caribbean Regional Drug Testing Laboratory. The agency aims to address issues requiring regional action, such as emergency response to natural disasters and regional health security. CARPHA has also provided a useful platform for countries to discuss their health concerns, such as noncommunicable disease prevention and control. Efforts in this area have included addressing determinants of noncommunicable diseases, such as nutrition. CARPHA has thus provided key leadership role in the region, though capacity constraints have hampered its effectiveness in times of need. For example, during the 2015–16 Zika outbreak, CARPHA was forced to limit testing due to insufficient capacity. Following the outbreak, a Global Health Security Agenda Five-Year Roadmap (2017–21) was developed by CARICOM in collaboration with the Pan-American Health Organization (PAHO), highlighting regional priorities and identifying steps to address health security gaps in the Caribbean region.

Gender inclusion in the OECS

160. The OECS has made significant progress towards closing gender gaps in the last few decades, although some challenges persist.⁸⁶ The share of female-managed firms is higher in OECS countries (24 percent) than in LAC (17 percent) and globally (15 percent).⁸⁷ There is gender equality in basic education enrollment, but more women tend to pursue higher education at the tertiary level. Female tertiary enrollment is twice that of male enrolment in most OECS countries; the LAC average for female enrolment is 30 percent higher than that of men (Figure 5-19). Women also perform better than men in most of the CSEC subjects, and the gender gap in school performance has becoming larger (Figure 5-20). Nevertheless, higher human capital does not ensure labor market opportunities for women on an equal basis.

⁸⁴ RTI International (2016). Economic Burden of Non-Communicable Diseases in Trinidad and Tobago: Preliminary Estimates.

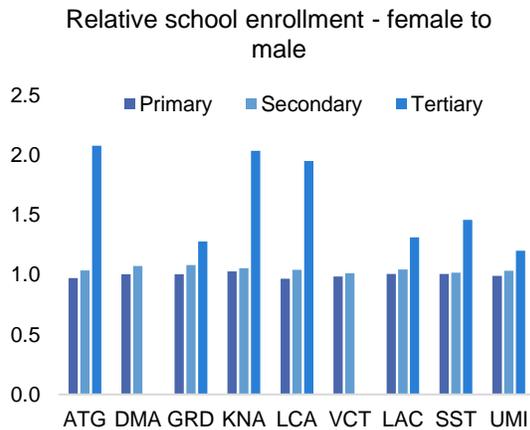
⁸⁵ GDP per capita varies widely among CARICOM member countries, from US\$662 in Haiti to US\$21,922 in The Bahamas (2010). This means that financing the proposed RHIM was always likely to present a challenge among certain countries. Even among OECS countries, the gap is substantial, with St. Kitts and Nevis' GDP per capita almost double that of St. Vincent and the Grenadines in 2010.

⁸⁶ The Caribbean Development Bank (CDB) is supporting gender assessments for several countries, and such work has already been completed for Antigua and Barbuda, Dominica, Grenada and St. Kitts and Nevis.

⁸⁷ World Bank Group Enterprise Surveys, 2010.

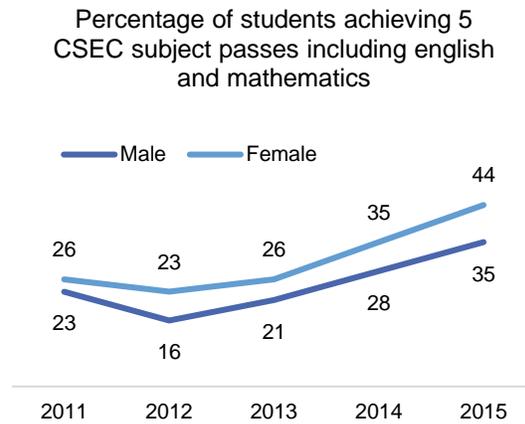
161. The OECS fare better than LAC in terms of gender parity in the labor market. Women’s integration in the labor market is higher than men in St. Kitts and Nevis. Nevertheless, in other OECS countries women face lower labor market participation, which could reflect traditional male roles as wage earners or greater rates of continuation to tertiary education among women. Despite their low participation rates, women seeking jobs are more likely to be unemployed, with women in St. Vincent and the Grenadines 40 percent more likely to be excluded from labor markets.

Figure 5-19. Women tend to pursue higher education at the tertiary level



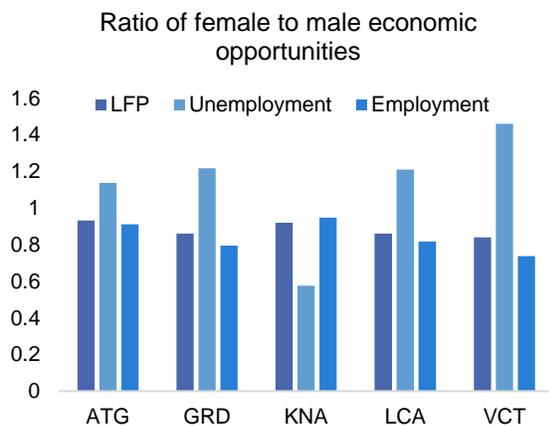
Source: World Development Indicators.
Note: Net enrollment for primary and secondary levels. Gross enrollment for tertiary level.

Figure 5-20. Women perform better than men in most CSEC subjects



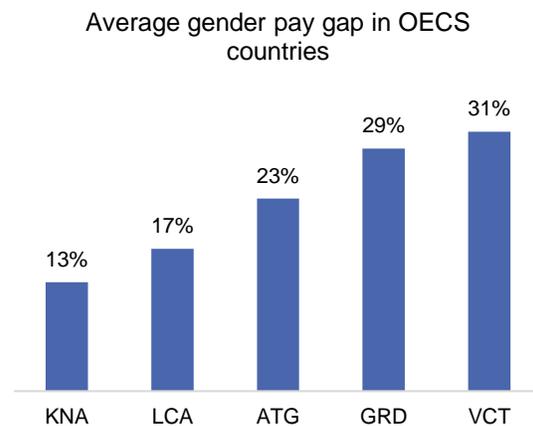
Source: Educational Statistical Digest 2016, OECS.

Figure 5-21. Nevertheless, women perform worse in the labor markets in terms of inclusion



Source: LFS 2013–2016. LFP is the labor force participation rate.

Figure 5-22. Gender pay gaps are large in the OECS



Source: WB Staff estimates from LFS 2013–2016.
Note: Estimates are from regression analysis of the relationship between labor income and gender, controlled for industries, education and potential experience (age adjusted by years of education). Labor income is the median of the labor income range reported by individuals.

162. Among employed women in the OECS, 87 percent work in the services sector. Only 4 percent of them work in agriculture and fisheries. Conversely, as much as 37 percent of employed men work in agriculture and industry particularly in agriculture and fisheries (12 percent) and construction (15 percent). An informal nature of agricultural and fishing activities that are mostly at subsistence level results in a larger share of employed men not having written employment contract and social insurance than their female counterpart. Nevertheless, when comparing between employed men and employed women who work in the same industry, have the same level of education, and have the same years of work experience, women earn less. The evidence points to diverse pay gaps across OECS countries (Figure 5-22).

Box 5-5. The Gender Pay Gap in the Tourism Industry: Survey Results from St. Lucia and Grenada

In 2017, the World Bank conducted firm- and individual-level surveys of the tourism industry in St. Lucia and Grenada that gathered data on differences between male and female employees. The surveys revealed a gender pay gap—women’s mean compensation is 23 percent lower than men’s in Grenada and 10 percent lower in Saint Lucia—and provide information on likely contributing factors.

Female employees are highly concentrated in traditionally female-dominated occupations: especially housekeeping, food and beverages, and front-office (74 percent in St. Lucia and 82 percent in Grenada), while male employees are more likely to be found in facilities and maintenance and financing and accounting (50 percent in St. Lucia and 69 percent in Grenada).

Female employees are less likely than male employees to be compensated for working overtime: 25 percent of female employees in St. Lucia and 40 percent in Grenada are not compensated at all for working overtime, compared to 16 percent of male employees in St. Lucia and 19 percent in Grenada.

Female employees are promoted less often than male employees: In St. Lucia, the male promotion rate is 9 percent in all-inclusive hotels and 10 percent in non-all-inclusive hotels, while the female promotion rate is 5 percent in all-inclusive hotels and 6 percent in non-all-inclusive hotels.

The type of establishment appears to be a factor. The largest wage gap is found at all-inclusive hotels in Grenada, where women’s mean compensation is 41 percent lower than men’s.

In addition, the surveys found important non-pecuniary gaps. Female employees in Grenada experience higher levels of stress than male employees: 19 percent of women in Grenada experience high or severe stress at work, compared to 7 percent of men. Female entrepreneurs are at higher risk of sexual harassment than males.

Box 5-6 Knowledge Gap: What are the main barriers to better labor market opportunities and outcomes for women?

Given the gender gap in the OECS labor market despite relatively high educational attainment of women, it is critical for policymaking to understand the main barriers to better labor market outcomes for women including sectoral segregation, teenage pregnancy, early marriage, as well as the impact of child care.

163. In terms of reproductive health, the sub-region is characterized by close-to-universal access to prenatal care and births attended by skilled staff, which translates into low maternal mortality rates. However, young women aged 15–24 are three to six times more likely to contract HIV/AIDS

than young men. Teenage pregnancy is lower than the LAC average but there are still 53 births per 1,000 women ages 15–19, risking serious consequences both for the mother and child’s health in each case.⁸⁸ In terms of representation, the sub-region has made progress in increasing women’s parliamentary participation. On average, the OECS (18.2 percent) lags behind upper-middle income countries (23.7 percent) and LAC (28.7 percent) on the proportion of women legislators, with Antigua and Barbuda farthest from the average at 11 percent and Grenada higher than the average at 33.3 percent (Table 5-2).

Table 5-2. Comparative development indicators, LAC and the OECS countries: 2012–16

Indicator	OECS†	LAC
<i>Endowments</i>		
Ratio of female to male primary enrollment (%)	99.6	100.0
Ratio of female to male secondary enrollment (%)	102.3	105.7
Ratio of female to male tertiary enrollment (%)	179.1*	129.1
Maternal mortality ratio (modeled estimate, per 100,000 live births)	40**	68
<i>Economic Opportunities</i>		
Ratio of female to male labor force participation rate***	0.88	0.67
Ratio of female to male unemployment rate***	1.26	1.47
Ratio of youth female to male unemployment rate (ages 15–24) ***	1.34	1.46
<i>Agency</i>		
Proportion of seats held by women in national parliaments (%)	18.2	28.7
Adolescent fertility rate (births per 1,000 women ages 15–19)	53****	75

Source: World Development Indicators.

Notes: Data presented is latest available date from 2012–2016, unless noted differently.

†Simple average for countries with data availability.

* Tertiary gross enrollment data is not available for Dominica and SVG.

** Average for Grenada, St. Lucia and SVG, 2015.

*** Data is not available for Dominica. LFS 2013 is used for St. Kitts and Nevis and LFS 2015 for others.

**** Recent adolescent fertility data is not available for Antigua and Barbuda, Grenada, or St. Kitts and Nevis. When including the latest available data of these three countries, the rate is 57.

Social protection: Sustaining equity and inclusiveness

164. Living standards can decline due to shocks affecting labor markets, health, or human capital. Social protection serves as a tool to insure against these risks, sustaining progress toward equity and inclusiveness. It is therefore critical that social protection systems help the poor and vulnerable manage and cope with risks. Their need for well-functioning social protection systems and the continuity of basic infrastructure such as electricity, improved drinking water and sanitation during emergencies in the OECS due to their inherent vulnerability to external shocks.

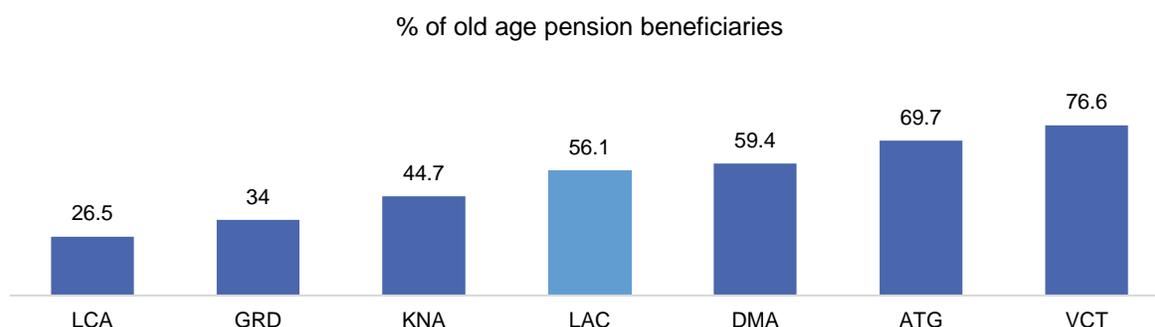
165. OECS countries have made a significant effort to establish social safety nets that respond to the unique vulnerabilities of small island states. Subsidies in various forms, such as transportation and childcare, social assistance, and employment-related social benefits have become a budget priority and account for a large share of government transfers. Public spending

⁸⁸Across the Eastern Caribbean a large share of women reports having their first child as a teenager: 40.3 percent of women aged 15 to 49 in Grenada had their first child between 15 and 19 years of age, and in St. Kitts and Nevis this figure was 42.2 percent (Caribbean Development Bank Poverty Assessments; 2006–2009).

on social assistance was equivalent to 2 percent of GDP during 2009–2014, higher than the LAC average of 1.3 percent and the upper-middle-income-country average of 1.6 percent.⁸⁹

166. While social spending has increased in most OECS countries, the effectiveness of safety nets, social insurance, labor market policies, and other social services in the OECS is hampered by a) a lack of updated poverty data to inform decision-making; b) limited coverage, given indicative poverty rates available only every 10 years; c) limited spending efficiency resulting from duplicated and fragmented service delivery; and d) rudimentary service delivery for identification, payments and monitoring that limit the ability of the system to respond rapidly to shocks.⁹⁰

Figure 5-23. Old-age pension coverage in St. Lucia, Grenada and St. Kitts and Nevis is lower than the LAC average



Source: ILO (2014).

Note: Proportion of persons above statutory pensionable age receiving an old-age pension, latest available year between 2008 and 2015.

167. Old-age pension coverage is high in Dominica, Antigua and Barbuda, and St. Vincent and the Grenadines compared to the LAC average. Coverage is still low in St. Lucia and Grenada, with approximately 30 percent of the elderly receiving a pension—both contributory and non-contributory (Figure 5-23). Coverage of social insurance benefits, including National Insurance Coverage and others, is particularly high. Among the employed, coverage ranges from 72 percent in Grenada to 90 percent in St. Kitts and Nevis. Low coverage in Grenada can be partly explained by a large informal sector. Large gaps remain for workers outside the formal sector and the self-employed (Figure 5-24). In Grenada, only 48 percent of informal employees receive social insurance benefits, compared with 94 percent of formal workers. Under 20 percent of St. Lucia’s self-employed population is insured against negative shocks. This results in larger disparities in the social insurance coverage between the bottom and top assets-based wealth quintiles of households in Grenada, St. Lucia, and St. Vincent and the Grenadines, when compared to the gap observed in Antigua and Barbuda (Figure 5-24).

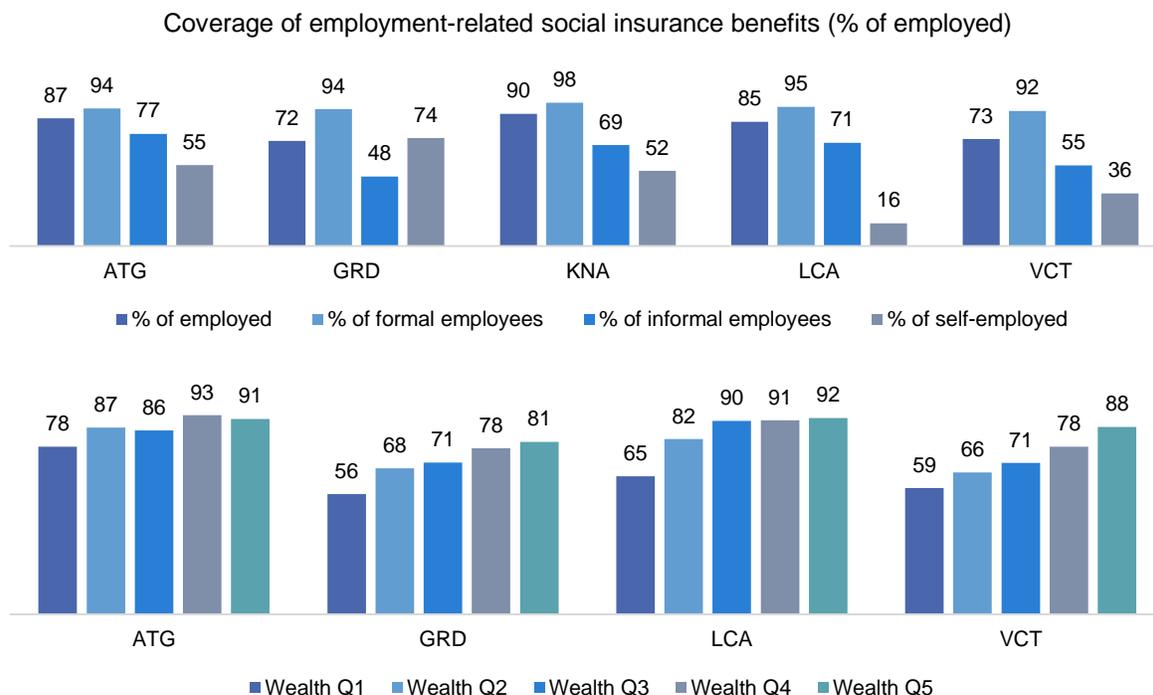
⁸⁹ World Bank (2017). *Dominica Social Protection Assessment*. Washington DC: World Bank.

⁹⁰ Commonwealth of Dominica (2017). *Post-Disaster Needs Assessment: Hurricane Maria*.

Box 5-7 Knowledge Gap: What is the causal impact of social protection programs on poverty in normal times and in emergencies?

A lack of data limits the impact evaluation of social protection programs in the OECS. International evidence suggests that economic crises and extreme weather events push many into poverty. Monitoring and evaluation of social protection programs are critical for improving the quality of social protection systems in targeting the poor and preventing the vulnerable from falling into poverty, especially during periods of emergency.

