



TOURISM INDUSTRY REFORM

STRATEGIES FOR ENHANCED
ECONOMIC IMPACT

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CARIBBEAN DEVELOPMENT BANK

PURPOSE

“The purpose of the Bank shall be to contribute to the harmonious economic growth and development of the member countries of the Caribbean (hereinafter called the Region) and to promote economic cooperation and integration among them, having special and urgent regard to the less developed members of the Region”

Article 1 – Agreement establishing the Caribbean Development Bank

MISSION STATEMENT

CDB’s Mission is to be the leading catalyst in the reduction of poverty through the inclusive and sustainable development of our BMCs by mobilising development resources in an efficient, responsive and collaborative manner with accountability, integrity and excellence.

CDB Member Countries

Regional Borrowing Member Countries (BMCs)

 Anguilla	 Haiti
 Antigua and Barbuda	 Jamaica
 The Bahamas	 Montserrat
 Barbados	 Saint Lucia
 Belize	 St. Kitts & Nevis
 British Virgin Islands	 St. Vincent & the Grenadines
 Cayman Islands	 Suriname
 Dominica	 Trinidad & Tobago
 Grenada	 Turks & Caicos Islands
 Guyana	

Other Regional

 Brazil	 Mexico
 Colombia	 Venezuela

Non-regional

 Canada	 Italy
 China	 United Kingdom
 Germany	

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ABBREVIATIONS

BMC	Borrowing Member Country
BREXIT	British Exit from the European Union
BVI	British Virgin Islands
CAAM-HP	Caribbean Accreditation Authority for Education in Medicine and other Health Professions
CCLEC	Caribbean Law Enforcement Council
CDB	Caribbean Development Bank
CTO	Caribbean Tourism Organisation
ECFMG	Education Commission for Foreign Medical Graduates
FE	Fixed Effects
GDP	Gross Domestic Product
GMM	Generalised Method of Moments
GPA	Gross Proficiency Average
IHRC	International Health Research Center
IMF	International Monetary Fund
LAC	Latin America and the Caribbean
MICE	Meetings, Incentives, Conventions and Events
OECS	Organisation of Eastern Caribbean States
PPP	Purchasing Power Parity
SGU	St. Georges University
SWOT	Strengths, Weaknesses, Opportunities, Threats
TLG	Tourism-led Growth
TSA	Tourism Satellite Accounts
UAE	United Arab Emirates
UNDP	United Nations Development Programme
UNECLAC	United Nations Economic Commission for Latin America and the Caribbean
UNWTO	United Nations World Tourism Organisation
USD	United States Dollar
USMLE	US Medical Licensing Examination
VRBO	Vacation Rentals by Owner
WHO	World Health Organisation

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An internal team comprising Dr. Patrick Kendall, Dr. Justin Ram, Ronald James, Kevin Hope, Dr. Amos Peters, Dr. Roger McCloed, Donna Kaidou-Jeffrey and Dr. Stephan Maier was responsible for the technical supervision of the process. The team acknowledges with deep appreciation the useful comments and insights offered by CDB staff and the invaluable services provided by Kim Sealy, librarian, in assisting the research effort. Alana Goodman and Gayle Nicholas competently provided the legal services required of the project. Andria Murrell and Laelia Ajodhia-Nicholson provided the Secretarial, Administrative and other support needed for timely completion of the publication.

It is our hope that policymakers and other stakeholders will find this study a very useful guide in efforts to reform and enhance the development impacts of the regional tourism industry.

Dr. Justin Ram
Director, Economics Department
Caribbean Development Bank



FOREWORD

Tourism is the engine of growth and a major foreign exchange earner in many Caribbean countries. During the last two decades, we have witnessed a distinct shift in the profile of visitors to the Caribbean and as a result, in the industry's structure. The Region is facing increasing competition for key customer segments from Central America, South America, Asia and other markets.

These changes in the industry have signalled a need for policy-makers and key industry players to rethink their strategies for improving the competitiveness and safeguarding the medium to long-term development prospects of the industry in this Region.

The study that was commissioned by the Caribbean Development Bank presents a detailed analysis of the tourist industry in the Region. The emphasis is on identifying the critical drivers of growth and proposing broad strategies and practical policy recommendations for improving industry performance. The study also expands much-needed empirical analysis of tourism, focusing on its economic impact, and provides a basis for broader evidence-based policy-making in the industry.

The study ... presents a detailed analysis of the tourist industry in the Region. The emphasis is on identifying the critical drivers of growth and proposing broad strategies and practical policy recommendations for improving industry performance.

It is our hope, then, that policy makers, the private sector and other stakeholders will find, in the study, a useful guide for promoting industry reforms and for enhancing the competitiveness and economic impact of the tourism industry across the Region.

Wm. Warren Smith, Ph.D., CD
President
Caribbean Development Bank



EXECUTIVE SUMMARY

Tourism is the dominant industry in several Caribbean economies and is a significant focus of development in many others. However, in recent years the profile of visitors to the Caribbean has changed and the region is now facing increased competition for key customer segments from other regions, such as Central America, South America and Asia. Given the significance of the tourism industry to the economies of the Caribbean and the changes that are taking place therein, it is important for regional policy makers to understand the relationship between the industry and economic growth and how this relationship may be evolving.

Against this backdrop, the Caribbean Development Bank (CDB) embarked on a study to investigate the impact of the tourism industry on regional economic growth in order to assist its Borrowing Member Countries (BMCs) in developing strategies for enhancing the industry's economic impact through policy, regulatory and institutional reform in critical areas.

The study contributes to the literature on the regional tourism industry by expanding much-needed empirical analysis focused on the economic impact of the industry rather than merely the determinants of tourist inflows which have tended to dominate the regional empirical literature. It provides the opportunity for broader, critical evidence-based policy-making in an industry in which tourism business strategies have clearly evolved over the decades and are continuing to evolve, forcing the need for more frequent and timely analysis on which to base changes in policy and strategy so as to maximise economic impacts. It also contributes to the literature by focusing the analysis on BMCs generally rather than just the major regional tourism destinations, as is customary, thereby facilitating a broader regional discussion of industry development.

MAJOR TRENDS IN TOURISM IN THE BMCS

The study identifies a number of trends in the evolution of the industry in the BMCs during 1989 to 2014. However, two major trends stand out as particularly significant:

1. The number of long-stay tourist arrivals has grown slowly as competition from other regions has intensified. During 1989 to 2014, the number of long-stay tourists arriving at BMCs grew at an average rate of 2.5%, compared to an average growth rate of 3.7% in the wider Caribbean and 4.5% globally. As a result, the share of global long-stay arrivals accounted for by BMCs fell from 1.1% to 0.7%.
2. On the other hand, the number of cruise arrivals in the BMCs has grown substantially. During the period, the number of cruise arrivals to the BMCs more than tripled from 4.4 million to 14.5 million. Currently, there are almost twice as many cruise arrivals to the BMCs as there are long-stay arrivals compared to the turn of the century when the numbers were roughly the same.

As cruise visitors and long-stay visitors have very different spending profiles (cruise visitors typically spend much less in a given location than long-stay tourists), these trends have implications for the amount of tourist expenditure in the BMCs. The average expenditure per tourist arrival fell from \$870 in 1999 to \$608 in 2014.

ECONOMIC IMPACT OF TOURISM IN THE BMCS

Tourism activity directly and indirectly impacts the economies of the BMCs. The goods and services purchased by tourists generate demand for local businesses and support the employment of local labour. There are also impacts along the tourism value chain as tourism-related businesses source inputs to meet the higher demand. This creates opportunities for other sectors of the economy. In addition, there are spin-off impacts that result from development of specialised infrastructure and human capital that are required to support the industry.

Quantifying the overall link between tourism activity and economic growth is a complex task, not least because there are a variety of factors that impact economic growth aside from tourism. However, there is a growing literature that uses econometric analysis to identify the impact of tourism, controlling for key factors, such as levels of investment, government spending, and labour productivity. Adding to this literature, the economic impact estimates in this study are based on an econometric model that characterises the causal relationship between tourism activity and GDP growth in the BMCs, drawing on data from each of the BMCs between 1989 and 2014. The main results of the analysis are as follows:

- All else being equal, a 10% increase in tourism expenditure per capita gives rise to a same-year increase in GDP per capita of between 0.58% and 0.89%. Over the long term, as a result of multiplier effects, this impact rises to approximately 2.6%.
- This relationship can be approximated in dollar terms as follows: for every \$100 in tourist expenditure in the BMCs, there is a same-year impact on GDP of \$35-54, rising to \$155-160 in the long term.
- Despite the changes in the tourism industry over the study period, there has not been a statistically significant change in the relationship between tourist expenditure and GDP growth.
- On the other hand, the impact of tourism on GDP growth varies significantly by arrival type. In particular, while the economic impact of a given long-stay tourist arrival is estimated to be substantial, the economic impact of a given cruise arrival is much smaller. This is expected as cruise ship visitors typically spend much less per visit.

While there are methodological differences, the estimates of economic impact in this study are comparable to other studies. In particular, studies that use data from developing countries show a slightly lower economic impact and, studies that use data from OECD countries show a higher long-term economic impact than the estimates presented in this study.

ASSESSING THE DRIVERS OF ECONOMIC IMPACT

Before developing strategies for enhancing the economic impact of tourism in the BMCs, it is important to first establish the factors that determine the impact. Supported by a programme of stakeholder engagement, this study identifies a set of factors that currently influence the degree to which tourism contributes to economic growth in the BMCs (strengths and weaknesses) as well as a set of factors that may influence the potential for tourism to contribute to economic growth in the future (opportunities and threats). These factors are summarized on the following page:



An understanding of these factors provides important background for the steps that policy makers can take to help enhance the economic impact of tourism. For example, one of the key challenges that BMCs face is in strengthening the links between the tourism sector and the local economy, for example, by helping local businesses participate in the industry either directly or indirectly as suppliers to tourism-related businesses. Measures that help to improve these links can support the enhancement of economic impacts. Similarly, the large number of cruise arrivals can be viewed as an opportunity if BMCs can convert some portion into long-stay passengers. Measures that improve the conversion rate can support the enhancement of economic impacts. These considerations are investigated in detail in the main body of the report.

The study includes a more detailed focus on the yachting and medical and education tourism subsectors as these were identified as having significant potential for driving economic growth. However, there is limited data to evaluate the extent of the potential for these subsectors to drive economic growth. Indeed, one of the key recommendations for yachting is to establish standardised methodologies for accurately reporting on yacht arrivals and expenditure across the region. The report identifies a number of policy, infrastructure and institutional factors that are likely to impact the extent to which these subsectors can be leveraged for economic development purposes.

Strategies for enhancing the economic impact of tourism in the BMCs: The tourism industry is changing, and BMCs need to adapt in order to make the most of the economic development opportunities that arise therefrom. Local governments and industry stakeholders can play an important role in this adaptation process. While the challenges vary across the BMCs and there is no “one-size-fits-all” solution, there are some common themes to these challenges. Five broad themes have been identified, each with corresponding examples of strategies that BMCs could consider to enhance the economic impact of tourism. These themes are summarised below:

1. Leveraging tourism as a tool for economic development: BMCs should consider how to use their strong

tourism product to diversify their economy and to grow other sectors so that they are more resilient to economic shocks. As an example, BMCs could link the concessions granted to hotels and other tourism industry players to measurable contributions to the BMC’s long-term economic development goals (e.g. local investments, training and employment of local staff).

2. Organising the tourism industry: The tourism industry in the Caribbean is broad and complex, involving a variety of businesses and stakeholders, from hotels and restaurants to agriculture and manufacturing companies. Despite co-ordination challenges, it is important that the industry is not treated as an informal and fragmented part of the economy. There are specific efforts that can be taken to achieve this. Two such examples are, for example, an increase in the coverage and standardisation of tourism data collection across the BMCs and the development of quality standards across all parts of the industry.

3. Developing economic linkages and inclusion: Making the most of the economic development opportunity presented by tourism requires ensuring there are links to the local economy. Examples of measures that could support this include the development of market institutions that make it easier for tourism businesses to source locally and programmes that help local entrepreneurs gain access to capital required to develop a business. Furthermore, given the typical scale and type of expenditure by long-stay visitors, BMCs should consider developing strategies to convert some portion of cruise arrivals into the long-stay visitors of the future.

4. Exploring further opportunities for regional collaboration: As competition for tourist arrivals from other regions grows, it is becoming increasingly important for the BMCs to capitalise on opportunities for collaboration. BMCs should seek to develop new collaboration initiatives to further develop the Caribbean tourism industry and attract additional visitors to the region. Examples expanding the regional network of training facilities that help to develop skills sought after

by the hospitality and other tourist-related industries; concerted efforts to improve transportation links; and the standardisation of immigration and customs procedures across the region.

5. Preparing for the tourism industry of the future: While competition is growing, the needs and expectations of tourists are also changing. Demographic shifts and, in particular, the increasing significance of the millennial segment are important factors here. Visitors from North America and Europe are increasingly using less cash for everyday transactions, and they are used to accessing information and services on their mobile phones. New business models for transportation and accommodation services, such as Uber and Airbnb, are pervasive in visitors' home countries. BMCs should consider how to keep up with the needs and expectations of the key tourist markets and to adapt their tourism products accordingly.

DIRECTIONS FOR FURTHER RESEARCH

This study provides a regional analysis of the economic impact of tourism in the BMCs and offers broad recommendations on strategies that could be adopted to enhance this impact. The results of this work suggest there would be significant value in conducting further research in a number of areas, including:

- Investigating further the relationship between cruise and long-stay arrivals and examining how to improve cruise conversion;
- Exploring how to implement a regional marketing approach that leverages the importance of the region on the global scene while allowing individual countries to market their specific strengths;
- Examining the preferences of millennial travellers and developing strategies that maximise the ability of the region to attract this key demographic, for example, through the use of digital methods.
- Developing approaches for collecting data in areas that are currently underdeveloped, such as yachting arrivals and spending patterns.

In addition, individual BMCs should identify the strategies that are most relevant to the specifics of their local tourism industry and economy, and consider how best to develop tailored approaches to help enhance the economic impact of tourism in their market.



1 INTRODUCTION

Tourism has traditionally been the dominant sector of the Caribbean economy and a driver of economic growth and development. For decades, the region has attracted tourists from around the world, leveraging its warm and sunny weather, its proximity to North America, and its cultural ties with Europe.

The tourism sector has changed considerably in the past two decades. With increasing digitisation, customers can access competing booking services that bundle vacations and provide group savings. The rise of all-inclusive resorts and cruise ships has also impacted consumer behavior. All-inclusive resorts and cruises provide many of the services and amenities demanded by tourists and allow them to pay most of the costs upfront. Looking forward, ongoing global events such as BREXIT, the relationship between the United States and Cuba, and the Zika virus may also affect tourism growth.

These trends and others have implications for the extent to which the tourism sector can support economic growth and development. Given the significance of the tourism sector to the economies of the Caribbean, it is important for policy makers in the region to understand the relationship between the tourism sector and economic growth and also how it is changing.

Against this backdrop, the Caribbean Development Bank (CDB) undertook to investigate the impact of the tourism industry on regional economic growth, and to assist its Borrowing Member Countries in developing strategies for enhancing that impact through policy, regulatory and institutional reform in critical areas.

The following BMCs are included in the scope of this study:

- Anguilla;
- Antigua and Barbuda;
- Barbados;
- The Bahamas;
- Belize;
- British Virgin Islands;
- Cayman Islands;
- Dominica;
- Grenada;
- Guyana;
- Haiti;
- Jamaica;
- Montserrat;
- Saint Lucia;
- St. Kitts and Nevis;
- St. Vincent and the Grenadines;
- Suriname;
- Turks and Caicos Islands; and
- Trinidad and Tobago.

Due to lack of available data, however, not every country is included in all modes of analysis and metrics evaluated.



REPORT CONTENT

The structure of the report is outlined below:

Chapter 2: Tourism in the Borrowing Member Countries (BMCs) – Reviews the overall trends in tourism in the BMCs from 1989-2015.

Chapter 3: Tourism and Economic Growth – Presents estimates of the economic impact of tourism over 26 years (from 1989-2014).

Chapter 4: SWOT Analysis of Tourism in the Caribbean – Reviews the strengths, weaknesses, opportunities and threats that affect the ability of the tourism sector in the BMCs to provide economic impacts.

Chapter 5: Industry focus: Medical Tourism and Education Tourism – Provides an overview of the potential impact and opportunities for development of the medical tourism and education tourism industries in the BMCs.

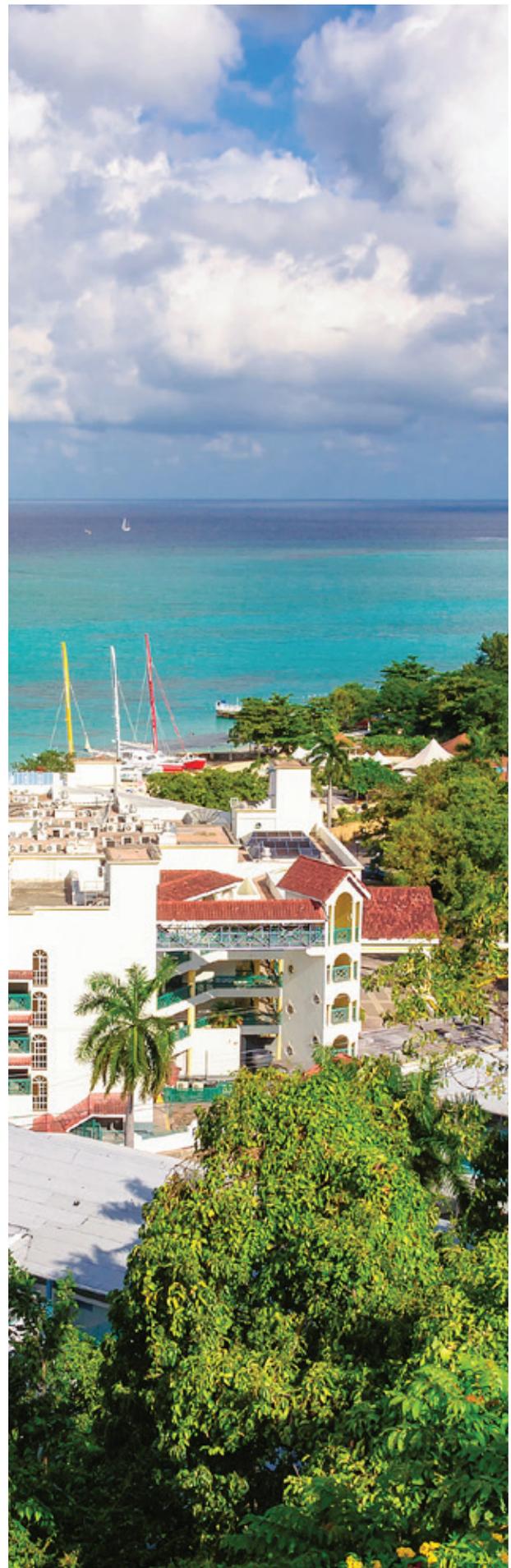
Chapter 6: Industry focus: Yachting – Provides an overview of the potential impact and opportunities for development of the yachting industry in the BMCs.

Chapter 7: Strategies for enhancing the economic impact of tourism in the BMCs – Presents policy strategies and recommendations based on the analysis.

Appendix I: Technical details of the economic impact modelling – Provides technical details on the economic analysis used in this study.

Appendix II: The Medical Tourism IndexTM – Provides an overview of the index on medical tourism developed by the International Healthcare Research Center (IHRC).

Appendix III: Bibliography – Provides a list of reports and studies that were used in the analyses.



2 TOURISM IN THE BORROWING MEMBER COUNTRIES

2.1. CURRENT STATE OF THE TOURISM SECTOR IN THE BMCs

The Caribbean is an established destination for tourism, attracting millions of visitors from around the world every year. In 2015, the 19 BMCs recorded a total of 22.7 million visitors, 64% of whom were cruise visitors and 36% of whom were long-stay visitors.¹

The “sun, sea, and sand” component of the Caribbean tourism product is well known. However, the BMCs offer much more than this, and there can be differences between the tourism products across the countries. Table 1 illustrates the range of tourism experiences offered across the BMCs.

Table 1: Examples of different types of tourism offerings in the BMCs

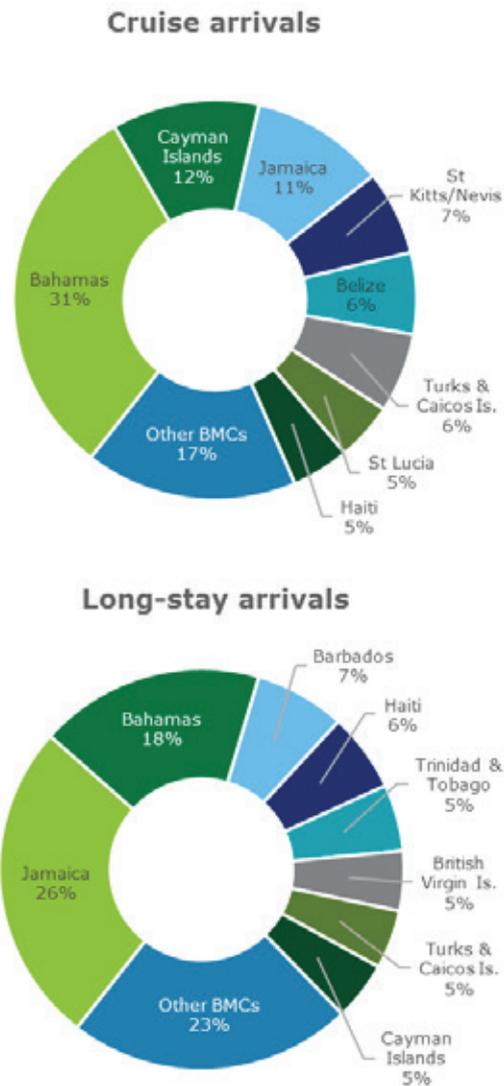
ECOTOURISM	Belize, Guyana, Suriname
HERITAGE & CULTURE	Barbados, Belize, Jamaica, Trinidad and Tobago
CULINARY	Anguilla, Cayman Islands, Suriname, Turks and Caicos, Jamaica
EVENTS & SPORTS	Antigua & Barbuda, Barbados
EDUCATION	Dominica, Grenada, Antigua & Barbuda, St. Kitts and Nevis
YACHTING	Antigua & Barbuda, BVI, Grenada, Saint Lucia, St Vincent and the Grenadines

Source: Authors' analysis

The size of the tourism market varies across the region. From the group of 19 BMCs included in this study, ten

of them account for 91% of cruise arrivals and 86% of long-stay arrivals. The Bahamas, the Cayman Islands and Jamaica are the leading BMCs in cruise passenger arrivals. The top three countries for long-stay tourism are Jamaica, The Bahamas and Barbados

Figure 1: Country share of tourist arrivals, 2015



Source: Caribbean Tourism Organisation (CTO).

To some extent, this distribution reflects differences in the size of the economies of the BMCs, with larger BMCs generally accounting for more arrivals. However, across the region there are varying levels of reliance on tourism for economic growth. For example, some countries have diversified economies, and rely less on tourism (e.g. Trinidad and Tobago), whereas others are less diversified economies that depend heavily on tourism (e.g. Turks and Caicos).

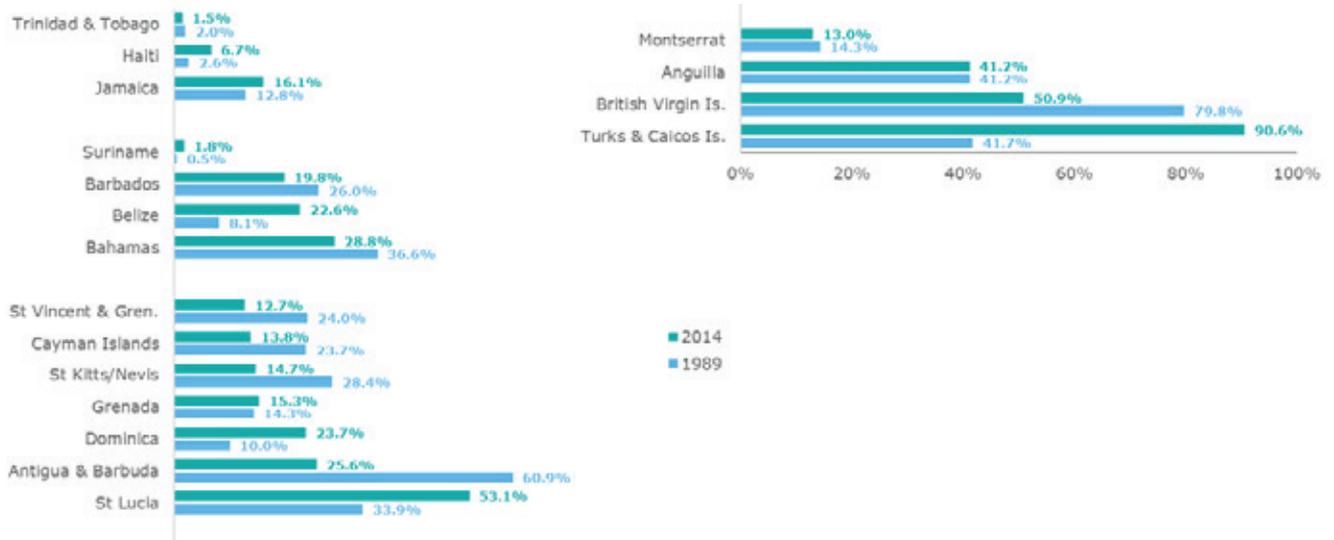
Figure 2 shows the total tourism expenditure as a

¹ Cruise passengers are defined as tourists arriving to BMCs via cruise ships, and long-stay tourists are those that are not cruise passengers.

proportion of GDP in each of the BMCs in the scope of the study. While there are variations in the importance of tourism across the BMCs, in general, those countries with small to medium sized populations tend to be more reliant on tourism than BMCs with larger populations. Many

factors may influence this general finding, including size of labour pool and production capacity, as well as tourism-related factors such as distance to major markets, natural resources and security.