Figure 5-24. Coverage of social insurance is high despite large gaps for the informal sector, the self-employed, and the bottom asset-based wealth quintile



Source: LFS 2013–2016.

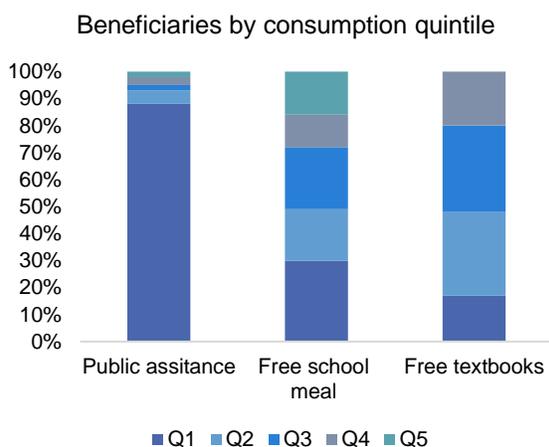
Note: Data is not available for Dominica but the World Bank report *Dominica Social Protection Assessment* (2017) shows that over half of the working-age population in Dominica contributed to the social security system in 2015. The wealth index is constructed based on household assets using the principal components analysis (PCA) method.

168. Targeting accuracy analysis of current social protection programs in OECS countries is limited, partly due to outdated household surveys. Efforts have been made to improve targeting accuracy. Grenada and St. Lucia have adopted a proxy means test (PMT) to replace the diverse approaches they were using to determine beneficiary eligibility.⁹¹ Still, updated poverty data is needed to implement the system. Grenada is the only OECS country that has transitioned from an unconditional cash transfer to a cash transfer conditional on education attendance and use of health services, which is expected to have a more sustained effect on human capital development. Nevertheless, the existing evidence suggests that social protection programs in the OECS countries tend to have rudimentary beneficiary selection and targeting mechanisms, which may lead to a large degree of inefficient discretion in the selection of beneficiaries. In Antigua and Barbuda,

⁹¹ In St Lucia, it is termed the National Eligibility Test (SL-NET).

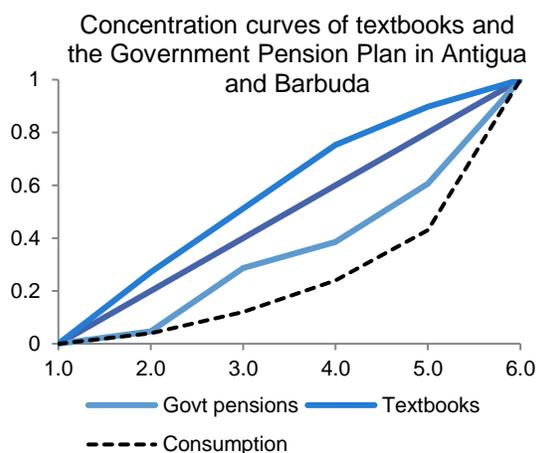
most social assistance programs use categorical (age) or geographical (wealth of district) targeting based on personal characteristics. The latest evidence from Dominica, from 2007–09, shows that its Public Assistance program was well-targeted, but benefits from other programs such as Free School Meals and Free Textbook Programs delivered were delivered to a significant number of students from the top consumption quintiles (Figure 5-25). In Antigua and Barbuda, while the Public Assistance and Textbooks programs were pro-poor, other programs such as the civil service scheme, School Meals, and Old Age Assistance were not (Figure 5-26).

Figure 5-25. In Dominica, not all programs were well-targeted



Source: World Bank (2017). *Dominica Social Protection Assessment*. Washington DC: World Bank.

Figure 5-26. In Antigua and Barbuda, most social programs were not pro-poor



Source: World Bank (2011). *Antigua and Barbuda Social Protection Assessment*. Washington DC: World Bank.

169. Addressing inadequate coordination and duplication is critical to improving the efficiency of the social protection systems in the OECS.⁹² In Antigua and Barbuda, some pensioners receive benefits from the Antigua and Barbuda Social Security Board (ABSSB)’s Old Age Assistance program despite receiving state or private pensions, undermining the pro-poor feature of the program. In addition, some programs are overly generous. The current civil servant pension plan sees some public officials able to draw two or three pensions equivalent to 130 per cent of their retirement salary, while meals provided under the National School Meals program cost over 10 times the international average.

170. Among the most challenging areas of social protection systems in the OECS is in dealing with the consequences of frequent natural disasters. According to the Environmental Vulnerability Index (EVI), St. Lucia is classified as extremely vulnerable to future shocks, while Grenada, St. Kitts and Nevis, and St. Vincent and the Grenadines are among those classified as highly vulnerable.⁹³ While OECS countries’ experiences with hurricane are extensive, monitoring and evaluation of social protection programs’ efforts to respond to natural disasters are limited. Recent

⁹²Williams et al, (2013).

⁹³ United Nations Environment Programme and South Pacific Applied Geoscience Commission (2005). *Building Resilience in SIDS, The Environmental Vulnerability Index*.

evaluations of the responsiveness of social protection systems to disaster risk management in Dominica, Grenada, and St. Vincent and the Grenadines found few social protection programs had any established links to disaster preparedness, response, reconstruction or risk reduction, and where they existed, they were only relevant to small-scale or localized disasters.⁹⁴ Furthermore, the service-delivery tools necessary to ensure effective identification of poor and vulnerable households before and after disasters strike remain absent or rudimentary in most countries. These would include social registries with comprehensive data on households, modernized and diverse payment delivery mechanisms, and management information systems to support effective service delivery.

171. The absence of formal structures for scaling-up safety-net and other social protection responses following disasters threatens to further hinder the ability of affected households, most of whom are disproportionately poor and vulnerable, to recover quickly. In St. Lucia, while the non-poor reported using financial resources such as remittances, credit, and savings in the face of Hurricane Tomas in 2010 and the “Christmas trough” (severe rains, winds and flooding) in 2013, the poor had limited ability to financially cope with these disasters, opting instead for physical relocation as their coping strategy. The poor were also less likely to receive help from the government and NGOs.⁹⁵ There has been some ad-hoc adaptation of existing systems to respond to disasters. When Tropical Storm Erika struck Dominica in 2015, the country’s main safety net—public assistance—did not play a role in the response.⁹⁶ Rather, the government introduced three temporary transfers to help affected households address displacement and housing needs, which have since been discontinued.⁹⁷

⁹⁴ Alejandro Gonzalez (2018). *Dominica Process Evaluation for Post-Disaster Social Protection and Labor Support* (2018); Washington DC: World Bank; (2017) *Process Evaluation for Post-Disaster Social Protection and Labor Support in Grenada*; Washington DC: World Bank; (2018). *St. Vincent and the Grenadines Process Evaluation for Post-Disaster Social Protection and Labor Support*; Washington DC: World Bank.

⁹⁵ 2016 Household Budget Survey. The results should be taken with caution as the response rate was less than 10 percent.

⁹⁶ World Bank (2017). *Dominica Social Protection Assessment*; Washington DC: World Bank. There was no increase in the amount of the transfers for beneficiaries affected by the disaster or in the coverage for non-beneficiaries affected by the disaster.

⁹⁷ Carlos Soto (2017). *Social Protection and Disaster Risk Management*; Washington DC: World Bank. These transfers included a Loss of Content Grant, Displacement Allowance, and Rental Allowance.

Box 5-8: Natural disasters that disrupt inclusive development: The case of Hurricane Maria in Dominica.

Dominica’s recent experience with Hurricane Maria was a stark reminder of the challenge of inclusive development in the context of natural-disaster vulnerability. The region’s vulnerability to natural disasters signals the urgency of increasing resilience to shocks among both the non-working and working poor and vulnerable populations.

Vulnerability to natural disasters and reliance on climate-sensitive sectors such as tourism and agriculture, coupled with high unemployment and large numbers of working poor, require urgent labor market strategies to help mitigate against severe employment impacts when disasters strike. For Dominica, the post-disaster needs assessment for Hurricane Maria, which struck the country in 2017, estimated EC\$94.9 million (US\$35.1 million) in income and 3.1 million work days to be lost because of the disaster.⁹⁸ Labor-market impacts included slowdowns in the agriculture and tourism sectors for up to 12 months. Compounding this was the tendency for poor households to resort to negative coping strategies after shocks, and for shock impacts to deplete poor households’ savings and ultimately reduce income and earning capacity. Labor-market strategies to facilitate more productive livelihoods among the working poor, productive inclusion of the poor and unemployed, and diversification of livelihoods away from climate-sensitive sectors where feasible, are therefore necessary to ensure that individuals are better able to secure their livelihoods in times of crisis.⁹⁹

The Post Disaster Needs Assessment (PDNA) estimated a 25 percent reduction in overall consumption directly resulting from lost income caused by Hurricane Maria, with the potential to increase the poverty head count from 28.8 percent to 42.8 percent; and doubling the number of people in extreme poverty from 2,253 to 4,731. Furthermore, the PDNA estimated that almost 2,800 individuals considered vulnerable prior to Maria could fall below the poverty line if their consumption needs were not addressed.¹⁰⁰ Nevertheless, the safety net system has not been flexible enough to respond efficiently in emergency. Following the recent destruction of homes and livelihoods caused by Hurricane Maria, challenges to identify the new poor delayed the provision of various packages of social protection to the newly indigent and poor. In the end, poor families were primarily supported by a temporary transfer provided by the World Food Program and UNICEF, which “piggybacked” on the Public Assistance payment list and payment delivery mechanism. Despite this, the continued absence of a social registry and other formal linkages between the social safety net and disaster risk management objectives means that the poor may remain vulnerable to future shocks.

Natural disasters also imposed significant losses on the island’s education systems. According to the Post-Disaster Needs Assessment (PNDA) conducted by the World Bank in Dominica after Hurricane Maria, total losses in the education sector reached over US\$77m; 137 out of 163 educational facilities were damaged, including severe damage to equipment and pedagogical materials; and learning time for students for the school year was decreased by 40 percent. The damage to school infrastructure was incurred not only by the storm itself, but also from the use of schools as shelters in its aftermath. The need for safer school infrastructure and proactive measures to prepare for future disasters is an increasing subject of discussion in regional education policy forums.

⁹⁸ Commonwealth of Dominica (2017). “Post-Disaster Needs Assessment Hurricane Maria September 18, 2017.”

⁹⁹ Productive inclusion refers to strategies and interventions that aim to improve the income generating capacity of the poor in a sustainable way. Examples of productive inclusion interventions include complementing consumption support with asset transfers; improved access to credit and markets; promoting savings; and training and coaching.

¹⁰⁰ Commonwealth of Dominica (2017).

6. Sustainability

OECS are rich and diverse in natural capital that has been successfully utilized as a pathway to sustainable growth, especially to build a strong nature-based tourism sector. As several factors pose imminent threats to the sustainable management of this natural capital endowment, OECS countries need to mobilize investments and build capacity to continue realizing sustainable yields from their unique natural capital endowment. On the one hand, geography and location expose the OECS to a range of natural hazards, magnified by changes in the global climate. On the other hand, the exploitation of the natural environment for economic opportunities, not least tourism, can damage the same natural environment. Most of the OECS countries have already taken measures to balance the use and conservation of the environment. Building further on already successfully established regional approaches, there currently exists a crucial opportunity for OECS countries to further capitalize on existing successful regional approaches with regard to environmental conservation and management to enhance the returns on their unique natural capital. While the OECS possess rich human capital, this could be hampered by limited employment opportunities through the vicious cycles of brain drain and skill erosion. Crime is not a pressing issue in most OECS countries but when combined with high youth unemployment, it could impact social sustainability.

Fiscal policy and sustainability

172. Fiscal policy can provide an important foundation for sustainability in the OECS in two broad areas—by ensuring that fiscal policies are themselves sustainable in the long term (notably, debt sustainability) and by using fiscal measures to make countries more resilient to climate change and natural disasters. Public debt is high in all OECS countries, as has been discussed in previous chapters, and constrains their long-term growth and stability. High debt-service obligations crowd out government spending on public goods that can raise productivity (including investments in human capital). High levels of borrowing in local markets crowd out credit to the private sector that can create jobs and incomes. Strong fiscal-responsibility frameworks can help governments contain spending growth, reduce debt, and build fiscal buffers. Grenada has taken steps in this direction.

173. Fiscal policy can make direct contributions to climate-change mitigation and to making countries more resilient to the effects of climate change and natural disasters. The St. Lucia Climate Change Policy Assessment explores the role of fuel taxes and other carbon-related taxes, which can both raise much-needed revenue and reduce the country’s greenhouse gas emissions.¹⁰¹ Given OECS countries’ high exposure to climate change and natural disasters, it is important for governments to identify and quantify risks these pose to public finances, e.g., through shocks to spending, revenue, public assets, and contingent liabilities. This is a first step towards designing

¹⁰¹ Leo Bonato, Adrienne Cheasty, Miria Pigato, Kassia Antoine, Annette De Kleine Feige, Alejandro Guerson, Shruti Lakhtakia, Ian Parry, Gonzalo Salinas, and David Stephan, “St. Lucia: Climate Change Policy Assessment—Pilot,” International Monetary Fund and World Bank, June 2018.

financing strategies that incorporate climate change and natural disasters into the broader fiscal and debt management framework.¹⁰²

174. Finally, there are measures that straddle both areas, such as debt-for-nature and resilience swaps and blue bonds. Seychelles provides examples of these measures. In 2017 it issued US\$15m in blue bonds to finance investments in sustainable fishing, supported by World Bank and Global Environmental Facility Financing. In 2018 Seychelles and the Paris Club agreed on a US\$25.9bn reduction in public debt, in a transaction that created sustainable, long-term financing for marine and coastal management investments.

Environmental sustainability

175. The outstanding natural capital endowment of the OECS is the most important asset in building economic development and shared prosperity. Its unparalleled marine and coastal resources are intricately linked to almost every aspect of sustainable development in the Insular Caribbean. Traditionally, fishing has been one of the most important economic and livelihood-supporting activities and it continues to be important for OECS economies, while tourism and associated services have shaped the OECS economies in more recent decades. These sectors are not only important for their economic contribution, but for providing the core employment opportunities for a large share of the OECS population. Fishing, the coastal lifestyle, and the natural environment are also intrinsic parts of the cultural heritage and self-identification of local populations and thus contribute to social cohesion and regional integration.

176. The sustainable management of the natural capital of OECS represents an essential part of economic and social development. The balanced use and conservation of the unique natural capital endowment has always been of highest priority and the OECS have invested financial and human capital in maintaining this approach. There is, however, an increasing risk of depletion and degradation if this capital stock due to increasing internal and external pressure, mainly pollution, but also threats exogenous to the socio-economic system of the OECS (especially resulting from climate change). Increased, concerted efforts are needed to safeguard this important asset, but also to capitalize on its use in an efficient and effective way for future sustainable development. The strength embedded in regional cooperation among the OECS, which has already been capitalized on in several pilot activities, provides a comparative advantage that should be further enhanced. If this asset and its flows are not sustainably managed, the broader development ambitions of the OECS are at risk.

177. Natural capital is so inherent to the socio-economic and socio-cultural structure of the OECS that its sustainable management also represents one of the most effective and efficient protections against external shocks. Due to their geographic shape and location, OECS countries are naturally exposed to many natural risks, not least hurricanes, but also volcanic activity, earthquakes, and tidal waves. Good stewardship of the natural environment and investment in further strengthening ecosystem health and integrity represents an important pillar for building

¹⁰² See for example, chapter 4 of World Bank, “Fiscal Policies for Development and Climate Action,” draft report, May 2018.

resilience against these recurrent environmental threats, especially given that these are likely becoming increasingly frequent due to global climate change. In addition, the structural economic composition of OECS states makes them vulnerable to economic shocks against which a healthy and well-managed natural environment can provide safety-nets and copying mechanisms, at least in the short-term.

The state of natural capital

178. Aggregate measures of environmental management by OECS countries reflect a mixed picture. Taking the latest assessment results of the Environmental Performance Index (EPI) as a general bearing, absolute scores have slightly improved while relative performance has declined (EPI 2018). As for the Ocean Health Index, scores have stagnated for all countries, suggesting that OECS countries have failed to invest as much in environmental management as other countries. Given the importance of the natural asset base for economic development—especially tourism—and the increasing competition for nature-focused tourists in the wider Caribbean region, including Central America, these indicators may also reflect a decline in competitiveness for this sector.

Table 6-1. Environmental management performance

	2018 EPI (out of 180)**	Change in EPI score (0–100)	Ranking Ocean Health Index (out of 221)***	Ocean Health Index score (0– 100)
Antigua and Barbuda	76 (+2)*	+ 2.92	18 (0)	80 (0%)
Dominica	73 (-8)	+ 4.69	205 (+1)	52 (1%)
Grenada	118 (+5)	+ 2.57	185 (-9)	58 (-1%)
St. Kitts and Nevis	NA	NA	138 (+2)	64 (-2%)
St. Lucia	91 (+8)	+ 1.80	180 (+2)	60 (-1%)
St. Vincent and the Grenadines	36 (-17)	+ 6.43	193 (+1)	56 (0%)

Source: Environmental Performance Index, 2018 and Ocean Health Index, 2017.

* Changes compare to baseline rank which refers to ten years in the past, the lower the rank the better.