Figure 2: Visitor expenditure as a proportion of GDP

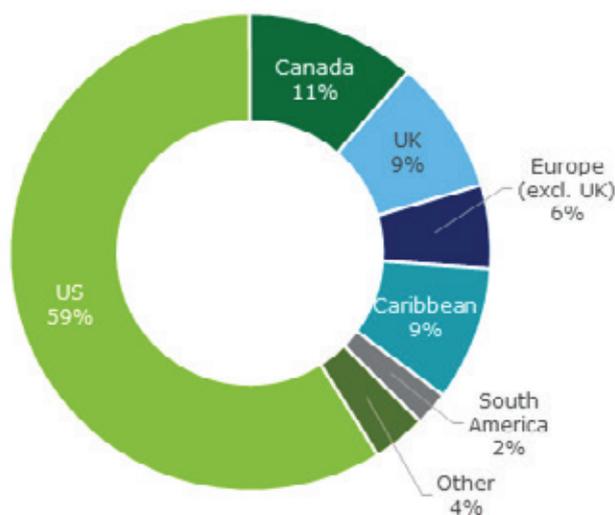


Note: Data on visitor expenditure was not available for Guyana
 Source: Authors' analysis of data from the Caribbean Tourism Organization (CTO).

TOURISM DEMAND IN THE BMCs: KEY SOURCE MARKETS

The majority of tourists arriving in the BMCs do so from North America. In 2015, 59% of the long-stay visitors to the BMCs came from the US, while 11% came from Canada. The UK is the third largest extra-regional market, accounting for 9% of long-stay arrivals in 2015. Intra-regional tourism (i.e. visitors from other parts of the Caribbean) also accounted for 9% of arrivals.

Figure 3: Long-stay tourist arrivals by source market, 2015



²UN World Tourism Organisation (UNWTO), *Tourism Highlights*, 2016 Edition.

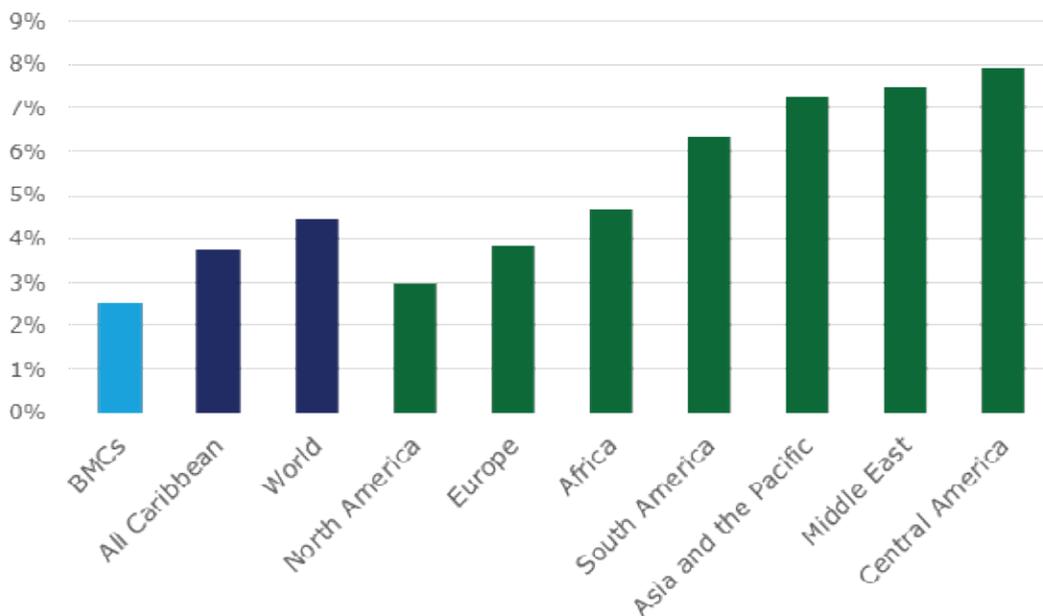
Although data for the BMCs show the US as the main source market, there is considerable variation across the different countries. Countries such as Barbados, Antigua & Barbuda, and Montserrat show lower dependence on the US as a source market, and a higher proportion of UK visitors. Meanwhile, destinations such as Suriname, Dominica, and St. Vincent show larger proportions of visitors from South America and intra-regional, or Caribbean, tourists.

GLOBAL COMPETITION

Over the last 25 years, long-stay tourism in the BMCs has grown more slowly than the regional and global average: between 1990 and 2015, the average annual growth of long-stay visitors to the BMCs was 2.5% compared to a regional average of 3.7% and a global average of 4.5%. As a result, the share of global long-stay arrivals accounted for by BMCs fell from 1.1% to 0.7%.²

Figure 4: Growth in long-stay tourist arrivals, 1990-2015

Annual Growth Rate



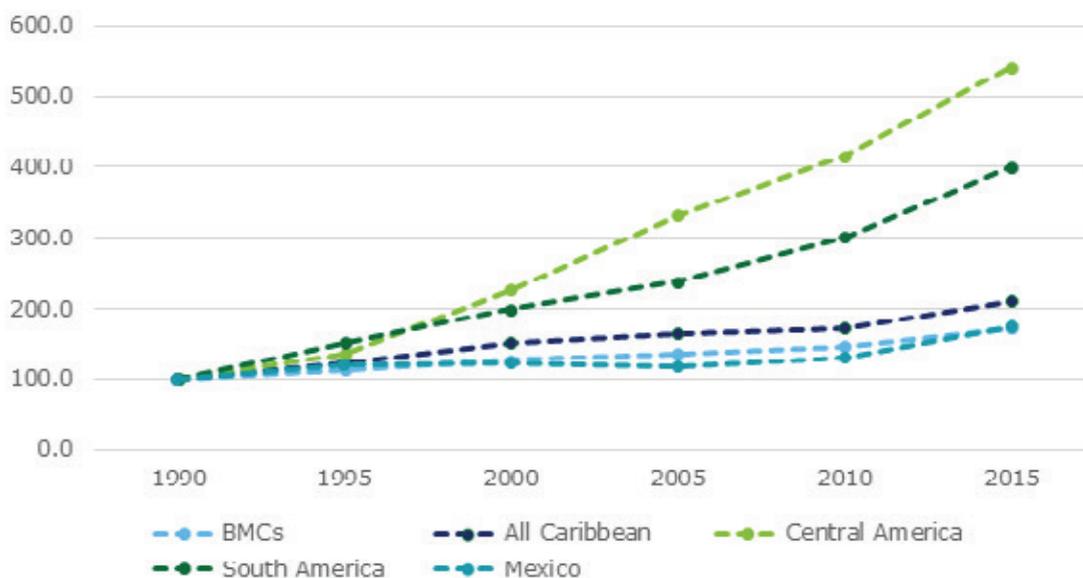
Source: Caribbean Tourism Organization (CTO); World Tourism Organization (UNWTO).

Competition from other regions across the globe has increased. Destinations that were not previously considered as established tourism regions – such as Asia, Central and South America, and Africa – have experienced high growth in long-stay tourist arrivals and are increasingly becoming established as alternatives to the Caribbean. For both South America and Central America, most of this growth came between 1995 and 2005. These regions now compete with the Caribbean for key tourist groups in an unprecedented way.

The UK is the third largest extra-regional market, accounting for 9% of long-stay arrivals in 2015.

Figure 5: Growth in long-stay arrivals in BMCs’ direct competitors

Arrivals Index | (1990=100)



Source: Caribbean Tourism Organization (CTO); World Tourism Organization (UNWTO); and the World Bank.

2.2 TRENDS IN THE TOURISM SECTOR IN THE BMCs

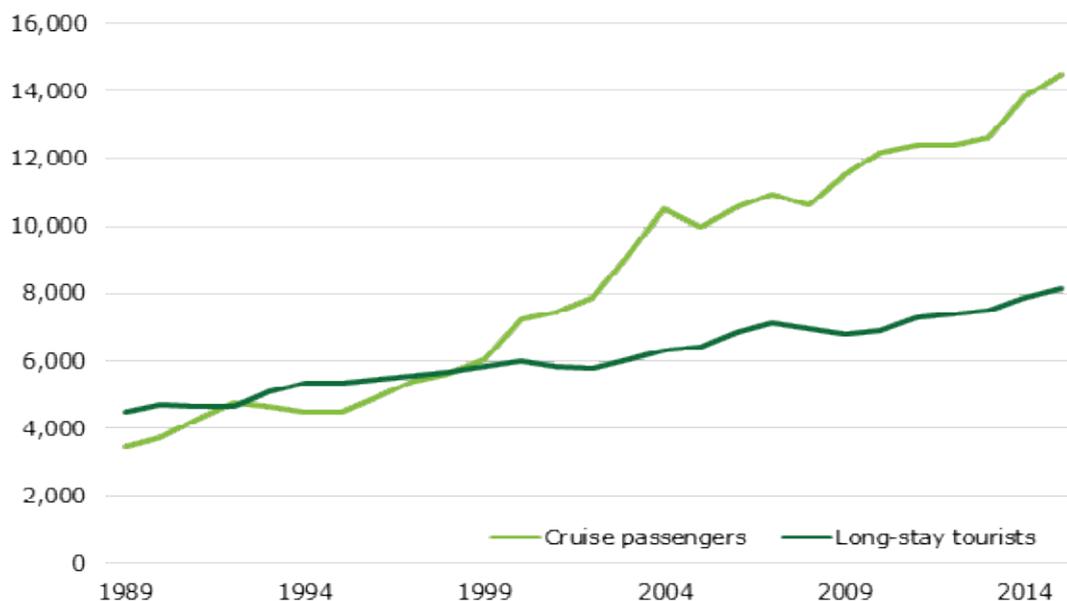
ARRIVALS

Total long-stay and cruise passenger arrivals to the BMCs increased from 7.9 million to 22.7 million between 1989 and 2015.³ This equates to an average growth rate of approximately 4.1% annually. However, the composition of tourist arrivals changed significantly over this period, with an increasing share of arrivals being accounted for by cruise passengers. In 1990, the number of cruise passengers arriving in the BMCs was approximately 4.4 million, but by 2015 this number had increased to roughly 14.5 million. Over the same period, the number of long stay tourists grew from 4.7 million to 8.2 million, meaning that the ratio of cruise visitors to long-stay visitors almost doubled in the region.



Figure 6: Arrivals to the BMCs by type of tourist

Arrivals in Thousands



Source: Caribbean Tourism Organization (CTO).

³ The latest year of consistent data on expenditure is 2014, while arrivals data are available for 2015.

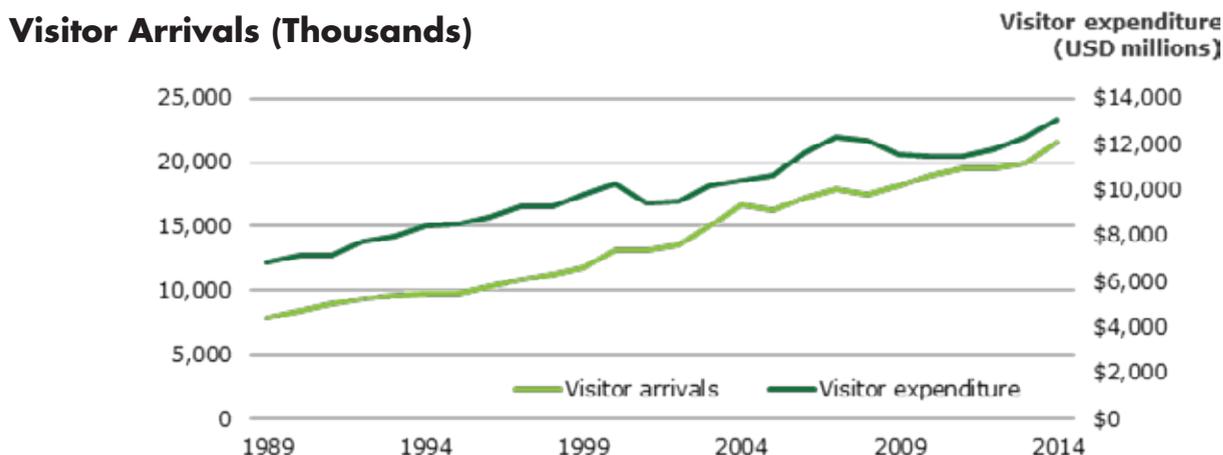
There is some variation in this trend across the BMCs. The Turks & Caicos Islands, Dominica, St. Kitts & Nevis, and the British Virgin Islands are examples of countries that experienced particularly high growth rates in cruise passenger arrivals between 1990 and 2015. Many of these BMCs invested in port infrastructure to be able to attract cruise routes and lines. In the long-stay segment, established countries, such as The Bahamas and Barbados, experienced low or even negative growth rates since 1990. Some smaller countries show high growth rates in long-stay tourist arrivals⁴. These countries include Suriname, Turks & Caicos, and Guyana.⁵ One exception to this finding is Jamaica, which experienced relatively high growth in the period from 1990 to 2015 when compared to other more established countries.⁶

EXPENDITURE

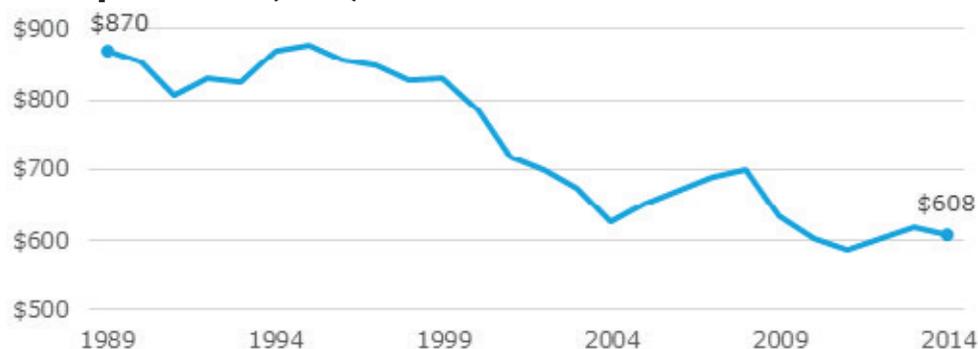
Total real tourist expenditure grew from USD 6.8 billion in 1989 to USD 13.1 billion in 2014. This is equivalent to an average annual growth rate of 2.7%. This growth was primarily driven by the growth in arrivals as average expenditure per visitor declined over the period. In 1989, visitors to the BMCs spent approximately USD 870 per-person-per-visit, but by 2014 that number had declined to USD 608. This implies a 30.1% decline in a 25-year period, which equates to an average annual decline of 1.2%.

Some smaller countries show high growth rates in long-stay tourist arrivals.

Figure 7: Visitor arrivals and expenditure in the BMCs



Per Visitor Expenditure (USD)



Note: All dollar values are in 2011 USD adjusted for purchasing power parity (PPP).
Source: Caribbean Tourism Organization (CTO).

⁴ The Bahamas experienced negative growth in long-stay tourist arrivals between 1990 and 2015, at -0.3% annually. The period between 2000 and 2009 was the worst for the country in terms of long-stay arrivals, showing a growth rate of -1.5%.

⁵ Haiti also experienced high growth in long-stay tourist arrivals, with the annual growth rate between 1990 and 2015 being roughly 4.4%. It is hypothesised that some of this increase in visits relates to "foreign aid tourism".

⁶ Overall growth rate in Jamaica was 3.7%, which is high compared to The Bahamas and Barbados, and above the average growth rate of long-stay tourist arrivals for all BMCs.

A key driver of this decline has been the changes in the composition of the tourism sector in the BMCs, particularly the growth of the cruise industry which has a different spending profile for visitors from traditional long-stay tourists.

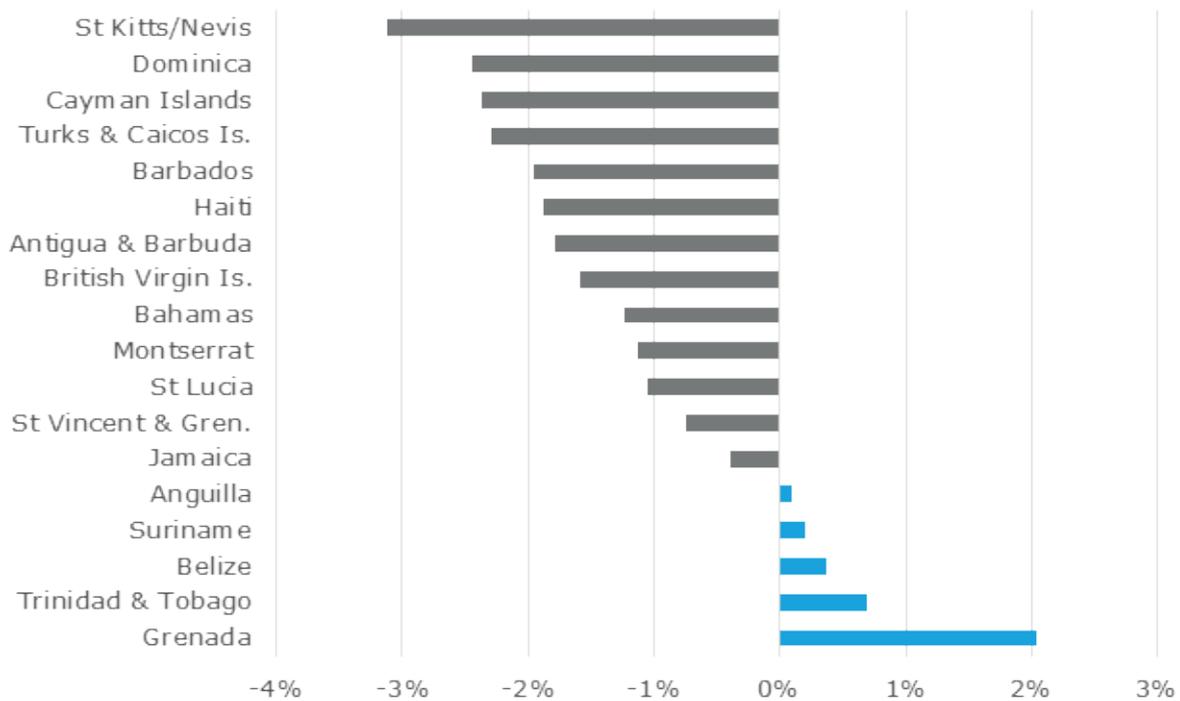
Expenditure data for cruise passengers and long-stay tourists show that cruise passengers tend to spend much less during a visit than long-stay tourists.⁷ Expenditure per person for cruise passengers is on average 94% lower than the spending per person for long-stay tourists. There are three major reasons for this difference:

Cruise passengers generally stay for only one day in each destination.

1. Some cruise passengers may choose to stay on the cruise ship and do not spend any money in the country of arrival, while still being counted in the arrivals statistics;
2. Cruise passengers generally stay for only one day in each destination, while the average length of stay for long-stay tourists is approximately 8 days; and
3. The daily spending per person for cruise passengers is on average 55% lower than the spending per person for long-stay tourists.⁸

The trends outlined above have not affected all BMCs equally, and this has led to differences in how expenditure per visitor changed over time in each BMC.

Figure 8: Average annual growth of expenditure per visitor, 1989-2014



ANNUAL GROWTH RATE OF EXPENDITURE PER VISITOR

⁷Data for cruise passenger and long-stay tourist expenditure are not consistently reported for all BMCs. The calculations and findings use data for the following countries: The Bahamas, Barbados, Belize, British Virgin Islands, Dominica, Grenada, Jamaica, and Saint Lucia and is supplied by the Caribbean Tourism Organisation (CTO).

⁸ The difference in daily spending varies considerably among the BMCs analysed, with some of them showing cruise passenger spending 87.0% lower than daily long-stay tourist expenditure.

In addition to lower magnitude of expenditure, the distribution of expenditure is also different and this is likely to have implications for economic impact. The cruise model includes food, shelter, recreational activities and entertainment – key points of expenditure for long-stay tourists. This means that the cruise passengers' interactions with the local economy tend to be more limited than those of long-stay tourists.

2.3. SUMMARY

Tourist arrival and expenditure patterns in the BMCs have changed significantly over the past 25 years as the cruise industry has expanded and competition in the long-stay segment, from regions such as South America and Central America, has developed. The implications of these changes on the economic impact of tourism in the Caribbean are explored in the next chapter.

Some cruise passengers may choose to stay on the cruise ship and do not spend any money in the country of arrival, while still being counted in the arrivals statistics.



3 TOURISM AND ECONOMIC GROWTH

Tourism activity directly and indirectly affects the economies of the BMCs. The goods and services purchased by tourists generate demand for local businesses and support the employment of local individuals. There are also benefits along the tourism value chain as tourism-related businesses need to source inputs to meet the higher demand, and this creates opportunities for other sectors of the economy. In addition, there are spin-off benefits that come from developing the specialised infrastructure and human capital needed to support the industry.

A range of factors influences the overall magnitude of these economic impacts. The number of tourists; how long they stay; how much they spend; and where they spend all influence the distribution of the demand injection into the local economy. The previous chapter described how these factors vary by cruise and long-stay segments.

In addition to the distribution of tourist expenditure, the strength of the linkages between the tourism sector and the rest of the economy is another critical factor in determining the overall economic impact of tourism. While there are typically capacity constraints within the local economies forcing businesses to import inputs to produce a certain type or quality of product, all else being equal, the more the tourism sector sources from the local economy, the greater the overall economic impact.

Finally, where there are capacity constraints, tourism demand can provide the incentive for businesses and governments to invest in infrastructure and skills, which can generate a wide range of economic benefits which go beyond the tourism sector alone. Investment in the development of local capacity can also unlock the potential for tourism to benefit the economy by replacing imports with locally sourced goods and services.

Figure 9 provides a high level summary of how tourism activity generates economic impact in the BMCs.

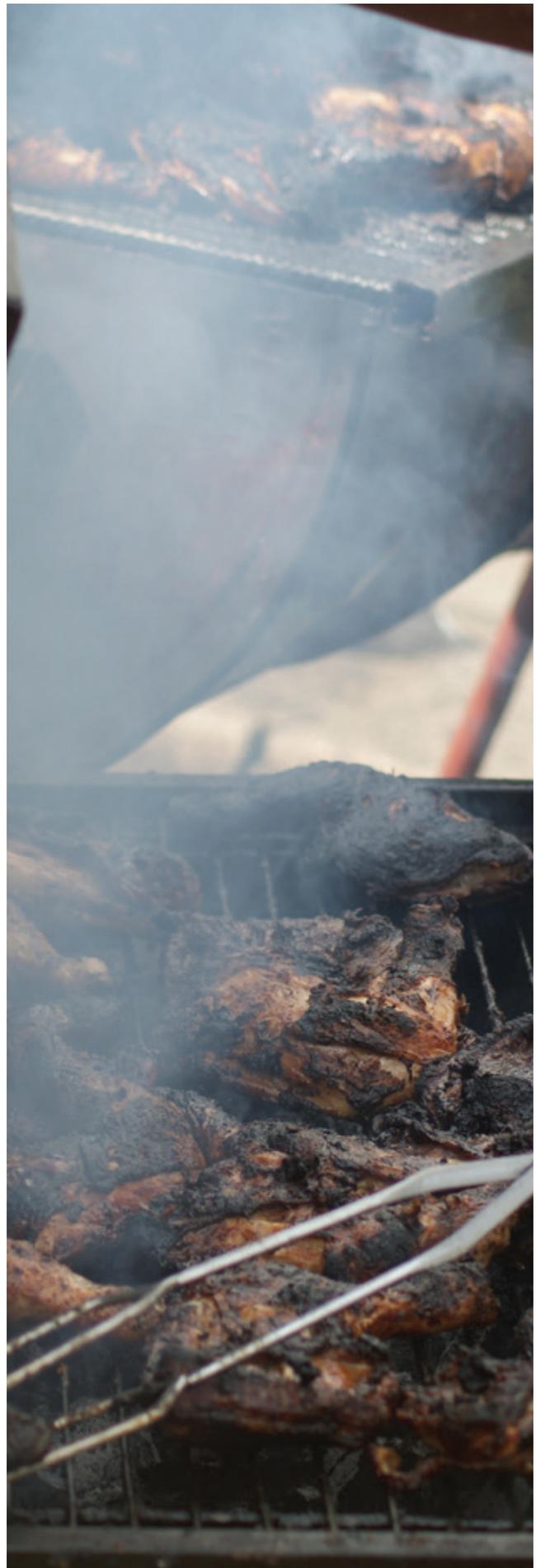
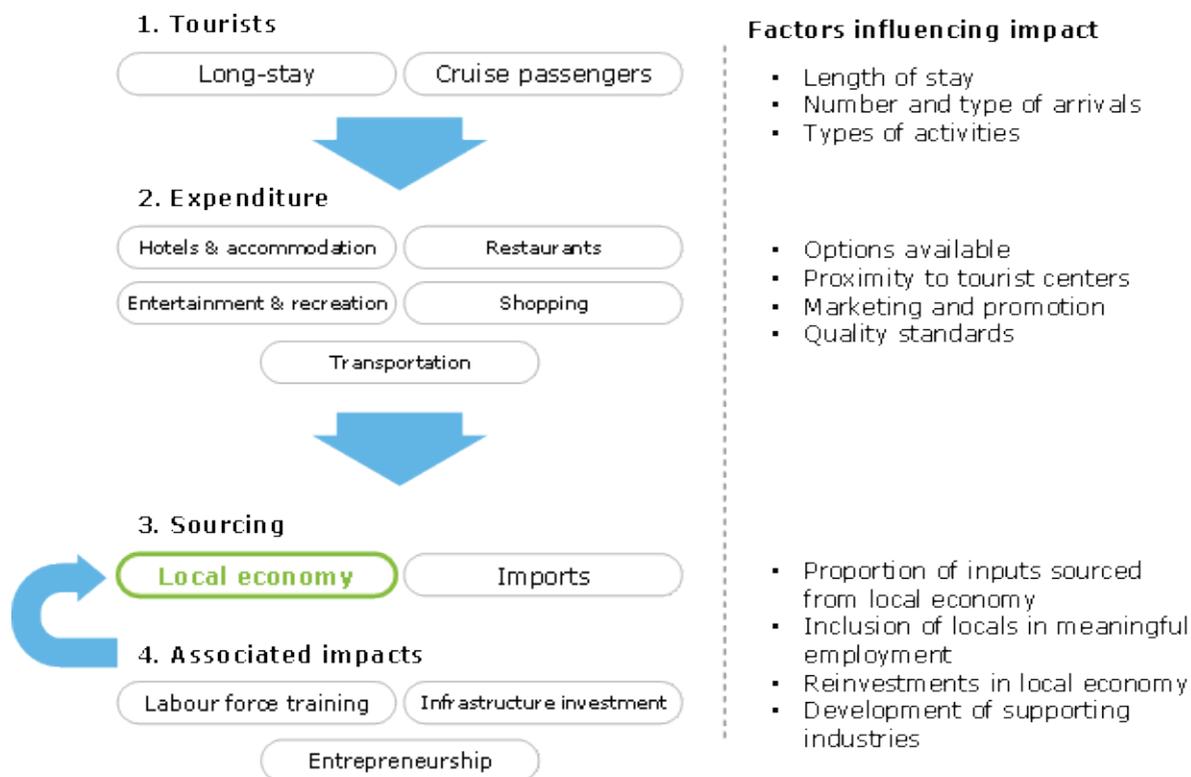


Figure 9: Overview of how tourism activity generates economic impact in the Caribbean



Source: Authors' analysis.