** EPI=Environmental Performance Index

*** In comparison to 2016

179. Within the broader natural capital asset owned by the OECS, the importance of coastal and marine resources cannot be overestimated. The Atlantic/Caribbean region includes about 10 percent (26,000 km²) of the world’s coral reefs.¹⁰³ Approximately 7 percent of the world’s coral resources are in the Caribbean with high level of endemism.¹⁰⁴

180. Within the broader natural capital assets owned by the OECS, the importance of coastal and marine resources cannot be overestimated. The Atlantic/Caribbean region includes about 10

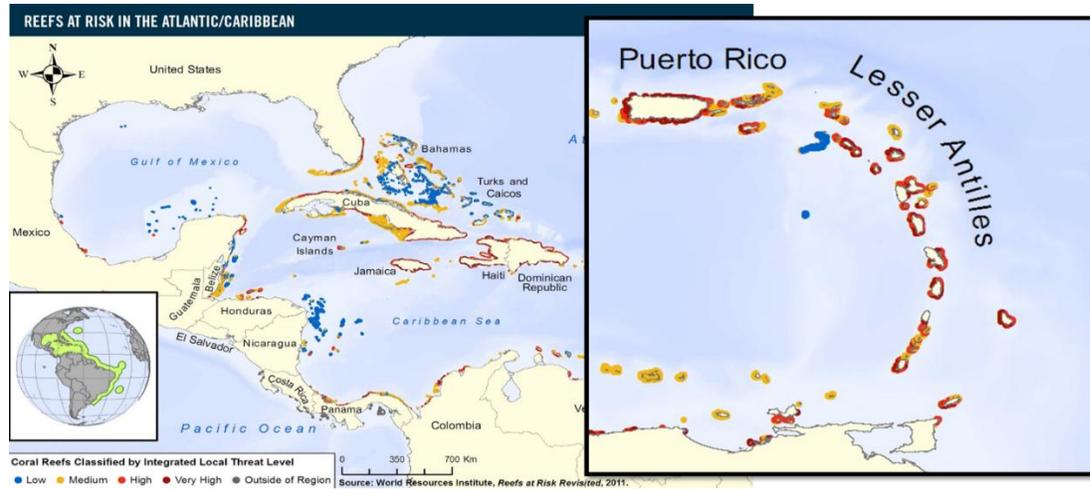
¹⁰³ Burke, Laretta, Katie Reytar, Mark Spalding and Allison Perry (2012). *Reefs at Risk Revisited in the Coral Triangle*. Washington, DC: World Resources Institute.

¹⁰⁴ Heileman, Sherry (2007). *Thematic report for the insular Caribbean sub-region*. Unpublished. CLME Project Implementation Unit, Centre for Resource Management and Environmental Studies (CERMES), University of the West Indies, Barbados. There are no exact figures for coral reefs in the OECS alone.

percent (26,000 km²) of the world’s coral reefs.¹⁰⁵ Approximately 7 percent of the world’s coral resources are in the Caribbean with high level of endemicity.¹⁰⁶

181. The economic value of coral reefs in the Caribbean region are estimated at US\$3.1–4.6 bn annually with benefits categories related to shoreline protection, habitats for healthy fisheries, and natural infrastructure for the tourism sector.¹⁰⁷ One estimate puts the annual net benefits from coral reef-related goods and services in the Caribbean region in 2010 at US\$2.7bn for tourism, US\$395m for coral-reef fisheries, and US\$944m to US\$2.8bn for shoreline protection.¹⁰⁸

Figure 6-1. Reefs at risk in the Atlantic and Caribbean



Source: Burke et al. 2012

182. Despite their importance, more than 75 percent of Caribbean reefs are reported to be threatened, with more than 30 percent in the high or very high threat category.¹⁰⁹ This global phenomenon is especially severe – and economically significant – for the Caribbean region. It is estimated that about 75 percent of Caribbean reefs are affected by local threats, such as overfishing, pollution from agricultural run-off, and coastal development.¹¹⁰ Average coral cover in the Caribbean in 2011 was estimated at 14.3 percent—a decline of almost half since 1970. In some areas, coral cover is down by 80 percent.¹¹¹ For the Caribbean as a whole, the degradation of reefs represents US\$525m per year in lost environmental services in areas under medium threat of

¹⁰⁵ Burke, Laretta, Katie Reytar, Mark Spalding and Allison Perry (2012). *Reefs at Risk Revisited in the Coral Triangle*. Washington, DC: World Resources Institute.

¹⁰⁶ Heileman, Sherry (2007). *Thematic report for the insular Caribbean sub-region*. Unpublished. CLME Project Implementation Unit, Centre for Resource Management and Environmental Studies (CERMES), University of the West Indies, Barbados. There are no exact figures for coral reefs in the OECS alone.

¹⁰⁷ CRFM (2014b). “Sustainable use, conservation and management of fisheries resources: the Action Plan for Improving the Outlook for Caribbean Coral Reefs.” Presentation Caribbean Regional Fisheries Mechanism.

¹⁰⁸ Burke, Laretta, Marie and Jonathan Maidens (2004). *Reefs at risk in the Caribbean*. Washington, DC: World Resources Institute.

¹⁰⁹ Burke et al. (2012).

¹¹⁰ CRFM (2014b).

¹¹¹ Jackson et al. (2014).

destruction and US\$700m per year for places facing a high threat, a total of US\$1.2bn,¹¹² The Caribbean Regional Fisheries Mechanism (CRFM) estimates that the cost of failure to reverse these trends could cost its members US\$95–140m per year in fisheries, US\$100–300m per year in dive tourism, and US\$140–420m per year in reduced shoreline protection services.¹¹³

183. In addition to local factors driving reef degradation, the greatest global long-term risk to coral reefs is climate change, and the associated increase in water temperatures and acidification processes.¹¹⁴ In the OECS, Grenada and St. Kitts and Nevis are two of the 27 countries identified as most vulnerable to reef degradation globally, due to high threat levels, the high economic dependence on reefs of local residents, and limited capacity to adapt to reef loss.¹¹⁵

184. The degradation of coral reefs has important knock-on effects, especially on beaches – probably the single most important asset in the natural capital portfolio of OECS. Not only do coral reefs deliver calcareous sand to maintain beaches, they also protect against wave erosion, which is especially important during hurricanes. Artificially replacing sand, a process known as beach nourishment, can cost millions of US dollars for a single island. Long-term investments in protecting reefs often provides the most cost-effective nature-based adaptation solution to beach erosion.¹¹⁶

185. Beaches not only suffer from coral reef degradation, but are also prone to pollution in the form of wet weather discharges, trash and litter, vessel discharges, and agro-chemical run-off. Frequent closures of beaches due to wet weather discharges during the holiday season could have a significant impact on tourism earnings during holidays.¹¹⁷ The presence of litter, and the fear of exposure to contaminated water and agro-chemical run-off are likely to have significant long-term impacts on tourism. The use of heavy machinery for beach clean-ups can also cause negative impact on beaches, e.g., beach erosion after Sargassum seaweed intrusions.¹¹⁸

¹¹² Burke and Maidens (2004). This data applies beyond the OECS. The costs of the environmental degradation of reefs are concentrated in Belize, Colombia, Cuba, the Dominican Republic, Haiti, Jamaica, Panama, and Puerto Rico.

¹¹³ CRFM (2014b).

¹¹⁴ Burke et al (2012).

¹¹⁵ Ibid., (2012).

¹¹⁶ World Bank (2018b).

¹¹⁷ Wet weather discharges result from precipitation events, such as rainfall and snowmelt. Wet weather discharges include stormwater runoff, combined sewer overflows (CSOs), and wet weather sanitary sewer overflows (SSOs). Stormwater runoff is rainwater that flows over land, and can carry sediment and contaminants from streets, rooftops, parking lots, lawns and other places to surface water bodies or infiltrate through the soil to ground water; it can also be directed to Class V UIC wells such as dry wells, French drains, and seepage pits and be discharged into Underground Sources of Drinking Water (USDW) with little or no pretreatment. CSOs are overflows of excess wastewater from combined sewer systems (those that collect runoff, domestic sewage, and industrial wastewater in the same pipe) that occur during periods of heavy precipitation; they can carry stormwater, untreated human and industrial wastes, toxic materials and debris directly into water bodies. SSOs are discharges of raw sewage from municipal sanitary sewers into our waters (and basements) due to severe weather, improper system operation and maintenance, and vandalism.

¹¹⁸ Hinds, C., Oxenford, H., Cumberbatch, J., Fardin, F., Doyle, E., Cashman, A. (2016). “Golden Tides: Management Best Practices for Influxes of Sargassum in the Caribbean with a Focus on Clean-up.” Centre for Resource Management and Environmental Studies (CERMES), The University of the West Indies, Cave Hill Campus, Barbados.

Box 6-1. The Influx of Sargassum Seaweed to the Caribbean—its Impacts and Likely Causes

Sargassum seaweed is a macroalgal, which usually originates in the Sargasso Sea in the North Atlantic Ocean. All species of the algae grow natural buoys that keep the weed afloat. In the open sea, these natural seaweed rafts provide important micro ecosystem for fish, invertebrates, sea turtles and sea birds, especially as spawning and nursing areas (Rodríguez-Martínez et al., 2016).

Historically, sargassum seaweed has always stranded on Caribbean beaches. If washed ashore in small quantities, or at inaccessible, non-tourist or non-critical locations, it is advisable to leave the seaweed where it is, as it nourishes the beaches and shorelines (Hinds et al., 2016). However, since 2011, several Caribbean coasts have received heavy influxes of sargassum seaweeds on sensitive beaches, at times over 200 times the usual biomass, piling several meters high, blocking beaches from usage, and disrupting local economic activities, like tourism and fisheries, as well as ecosystems. Apart from the amount, when sargassum seaweed decomposes, it produces hydrogen sulfide gas (H₂S) and other organic compounds, thus developing a foul odor and causing health problems such as headaches, nausea, and respiratory problems (Rodríguez-Martínez et al., 2016).

Since its first mass inundations in 2011, local authorities have been developing best-practice and communication guidelines to ensure sustainable removal management of seaweed influxes to minimize beach erosion via heavy equipment and damage to ecological sensitive areas like nesting beaches (Hinds et al., 2016).

A variety of socio-economic and climatic factors are suspected to foster the reoccurring massive algae influxes. Current algae fields appear to originate from the South Atlantic, where large rivers, such as the Orinoco in Venezuela and the Amazon in Brazil, transport massive amounts of high nitrogen loads, oil, and fertilizer, fostering algae growth, into the Atlantic. This in combination with rising sea temperature levels due to climate change and low winds are assumed to generate favorable conditions for sargassum seaweed (Schell et al., 2015).

Marine pollution

186. Marine pollution is one of the key threats to economic and ecological sustainability in the OECS. The main causes of marine pollution are littering, untreated sewage discharge, agricultural runoff, and sedimentation from inland watersheds. The resulting impacts on coral reefs, beaches, mangroves, and other related ecosystem services greatly affect economically relevant sectors such as tourism, recreational activities, and fisheries.¹¹⁹

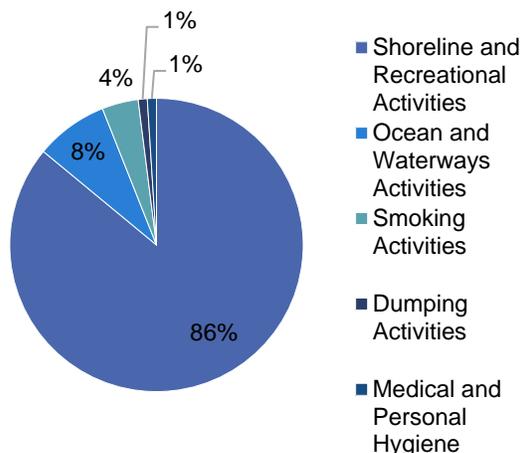
187. After the Mediterranean, the Caribbean is one of the most plastic-polluted basins in the world with an average surface water concentration of 1,414 plastic items/km². Marine trash is mainly the result of direct littering by users of beaches and coastal areas; 80 percent of all marine pollution in the Wider Caribbean Region (WCR) comes from land-based sources, mostly untreated wastewater, litter, and agricultural run-off.¹²⁰ Assessing the sources of marine litter through coastal cleanups between 2006 and 2012, the sources of litter are from local sources, e.g., 86 percent litter from shoreline and recreational activities, 8 percent from ocean and waterway activities, 4 percent from smoking, 1 percent dumping and 1 percent medical and personal hygiene products.¹²¹ These pollutants, and especially the formation of microplastics, are causing increasing damage to marine ecosystems and associated economic activities. An estimated 322,745 tons of plastic go uncollected each year across selected OECS countries.

¹¹⁹ Patil, P.G., Virdin, J., Diez, S.M., Roberts, J., Singh, A. (2016). “Toward A Blue Economy: A Promise for Sustainable Growth in the Caribbean; An Overview.” The World Bank, Washington D.C.

¹²⁰ (World Bank 2018b). The Wider Caribbean Region (WCR) comprises 28 island and coastal states and territories with coasts on the Caribbean Sea, Gulf of Mexico, and abutting the Atlantic Ocean.

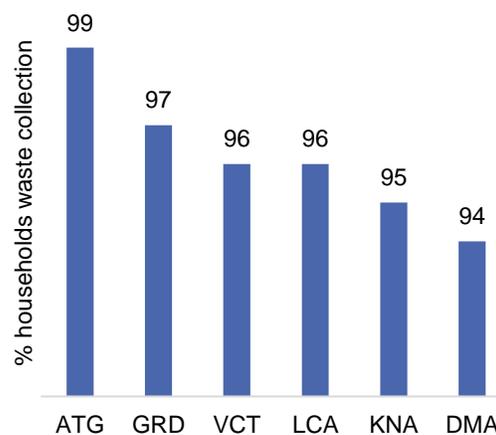
¹²¹ UNEP-CEP (2014).

Figure 6-2. Types of marine litter in the WCR, 2006–12



Source: UNEP-CEP (2014).

Figure 6-3. Share of households with waste collection service, 2010–12



Source: St. Lucia: 2010 National Census; Grenada: 2011 National Census; St. Vincent and the Grenadines: 2012 National Census

188. Most countries of the OECS have already taken measures to reduce litter pollution, especially related to plastics. For example, Antigua and Barbuda banned the use of Styrofoam and plastic bags, the latter of which made up 90 percent of all plastic waste from retail between 2006–17. As a result, the share of plastic in landfills dropped from 19.5 percent to 4.4 percent, which not only reduced waste generation, but also waste-management costs. Other OECS countries have launched similar strategies and developed plans to address solid waste-management challenges.

189. Existing efforts to address waste management are partially reflected in the fact that between 90 and 95 percent of households in Eastern Caribbean countries are covered by collection services. This is above average compared to other, larger countries in the WCR. Estimated uncollected household waste for the OECS is 4,461 tons per year or 0.11 percent of that of the WCR while estimated uncollected household plastic waste for the OECS is 819 tons per year or 0.25 percent of that of the WCR.¹²² On the other hand, street sweeping services are rarely provided and public clean-up services are lacking except for in Grenada.

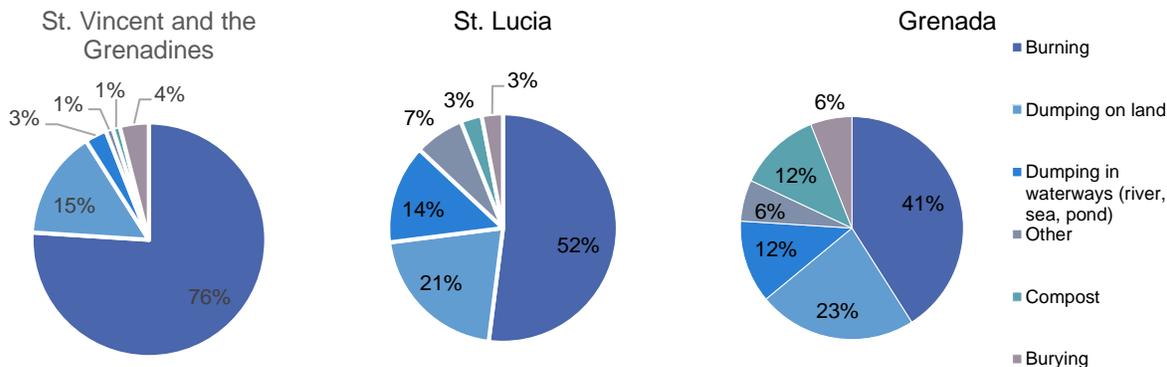
190. Those households that do not receive waste-collection services commonly burn their waste or dump it on land. In St. Lucia and Grenada, 14 percent and 12 percent respectively of such households dump their waste in waterways. Uncollected and unmanaged litter causes economic damage by affecting human health, as it serves as a habitat for mosquitoes and pests. Studies have shown that between 7 percent and 15 percent of breeding habitats for mosquitoes are provided by litter such as plastic bottles, tin cans, and Styrofoam containers.¹²³ The associated economic costs

¹²² World Bank (2018b)

¹²³ Chadee, D.D., Huntley, S., Focks, D.A., Chen, A.A. (2009). “Aedes aegypti in Jamaica, West Indies: container productivity profiles to inform control strategies.” *Tropical Medicine and International Health*, Vol 14 (2), pp. 220–227.

of Dengue, Zika and Chikungunya outbreaks add up to approximately 0.21 percent of regional GDP per year in direct health costs and indirectly in deterring tourists.¹²⁴ Furthermore, litter leads exacerbate the economic costs of flooding, as debris clogs drainage systems.¹²⁵

Figure 6-4. Disposal practices for households without collection services, 2010–12



Source: St. Lucia: 2010 National Census; Grenada: 2011 National Census; St. Vincent and the Grenadines: 2012 National Census

191. The ecological and socio-economic costs of marine litter are extremely high in the Eastern Caribbean. Corals that are highly exposed to plastic litter are more likely to contract microbial colonization by pathogens and microhabitats for reef-associated organisms, and valuable commercial fish species will be disproportionately affected.¹²⁶ Furthermore, plastic litter can also serve as a vector for the transport of invasive species like toxic algae.¹²⁷ Most invasive species are either microorganisms, seaweed or invertebrates that “travel” on floating litter.¹²⁸ Plastic waste also directly affects marine species as they get entangled in or ingest plastic materials.

192. The impact of marine litter on tourism is significant in many ways. In terms of amenity values, one recent survey lists water quality, scenery, and the absence of litter among the five core factors that tourists expect from coastal visits.¹²⁹ A variety of studies also provide evidence for consumer preference and increasing willingness to pay for clear water, healthy corals and high-quality beaches.¹³⁰ Tourists are willing to travel further, and at higher costs, to avoid littered

¹²⁴ World Bank (2018b).

¹²⁵ McLean, S. 2016. “Plastic Pollution: The Multi-Million Dollar Problem.” *The Jamaica Gleaner*.

¹²⁶ Lamb, J.B., Willis, B.L., Fiorenza, E.A., Couch, C.S., Howard, R., Rader, D.N., True, J.D., Kelly, L.A., Ahmad, A., Jompa, J., Harvell, C.D. (2018). “Plastic Waste Associated with Disease on Coral Reefs.” *Science* 359(6374). pp. 460-462.

¹²⁷ Masó, M., Garcés, E., Pagès, F., Camp, J. (2003). “Drifting Plastic Debris as a Potential Vector for Dispersing Harmful Algal Bloom (HAB) Species.” *Scientia Marina* 67(1): 107-111.

¹²⁸ Lusher, A., Hollman, P., Mendoza-Hill, J. (2017). “Microplastics in fisheries and aquaculture: Status of knowledge on their occurrence and implications for aquatic organisms and food safety.” Food and Agriculture Organization of the United Nations, Rome.

¹²⁹ Rangel-Buitrago, N., Williams, A., Anfuso, G. (2018). “Killing the goose with the golden eggs: Litter effects on scenic quality of the Caribbean coast of Colombia.” *Marine Pollution Bulletin* 127, pp. 22-38.

¹³⁰ See Krelling, A.P., Williams, A.T., Turra, A. (2017). “Differences in perception and reaction of tourist groups to beach marine debris that can influence a loss of tourism revenue in coastal areas.” *Marine Policy* 85, pp. 87-99;

beaches.¹³¹ Litter on beaches reduces tourism by an estimated 1–5 percent.¹³² As for dive tourism, improvements in fish populations and reduced encounters with fishing-gear litter in the Caribbean are likely to result in significant economic gains.¹³³ Recent bans on plastics and styrofoams in several Caribbean countries, including members of the OECS, were in large part motivated by tourist complaints about littering.

Table 6-2. Domestic wastewater treatment levels in the OECS

	Wastewater treatment: m3/d	Municipal wastewater coverage: %
Antigua	4810	4.2
Barbuda	0	7.4
Dominica	NA	14.6
Grenada	NA	8.0
St. Lucia	0	13.2
St. Vincent	213	11.6
Grenadines	0	0
St. Kitts	0	5.6
Nevis	NA	6.4

Source: Peters (2015).

193. In addition to solid waste, pollution through untreated wastewater discharge poses a different challenge in the OECS. About 52 percent of households in the insular Caribbean lack sewer connections and only 17 percent have adequate collection and treatment systems. Small islands often have insufficient or no waste water treatment facilities at all.¹³⁴ In the Eastern Caribbean, wastewater treatment is below the regional average, with only 8 percent of domestic wastewater treated (mostly with primary treatment) and less than 2 percent of urban sewage treated.¹³⁵ As depicted in Table 6-2, Antigua & Barbuda, the Grenadines, and St. Kitts & Nevis have the least wastewater coverage and treatment in the OECS. Pesticides and insecticides used for agriculture are the primary chemical wastes in the Caribbean, high in organic matter and toxic to bacteria and fish.¹³⁶

194. Sewage and wastewater-related pollution can have harmful consequences for human health. Swimming and other contact with contaminated water (e.g., through watersports like surfing and diving) can lead to gastroenteritis and other infections of the digestive system, skin

Schuhmann, P., Skeete, R., Waite, R. (2017). “The Economic Importance of Coastal and Marine Resources to Tourism in Barbados.” Report by the Caribbean Tourism Organization and University of North Carolina Wilmington.

¹³¹ Leggett, C., Scherer, N., Curry, M., Bailey, R., Haab, T. (2014). “Assessing the economic benefits of reductions in marine debris: A pilot study of beach recreation in Orange County, California” (Final report, pp. 45). Cambridge, MA.

¹³² OSPAR Commission. 2009. “Marine Litter in the North-East Atlantic region: Assessment and Priorities for Response.” London, UK.

¹³³ Gill, D.A., Schuhmann, P.W., Oxenford, H.A. (2015). “Recreational diver preferences for reef fish attributes: Economic implications of future change.” *Ecological Economics* 111, pp. 48-57.

¹³⁴ World Bank (2018b).

¹³⁵ Peters, E.J. (2015). “Wastewater reuse in the Eastern Caribbean: a case study.” *Proceedings of the Institution of Civil Engineers - Water Management*, 168(5), pp. 232–242.

¹³⁶ World Bank (2018b).

rashes, conjunctivitis, respiratory infections, meningitis, and hepatitis.¹³⁷ One study in Barbados indicated that an increase in stomach infections would negatively impact visitor’s willingness to again spend vacation in the country.¹³⁸

195. Despite the significant benefits resulting from enhanced wastewater treatment, the costs for the OECS to develop adequate wastewater treatment and disposal (WWTD) systems are estimated to be extremely high.¹³⁹ Relative to GDP, cost estimates range between 25 percent for Dominica to 120 percent for St. Vincent and the Grenadines. Private-sector involvement in wastewater management is constrained by its financial unattractiveness owing to high capital intensity, political pressures to keep tariffs low, and poor regulatory frameworks.¹⁴⁰

Table 6-3. Estimated costs of wastewater treatment investments in the OECS

	Costs of WWTD* (US\$)	Required investment (% of GDP)
Antigua and Barbuda	675,934,507	57.46
Dominica	118,081,895	24.62
Grenada	885,614,216	112.17
St. Kitts and Nevis	421,721,055	56.35
St. Lucia	1,349,399,509	113.54
St. Vincent and the Grenadines	848,503,505	119.07

* WWTD = Wastewater Treatment and Disposal
Source: Peters (2015). UNEP/CAR-RCU (2009).

Table 6-4. Annual rainfall and wastewater reuse coverage in the OECS

	Annual rainfall		Municipal water reuse	Hotel & resorts water reuse
	Range (m)	Mean (m)	(%)	(%)
Antigua	0.89 - 1.40	1.04	4	NA
Barbuda	0.51 - 0.99	0.9	NA	< 10
Dominica	1.80 - 7.62	3.15	0	0
Grenada	1.00 - 4.00	2.23	0	< 1
St. Lucia	1.32 - 2.54	1.55	0	NA
St. Vincent	1.50 - 3.80	2.31	1	> 1
Grenadines	0.80 - 1.40	1.25	0	50
St. Kitts	1.02 - 3.80	1.42	0	16
Nevis	0.90 - 2.20	1.27	0	2.3

Source: Peters (2015).

196. There is a complex relationship between tourism and wastewater generation. Tourists not only consume about three times more water than locals, resulting in associated high amounts of wastewater, but peak consumption by tourism also usually coincides with dry season and subsequent conditions of water scarcity.¹⁴¹ Solutions include rainwater harvesting and the reuse of wastewater on-site, although rainfall and freshwater availability can range widely within the

¹³⁷ Natural Resources Defense Council (2014). “The Impacts of Beach Pollution.” *Testing the waters*, 24.

¹³⁸ UNEP CEP (2015).

¹³⁹ UNEP/CAR-RCU (2009) Financial Assessment for Wastewater Treatment and Disposal (WWTD) in the Caribbean Report. Caribbean Institute for Environmental Health (CEHI), St. Lucia

¹⁴⁰ Peters (2015).

¹⁴¹ Ibid., (2015). Peak tourism consumption is approximately 825 liters/day. See: EarthCheck Research Institute (2013).

region. Climate change models predict 10–30 percent changes in rainfall patterns in the Eastern Caribbean.¹⁴²

Tourism, agriculture and the environment

197. Chapter 4 discussed the contribution of tourism to economic growth in the OECS. We continue the analysis here by looking at the complex interplay between tourism and the environment. The Caribbean’s natural assets—coasts, beaches, and marine life—form the foundation for tourism in the OECS. At the same time, expansion of the tourism industry brings risks that these natural assets will be degraded. The challenge for the tourism industry is to find new ways to derive benefits from the region’s natural capital while preserving its long-term sustainability.

198. Cruise tourism in particular brings environmental costs – mainly in form of oily bilge water and ballast water management, air pollution, and solid waste and wastewater management—of which a large share has to be borne directly and indirectly by local countries and their population.¹⁴³ On a one-week voyage, a middle-sized cruise ship (with around 3,500 passengers) generates 795,000 liters of sewage, 3.8 million liters of grey water, 500 liters of hazardous waste, 95,000 liters of oily bilge water, and eight tons of garbage.¹⁴⁴ But the region’s small ports have limited facilities for handling waste and sewage from cruise ships and holiday-makers who disembark.¹⁴⁵

199. Most cruise ships run on bunker fuels and commonly operate auxiliary engines at high loads throughout their stay at berth.¹⁴⁶ Emissions from on-board waste incineration plants further contribute, and generate ash that can be contaminated by dioxins. Usually discarded into the sea, this ash should be treated as hazardous waste.¹⁴⁷ Approximately 95 percent of exhaust particle matter is PM2.5.¹⁴⁸ Although the direct impact on coastal populations, especially those in ports, need to be further analyzed, external costs more generally include acute and health chronic effects of PM2.5, SO₂ and NO_x and the effects caused by SO₂ on materials used in buildings and structures (including those of cultural value).

200. One prospect for OECS to further develop its tourism potential, especially with a view towards higher in-country value-added, is by targeting individual tourism. With an increasing portfolio of locally-owned infrastructure for individual travel, there are multiple opportunities for

¹⁴² ECLAC (2010). *Regional Climate Modelling in The Caribbean*.

¹⁴³ Klein, R.A. (2011). “Responsible Cruise Tourism: Issues of Cruise Tourism and Sustainability.” *Journal of Hospitality and Tourism Management*, 18, 107–116.

¹⁴⁴ Wan, Z., Zhu, M., Chen, S., Sperling, D. (2016). “Three steps to a green shipping industry.” *Nature* 530, pp. 275-277

¹⁴⁵ World Bank (2018b). “Marine Pollution in the Wider Caribbean: Not a Minute to Waste.” World Bank Group Draft Report. Forthcoming.

¹⁴⁶ Tzannatos, E. (2009). “Ship emissions and their externalities for the port of Piraeus, Greece.” *Atmospheric Environment* 44, pp. 400-407

¹⁴⁷ Carić, H., Mackelworth, P. (2014). “Cruise tourism environmental impacts: The perspective from the Adriatic Sea.” *Ocean & Coastal Management* 102, pp. 350-363

¹⁴⁸ Sharma, D. (2006). “Ports in a Storm.” *Environmental Health Perspectives* 114 (4), pp. 222-231;

growth in this segment. One driver of growth could be through enhanced regional integration through infrastructure offerings and regional rather than national marketing approaches. Regional ferry systems, for example, would facilitate travel between islands and countries, but could also facilitate an increase in regional trade.¹⁴⁹ Overall, the joint natural assets of the OECS—and their sustainable management and conservation—will be crucial to any of efforts to further boost the tourism sector for economic growth.

201. Other options for enhancing the role of tourism is to find ways that increase the local spending of cruise ship passengers, and integrate local value chains more strongly into the tourism industry. Local agricultural production is often seen as one of the biggest opportunities, as food consumption is an important part of tourism. However, although highly variable from country to country, the agricultural sector is relatively small overall and the general trend has been a declining role for agribusiness in national economies.¹⁵⁰

Agriculture and tourism

202. In Dominica, approximately 40 percent of the labor force is employed in the agricultural sector, and its contribution to GDP is 14.9 percent.¹⁵¹ This figure is far lower however in the other OECS countries, ranging from 1.5 percent for St. Kitts to 7.5 percent for St. Vincent and the Grenadines (as per 2014 data). One of the key limiting factors for the agricultural sector is the availability of arable land.

203. The agriculture sector is linked to the tourism sector through supply of food and beverages and likely by workers moving between the two sectors on a seasonal basis. In 2007, 25 percent of agricultural imports were consumed by the tourism sector, as only 32 percent of tourism demand for produce could be met by local production.¹⁵²

204. A recent World Bank study analyzed the potential for improving linkages between the agricultural and the tourism sector for locally produced food items in the Eastern Caribbean, such as cultivated fruits, vegetables, and fish and other seafood production.¹⁵³ For example, perishable food items may have a comparative advantage if sourced through local value chains. The supply of such items may also suit the structure of agricultural production in OECS, which is largely based on small- and medium-size agricultural producers. Smallholders currently have limited capacity to deliver produce in the required quantity and quality in a timely, consistent, and competitive manner. One key issue is frequent food losses caused by overproduction and the lack of storage capacity.¹⁵⁴ An enabling policy framework supporting the production of these food items (with

¹⁴⁹ World Bank (2015). “Driving Tourism in the Eastern Caribbean: The Case for a Regional Ferry.” World Bank, Washington, DC.

¹⁵⁰ Ibid., (2015).

¹⁵¹ Based on 2014 data.

¹⁵² World Bank Tourism Linkages Survey. 2008. “Backward Linkages of Tourism in the Agriculture Sector for the OECS Countries.” World Bank and FAO (Food and Agriculture Organization).

¹⁵³ World Bank (2015).

¹⁵⁴ Jansen, H., Stern, A., Weiss, E. (2015). Linking Farmers and Agro-processors to the Tourism Industry in the Eastern Caribbean.” The World Bank. Washington DC.

extension services and investments in storage, for example) could strengthen agricultural-tourism linkages.

205. Facilitating the development of cooperative production and marketing system, contract farming for fresh produce, and making use of IT solutions to efficiently organize supply and demand are some options for boosting the vertical linkages between tourism and agriculture. Similar options also exist for enhancing the organization of value chains and associated storage through, for example, enhancing financial literacy, marketing skills, food processing and machinery, packaging, quality control, and food safety and hygiene. One obstacle to these opportunities is that younger generations do not perceive agriculture and rural life as desirable career paths.¹⁵⁵

Fisheries

206. All OECS are members of the Caribbean Regional Fisheries Mechanism (CRFM), under which they have to report data on the fisheries sector. While data mainly focuses on marine commercial capture fisheries, there is a general lack of reliable statistics due to insufficient data collection and insufficient use of the Caribbean Fisheries Information System (CARIFIS), especially for subsistence fishing and inland and fresh water fisheries.¹⁵⁶ There is likely no data available on subsistence fishing in most of the six OECS countries.¹⁵⁷

Table 6-5. Land area, coast line, continental shelf area and EEZ of the OECS

	Land area (km²)	Coast line (km)	Continental shelf area (km²)	EEZ (km²)	% of land area/EEZ
Antigua and Barbuda	443	153	3,710	107,914	0.4
Dominica	751	148	286	28,626	3
Grenada	344	121	2,292	26,158	1
St. Kitts and Nevis	261	135	788	10,201	3
St. Lucia	606	158	811	15,484	4
St. Vincent and the Grenadines	389	84	2,082	36,314	1

Source: Masters (2015).

207. The reported contribution of the fisheries sector towards GDP is low, but because of the large value of fish sold off-vessel economic value is likely underestimated. In contrast to its low economic value, fishery is an important employment sector and food source and is also an important aspect of the cultural heritage of the OECS.¹⁵⁸ Across the OECS, the fisheries sector provides jobs for 6–22 percent of the employed population.¹⁵⁹ In 2013–14, the OECS contributed approx. 5.3 percent to the total average annual fisheries production (by weight) of all CRFM member states.¹⁶⁰

¹⁵⁵ Ibid. (2015).

¹⁵⁶ CRFM (2014a).

¹⁵⁷ Masters (2014).

¹⁵⁸ Heileman (2007).

¹⁵⁹ Masters (2015).

¹⁶⁰ Ibid. (2015).

Table 6-6. Percentage contribution to gross domestic product (GDP) by the fishing industry (in current prices)

	% contribution to GDP	
	2012	2014
Antigua and Barbuda	1.18	1.25
Dominica	0.37	0.45
Grenada	1.61	1.39
St. Kitts and Nevis	0.54	0.45
St. Lucia	0.7	0.7
St. Vincent and the Grenadines	0.44	0.48

Source: Masters (2015).

Table 6-7. Employment in fishing, 2013–14

	Employment in direct production in marine commercial capture	Employment in direct production in aquaculture	Employment in other fisheries dependent activities *	Fishing Sector Employment	% of labor force employed in fisheries
Antigua and Barbuda	1,840	2	4,716	6,565	21
Dominica	1,344	5	4,047	5,396	17.9
Grenada	2,729	14	8,229	10,972	18.3
St. Kitts and Nevis	1,140	1	3,423	4,564	26.8
St. Lucia	1,226	201	4,281	5,708	7.2
St. Vincent and the Grenadines	2,500	0	500	300	5.5

* Calculated using “Some estimates indicate that, for each person employed in capture fisheries and aquaculture production, about three jobs are produced in the secondary activities” (FAO, 2010)

Source: Masters (2015).

208. An important observation for the fisheries of the six OECS countries is that (except in Grenada’s case) they are not for export but rather are importing to cover domestic consumption. The main exporting countries/territories of the CRFM before Grenada are Belize, Suriname, Turks and Caicos Islands, Guyana, and Bahamas with fish exports ranging from 42 percent to 85 percent of national production. In some contexts, fishermen focus on niche products with high export value. In Barbuda, for example, with an estimated permanent population of about 500, the average annual catch of spiny lobster was reported at US\$315,000 between 2007–16.

Table 6-8. Number of fishing vessels operating in the commercial capture fishery, 2012

	2012	Sources for 2011 and 2012 data
Antigua and Barbuda	339	Fisheries Division Antigua and Barbuda, 2014**
Dominica	434*	CRFM, 2013
Grenada	1768	Fisheries Division Grenada, 2014**
St. Kitts and Nevis	579	Department of Marine Resources St. Kits and Nevis, 2011**
St. Lucia	700	CRFM, 2012a; CRFM, 2013
St. Vincent and the Grenadines	785	Fisheries Division St. Vincent and the Grenadines, 2011**

* Data for 2011 carried forward as 2012 data were not yet available

** Data collected directly from the data/fisheries statistic unit of the Fisheries Authority in the Member State.

Source: Masters (2014).

Climate change and natural disasters

209. Globally, SIDS—including those of the OECS—face heightened vulnerability to natural disasters, including susceptibility to the adverse effects of climate change. Two-thirds of these countries across the world suffer the highest relative losses due to natural disasters (1–9 percent of their GDP each year). Hurricanes, storms, earthquakes, volcanic activity, floods, droughts, and landslides are frequently observed in the Caribbean. Global climate change magnifies the challenges of the regional natural environment, putting additional pressure on fragile island systems through increasing average ocean and land temperatures, changes in the seasonality and duration of rainfall, and rising sea levels. Greater exposure to economic and physical shocks leads to greater growth volatility in small states compared with larger states, and repeated shocks coupled with the associated stresses on public finances and already-limited borrowing opportunities has led to a heavy buildup of debt in several small states.¹⁶¹

210. The OECS are in the so-called “hurricane belt” and are highly exposed to natural disasters. Natural disasters are estimated to have cost an average of 3 percent of GDP for the OECS in the twenty years through 2015, with individual events resulting in damages equivalent to as much as 220 percent of GDP and 150 percent of GDP, respectively, in the cases of Hurricane Georges in St. Kitts and Nevis in 1998 and Hurricane Ivan in Grenada in 2010.¹⁶² In Dominica and Grenada, losses related to extreme weather events in the period 1996–2015 have been estimated in the order of 8 percent of GDP. These countries rank 2nd and 3rd respectively in terms of the relative amount of losses to weather events during the same period globally (Figure 2-4).