3.1. QUANTIFYING THE ECONOMIC IMPACT OF TOURISM IN THE BMCS

Quantifying the economic impact of tourism in the BMCs is a complex exercise. As described above, there are several different mechanisms driving this impact and some are connected to or dependent on each other. Moreover, the impact of tourism expenditure can occur over several years and there may be some off-setting of the impacts as a result of displacement effects that may occur. For example, as the tourism sector grows, individuals may be compelled to find employment in the sector, reducing the labour available to – and therefore production capacity of – other sectors.

Despite these challenges, there is growing empirical literature on the relationship between tourism and economic growth. Much of this literature is based around the tourism-led growth (TLG) hypothesis, which views tourism as an alternative form of exports, and applies econometric techniques to isolate the economic impact of tourism, typically using GDP per capita or GDP growth as the relevant variable of interest.⁹ A detailed review of this literature is presented in Appendix I.

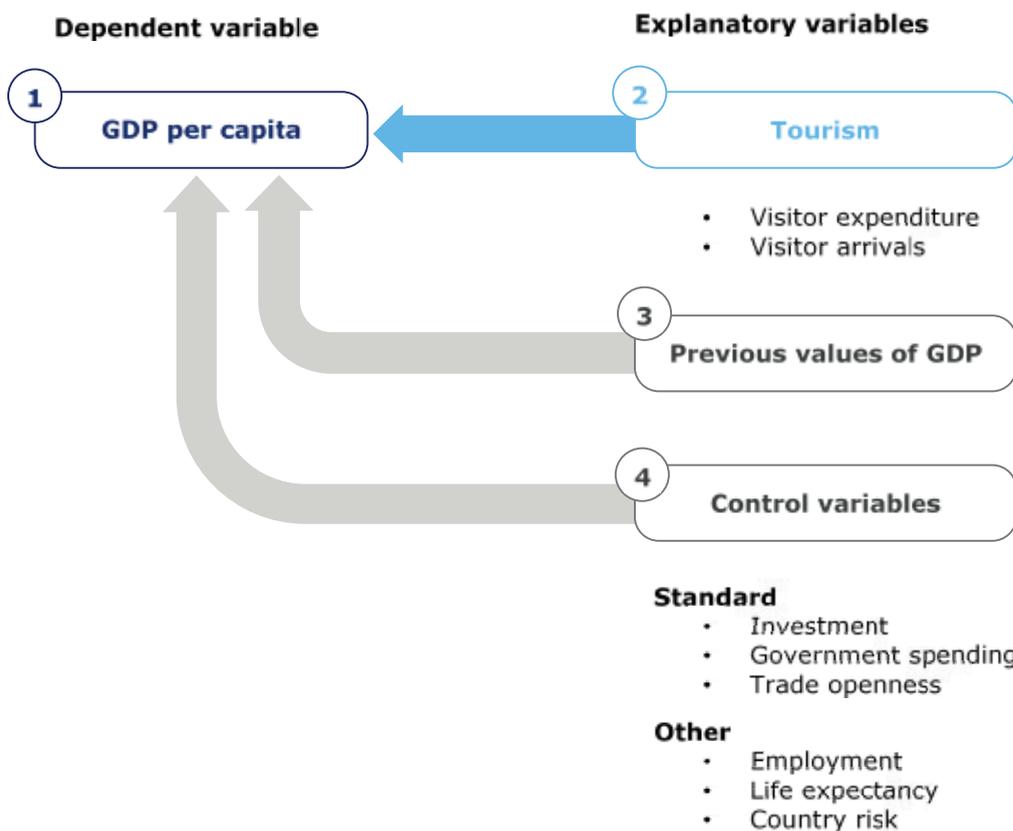
In line with this literature, this study derives estimates of economic impact using an econometric model of the relationship between tourism activity and GDP growth in the BMCs. There are many factors other than tourism that help determine GDP growth in the Caribbean, and these are taken into account by the model. The model therefore controls for, among other things, business investments, government spending, and openness to trade, so as to isolate the effect that tourism specifically has on the GDP of the BMC economies. Figure 10 illustrates the general approach to the model.¹⁰

Unlike input-output approaches, which are commonly used to estimate economic impacts, the model uses an econometric approach to estimating the economic impact. That is, instead of looking at the determinants of economic impact, and building estimates around them, it focuses on how variations in GDP growth can be accounted for by tourism activity. One of the advantages of this approach is that, in theory, it captures all mechanisms by which tourism impacts GDP.

⁹ Mercedes Castro-Nuño, José A. Molina-Toucedo, and María P. Pablo-Romero, "Tourism and GDP: A meta-analysis of panel data studies," *Journal of Travel Research*, 2013.

¹⁰ Full details can be found in Appendix I.

Figure 10: Overview of the modelling approach



Source: Authors' analysis.

3.2. RESULTS OF THE ECONOMIC IMPACT MODEL

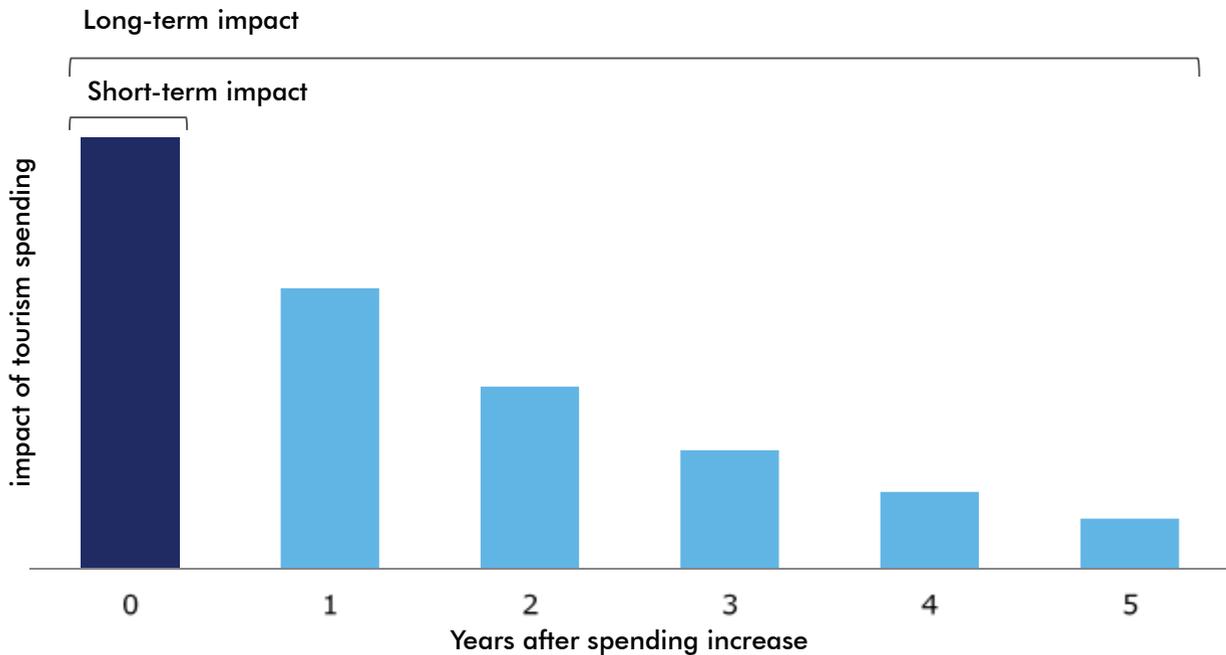
The first set of results focuses on the causal relationship between tourism spending and GDP in the BMCs. There are two types of impact that are modelled:

- **Short-term impacts:** These refer to the contemporaneous impacts that tourist spending has on local economies. Spending by tourists in a certain year or season affects the local economies in that same year or season through increases in labour income, local business revenues, and taxes. All of these contribute to same-year increases in GDP.
- **Long-term impacts:** With income and government revenues increasing as a result of the short terms effects, tourism spending enables further consumption and investments in the local economy, and consequently greater economic activity. The long-term impact captures the dynamic effects of tourism spending which take place over several years (in this case, calculated over a 5-year period).

Figure 11 illustrates the conceptual difference between the short-term impacts and the long-term impacts of tourism expenditure in a given year. The short-term impact is measured by the incremental increase in GDP in the same year as the expenditure takes place. The long-term impact is measured by the sum of the annual increases in GDP that are attributable to the tourism expenditure in the initial year. These annual increases occur in one year and continue to work through the local economies to enable further growth. However, as years pass, leakages in the economy occur, which is why the expenditure's impact diminishes.

There are many factors other than tourism that help determine GDP growth in the Caribbean, and these are taken into account by the model.

Figure 11: Illustration of the difference between the short-term and long-term economic impacts



Source: Authors' analysis.

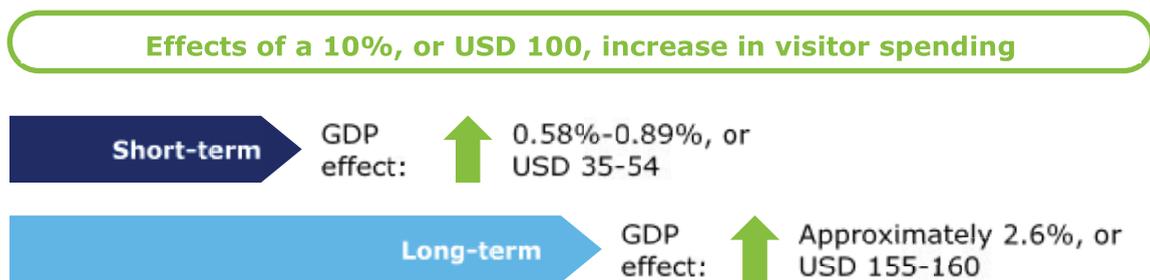
The results show that, for the BMCs on average, a 10% increase in tourist spending is associated with a short-term increase in GDP per capita that is between 0.58% and 0.89%. With the annual growth of visitor spending in the BMCs averaging 2.7% between 1989 and 2014, it is estimated that each year the contemporaneous impact of tourism on GDP growth was between 0.16% and 0.24%.¹¹

In the long-term, this impact is estimated to be much greater. A 10% increase in tourism spending is associated with a cumulative increase in GDP per capita of approximately 2.6% after the first 5 years.¹²

These results can be made more tangible by converting them into dollar terms. As an illustration, the average GDP impact of an additional USD 100 of tourism expenditure is estimated to be USD 35-USD 54 in the short-term, and between USD 155 and USD 160 in the long-term.¹³

These results imply that in the short-term between 30% and 50% of tourist spending translates to GDP. In the long-term, because of dynamic effects, tourism spending in a certain year generates on average between 1.5 and 1.6 times its value in terms of GDP in the BMCs.

Figure 12: Estimates of the average economic impact of tourism expenditure in the Caribbean



Source: Authors' analysis.

¹¹ Total GDP growth for the BMCs averaged 3.5% for the period between 1989 and 2014.

¹² From a theoretical standpoint, the impact of tourism would continue to yield returns for many years after the original increase in tourist spending and the model can estimate the cumulative effect of tourism. In reality, however, due to leakages (e.g. imports and remittance of profits) the effects of tourism spending are most likely insignificant beyond the 5-year period after the original spending increase.

¹³ Transforming elasticities (ϵ) into dollar values (or marginal products, $\partial y/\partial x$) relied on the following expression: $\epsilon = \partial y/\partial x \cdot x/y$ - with y and x representing, respectively, the average GDP and tourism spending per capita in the period between 1989 and 2014 for the BMCs included in the regression analyses.

To develop an industry-wide view of the impact, these results can be applied to the total tourism expenditure in the BMCs. In 2014, this amounted to USD 13.1 billion. Based on the estimates of long-term impact, tourism supports approximately USD 40.3 billion of GDP across the region, which makes up approximately one third of total GDP in the BMCs.

How these results compare with other jurisdictions

To provide some context for these results, it is useful to compare them to estimates of economic impact from other studies.

Table 2 presents results on the short-term and long-term effects from three studies on three different markets (Africa, Latin America and a global sample). While there are differences in the methodology used to estimate these impacts, in general the results are comparable.



Table 2: Results from selected comparator studies

Study	Short-term effect	Long-term effect	Sample
Fayissa <i>et al</i> (2008)	0.25%	0.6%	42 African countries from 1994-2005
Fayissa <i>et al</i> (2009)	0.24%	0.3%	17 Latin American countries from 1994-2005
Sequeira (2008)	0.41%	8.9%	95 countries from 1980-2002 (Fixed effect model)
	0.34%	4.5%	95 countries from 1980-2002 (GMM model)
Current study	0.58%	5.2%	17 BMCs from 1989-2014 (Fixed effect model)
	0.89%	2.9%	17 BMCs from 1989-2014 (GMM model)

Note: Short and long-term effects are based on a 10% increase in tourism spending. Long-term effects presented here were calculated based on an infinite horizon.

Source: Various .¹⁴



¹⁴ Bichaka Fayissa, Christian Nsiah, and Badassa Tadasse, "Impact of tourism on economic Growth and Development in Africa," *Tourism Economics*, 2008; Bichaka Fayissa, Christian Nsiah, and Badassa Tadasse, "Tourism and economic growth in Latin American countries (LAC): further empirical evidence," *Department of Economics and Finance Working Paper Series*, 2009; Tiago Neves Sequeira, and Paulo Maçãs Nunes, "Does tourism influence economic growth? A dynamic panel data approach," *Applied Economics*, 2008.

The results are generally in line with the impacts found by other studies. Estimation results tend to vary significantly with region and type of countries included (e.g. small versus large, or developing versus developed). Compared with a selected group of studies, the results show higher impacts of tourism than comparable regions in terms of economic development, such as Latin America and Africa. When compared to samples containing larger, more developed countries, the short-term impacts are slightly higher, but the long-term impacts are smaller.¹⁵

How the impact has varied over time

The estimates presented on the previous page represent the average relationship over the last 26 years. However, it is possible that the relationship between tourism and GDP growth may have changed over this period. For example, if over time tourists change their expenditure pattern by favouring activities that are more beneficial to the local economies (e.g. staying at locally owned hotels), the impacts of tourism spending will tend to increase. The opposite is true if tourists decide to partake in activities that do not favour the local economy.

With this in mind, the models were tested for the presence of structural breaks in the statistical relationship between tourism expenditure per capita and GDP growth per capita.¹⁶ The results suggest that, although there are some variations in the impact of tourism spend over time, these differences are not statistically significant.

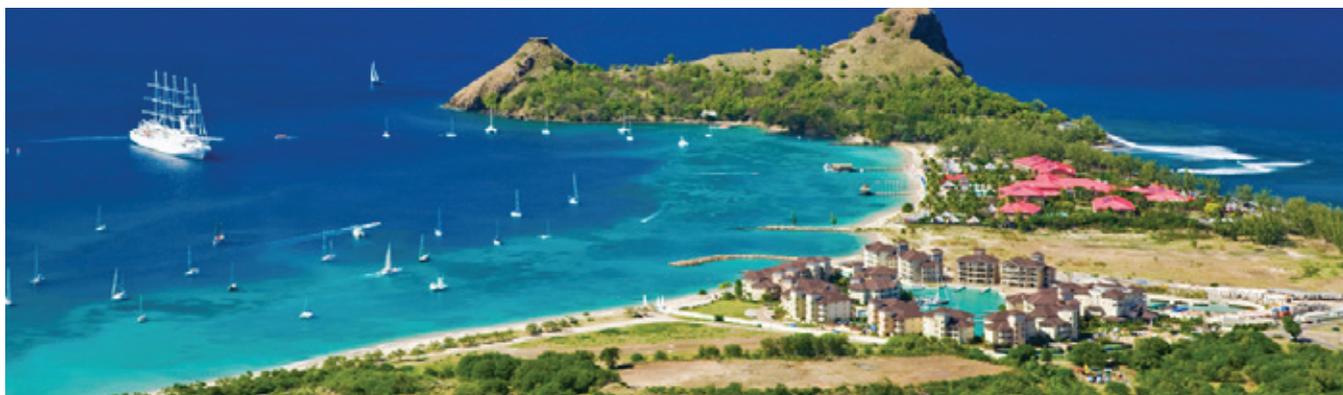
This finding indicates that on an expenditure basis there has been no significant change in the impact of tourism over time. However, on a per-visitor basis the impact has declined, as average expenditure has decreased over time with the increased share of the cruise segment.

How the impact varies by tourist segment

Analysis of tourism data showed that cruise passenger arrivals have increased at a much faster pace than long-stay tourist arrivals in the BMCs. This represents an important shift in the tourism sector for these countries. As hypothesized in the previous chapter, cruise passengers may not only spend less, but also spend on items which may not lead to significant impacts on the local economies. For example, with little time and contact with the BMCs communities, cruise passenger may spend more than long-stay tourists on souvenirs or other items that are not produced in the BMCs. Activities such as dining and entertainment are all done on the cruise ship, leaving little to be spent in the local economies.

To test this hypothesis, the model was re-estimated using arrival data for the two groups: long-stay tourists and cruise passengers. Because data on actual spending is incomplete, for this estimation arrivals were used - i.e. number of tourists and cruise passengers - rather than expenditures.¹⁷

The results of this analysis suggest that while long-stay arrivals have a positive economic impact, the marginal cruise arrival has a much smaller impact that is not statistically significantly different from zero. This should not be interpreted to mean cruise visitors have no economic impact, but that the relationship cannot be identified from the data. This is likely because the individual expenditure per arrival is so low that it cannot be distinguished from statistical noise.



¹⁵ A more comprehensive review of studies and estimation results can be found in Mercedes Castro-Nuño, José A. Molina-Toucedo, and María P. Pablo-Romero, "Tourism and GDP: A meta-analysis of panel data studies," *Journal of Travel Research*, 2013.

¹⁶ As part of the tests, two additional strategies were used for assessing changes in tourism spending impact over time: dividing the dataset into two time periods (1989-2001 and 2002-2014); and interaction between tourism spending and year dummy variables. Both strategies yielded statistically inconclusive results.

¹⁷ There are pros and cons from using arrivals data, and the literature on tourism-led growth is divided on which to use when data availability is not a constraint.

4 SWOT ANALYSIS OF TOURISM IN THE CARIBBEAN

The estimates of economic impact in the previous chapter illustrate the extent to which tourism is contributing to the BMCs' economies. The focus of the rest of the report now turns to how these impacts could be enhanced. This chapter begins by identifying the factors that influence the potential of the tourism industry to generate economic impact.

To support the analysis in this chapter, discussions were held with a variety of stakeholders from across the region, including government ministries and agencies, industry associations, and private companies involved with tourism to gather a wide range of perspectives on the role that tourism plays in the economy.

The findings of the analysis are organised within a "SWOT" (strengths, weaknesses, opportunities, and threats) framework. The elements of this framework should be interpreted as follows:

- **Strengths:** Current factors that support the economic impact of tourism in the Caribbean;
- **Weaknesses:** Current factors that may be limiting the economic impact of tourism in the Caribbean;
- **Opportunities:** Emerging factors that may support the future economic impact of tourism in the Caribbean; and
- **Threats:** Emerging factors that may limit the future economic impact of tourism in the Caribbean.

The purpose of this chapter is to identify the factors that are broadly relevant across the BMCs and to encourage the development of practical strategies for enhancing the economic impact of tourism in the Caribbean. The factors presented are not exhaustive, and will inevitably have varying levels of relevance across the BMCs. As such, the number of factors included in each of the four SWOT categories should not be interpreted as a comment on the state of the industry.¹⁸

Figure 13 summarises the findings of this analysis. Further details on each of the strengths, weaknesses, opportunities and threats identified here are provided below.

Figure 13: SWOT Matrix



Source: Authors' analysis.

¹⁸ In particular, there is a natural tilt towards identifying weaknesses as factors to be addressed.

4.1. STRENGTHS

Unique value proposition and diversity of the tourism offering

One of the major strengths of the tourism industry in the Caribbean is the uniqueness of the value proposition, which combines: a strong “sun, sea, and sand” product; a rich and varied heritage; beautiful natural features; and relatively high levels of safety and security. These features allow many of the BMCs to offer a more diversified product than much of the region’s competition. For example, many BMCs market ecotourism, heritage and cultural tourism (e.g., music festivals, culinary experiences) as part of their major offerings, while others market more niche tourism products, such as romance tourism in Saint Lucia.

Achieving product diversification supports the enhancement of economic impact for two key reasons:

- As the region contains many individual countries, competition for tourists is inevitable. However, the type of competition depends on how the countries differentiate themselves. If “sun, sand, and sea” is the only product offered across the Caribbean, then countries might compete on prices in the form of a race to the bottom. Product diversification can reduce this tendency by enabling BMCs to compete on the basis of unique tourism value propositions.
- Diversification allows BMCs to hedge against shocks to the tourism industry, such as bad weather, price shocks, and price competition from other regions. This helps mitigate potential threats to the industry and safeguards the economic benefits that accrue from tourism.

As the Region contains many individual countries, competition for tourists is inevitable.

A diversified tourism product also provides opportunity for the diversification of the economy itself. This is especially important for countries that are highly reliant on the tourism industry. The greater the variety of tourism product, the wider the input needs and hence the greater the opportunity to develop ancillary sectors, such as agriculture, light manufacturing, and general services.

A more diversified tourism product can also support the development of tangentially related sectors. For example, tourism stakeholders in Barbados highlighted the opportunity to leverage the country’s strong tourism product to grow the Meetings, Incentives, Conventions, and Events (MICE) sector. The resulting development of facilities to support this could then support the development of the business district in Bridgetown.

Proximity to Major Markets

The real estate adage of ‘location, location, location’ applies equally to tourism, and is a significant factor in forming a region’s comparative advantage relative to other markets. In this regard, the importance of the location of the BMCs and the resulting travel time from major markets cannot be understated. With approximately 75% of the US and Canadian population within a 5-hour flight from the region, the addressable market for the BMCs is very large. This permits the various destination marketing organisations to deploy different campaigns to encourage visits. For instance, it is possible to market a destination for short-term visits, such as a cultural, sporting or culinary events, as well as for longer term stays of a week or more.

4.2. WEAKNESSES

Seasonality of tourism industry

Seasonality has traditionally been a major issue for the tourism industry in the BMCs. Tourist demand is high in December to April (peak season), but lower during the rest of the year. The extent of this seasonality varies among the BMCs, and is particularly acute within the cruise segment.



Figure 14: Seasonality of tourist arrivals in Eastern Caribbean countries (index, Jan 2015 = 100)



Note: Grey shading indicates months that are not peak season.
 Source: The Organisation of Eastern Caribbean States (OECS).

The seasonality trend is primarily driven by two factors:

- Typically, the Caribbean’s rainy season starts in May and its hurricane season runs from August to October. The change in weather pattern significantly affects arrivals given that “sun, sea and sand” are important aspects of the Caribbean tourism product;
- The increased attractiveness during the summer months of alternative options in the USA, Canada and Europe, from where most extra-regional tourists originate.

The seasonality of demand presents challenges for the ability of tourism to support economic impact. Naturally, if the industry is significantly less active for large parts of the year, there are limits to the economic contribution the sector can make. Seasonality also lowers the incentive to invest in local skills, supply chains, and infrastructure, which help develop the economic benefits of tourism activity, and to source local labour and other production inputs. For example, super-yachts, a highly seasonal segment of the tourism sector, require substantial provisioning services. Yet, these services are often provided by foreign companies, rather than local companies, because the type of local investment required to meet the scale and quality expectations of super-yachts is not feasible, given the limited time period that the services will be used.

BMCs have been pursuing a variety of strategies to reduce the seasonality of tourism, mostly through diversifying their tourism product away from “sun, sea, and sand” in order to provide new reasons to choose the Caribbean that are not weather dependent. For example, to generate more year-around visits, some BMCs organise sporting and cultural events during the summer months and invest in non-seasonal areas of tourism, such as education tourism. The box below provides an example of the cultural events held in the region.

Example of a strategy used to reduce seasonality

The Saint Lucia Jazz Festival was created in 1992 to encourage tourism in the low-season. The success of the festival increased visitor arrivals, raised awareness of the destination, provided exposure for local artists, and increased the subsequent demand for other tourist accommodation, transport, food, performances, events and souvenirs services. The value of the additional media exposure from the festival is estimated to surpass the annual budget of the local marketing board.

Linkages to the rest of the economy

As explained above, the overall economic impact of tourism depends both on the scale of the industry (e.g. the number of tourists coming to the region and how much they spend) and the linkages that the tourism industry has to the rest of the local economy. These linkages are largely determined by the extent to which tourists engage with the local economy (rather than staying in their hotels or in the main tourist areas) and the extent to which hotels, restaurants, attractions, and other tourism-related businesses hire labour and source their inputs locally.

Data on the linkages between the tourism sector and local economies is limited, but research shows some evidence the BMCs may face challenges leveraging the economic activity generated by tourism into broader economic impacts. Past studies have measured the linkages between accommodation and other sectors. For example, a 2006 study by Tourism Global Inc. revealed that, on average, only 16% of fruit and 20% of fish used in the Caribbean hotel sector are sourced locally.¹⁹ Furthermore, a survey that aimed to quantify the hotel sector's motivation to buy locally revealed that 79% of hotels would be willing to purchase more inputs locally. Yet, these hotel operators highlighted availability issues, price and quality as the biggest barriers preventing them from doing so.²⁰

A key factor determining the extent to which tourism links to the local economy is the distribution of tourist expenditure. Many BMCs have difficulty encouraging tourists to spend more in the local economy, and much of the tourist expenditure takes place within the hotel. For example, according to visitor exit surveys in Saint Lucia, approximately 68% of daily expenditure (this includes room rate and food and beverages) is spent at the hotel.²¹

One institution that stakeholders identified as having the potential to enhance the linkages with the regional economy is an organised agriculture market for hotels and other tourism-related businesses to purchase inputs directly from local producers. In developing such markets, quality assurance is a critical success factor, especially in higher end, luxury destinations, such as Antigua and Turks and Caicos Islands, or locations with premiere all inclusive resorts, where the customers expect products of a particular standard.