211. Broader climate-change impacts in the Eastern Caribbean include the erosion of soft shores, increased salinity of estuaries and aquifers, rising coastal water tables, and increased and more severe coastal flooding and storm damage. The vulnerability of the countries also results from intensive land development, high population density in coastal zones, poorly developed coastal infrastructure, and a low human capacity of trained personnel.¹⁶³ The impact of climate change is also resulting in long-term changes to the economic base of the OECS, mainly tourism and fisheries. Climate change is the single greatest global threat to coral reefs by fostering acidification processes and mass bleaching events due to thermal stress. Grenada and St. Kitts and Nevis are among 27 countries identified most vulnerable globally to reef degradation.¹⁶⁴ The consequential decline in the abundance of reef-based marine populations, and particularly in the number of large fish observed on recreational dives, will result in significant reductions in diver consumer spending in the Caribbean. Conversely, most academic literature suggests that scuba divers are willing to pay high surpluses for reef quality and species diversity. Some authors suggest that a fee of US\$10 per dive trip in St. Kitts and Nevis and Barbados could contribute approximately US\$180,000 towards conservation in St. Kitts and Nevis.¹⁶⁵ Increasing reef resilience in the OECS should therefore be of utmost importance for stakeholders in the industry.

¹⁶¹ Patil et al. (2016).

¹⁶² Germanwatch (2017); Acevedo (2017).

¹⁶³ Lewsey, C., Cid, G., Kruse, E. (2004). “Assessing climate change impacts on coastal infrastructure in the Eastern Caribbean.” *Marine Policy* 28, pp. 393-409

¹⁶⁴ Burke et al. (2012).

¹⁶⁵ Gill et al. (2015).

Human capital sustainability

212. Education indicators place the OECS well above the average of all countries with similar level of economic development. Maintaining human capital is one of the region’s main challenges, however. Human-capital sustainability has been deteriorated by a vicious cycle of human-capital flight (emigration) and a vicious cycle of human capital deterioration (scarred workforce), both of which continue to hamper productivity and growth (Figure 6-5 and Figure 6-6). The two cycles are reinforced by high unemployment rates, especially in Grenada, St. Lucia, and St. Vincent and the Grenadines.

Figure 6-5. Vicious cycle of human-capital flight

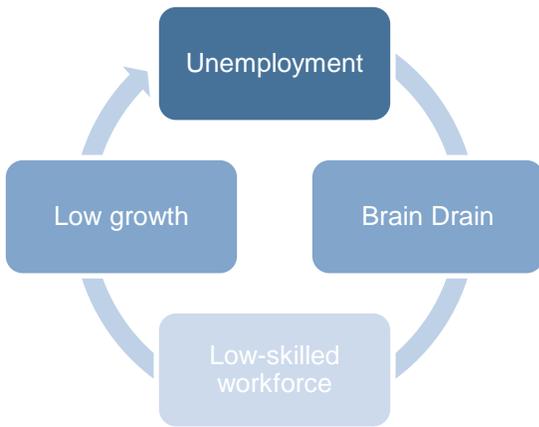


Figure 6-6. Vicious cycle of human-capital “scarring”

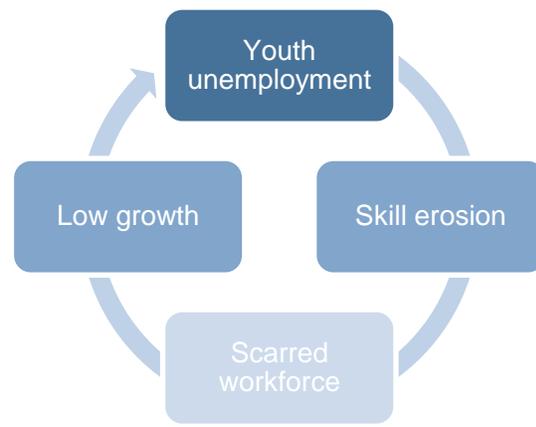
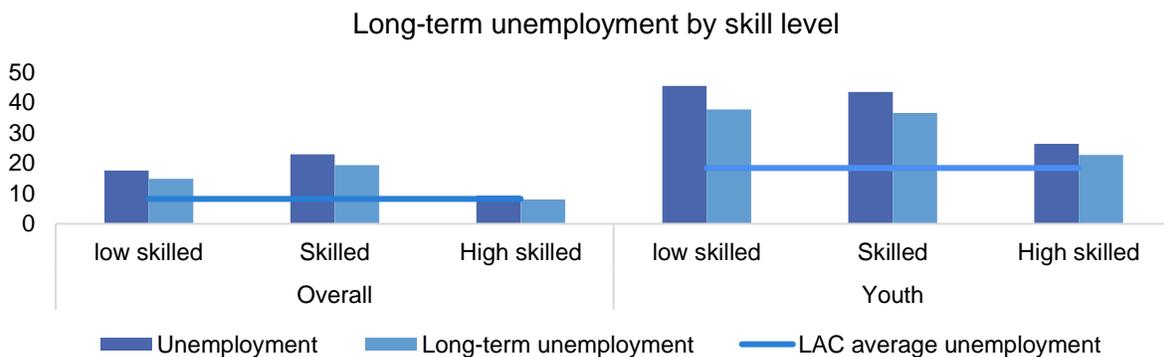


Figure 6-7. Unemployment is high even among skilled workers, with 85 percent of unemployment considered long term.



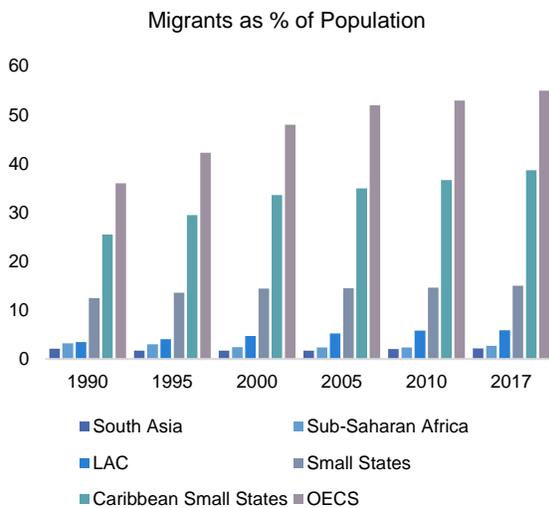
Source: LFS 2013–2016.

Note: Unemployment rate is defined using the ILO standard. Skill level is defined by level of education: low-skilled (below secondary education), skilled (below tertiary education) and high-skilled (completed tertiary education).

213. Unemployment in most OECS countries is high relative to other small states and LAC countries. More than 85 percent of unemployment is classified as long term, posing a higher risk of skill deterioration. While unemployment disproportionately affects low-skilled workers, the unemployment rate among high-skilled workers in the OECS is still higher than the LAC average of all skill levels. Especially among young people, the high-skilled unemployment rate of 26.4 percent is significantly higher than the LAC youth unemployment rate of 18.4 percent (Figure 6-7)

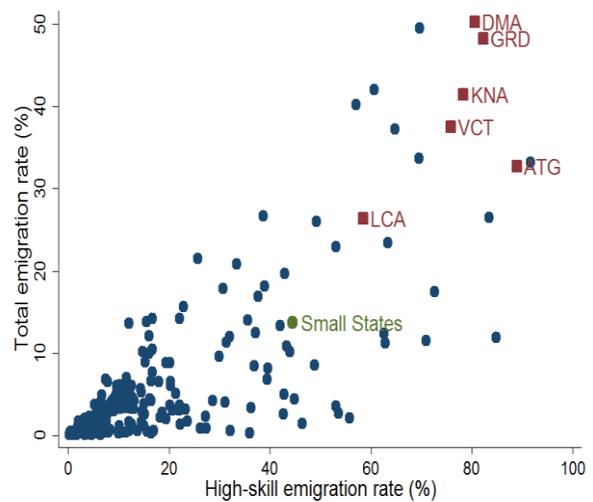
214. High unemployment is one of the main motivations, together with natural disasters and insecurity, behind huge levels of emigration from the OECS, creating human capital flight. Recent data show a steady increase in the number of OECS population living abroad and as a share of the OECS-resident population. The proportion of the population residing in the OECS countries living abroad rose from 35.9 percent in 1990 to 54.9 percent in 2017 (Figure 6-8). Women are more likely to migrate. The extent varies across countries which can be due in part to women’s lower employment opportunities and earnings potential compared to men. In Grenada, female migrants account for 72 percent of the female population residing in Grenada, significantly larger than male migrants (54 percent of the male population). The gender difference is small in Antigua and Barbuda, where female (male) migrants account for 34 (32) percent of the female (male) population residing in the home country (Figure 6-10).

Figure 6-8. Outmigration from the OECS is significantly higher than from other small states



Source: International migrant stock, UN Population Division.

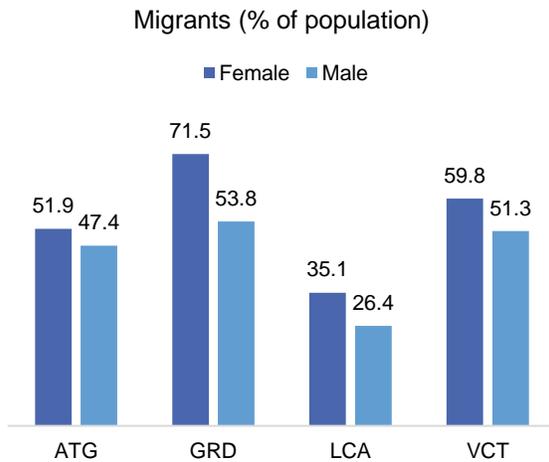
Figure 6-9. Brain drain is a major issue for the OECS



Source: Institute for Employment Research, brain-drain data 2010.

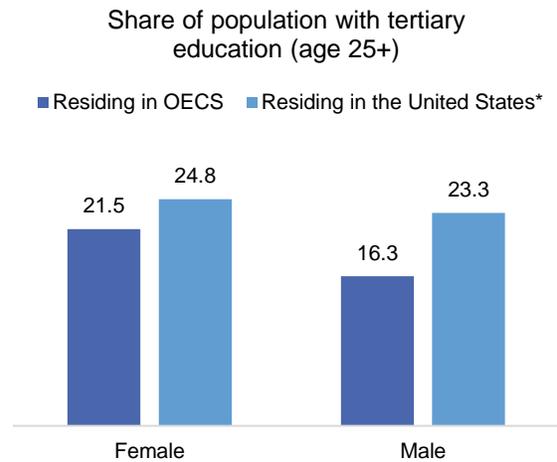
Note: High skill refers to completed tertiary education. Emigration rate is a share of migrants in the pre-migration population.

Figure 6-10. Women are more likely to migrate



Source: International migrant stock, UN Population Division.

Figure 6-11. Men have a higher rate of brain drain



Source: American Community Survey (ACS) 2015.

Note: *Migrants who migrated to the United States after the age of 21.

Box 6-2. Knowledge Gap: What is the role of migration and remittances in household decision making?

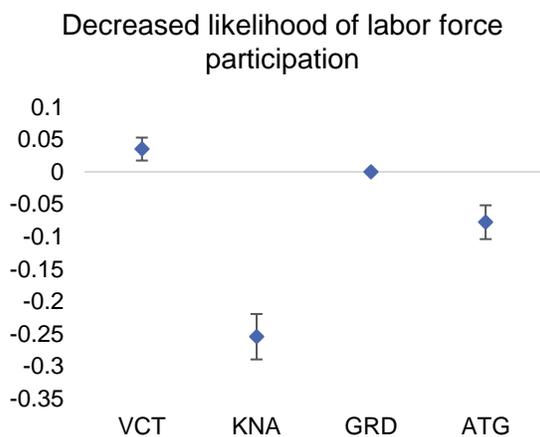
International evidence suggests that migration and remittances affect household decisions on labor market activities, education expenditure, health expenditure, and investment. Since the brain drain situation in the OECS is unique and large-scale, a country-specific study of the impact of migration and remittances on human development and economic development would be of great use.

215. While international labor mobility allows labor markets to be more resilient, those that offer limited opportunity for employment can prompt high-skilled workers to seek opportunities elsewhere and emigrate in large numbers (the “brain drain” effect). Brain drain is commonly a major issue for small states, including the OECS, in which unemployment rates for skilled workers and high-skilled workers are extremely high, and high-skilled workers are more likely to migrate (Figure 6-9). Interestingly, despite lower emigration rate, men have a higher rate of brain drain than women (Figure 6-11). Although 23 percent of men who immigrated to the United States after the age of 21 have completed tertiary education, only 16 percent of those who stayed in their home countries do so. The phenomenon of human capital flight can adversely affect the size of the labor force and productivity and ultimately growth. Nevertheless, if OECS countries are able to engage their diaspora in economic development through reverse-investment schemes, brain drain need not be debilitating and can even bring benefits.

Box 6-3. Impact of Remittances on Labor Supply

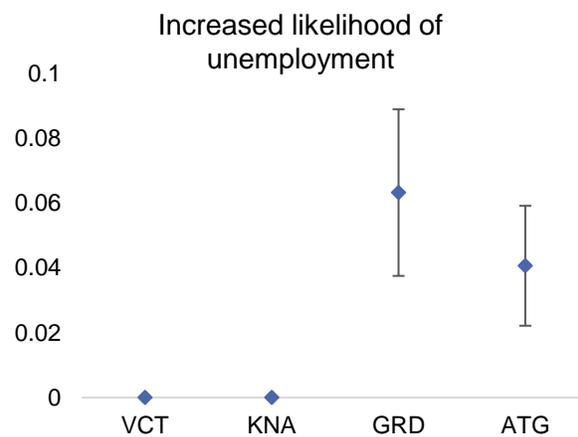
Since remittance inflows are simple income transfers, remittance-receiving households may substitute remittance income for labor income. Remittances may also increase the reservation wage of individuals living in the remittance-receiving households, altering their decisions about labor-force participation and discouraging them from taking job opportunities. The technique of propensity score matching, which is used to find a comparison group for individuals in remittance-receiving households, suggests that in some OECS countries remittances indeed generate a disincentive to participate in the labor market. While St. Vincent and the Grenadines has a larger share of population receiving remittances, their effect on labor supply decision is negligible. The largest impact on labor force participation is found in St. Kitts and Nevis due to sizable remittance inflows, where living in a remittance-receiving household decreases the chance of participating in the labor force by 25 percentage points (Figure 6-12). A similar disincentive is found in Grenada and Antigua and Barbuda where living in a remittance-receiving household increases the chance of being unemployed by 4–6 percentage points (Figure 6-13). While remittances play a significant part in poverty reduction in the OECS, they discourage members of remittance-receiving households from participating in the labor market in some countries. As such, their negative impact needs to be taken into account in terms of wasted human capital, reduced productivity, decreased tax income, and an increased future burden on pension schemes and health services.

Figure 6-12. Working-age population from remittance-receiving households are less likely to enter the labor force



Source: World Bank Staff estimates from LFS 2013–2016. Note: Propensity score matching controlled for household and individual characteristics. Estimates are shown with a confidence interval within one standard error.

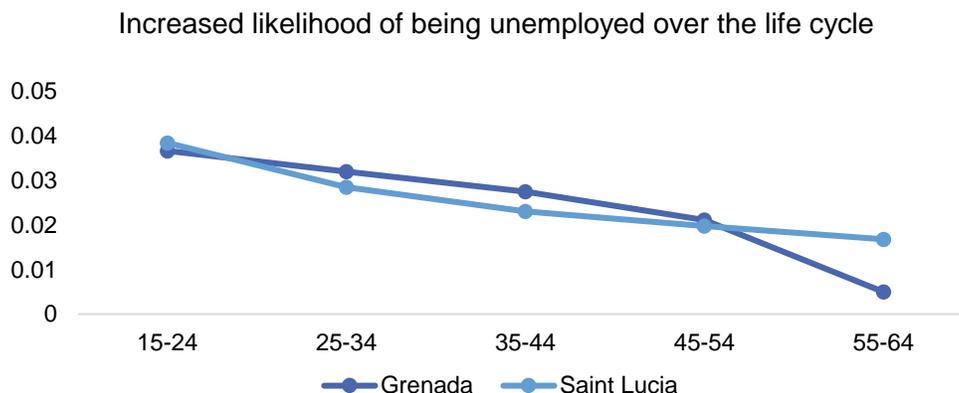
Figure 6-13. Labor-force participants from remittance-receiving households are also more likely to be unemployed



Source: World Bank Staff estimates from LFS 2013–2016. Note: Propensity score matching controlled for household and individual characteristics. Estimates are shown with a confidence interval within one standard error.

216. Long-term unemployment usually leads to skill deterioration, with young people more affected than other age groups when long-term unemployment forms part of their early labor-market experience. Skill deterioration compromises workers’ future expected salaries and their chances of obtaining a decent job in the longer term, a phenomenon known as the “scarring effect.” The effect is visible in Grenada and Saint Lucia, the two countries where data are available. Young people who enter the labor market during a low-growth period have a higher chance of being unemployed even when they are in their 40s (Figure 6-14). This phenomenon hampers the economy’s future expected performance and the prospect of sustained growth, creating another self-reinforcing vicious cycle which has an adverse impact on sustainable development.

Figure 6-14. Youth unemployment has a long-term impact on future labor market possibilities, or a “scarring effect,” in Grenada and Saint Lucia



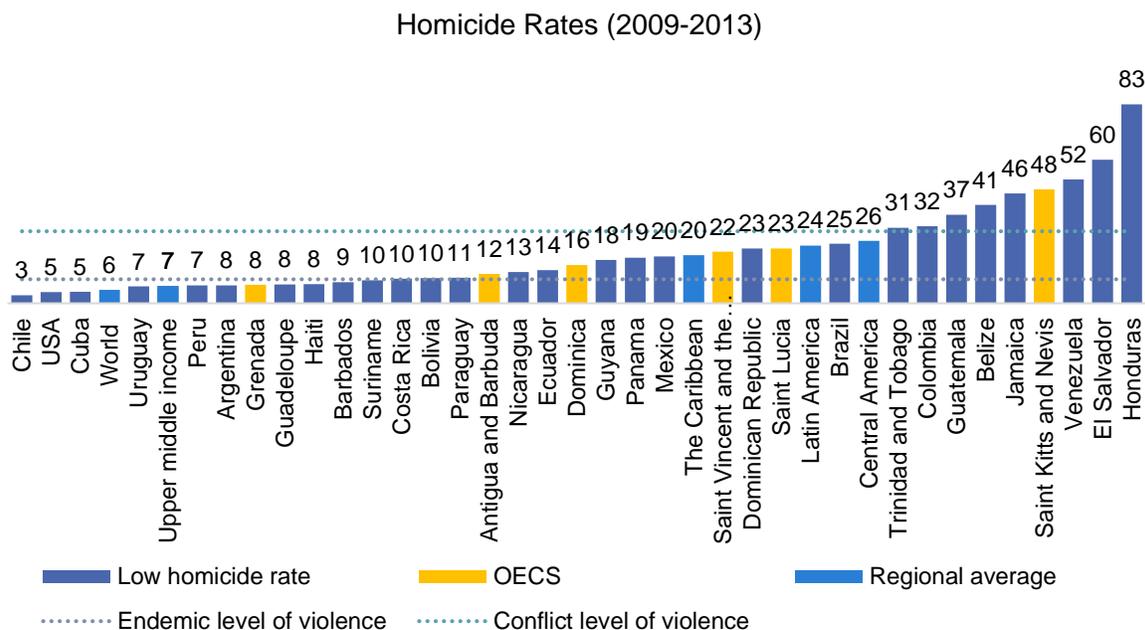
Source: World Bank staff estimates from Grenada’s LFS 2013–2017 and Saint Lucia’s LFS 2008–2016. Impact is an average increase in the likelihood of being unemployed over the life cycle if an individual enters the labor market during a period of five-percentage-point decrease in growth rate.

Social Sustainability

217. Crime rates in most OECS countries remain below the LAC average. The issues of crime and security have been of growing concern due to increasing criminality and a lack of capacity by law enforcement to respond.¹⁶⁶ Homicide rates in the OECS are lower than the LAC average, except for St. Kitts and Nevis which is listed among those with the highest homicide rate in Latin America and the Caribbean (Figure 6-15). In contrast to evidence gathered elsewhere internationally, higher per capita income or poverty reduction do not seem sufficient to reduce crime and violence in the Eastern Caribbean. In fact, homicide rates in two high-income countries, Saint Kitts and Nevis and Antigua and Barbuda, doubled during 2000s. Exclusionary and jobless growth, and high rates of youth unemployment in particular, tend to result in high rates of crime. Natural disasters pose additional, albeit temporary, risks of social vulnerability and crime.

¹⁶⁶ United Nations Development Programme (2012). *Caribbean Human Development Report 2012: Human Development and the Shift to Better Citizen Security*; New York, NY: UNDP.

Figure 6-15. Homicide rates in most OECS countries are higher than the endemic level of violence



Source: Laura Chioda (2017) based on UNDOC data for the latest year available (2009–13).¹⁶⁷ Homicide rate is defined per 100,000 population. The dashed lines at 10 and 30 homicides per 100,000 population represent the endemic and conflict level of violence as defined by the World Health Organization (WHO).

218. More than half of the population of St. Kitts and Nevis identifies security as the biggest problem in the country, higher than the LAC average (Figure 6-16). While perception of insecurity in other OECS countries is relatively low compared to the LAC average, the issues of victimization, the drug trade, domestic violence and gang activity merit concern by the government. Crime affects vulnerable groups disproportionately.¹⁶⁸ Young people, especially men, are more likely to be a victim of crime (Figure 6-17). In Saint Lucia, half of young men report being a victim of homicide, violent threats, theft or acts of aggression in the past five years. Gender-based violence is reported as an important problem in Saint Vincent and the Grenadines, St. Kitts and Nevis, and Dominica (Figure 6-18).¹⁶⁹ The intensity and character of crime varies across OECS countries. St. Kitts and Nevis has the most serious crime problem, particularly homicide and gang activity. In most OECS countries, rates of crime against property (e.g, robbery) continue to outstrip violent crime rates. The most pressing security concern for Dominica and Saint Lucia involves drug-trafficking. A United States government identifies Dominica, St. Kitts and

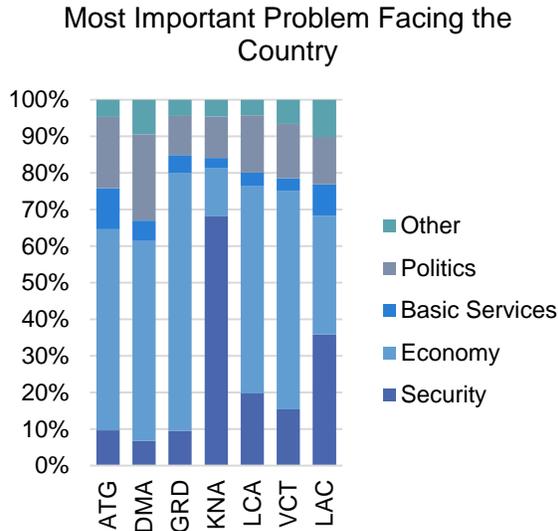
¹⁶⁷ Chioda, Laura (2017). *Stop the Violence in Latin America: A Look at Prevention from Cradle to Adulthood*. Latin American Development Forum; Washington, DC: World Bank.

¹⁶⁸ 2016 LAPOP OECS survey shows that report of victimization is higher among the bottom 40 percent except in Saint Lucia and St. Vincent and the Grenadines.

¹⁶⁹ In Antigua and Barbuda, while only 10 percent of respondents from 2016 LAPOP survey reported that domestic violence is a serious problem, 15.7 percent and 19.1 percent of respondents from 2010 UNDP citizen security survey reported that they had been victim of domestic violence or worried about being sexually assaulted.

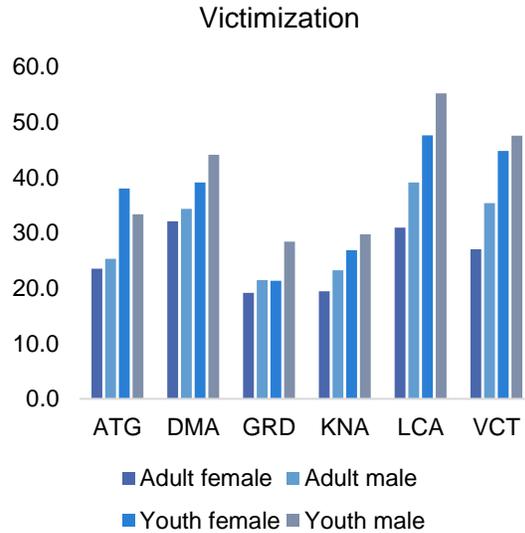
Nevis, and St. Lucia as transit points for narcotics destined for the United States, Europe, and Latin America.¹⁷⁰

Figure 6-16. Most of St. Kitts and Nevis’ population identifies security as the country’s biggest problem



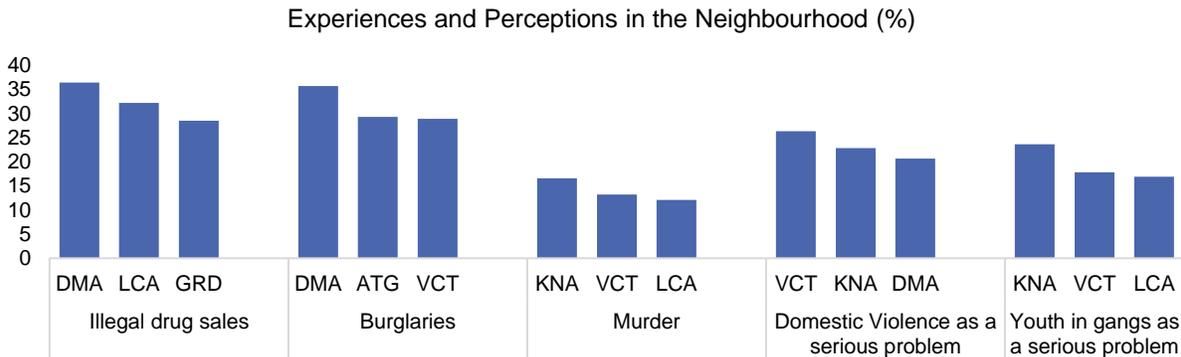
Source: LAPOP OECS survey 2016.

Figure 6-17. Crime affects vulnerable groups disproportionately, especially young men



Source: LAPOP OECS survey 2016. Victimization by theft or aggression during 2011–16.

Figure 6-18. Drugs, burglaries, domestic violence, and the presence of young people in gangs are concerning issues in some OECS countries



Source: LAPOP OECS survey 2016. Three countries with the highest response are reported.

219. Young people are not only the victims of crime. Rather, high levels of youth unemployment in the OECS may have led to increased youth violence, gang involvement, and drug abuse. Youth unemployment is associated with a rising at-risk youth population, some of whom are prone to social exclusion and exposure to violence, particularly in the form of street gangs. Besides St. Kitts and Nevis, the presence of young people in gangs is a particularly concerning issue in Saint Lucia

¹⁷⁰ Donoso, Juan Carlos (2016). LAPOP Americas Barometer Report on Citizen Security in Six Countries in the Organization of Eastern Caribbean States; Nashville, TN: LAPOP.

and Saint Vincent and the Grenadines, two countries with the highest youth unemployment in the region. Investment in at-risk young people is necessary to reduce potential crime and violence, as well as to ensure sustainable human development and social inclusion.

220. Challenges remain in tackling crime and violence in the OECS. The capacity of institutions that tackle crime and violence, including the judicial system and police force, tends to be limited by both human and financial resources, and is subject to economies of scale. In 2010, security expenditures accounted for 7.1 percent of GDP in Antigua and Barbuda and 11 percent in Saint Lucia.¹⁷¹ While the level of trust in law-enforcement institutions varies across countries, the level of trust in the police is lower than the LAC average in all OECS countries except Grenada. Trust in the judicial system is higher than the LAC average except for in Saint Lucia and Dominica. Differences in the complexity of crime problems across OECS countries require country-specific budgetary frameworks, but regional efforts may also be needed to achieve economies of scale in crime prevention.

Financial resilience and sustainability

221. After large, infrequent weather events, OECS countries face a “protection gap” in the coverage of reconstruction costs, continuity of services to citizens, loss of income for households and firms (especially SMEs), and loss of tax revenue. The Caribbean Catastrophe Risk Insurance Facility (CCRIF) is the primary pre-arranged risk-transfer mechanism for OECS governments. CCRIF injects immediate liquidity into government budgets after disasters to help ensure continuity of public services, meet humanitarian needs, and finance recovery. While CCRIF has played a critical role in extending immediate liquidity, countries still face major shortfalls in the recovery and reconstruction phases.

222. Public assets and public services in the OECS tend to be underinsured, if at all. The capacity to “build back better” (replaced destroyed and damaged infrastructure and services with more resilient ones) is reduced in such resource-constrained environments. New insurance products and optimized policies would help better protect key vulnerable infrastructure and public services, protect fiscal balances and, potentially, incentivize more resilient reconstruction and recovery. Saint Lucia, for example, has a small insurance market for both public and private assets focusing on life, housing, and vehicles. The current non-life insurance penetration is 4.2 percent, and 20 percent of homeowners are covered. Based on the available working registry of government-owned buildings, less than 5 percent are insured.

223. Private assets also tend to be underinsured. High reconstruction costs weigh down business activity and household welfare after a disaster. They also represent a contingent liability for governments, which are often looked to as the insurer of last resort. If the private sector is not able to recover quickly, this will impact fiscal income as well as increase public-sector expenditure.

224. Local insurance markets in OECS countries are generally fragmented, sometimes possess low technical capabilities, and are unable to tap into uninsured markets. In St. Lucia, for example,

¹⁷¹ United Nations Development Programme (2012). *Caribbean Human Development Report 2012: Human Development and the Shift to Better Citizen Security*; New York, NY: UNDP.

there are 19 general insurance companies for a total gross premium of US\$60.5m. The market is comprised of local and regional general insurance companies, with access to Lloyd's of London. Insurance policies are intermediated by local agents and brokers. Companies focus on simple risks with low coverage limits, such as homeowners' policies, with low technical underwriting capabilities. For complex risks, companies rely on international reinsurance brokers or choose not to insure. Insurance products offered are traditional (e.g., proportional basis), and there is no supply of first-loss, non-proportional, coverage. This is a major restriction for public sector and large private businesses.

225. There is a reliance on reinsurance as a supplier of capital. About 80–90 percent of business is ceded abroad. Reinsurance programs are based on both proportional (quota share and surplus share) and non-proportional (working excess of loss and catastrophe excess of loss). Automatic underwriting capacity among the local insurance market ranges from US\$10 to US\$200m per unit of risk. Given the current competitive market, coinsurance is not a market practice, meaning that the market cannot offer high amounts of insurance. While reliance on international reinsurance markets for catastrophe coverage is necessary and advisable, increased capital for regional insurance providers would allow to OECS countries to more adequately cover lower layers of risk. Insurance brokers' services tend to be limited in terms of technical advice, insurance policy management, and claims support.

226. Underpinning all the issues outlined above, Caribbean governments lack an efficient, optimized set of financial instruments, policies, and systems to protect national balance-sheets. Providing evidence on the fiscal impacts of disasters, including in terms of debt sustainability, is important to engage and implement DRF strategies. Such strategy should be a mix of ex-ante instruments (e.g. emergency funds, contingency lines of credit, parametric and indemnity insurance) and ex-post instruments (donors, post disaster loans, fiscal measures, etc.) with a definition of its intended purpose (e.g., risk retention versus transfer), its precedence of use, and portfolio optimization.

7. Priority Areas

The SRD has identified the opportunities for regaining high-growth trajectory in an inclusive and sustainable manner, reinforced by priority areas that will address the main constraints diagnosed throughout the report. The priority areas include: (i) building resilience to external shocks from a 360° perspective, (ii) embedding growth in the blue economy, (iii) strengthening and harnessing human capital, (iv) embracing new technologies to transform productivity, and (v) promoting regional integration and connectivity. Area (i) provides the environment that protects the development path from external shocks and natural hazards, setting the foundation for a stable growth path. Area (ii) builds on comparative advantage as a key engine for growth. Area (iii) supports growth and ensures economic inclusion. Areas (iv) and (v) are necessary for small states as they offer the solutions to economies of scale and capacity constraints of the OECS.

227. The prioritization process identifies the opportunities for regaining high-growth trajectory in an inclusive and sustainable manner, reinforced by priority areas that will address the main constraints diagnosed in the previous chapters. This is particularly important as the OECS used to enjoy a high growth period during the 1980s but economic growth has been stalled since 1990. Their small size allows the economies to bounce back quickly if the development strategies are clearly defined and prioritized.

228. The prioritization is based on the diagnostic presented in the previous chapters. The analysis relies on findings from the existing literature and comprehensive cross-country benchmarking, particularly with regard to Latin America and the Caribbean, upper-middle-income countries and small states which present different levels of development and sets of constraints. The findings were also validated with country knowledge through consultation with country stakeholders and regional organizations.

229. The SRD concludes with recommendations that are believed to boost growth, inclusion and sustainability, and that are expected to directly or indirectly achieve the twin goals. In the first step, the SRD takes a regional approach in identifying priority areas. This is motivated by the similarity of development challenges as well as the regional solutions to these challenges. These priority areas are not meant to be mutually exclusive or exhaustive. They overlap to some extent. For each priority area, the SRD provides a set of policy actions with a possible timeframe in which the impact could be realized, from “low-hanging fruits” to longer-term reforms. The second step acknowledges variations across the OECS countries and identifies the country-specific priority scale for each policy action.

Building on comparative advantage while tackling small size and vulnerability

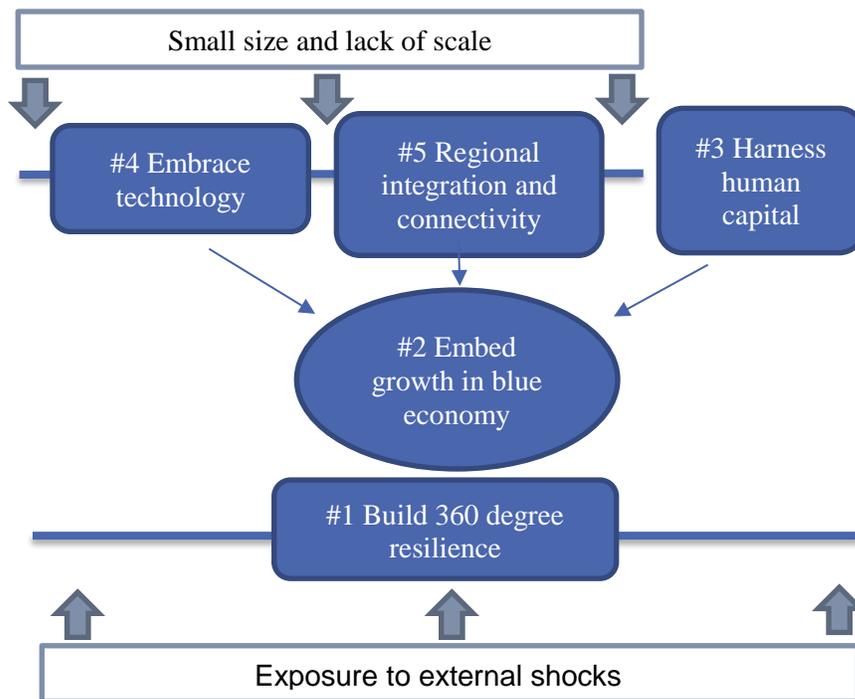
230. The diagnostic shows that the OECS used to enjoy a high growth period during the 1980s but economic growth has stalled since 1990 due to an erosion in trade preference, rising competition in global tourism markets, a series of natural disasters, and a fall in tourism demand following the 2008 global financial crisis.