Developing linkages between tourism and local food industries

In Saint Lucia, there has been a local produce purchasing policy in place since 2002 with three Sandals hotels. More than 50 local farmers and suppliers are involved in supplying the weekly orders. The policy also includes training for purchasing clerks and receivers, regular visits to farms by chefs and kitchen staff, and discussions with farmers and suppliers on issues of traceability.

The Sandals Resort Farmers Programme in Jamaica is another example of a successful agro-tourism initiative in the Caribbean. The programme, created by the Sandals Group in 1996, grew from ten farmers supplying two hotels, to 80 farmers in 2004 supplying hotels across the island. Due to the programme, farmers' sales increased over 55 times in three years, from USD 60,000 to USD 3.3 million. The hotels also benefited from a wider variety of good quality local produce.

An example of an island incorporating food festivals into tourism is Barbados' Oistins Fish Fry. This is a weekly event where fishermen, fish sellers, farmers and local chefs sell local vegetables, fish, beverages, and prepare meals to thousands of tourists and locals. This is a self-sustaining year-round event. The event has grown to also offer opportunities for local craftspeople to sell to hundreds of tourists at the event every weekend.

Outside of agriculture, there are opportunities to expand the links between tourists and the local economy. In St. Vincent & the Grenadines, for example, a programme was launched to promote local craftsmanship to tourists in an attempt to replace generic souvenirs, which tend to be imported. Although the programme faces challenges, such as ensuring the overall quality of the products being offered, it is a valid attempt at generating higher returns from tourism activity.

Another way to stimulate better linkages between the economy and the tourism sector is by leveraging tourism to enhance or increase the capacity of other industries and

¹⁹ Tourism Global Inc., *The Caribbean Accommodation Sector as a Consumer of Locally Produced Goods and Services and Contributor to Government Revenues*, 2006.

²⁰ *Ibid.*

²¹ This is based on reports on exits surveys provided by Saint Lucia's Ministry of Tourism.

public infrastructure. The tourism sector demands inputs from a variety of industries that could be further developed in some of the BMCs, such as light manufacturing (e.g. linen production). Additionally, public infrastructure, such as roads, ports and utilities, are also required for the ongoing functioning of the tourism sector. Through policy initiatives, tourism activity can be used to enhance the broader economies of the BMCs (e.g. skills enhancement, supply chain development) and their public infrastructure for the benefit of local communities, as well as the tourism sector, in the long term. An example of this approach is Jamaica's Tourism Enhancement Fund. This initiative consists of charging a small fee of approximately USD 20 to people flying into Jamaica and USD 2 to cruise passengers and directing the proceeds towards infrastructure projects and improvements that form part of the Country's Master Plan for Sustainable Tourism Development (2002). In 2013, funds were directed towards a project designed to bridge the language difference between non-English speaking guests and the sector's employees in order to provide better customer service standards in Negril and Montego Bay. Participants received training for 12 weeks to enhance their language skills enabling them to engage in conversations.

Jamaica's Tourism Linkages Network

In 2013, the Jamaican government established the Tourism Linkages Network with the goal of increasing the consumption of local goods and services by the industry and creating employment through these opportunities.

The Network consists of public and private partners. Notably, the Network works with the Technical Working Group focused on Agriculture and Manufacturing which is made up of representatives from these sectors. The goal of this collaboration is to identify issues that may prevent linkages from occurring and address them together.

In 2016, the Network prioritised developing integrated marketing campaigns and tourism experiences that could help cross-sell across the economy. For example, the Network is considering efforts to establish food festivals to help stimulate demand for locally grown food, and better market duty-free shopping experiences to tourists to help trigger positive spin offs in the economy.

Ultimately, the potential to achieve a higher overall proportion of locally sourced goods and services depends on the size and structure of the economy, and this varies across the region. For example, Trinidad & Tobago has a relatively high industrial capacity and a lot of the inputs and outputs consumed in its tourism industry are produced locally. This enhances the economic impact of the industry. Producing inputs for the different tourism sub-sectors may not be feasible for the smaller BMCs, given their resource constraints. Individual countries should assess where there are opportunities to enhance the linkages within the context of their own economy.

Transportation links

Transportation is a critical enabler of the tourism industry. Given the location of the major source markets (USA, Canada, and Europe) and the time it takes for visitors to travel to the Caribbean, connectivity is vital to securing tourist volumes and enabling diversification of customer markets.

However, for many BMCs, airlift and servicing remain a challenge. There are limited direct flights from major extra-regional markets to many of the smaller BMCs, and these countries are dependent on the major hubs, such as Barbados, Trinidad, Jamaica, and Antigua. Furthermore, intra-regional travel is often challenging, and visitors are regularly required to connect via multiple countries or even the United States to arrive at their destination.

Not only does poor connectivity pose barriers to travelling to the individual non-hub BMCs, but it also limits the opportunity for "island-hopping". For example, while data on the topic is incomplete, a 2015 market profile of the Caribbean by the U.S Department of Commerce and International Trade Administration shows that approximately 88 per cent of US visitors visit only one country in the region during their stay.²² The 2015 visitor exit surveys from Saint Lucia also showed a similar trend, in which most tourists visited only one country during their time in the region. While it is not clear whether this is driven by preference of visitors or the travel constraints they face on arrival in the region, the lack of intra-regional travel options places the region at a competitive disadvantage relative to other regions that have multi-modal options to cross countries easily (e.g. the European Union).

²² U.S. International Trade Administration, *Market Profile: Caribbean*, 2015.

Efforts to develop an inter-island ferry service in the East Caribbean

To address some of the inter-island travel challenges, proposals to develop a ferry service between islands which could enhance tourism regionally and internationally, have been developed.

Despite potential benefits, the development of this service has faced two major obstacles, according to stakeholders. Firstly, there is a technical issue that the vessel necessary to create the ferry system – for example, one that can carry approximately 200 people and link Barbados, Saint Lucia, Grenada, and St. Vincent – would cost approximately US\$20 million. Secondly, developing a customs and border crossing system that would permit the seamless passage of people and goods is a challenge.

Currently, the customs clearance process can be long and is non-standardised across islands. This limits the feasibility of the ferry service.

Regional solutions to human resource training

In The Bahamas, the Culinary and Hospitality Management Institute at the University of Bahamas is known to be a regional center of excellence in training in the industry.

Similarly, Excelsior Community College in Jamaica has established the School of Tourism, Hospitality and Entertainment Management. Included in the school's mandate is addressing identified gaps in training and education in the tourism and hospitality sectors. Students are given the opportunity to participate in internships and work study programmes in the industry, in order to develop real world experience at hotels, resorts etc. This kind of initiative will address not only the shortage of qualified local talent, but also ensure maintenance of tourism industry standards. Tourism is a global industry, and visitors to the Caribbean expect hotels, restaurants and other tourism-related services to follow standards similar to what they are accustomed to find in other countries.

Human resources and training

A common challenge raised by stakeholders across the region relates to the unavailability of labour with the appropriate skills to meet the customer service requirements of the tourism sector. This is an important barrier to economic development as the lack of local expertise typically leads to importing expertise from abroad, thereby limiting the economic benefits of tourism activity.

This issue may be particularly pertinent for managerial positions, which are often filled by foreign workers brought to the country by international hoteliers or resort operators. Hospitality and tourism research shows that hotels employ international managers mainly to retain control and to coordinate operations in their local branches.²³

4.3. OPPORTUNITIES

Regional collaboration

Competition between the BMCs is both inevitable and healthy. However, collaboration on initiatives that increase the flow of tourists to the Caribbean can provide benefits to the region as a whole.

There are currently a number of initiatives that support collaboration across the region. For example, the Caribbean Tourism Organisation supports and co-ordinates marketing initiatives for the region. Another example is the the Hospitality and Maritime Training Institute in St. Vincent & the Grenadines, which will serve as the hub for training employees in the Eastern Caribbean. Helped by the European Union, the Government of St. Vincent and the Grenadines constructed the Institute with the purpose of establishing a fully functional hospitality and maritime institute with accredited training programmes designed to adequately meet the needs of the Hospitality, Tourism and Maritime sectors in the Caribbean.

²³ B. Ozdemir, and R. Cizel, "International hotel manager as an emerging concept: A Review of Expatriate Management Literature and a Model Proposal," *Journal of Hospitality and Tourism Management*, 2007.

Other ways stakeholders identified BMCs could mutually benefit from collaborating include:

- Harmonisation of visa entries and other visitor regulations;
- Development of joint tourism offerings (e.g., regional tours based on special areas of interest such as cuisine, music, history); and
- Ongoing cooperation on public health and safety matters (e.g., protocols to prevent spread of communicable diseases).

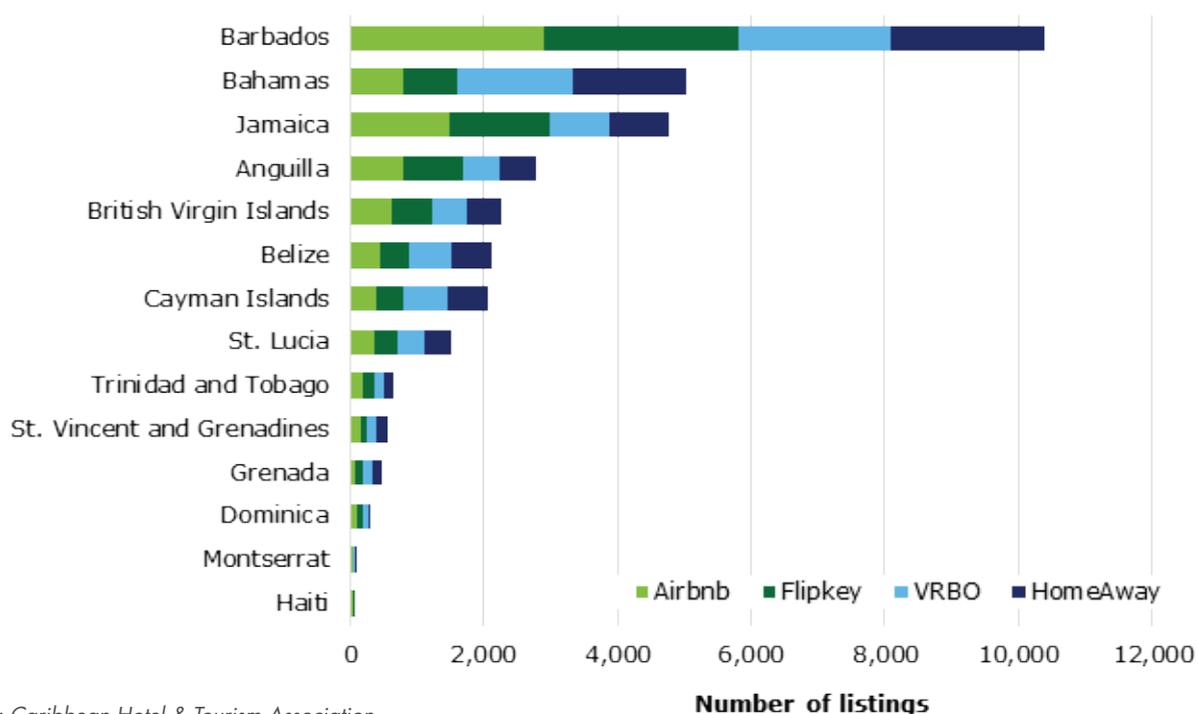
There may be insufficient interest in formalising cooperation efforts. One reason for this may be the heterogeneous nature of the islands. Not only do the BMCs have different tourism offerings and target different markets, but their industries are also at different stages of development. This creates differences in incentives for cooperation. For example, while small islands, such as St. Vincent & the Grenadines and Turks and Caicos Islands might benefit from coordinated efforts, larger countries such as The Bahamas and Barbados may not reap the same level of benefits.

Growth of the sharing economy

The sharing economy, particularly in the accommodation sector, is rapidly growing in the Caribbean. Platforms such as Airbnb, Vacation Rentals by Owner (VRBO), HomeAway, and FlipKey allow residents to list rooms and participate in the Caribbean tourism sector directly. As of February 2016, there were approximately 84,548 rooms listed across these four platforms with Airbnb comprising 25,000 of the listings.²⁴ However, hotels still dominate the accommodation sector. In 2015, it is estimated that there were more than 230,000 hotel rooms in more than 1,900 hotels in the Caribbean.²⁵

The sharing economy, particularly in the accommodation sector, is rapidly growing in the Caribbean.

Figure 15: Sharing-Economy Accommodations Listings



Source: Caribbean Hotel & Tourism Association.

²⁴ Caribbean Hotel and Tourism Association, *The Caribbean Sharing Economy Resource Guide*, 2016.

²⁵ Serlen Bruce, Brendan Manley, and Sean McCracken, "Deep Dive into the Caribbean: Hotel Performance, Pipeline and Investment in the Region," *Hotel News Now*, 2016.

These platforms can increase the number of visits by adding new accommodation options for tourists in peak periods, when hotels and resorts are typically operating at full capacity. This result will likely have a greater impact in BMCs with more seasonal long-stay visitor trends. The platforms also provide opportunities for markets that generally offer luxury accommodation to serve tourist segments with a lower budget.