231. The diagnostic points out that opportunities for regaining high growth trajectory lie in the potential of the blue economy as a comparative advantage to reignite economic growth. The OECS have relatively rich natural assets. Tourism contributes significantly to GDP and employment and has been an engine of growth. While the countries have undergone a structural transformation from agriculture to services, much of the population still relies on agriculture. Harnessing the natural capital of the countries, especially in marine and coastal resources, provides a unique comparative advantage for OECS countries to boost economic growth, as well as tackle the key challenges of high unemployment, food security, poverty, and resilience to climate change. The assets and services provided by oceans contribute to jobs and incomes in the region's major industries, such as tourism and recreation, fishing and aquaculture, and transport.

232. To fully exploit the potential of the blue economy in reigniting economic growth, the diagnostic also identifies a set of constraints to growth and inclusion that needs to be tackled. First, location and geography expose the OECS to several natural hazards. The OECS face a higher frequency of disasters, each time with significant damage and loss, and a greater risk from climate change than other countries. Secondly, small size results in lack of scale and lack of diversification, increasing vulnerability to external shocks. OECS countries have more concentrated export baskets than other countries and rely on fewer tourism markets. Thirdly, institutional factors including pro-cyclical fiscal policy, a high public debt burden, and constrained government capacity and effectiveness hamper potential growth and add to volatility. Lastly, limited job opportunities and high unemployment encourage brain drain, erode skills, and make growth less inclusive.

233. Based on the above diagnostic, the SRD has identified five priority areas for policy actions to build on the countries' comparative advantage while tackling an identified set of constraints. The priority areas include (i) building resilience to external shocks from a 360° perspective, (ii) embedding growth in the blue economy, (iii) strengthening and harnessing human capital, (iv) embracing new technologies to transform productivity, and (v) promoting regional integration and connectivity. Area (i) provides the environment that protects the development path from external shocks and natural hazards, setting the foundation for stable growth. Area (ii) builds on comparative advantage as a key engine for growth. Area (iii) supports economic growth and ensures economic inclusion. Areas (iv) and (v) are necessary for small states as they offer the solutions to economies of scale and capacity constraints of the OECS. While size and scale have typically been identified as the biggest obstacle for small states, the commonality of characteristics, opportunities and challenges of OECS countries present regional integration as a solution to this problem. The availability of disruptive technologies enables small states to reduce costs and realize economies of scale. While technological advancement is an emerging area, it offers new opportunities and moves forward the global development agenda.

Figure 7-1. Priority areas to build on comparative advantage while tackling small size and vulnerability



Priority #1: Build resilience to external shocks from a 360° perspective

234. The events of the past decade—from the onset of the global financial crisis in 2007 to the devastating 2017 Caribbean hurricane season, all amid the steady acceleration of climate change—drive home the need for the OECS to strengthen resilience to external shocks. Given the inherent vulnerability of the OECS, their development process can be disrupted repeatedly, weakening the performance of the identified development strategies. Addressing this issue is the most critical step. The success of any economic model hinges on providing an environment that protects the economy and the population, especially the most vulnerable, from external shocks and natural hazards. The OECS countries cannot change their external environment. They can, however, reduce their vulnerability and exposure to shocks, shift and spread risks from shocks, and pursue policies that respond more effectively to shocks when they occur. Doing so will require addressing resilience from all angles.

235. Fiscal resilience: A high public debt burden and pro-cyclical fiscal policy in the OECS hamper the ability of economies to buffer against shocks in the short term and to ensure sustainability in the long term. Resilience requires countercyclical fiscal policies that enable governments to generate savings during good times and preserve fiscal space for responding to shocks during bad times. Reducing public debt to the regional target of 60 percent of GDP (or lower) will reduce spending on debt service, and thereby expand policy space for spending on public goods and poverty reduction. In addition, resilience requires adjusting systems for public investment management, procurement, and financial management to address climate change and disaster risks.

236. Financial resilience: The effects of the 2008–09 global financial crisis still constrain the ability of banks and credit unions to channel credit needed for enterprise development and for diversification into production that is less sensitive to climate change and natural disasters. Insurance and financial buffers are most limited among the poor and vulnerable. A broad view of resilience requires strengthening the financial sector in general and insurance markets in particular. Broader and deeper insurance markets are also critical so that governments, firms, and households can spread and transfer risks, meaning that vulnerable households and small businesses in particular are able to withstand shocks. Governments will need to develop multi-layered financing strategies and a set of efficient, optimized financial instruments that protect national balance sheets in times of crisis.

237. Social resilience: Poor households and those with vulnerable individuals such as children, the elderly, and disabled people tend to suffer most from natural disasters and other shocks. Resilience requires strengthening social safety nets so that these households can be identified and supported before and after shocks. Continuity in public service delivery and access to basic infrastructure during emergencies is critical to preserving human capital when shocks occur. Access to improved drinking water and sanitation reduces the prevalence of certain diseases in addition to reducing the negative impact of natural disasters on health and livelihood. This also requires resilient public, educational, and healthcare infrastructure.

238. Institutional resilience: Constrained government capacity and effectiveness limit the role of public sector in shielding the countries against external shocks and climate change. A resilient governance framework (i) facilitates the adaptation of public programs and investments that reduce risks at the portfolio level and identifies the appropriate protection mechanisms for public assets; (ii) responds to natural disasters through protocols in budget planning, execution, procurement, treasury, and audit that facilitate the mobilization, execution, and monitoring of resources in the event of a disaster, and (iii) promotes recovery and reconstruction through the operationalization of government continuity frameworks to fortify core information systems to ensure continued delivery of critical public services.

239. Ecological resilience: The natural environment supports economic activity and helps defend against climate change and natural disasters, but is also threatened by these shocks. Adapting the sustainable management of reefs, beaches, and forests to a changing environment will help increase the resilience of islands against many effects of extreme weather events. It also requires measures to use natural capital more efficiently—for example, promoting weather-resilient and climate-adapted crops, or irrigation management systems that improve water distribution and recycling.

240. Infrastructure resilience: Reflecting their long history of earthquakes, volcanic activity, and hurricanes, the OECS have been working for years to strengthen the built environment—housing, commercial and public buildings, and infrastructure—to stand up to these hazards. Resilience requires continued improvements in building codes, zoning, physical planning, and other efforts to reduce the risks of damage to the built environment by natural hazards. It also requires ex post measures to accelerate reconstruction after natural disasters occur.

Priority #2: Embed growth in the blue economy

241. Harnessing the natural capital of the countries, especially of their marine and coastal resources, provides a unique comparative advantage for OECS countries to boost economic growth. The assets and services provided by oceans contribute to jobs and incomes in the region's major industries, such as tourism and recreation, fishing and aquaculture, and transport.

242. The comparative advantage is especially important in tourism and recent advances in internet services provide a unique opportunity to boost new and innovative ways of tourism with the objective to create higher degrees of value added in the OECS. In particular, marketplaces that accommodate and facilitate the need for individual tourism could create new large-scale opportunities for a tourism industry in which where accommodation, food value-chains, and other associated inputs are locally owned. Governments could nurture this through an improved business environment and an enabling legal framework, for example, by well-managed natural resources (e.g., beaches) and access to beaches (now often controlled by hotels). Furthermore, given the public-good nature of such a service, governments could provide the marketing umbrella for such tourism, especially if branding efforts focus on the uniqueness of the OECS as a whole rather than as individual competitors. Given that other countries have also developed strong offers in nature-based tourism, OECS countries may be able to create higher impact and visibility when branding regionally rather than individually. Supported by an appropriate infrastructure network, increased island "hopping" is also an option for OECS countries for further growth.

243. Another way to capitalize on their natural capital endowment is to further develop high-end, locally owned tourism. Yachting, high-end sail cruises with renovated traditional boats, swimming with sperm whales in Dominica, life-on-board diving charters, and many other forms of such tourism could still be further explored and expanded in a sustainable manner. With the right policy framework in place, this could also capitalize on the vast OECS diaspora, which may see such investments in tourism as an individual investment opportunity. Diaspora-led investment in high-end, locally-owned tourism also has the potential for positive spillover effects, such as protecting or maintaining cultural heritage and building better, more resilient housing.

244. Integration and cooperation for economic opportunities should be complemented by similar cooperation for managing and conserving the natural capital endowment. This includes pursuing integrated approaches to ocean governance, applying marine spatial planning at the scale of exclusive economic zones, and by investing in the protection, restoration and maintenance of marine ecosystems and ecosystem processes. These actions will help countries generate additional value from the assets and services of the ocean through, for example, ecotourism, sustainable fishing, and aquaculture. Even though not limited to OECS countries, the recently established Caribbean Biodiversity Fund (CBF) is a remarkable example of such cooperation on which further co-operation can be built. The CBF is a regional Environmental Fund established in 2012 to provide a sustainable flow of resources for the conservation, protection and maintenance of biodiversity in the Caribbean. It mobilizes resources and channels support to partner National Conservation Trust Funds (NCTFs) and directly to selected national and regional projects.

Priority #3: Strengthen and harness human capital

245. Despite a high level of human capital, a significant skills mismatch and limited job opportunities prevent the economy from capitalizing on human capital, and eventually lead to a high incidence of brain drain. Addressing this challenge and mobilizing diaspora resources is identified as a priority area. Closing the skills gap can pave the way for more inclusive labor markets in OECS. This will require demand-driven and sector-focused employment development strategies that enhance labor market resilience. Inclusive market also requires strengthening the position of women in the labor market. Partnerships between industry and educational institutions are necessary to address the skills gap. Education should be demand-driven. Strong early work experience helps students build the technical and soft skills needed for industry. Through partnerships with businesses, students can obtain practical learning while the industry can integrate students into its workforce. On-the-job training or industry-led job training can also contribute to closing skills gap.

246. Clear sector-focused employment strategies, together with data-driven labor market analysis that provides detailed information on current and projected workforce demand by industry, are essential for OECS governments in designing market-responsive educational and training programs. Entrepreneurship, vocational, and workforce training initiatives need to be aligned with sector-focused employment strategies. One example is tourism and hospitality education institutions supporting the transition to a service-oriented economy.

247. Entrepreneurship can provide a way to address high unemployment when labor demand is low, especially among youth and women. Low-cost access to markets and credits is an essential component in facilitating entrepreneurship. Youth and women empowerment is critical for the OECS in preventing criminality and negative social behavior. Information and knowledge about labor market trends can help young adults and women gauge the potential market for new products and services or find the industry that fits best with their skills.

248. Cross-industry collaborations on the development of educational and workforce training strategies enhances resilience in labor markets. OECS labor markets are highly vulnerable to external shocks that can lead to an abrupt change in what skills are desirable. Inter-industry labor mobility initiatives can facilitate the transfer of skills and enable the receiving industries to acquire experienced workers from industries that face declining demand. Transferable skills merit equal attention to technical skills, as being especially critical in services industries.

249. International labor mobility provides a way to harness human capital when domestic job opportunities are limited. The OECS suffers high levels of brain drain, domestic labor markets lack skilled workers, and low-skilled workers are unemployed. Policies to better advertise migration opportunities for the poor and the low-skilled could exploit the benefits of international labor mobility and find them a more secure income than at home. By leveraging the well-educated and affluent diaspora through investment in specific sectors such as tourism and agriculture, the OECS can better harness human capital for economic development and mitigate the negative effects of brain drain.

Priority #4: Embrace new technologies to transform productivity

250. Adopting technologies in doing business can improve productivity and overcome large fixed cost due to small scale. Technology can be used to gain market access and expand the market at low cost, improve decision making, match job seekers to vacancies, and improve customer satisfaction. For example, Airbnb, TripAdvisor, and social media platforms enable small tourism enterprises to interact directly with consumers without the need for the large marketing operations that are affordable only for large, international firms.

251. Digitalization means governments can deliver better services at lower costs and helps the private sector achieve greater productivity (e.g., using government geospatial and meteorological data to guide farming). It also enables both sectors to respond more quickly to changing social, economic, and climactic conditions. The use of information and communication technologies (ICTs) in the public sector can reduce staffing requirements, improve the quality of public services, and ensure their continuity during emergencies. In addition, the use of open data policies boosts transparency and accountability in the public sector. Data-driven and citizen-centric service delivery also improves citizen welfare. Cloud computing can, for example, mitigate operational risk and protect government data from being lost, especially during natural disasters. However, these benefits do not occur naturally. Governments should adopt a strategic, far-reaching approach to implement transformative ICT-based institutional changes. Embracing technological innovation can lead to "smart solutions" that circumvent the challenges unique to small states, and thus complements the pursuit of other priority areas (e.g., health and education).

Priority #5: Regional integration and connectivity

252. Connectivity: Improving connectivity between islands and with the rest of the world can help to realize scale economies. More efficient inter-island transportation would reduce the costs of moving people to consume or provide services. This would expand opportunities for multi-island vacation packages, for example, or for hospitals and schools to reach more people.

253. Regional integration: OECS countries have successfully embraced regionalism as a development strategy. One example is the monetary union and the ECCB. Regional coordination in the blue growth economy and the use of marine and coastal resources can enhance synergies and mitigate negative externalities. Regional cooperation in government functions can realize scale economies and deliver greater value for money. For example, regionally coordinated public procurement methods (like the OECS eProcurement system for pharmaceuticals) can reduce the time and cost of procurement and can enhance transparency for bulk purchases through publishing tenders and contracts. Regional coordination in health and education increases specialization and quality of services, paving the way to become a niche exporter of services. Regional cooperation in education facilitates intra-regional labor mobility and can enhance labor market resilience.

Policy actions and country-specific priority scale

254. Going forward, the SRD identifies a set of critical policy actions for each priority area based on opportunities and constraints presented to the OECS economies. The list serves as a

guideline for deeper analysis and further policy planning. The selection criteria for policy actions are:

- Direct and indirect impact on poverty and inclusion: The potential impact on poverty reduction and increasing the welfare of the poor, the vulnerable, and disadvantaged groups.
- Direct and indirect impact on growth: The potential impact on economic growth through increasing factor accumulation and productivity.
- Direct and indirect impact on sustainability: The potential impact on economic sustainability, environmental sustainability, fiscal sustainability, and human-capital sustainability.
- Time horizon (immediacy of impact): The possible timeframe in which the impact could be realized, from low-hanging fruits to longer-term reforms.
- Supporting evidence: Evidence or diagnostics that support the selection of each policy action.
- Essential preconditions: Conditions or reforms necessary for implementing the proposed policy actions.

255. The last step adds more information on the country relevance for each policy action. For most policy actions, common challenges and opportunities faced by OECS countries lead to solutions that are similar across countries or involve regional cooperation. Nevertheless, variations across countries may emerge. The SRD acknowledges this heterogeneity derived from cross-country benchmarking and supporting evidence, and Annex II presents the country-specific priority scale for each policy action.

Annexes

Annex I: Data gaps in the OECS

Microeconomic data		
	Frequency	Accessibility
Census	Available on 10 cycles in all countries	Restricted
Survey of Living Conditions-Household Budget Survey	Available on 10 cycles in all countries ATG: 2005 DMA: 2002, 2008 GRD: 1998, 2008 LCA: 1995, 2005 KNA: 2000, 2007 VCT: 1996, 2008	Accessible with permission The World Bank has no access to all SLC-HBS 1995–2002 and VCT 2008.
Household survey on health (e.g., DHS, MICS)	LCA: 2012	-
Labor force survey	LCA: 2016–17 (quarterly) GRD: 2016–2017 (quarterly) ATG: 2015 KNA: 2013, 2016 VCT: 2015, 2017. DMA: n/a	Accessible with permission
Business/establishment survey	-	-

Macroeconomic data		
Does the country (OECS) subscribe to the IMF Special Data Dissemination Standard or participate in the Enhanced General Data Dissemination System?		Enhanced General Data Dissemination System
	Frequency	Timeliness
National accounts	A	2M–6M
Balance of payments	A	8M–11M
Government finances	Q,M	1Q

Source: Enhanced General Data Dissemination System

Note: A: Annually, Q: Quarterly, M: Monthly

Statistical Capacity Indicators, 2017				
	Source data	Periodicity	Methodology	Overall
ATG	60.0	63.3	40.0	54.4
DMA	60.0	53.3	60.0	57.8
GRD	60.0	60.0	40.0	53.3
LCA	60.0	53.3	60.0	57.8
KNA	40.0	70.0	40.0	50.0
VCT	40.0	70.0	60.0	56.7
OECS average	53.3	61.7	50.0	55.0
<i>Comparators</i>				
LAC	75.0	89.6	62.8	75.8
UMI	70.0	83.2	68.2	73.8
Small states	53.8	73.6	43.0	56.8

Source: World Bank Statistical Capacity Index

Annex II. Matrix of priorities and potential policy actions

Potential Policy Actions

Priority #1: Build resilience to external shocks from a 360° perspective						
Policy action	Impact on poverty and inclusion	Impact on growth	Impact on sustainability	Time horizon	Supporting evidence	Essential pre-conditions
Fiscal Resilience: reducing public debt and enhancing fiscal buffers	Fiscal space to respond to shocks and to spend on public goods and poverty reduction	High debt is associated with low economic growth	Direct impact on fiscal sustainability	Institutional reform can yield substantial results within the medium term	Debt to GDP is higher than 60 percent. Countries follow procyclical fiscal policy	Fiscal responsibility framework with appropriate escape clauses
Financial Resilience: strengthening financial capacity to face shocks	The ability to channel credit during emergencies and provide insurance directly help the vulnerable cope with risks	Greater efficiency and stability in the financial system lead to higher economic growth	Channeling funds to promote climate-resilient activities supports sustainable growth	Short to medium: implement policies necessary to increase access to credit and insurance Medium to long: institutional reform of financial systems toward risk-based supervision and insurance markets	Limited access to insurance, especially among the poor. Credit contraction and excess liquidity	Regulatory framework and regional cooperation to better achieve risk diversification
Social Resilience: ensuring continuity in service delivery (energy, water, social safety net, health, governance) during emergencies	The poor are protected from disruptions in service delivery, safeguarding human capital development	Continued business operation without labor-supply shortages lifts growth during emergencies	Reduced long-term impact of disasters on human capital such as health and education	Short to medium: scalable social protection system Medium to long: implement policies necessary to ensure continuity of service delivery and develop a multi-sectoral approach (energy, water, health, etc) to respond to disasters	Discontinuity of service delivery during emergencies. Evidence of ad-hoc social protection programs	Included in Government's priority programs and collaboration between ministries and stakeholders

Institutional Resilience: improving the role of public sector in buffering countries against external shocks and climate change	The poor are protected from disruptions in public service delivery and infrastructure	Continued public-sector operation positively impact growths during emergencies	Reduced long-term impact of disasters on capital	Medium to long: institutional reform to promote resilient infrastructure and public assets, mobilization of resources during emergencies, and continuity of service delivery.	Constrained government capacity and effectiveness especially during emergencies	Included in Government's priority programs and collaboration between ministries and stakeholders
Ecological Resilience: promoting disaster- and climate- resilient ecosystems	Preserve ecosystem which protects livelihood. Reduced vulnerability of farmers and fishermen as well as food insecurity	Natural capital contributes to growth from tourism, agriculture, fisheries, etc.	Environmental sustainability Reduced exposure to increasing risk of climate change	Short to medium: pollution, water and fisheries management Medium to long: coastal, marine and forest area management, protection and restoration, erosion control. Climate-resilient agricultural and fisheries systems	High EVI, CRI and frequency of natural disasters	Regional cooperation in ocean governance
Infrastructure Resilience: strengthening urban development and sectoral planning to better integrate disaster risk management	Reduced number of communities (predominantly poor ones) located in risk-prone areas	Reduced damage to infrastructure, property and human capital reduces negative impact on growth	Reduced exposure to increasing risk of climate change and rising sea levels	Short to medium: implementation of building codes Medium to long: embedding DRM in urban planning and development	High EVI, CRI and frequency of natural disasters. The poor are disproportionately affected by disasters in terms of asset loss and housing damages	Appropriate data on risky and hazardous areas, as well as strong institutions

Priority #2: Embed growth in the blue economy

Policy action	Impact on poverty and inclusion	Impact on growth	Impact on sustainability	Time horizon	Supporting evidence	Essential pre-conditions
Upgrading tourism to higher value added and strengthening linkages to local economy and other sectors	Job creation and increased income generation	Direct impact on economic growth from higher value added and spillovers into other sectors	Promoting high value-added tourism rather than greater numbers of tourists preserves natural capital	Short: market development and positioning strategy to increase competitiveness Medium to long: implement policies necessary to support high-	Large contribution of tourism to GDP and employment. Potential of blue economy and natural assets	Soft and transferable skills for the services sector

				end, locally owned tourism		
Upgrading agriculture, fisheries and aquaculture to higher value added	Job creation and increased income generation, especially for poor individuals working in agriculture and fisheries	Direct impact on economic growth from higher value added and spillovers other sectors	Controlling overfishing while maintaining the existing level of income from the sector	Short to medium: develop export and local markets for high-value fish Medium to long: implement reforms to align with the FAO Code of Conduct for Responsible Fisheries	Potential of blue economy and natural assets. Sector's contribution to employment. Presence of subsistence fisheries	Stock of high-value fish and technological literacy of farmers and fishermen
Protecting the coastal and marine environment for sustainable growth	Protecting livelihoods of those relying on natural capital and living in low-lying coastal areas	Indirect impact on sustainable growth	Blue economy cannot be sustained with depletion of natural capital	Short to medium: pollution management of increased fishing activities Medium to long: coastal, marine, and forest area management, protection and restoration, erosion control	Fall in the EPI and OHI ranking, degradation of coral reef, increase in marine pollution	Regional cooperation in ocean governance
Promoting investment and business climate	Job creation among youth and subsistent farmers when labor demand is low. Prevent social exclusion	Increased private sector activity and productivity. Employment and innovation from entrepreneurship promote growth	Indirect positive impact on sustainable growth and reduced skill erosion	Short: entrepreneurship training and adoption of new technology to expand the market. Medium to long: improved investment climate and business environment, reduced costs related to trade activities, improved access to credit	Doing Business environment. Credit access. High costs of doing business including power, transport, trade procedures	Included in government's priority programs and collaboration between ministries and stakeholders

Priority #3: Strengthen and harness human capital

Policy action	Impact on poverty and inclusion	Impact on growth	Impact on sustainability	Time horizon	Supporting evidence	Essential pre-conditions
Promoting demand-driven education and training, as well as	Job creation and income generation,	Greater employment, and skills needed by	Reduced skills erosion and brain drain	Short: assessment of TVET and ALMPs	High level of educational attainment alongside skills	Private-sector participation representing

sector-focused employment development strategies	among unemployed youth and low-skilled group Prevent social exclusion	targeted industries, boost growth		Medium to long: partnership with private sector in designing internships and training, alignment of curriculums with the national development plan	mismatch and high unemployment.	different industries Identification of focused industries
Improving teaching practices and early childhood development	Improved socioeconomic mobility	Higher return on human capital and labor productivity indirectly boosts growth	Sustainable development of human capital indirectly affects sustainable growth	Short: improving assessment of teacher quality Medium to long: improving preschool system and pedagogical skills training, changing incentives for teacher recruitment	Evidence from Classroom Assessment Scoring System. Limited access to ECE in some countries	Included in Government's priority programs
Strengthening labor market resilience to better respond to labor demand shock	Mitigating the impact of local labor-demand shock among low-skilled workers.	Resilient labor market reduces the impact of external shocks on growth	Reduced skills erosion	Medium: facilitating cross-industry collaboration to support transfer of skills and targeting migration opportunities towards the poor and the low-skilled	Rising unemployment when facing external shocks. The role of employment in poverty reduction	Labor with transferable skills and sectors with high skills transferability
Mobilizing and maximizing the potential of diaspora investment	Job creation and poverty reduction	Investment and new enterprises have a positive impact on growth	Reverse the sustainability impact of brain drain	Short to medium: incentives for diaspora investment, a platform for local entrepreneur and investors Medium to long: necessary reform to promote investment climate and sectors that allow brain circulation	High rates of emigration and high-skill emigration. The role of remittances in poverty reduction	Included in government's priority programs
Improving coverage and targeting of programs in health and social protection	Increase equity, protect livelihoods, and safeguard human capital development	Increased human capital and labor productivity indirectly impact growth	Increased fiscal sustainability of the programs	Short to medium: improved targeting tool and payment system Medium to long: implement necessary reforms to improve healthcare to address the	High level of OOPs and noncommunicable diseases. Limited coverage of social insurance among low-income groups	Social registries with frequently updated data to improve targeting Better infrastructure to

				issues of rising noncommunicable diseases and high OOPs		manage information systems
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Priority #4: Embrace new technologies to transform productivity

Policy action	Impact on poverty and inclusion	Impact on growth	Impact on sustainability	Time horizon	Supporting evidence	Essential pre-conditions
Promoting the use of disruptive technologies in business to reduce costs and dependence on economies of scale	Job creation. Low-cost access to market for small businesses and the self-employed	Increased productivity, reduced costs, market expansion for tourism and benefits for small enterprises, among others	Clean tech and smart tech promote sustainability of natural capital	Short: promoting the use of disruptive technologies to expand tourism market. Medium to long: investment in digital infrastructure	Limited access to market. Small size. International use of platforms such as Airbnb and TripAdvisor, the use of mobile phones to provide labor market information, etc.	Institutional capacity and citizen digital literacy Investments in regional ICT infrastructure
Promoting digitalization of government (open data, digitalization of public finance, ICT for government continuity)	Improved service-delivery and better policymaking, essential for the poor and vulnerable populations	Increased productivity and reduced costs. Improved investment decisions by private sector	Government efficiency that reduces the size of public sector can increase fiscal sustainability	Short to medium: Investment in digital infrastructure, electronic portal, digital ID, etc. Institutional reform to manage changes. Medium to long: data-driven and citizen-centric policymaking and service delivery	Limited public-sector capacity and effectiveness. Lack of scale. International evidence on e-government	Institutional capacity and citizen digital literacy Regulatory framework for data security

Priority #5: Regional Integration and connectivity

Policy action	Impact on poverty and inclusion	Impact on growth	Impact on sustainability	Time horizon	Supporting evidence	Essential pre-conditions
Increasing connectivity to promote tourism and resource mobility	Indirect impact from job creation and mobility during emergencies	Market expansion and employment	Indirect impact on sustainable growth	Medium to long: establishing efficient inter-island transportation	Low connectivity (LSCI) Lack of economies of scale due to small size	Regional consensus and cooperation

Implementing regional coordination in blue growth economy and the use of marine and coastal resources	Mitigation of negative externality between countries that can impact the vulnerable	Enhancing synergy and mitigating negative externality of blue growth between countries	Direct impact on sustainable blue growth economy	Short: Coastal Master Plan. Medium to long: Regional agreement and institutional reform on development plan and marine protection	Externality of rising marine pollution and the use of natural assets	Regional cooperation and broad consensus
Promoting regional coordination in government functions such as public procurement procedures	Fiscal space to respond to shocks and to spend on public goods and poverty reduction	Economies of scale reduce time and costs, increasing efficiency	Economies of scale reduce time and costs, promoting fiscal sustainability	Early efforts and medium-term institutional reform can yield substantial results	Lack of scale due to small size	Regional cooperation and broad consensus Improved connectivity

Country-specific priority scale for each policy action in three priority areas*

High	Medium	Low	NA	ATG	DMA	GRD	KNA	LCA	VCT
Priority #1: Build resilience to external shocks from a 360° perspective									
Fiscal resilience				High public debt, procyclical fiscal policy	High public debt, procyclical fiscal policy	High public debt, procyclical fiscal policy	Lower public debt	High public debt, procyclical fiscal policy	High public debt, procyclical fiscal policy
Financial resilience				Limited access to credit and insurance					
Social resilience				High incidence of natural disasters, discontinuity in service-delivery during emergencies					
Institutional resilience				High incidence of natural disasters, constrained government capacity and effectiveness during emergencies					
Ecological resilience				Lower risk	High environmental vulnerability and climate change risk				
Infrastructure resilience				High incidence of natural disaster					
Priority #2: Embed growth in the blue economy									
Upgrading tourism to higher value added and strengthening linkages to local economy				Rich natural assets	Rich natural assets	Rich natural assets	Lower contribution to GDP, employment	Rich natural assets	Rich natural assets
Upgrading agriculture, fisheries and aquaculture to higher value added				Indirect job creation, large EEZ and fish stocks				Lower contribution to GDP, employment	Lower contribution to GDP, employment
Protecting the coastal and marine environment				High environmental performance and ocean health index	Low environmental performance and ocean health index	Low environmental performance and ocean health index	Moderate environmental performance and ocean health index	Low environmental performance and ocean health index	Low environmental performance and ocean health index
Promoting investment and business climate				Low performance in doing business ranking. Limited access to finance					
Priority #3: Strengthen and harness human capital									
Promoting demand-driven education and trainings, sector-focused employment development strategies				Moderate unemployment		High unemployment Skills mismatch	Low unemployment	High unemployment	High unemployment
Improving teaching practices and early childhood development				Lack of trained teachers, poor CLASS results on pedagogical skills	Lack of trained teachers, poor CLASS results on pedagogical skills	Lack of trained teachers, poor CLASS results on pedagogical skills	High passing rate of CSEC in English and Mathematics.	Low ECE enrollment	Low ECE enrollment
Strengthening labor market resilience to better respond to labor demand shock				Moderate unemployment		High unemployment Wage rigidities	Low unemployment	High unemployment Wage rigidities	High unemployment Wage rigidities
Mobilizing and maximizing the potential of diaspora investment				Large diaspora	Large diaspora	Large diaspora	Large diaspora	Smaller diaspora	Large diaspora
Improving coverage and targeting of programs in health and social protection				High NCD risk factors	Very high neonatal mortality	Low coverage of social insurance, pension	High NCD risk factors	Low coverage of pensions	Low coverage of social insurance, healthcare, pensions

Note: Labor-market indicators are not available for Dominica.

*High priority of area #4 is applied to all countries based on the small size of the OECS. Priority area #5 requires regional cooperation from all OECS countries.

Annex III. OECS Countries' climate change commitments

The following table summarizes the key commitments and actions in the OECS Intended Nationally Determined Contributions to the 2015 Paris Agreement on Climate Change.

Action	INDC Commitment
<u>Antigua and Barbuda</u>	
Mitigation	<p>Unconditional commitment to update the Building Code to meet projected impacts of climate change. Conditional targets include:</p> <ul style="list-style-type: none"> • establish efficiency standards for the importation of all vehicles and appliances by 2020; • finalize the technical studies with the intention to construct and operationalize a waste to energy (WTE) plant by 2025; • achieve an energy matrix with 50 MW of electricity from renewable sources both on and off-grid in the public and private sectors by 2030; • protect all remaining wetlands and watershed areas with carbon sequestration potential as carbon sinks by 2030.
Adaptation	<p>Conditional targets include:</p> <ul style="list-style-type: none"> • increase seawater desalination capacity by 50 percent above 2015 levels by 2025; • improve and prepare all buildings for extreme climate events, including drought, flooding and hurricanes by 2030; • meet 100 percent of electricity demand in the water sector and other essential services (including health, food storage and emergency services) through off-grid renewable sources by 2030; • protect all waterways to reduce the risks of flooding and health impacts by 2030; • provide an affordable insurance scheme for farmers, fishers, and residential and business owners to cope with losses resulting from climate variability by 2030.
<u>Commonwealth of Dominica</u>	
Mitigation	<p>Conditional commitments to cut emissions by 18 percent by 2020, compared to 2014 levels, with additional cuts of 39 percent by 2025 and 45 percent by 2030 against the same baseline. By 2030, total emission reductions per sector will be as follows:</p> <ul style="list-style-type: none"> • Energy industries – 98.6 percent (principally from harnessing of geothermal resources); • Transport – 16.9 percent; • Manufacturing and construction – 8.8 percent; • Commercial/institutional, residential, agriculture, forestry, fishing – 8.1 percent; • Solid waste – 78.6 percent.
Adaptation	<ul style="list-style-type: none"> • Establish community off-grid, mini-grid or micro-grid renewable energy electrical supply systems (backed up by emergency alternative energy systems) in vulnerable communities on the east and south-east coasts; • Establish early warning systems, multi-use disaster shelters (powered by renewable energy) and emergency preparedness training programs in vulnerable communities; • Promote Food Security through Climate Resilient Agricultural/Fisheries Development to build climate resilient communities; • Legally establish the Department of Climate Change, Environment and Development.
<u>Saint Kitts and Nevis</u>	
Mitigation	<ul style="list-style-type: none"> • Conditional commitment to reduce GHG emissions by 22 percent from the business as usual scenario in 2025 and by 35 percent in 2030 through actions in energy and transport sectors. • Increase use of renewable energy sources by 50 percent by 2030.
Adaptation	Develop and implement a comprehensive plan to build resilience in the water, agriculture, and coastal zone sectors

Action	INDC Commitment
Grenada	
Mitigation	<p>Commitment to reduce greenhouse gas emissions by 30 percent of 2010 by 2025, with an indicative reduction of 40 percent of 2010 by 2030, through actions in the electricity, transport, waste, and forestry sectors. Planned targets include:</p> <ul style="list-style-type: none"> • 30 percent reduction in emissions through electricity production by 2025, with 10 percent from renewables and 20 percent from energy efficiency measures; • 20 percent reduction in the transport sector by 2025; • 90 percent reduction in methane emissions from waste; • protection of 20 percent of its terrestrial area
Adaptation	<ul style="list-style-type: none"> • Review the National Climate Change Policy and Action Plan (NCCPAP) (2007–11) as part of the National Adaptation Planning (NAP) process • Integrated approach to adaptation by linking local activities with national policies and sector specific experiences. • Mainstream climate change adaptation activities into national development planning. Actions to support resilience building at all levels include: enhancing institutional frameworks, building coastal resilience, improving water resource management, building resilience of communities
Saint Lucia	
Mitigation	<p>Conditional commitment to a 23 percent reduction in emissions by 2030 compared to a business as usual scenario, with an interim target of a 16 percent reduction by 2025, mainly through actions in the following sectors:</p> <ul style="list-style-type: none"> • Energy – energy efficient buildings, appliances, water distribution and network efficiency • Electricity generation – 35 percent Renewable Energy Target by 2025 and 50 percent by 2030, based on a mix of geothermal, wind and solar energy sources. • Transport – efficient vehicles, improved and expanded public transport
Adaptation	<ul style="list-style-type: none"> • Ensure resilience to the risks and impacts of climate change for the country, people, social systems, and environment through the Climate Change Adaptation Policy (CCAP) (2015) • Provide a framework through CCAP to address climate change impacts in an integrated manner across all key sectors, based on the interconnected processes of adaptation facilitation, financing, implementation. • Conditional actions for agriculture, coastal zone, disaster risk management, health, LULUCF/forestry, urban and water sectors
Saint Vincent and Grenadines	
Mitigation	<p>Unconditional, economy-wide reduction in greenhouse gas emissions of 22 percent compared to its business-as-usual (BAU) scenario by 2025, mainly through key measures in the energy sector (including energy generation, energy efficiency and transport).</p>
Adaptation	<ul style="list-style-type: none"> • Support climate change adaptation through specific strategic goals, objectives and targets in national programmes, including: <ul style="list-style-type: none"> - The National Economic and Social Development Plan 2013 – 2025 includes a goal on “Improving Physical Infrastructure, Preserving the Environment and Building Resilience to Climate Change” - Pilot Programme for Climate Resilience (PPCR) specifically designed to address climate risk and resilience - Signatory to Caribbean Challenge Initiative (CCI), pledging to protect 20 percent of near-shore marine and coastal resources by 2020 • Integrated approach to building resilience and adaptation planning in already vulnerable sectors, including agriculture, forestry, fisheries, tourism, water resources, coastal zone, health

Annex IV. Summary of consultations

The ECCB and the OECS Secretariat convened two consultative meetings with representatives of OECS member states. The team presented the main themes of the SRD in May 2018 to representatives from St. Vincent and the Grenadines, the ECCB, and the OECS Secretariat. The team then presented the full draft in June 2018 to representatives from Antigua and Barbuda, Dominica, St. Lucia, St. Vincent and the Grenadines, the ECCB, and the OECS Secretariat.

Participants provided useful feedback particularly in the areas of human development and the blue economy. The discussion on human development focused on skills mismatch, knowledge gaps on labor markets, and policy implications. It also touched on the potential link of high youth unemployment with young people at risk of criminal and gang-related activities. The discussion on the blue economy was centered around country-level development strategies and regional cooperation. The participants indicated that the SRD's proposed priorities and policy actions are well aligned with regional and national development strategies. The participants agreed on the priority area "Embracing new technology" but acknowledged that institutional transformation to address legal and security issues is an essential pre-condition.

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