The emergence of the sharing economy in the Caribbean can facilitate new mechanisms of economic impact. These platforms list accommodation that is not located in areas traditionally visited by tourists, allowing more locals to participate and receive income from the industry. Meanwhile, the per-visitor impact of tourists from the sharing economy is potentially more valuable than traditional tourists. Airbnb states that its guests stay 2.1 times longer than typical visitors and spend 2.1 times more than typical visitors, with 42% of guest spending occurring in the neighborhoods where they stayed.²⁶ For example, tourists using sharing economy accommodations tend to spend more on groceries and dining outside the accommodation facilities than tourists staying in hotels. These factors help amplify the economic impact of tourist activity.

While the sharing economy presents an opportunity to increase the economic impact of tourism, questions remain about how significant the impact will be. Many of the properties in the Caribbean which are listed on hosting platforms are owned by expatriates, part-time residents, or locals with overseas accounts.²⁷ This factor could limit the economic benefits associated with home-sharing platforms, as income from the rental properties may be flowing back overseas.

Moreover, short-term rental properties are not subject to the range of taxes and fees imposed on hotels.²⁸ Some governments outside of the Caribbean have approached this by imposing different taxes on rentals.

For example, Chicago has approved a 4.5% tax on rentals (compared to a 16.4% tax imposed on hoteliers).²⁹ In San Francisco, Airbnb pays over USD 1.0 million a month to the municipal government in monthly transient occupancy taxes.³⁰

However, in addition to the tax implications, the sharing economy poses regulatory and security implications. The rapid development of Airbnb and other similar businesses requires governments to consider policies relevant to short-term housing rental and ensuring that the sharing economy and its participants are safe.

Cruise Conversion

The econometric analysis presented in Chapter 2 indicates that the economic impact of cruise visitors is lower than that of long-stay visitors. While that may be the case, cruise passengers represent an important and relatively untapped opportunity as a captive audience to market to convert them into future long-stay visitors. For example, Cayman Islands have recognised the potential that these visitors represent, and are currently redesigning their strategy to engage visitors directly as they get off the ship. There is currently insufficient data to test the effectiveness of this strategy for the purpose of this study. However, this is an area worthy of additional research.

Medical tourism

Medical tourism is also seen as a potential sector for further development in the future, but stakeholders have been more cautious about labelling this as an opportunity as compared to the yachting industry. Analysis of the industry and its potential for growth are presented in Chapter 5.

The econometric analysis presented in Chapter 2 indicates that the economic impact of cruise visitors is lower than that of long-stay visitors. While that may be the case, cruise passengers represent an important and relatively untapped opportunity as a captive audience to market to convert them into future long-stay visitors.

²⁶ Airbnb. 2016. The Economic Impacts of Home Sharing in cities around the world. Retrieved from <https://www.airbnb.ca/economic-impact>.

²⁷ Caribbean Hotel and Tourism Association, *The Caribbean Sharing Economy Resource Guide*, 2016.

²⁸ Hotel taxes not applied to rental properties include: Accommodation or Occupancy Tax; Consumption Tax – VAT, Gross Receipts, Sales Tax, GST; Import-Related Duties and Stamp Taxes; Environmental Taxes, Fees or Surcharges; Commercial Rates and Taxes for Electricity, Water & Sewage, Telecommunications Services; Work Permit fees; Annual Hotel Licensing Tax/Fee; Real Estate Tax; Special License Taxes/Fees (i.e. restaurant, bar, entertainment, vehicles); Turnover Tax; Corporate Income Tax; Employee Wage-Related Taxes (income, social security).

²⁹ Caribbean Hotel and Tourism Association, *The Caribbean Sharing Economy Resource Guide*, 2016.

³⁰ Ibid.

Education tourism

Within education tourism, research shows that the most prevalent product is medical education tourism. This refers to international students, coming mainly from US, Canada, and Europe, to attend medical school in the Caribbean. Analysis of the industry and its growth potential are presented in Chapter 5.

Yachting industry

Stakeholders across the region view the yachting industry as a potential opportunity for enhancing economic impacts. An analysis of the industry and its growth potential are presented in Chapter 6.

4.4. THREATS

Climate change

Climate change has been identified by many stakeholders as a major threat to the Caribbean economies, with some suggesting that it poses an existential threat to the industry as a whole. There are fears that beach and coastal erosion and increased extreme weather patterns will damage infrastructure and the Caribbean's natural attractions. However, it remains unclear what the full scale of the impact of climate change on the BMCs will be.

While the BMCs cannot significantly influence the direction of climate change, many have implemented strategies at a national and regional level in response to changing weather patterns. For example, St. Vincent and the Grenadines established seven Marine Protected Areas to preserve near-shore marine habitats. Saint Lucia, Grenada, St. Vincent and the Grenadines, and Jamaica are participating in a project coordinated by the Caribbean Community Climate Change Center to protect their coral reefs.

Tourism's Environmental Footprint

Despite its potential for driving economic development, tourism and increased visitation can adversely impact the local environment. The industry's land developments require significant land and water resources and have put pressure on forests and coastal ecosystems in the BMCs. The US Environmental Protection Agency reports that large cruise ships generate 21,000 gallons of sewage and 170,000 gallons of grey water daily.

BMC governments have introduced some measures to prevent environmental degradation by the tourism industry. In Cayman Islands and Turks and Caicos Islands, penalties have been introduced for boaters and yachters who damage reefs during docking, or pollute beaches. This policy addresses environmental concerns and helps ensure that the region's natural beauty, a major driver of tourism, is sustained.³¹

Health risks

The break-out of the Zika virus in the Caribbean, a mosquito-borne disease that can cause microcephaly in babies, has resulted in governments issuing warnings against travel to affected areas. This has caused some travel disruption, with several major airlines, cruiselines, and hotels – such as United Airlines, Princess Cruises, and Hilton Worldwide – implementing refund policies for pregnant women with scheduled trips to the region.

While government stakeholders believe that Zika and other health risks may have affected the tourism volumes over the last two years, proactive measures have been instituted to raise local awareness of Zika, and disease control action plans have been put into place. For example, the Caribbean Hotel and Tourism Association offers online information and resources for tourists about health recommendations for travelling to the region. Despite this, travel warnings remain in place and the ongoing impact on tourist arrival numbers is unclear.



³¹ The issues of environment preservation and sustainable tourism are much more complex and beyond the scope of this study. For more detail on the topic, the reader should refer to: Michelle Mayco, "Sustainable Tourism Using Market Mechanisms and Green Certification: A Case Study of Barbados," *Journal of Sustainable Tourism*, 2006.

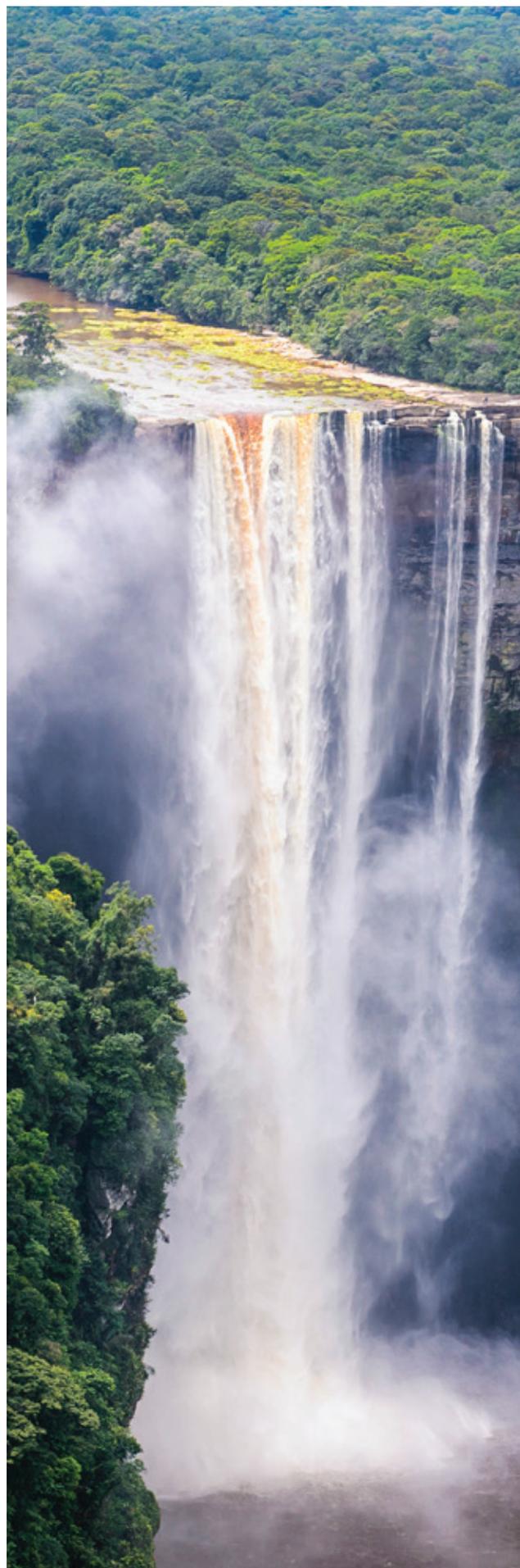
US-Cuba relations

The recently renewed diplomatic relations between the US and Cuba have been identified as a potential threat to tourism in the BMCs. The policy change has resulted in 12 categories of authorised travel for Americans to Cuba. According to the IMF, Cuba is expecting as many as 10 million American tourists per year. With nearly 60% of extra-regional visitors to the BMCs coming from the US, the opening up of a major market could have a significant impact on tourism in the BMCs.

The views of stakeholders on the magnitude of this threat vary across the region. This reflects the regional diversity of the industry and the differing levels of exposure to the changes. For example, Barbados, which relies less on US tourists than most BMCs and which is positioned more as a premiere market, may be less impacted in the long-stay segment than other regional markets. It was also suggested that the impact will be greatest in the short term and then fade, as the prospect of travelling to Cuba will be a novelty for US tourists at first. US airlines have already decreased the amount of daily flights to Cuba, from 1,920, when flights resumed, to 1,472 in February 2017 due to lack of demand. In the longer term, the impacts may be felt most in the cruise segment as Cuba could replace other Caribbean destinations on the major cruise routes. Some stakeholders even view the change in US-Cuba relations as an opportunity, as it may facilitate the development of a major hub for airline routes and open up additional routes to the region.

BREXIT

The impact of BREXIT on the UK economy (and potentially the economies of the European Union) is likely to have implications for tourism in the Caribbean, particularly in the BMCs for which the UK is an important market. First, the weakening of the pound following the referendum has made travel to the Caribbean more expensive for UK visitors. Should this continue, there is likely to be a reduction in arrivals numbers and per-visitor expenditure from the UK. In the longer term, there may also be a negative income effect resulting from the anticipated impact on the UK economy. However, both the scale of this impact and what it will mean for tourism in the Caribbean remains unclear. Local tourism stakeholders did not have definitive views on the impacts of BREXIT. Most claimed that if there are expected impacts, they are not yet reflected in arrivals or spending.



5 INDUSTRY FOCUS: MEDICAL AND EDUCATIONAL TOURISM

5.1. MEDICAL TOURISM

Medical tourism captures activities by individuals traveling across international borders for the primary purpose of obtaining medical services. Typically, consumers elect to travel internationally for procedures or surgeries when they cost less than they would at home. Medical tourists also pursue medical treatment abroad to access new therapies or alternative approaches to care that might not be approved for use in their home countries.

Medical tourism is to be distinguished from an interrelated segment of the industry known as health and wellness tourism. The table below provides key differences between the two.



Table 3: Comparison of Medical Tourism and Health and Wellness Tourism

	Medical Tourism	Health and Wellness Tourism
Interventions	Medical therapies, surgeries (e.g., orthopedic surgery, cosmetic surgery)	Complementary therapies (e.g., massages)
Setting	Hospitals or specialised medical facilities	Spa and wellness facilities
Inputs	Medication and medical devices	Devices required by spa and wellness facilities (e.g., massage chair, thermal baths)
Example	The medical tourist undertakes a rhinoplasty procedure at a hospital. The cosmetic surgeon uses medication to anesthetize the patient and medical devices to carry out the surgery.	The health and wellness tourist pays for a massage at the hotel spa. The masseuse uses oils and a massage chair.

Source: Authors' analysis.

Health and wellness tourism activities are increasing in relevance to tourists, who seek to capitalise on advances in beauty, relaxation and wellness treatments (e.g., anti-aging medicine). However, this tourism segment is outside of the scope of this study, as it is difficult to distinguish from broader tourism activities. For example, these services can be accessed by tourists in resorts or hotels. In addition, the market drivers and competitive context for these activities differs greatly from medical tourism.

Overview of the medical tourism industry in the BMCs

The past two decades witnessed a reversal in international patient flows globally. Traditionally, medical tourists were wealthy patients from developing countries travelling to developed countries for treatment. However, since the late 1990s, an increasing number of patients from developed countries have been pursuing medical care in developing countries, such as Caribbean countries.

Aging populations, rising health care costs, and long waiting lists for medical procedures in developed countries are the major push factors driving this trend.

To date, the developing countries with the largest medical tourism industries are India, Thailand, Singapore, and Malaysia. The Caribbean industry is much less developed and, as a result, there is limited publicly available data on this topic. Among the BMCs, research identified Jamaica, Cayman Islands, and Barbados as the only three BMCs more advanced in terms of medical tourism.

Despite current data limitations, the research identified key factors that influence the potential for medical tourism in the Caribbean.

The past two decades witnessed a reversal in international patient flows globally.

Table 4: Factors influencing the opportunity for Medical Tourism in the BMCs

Factor	Description
Cost	<p>The BMCs can appeal to medical tourists by offering health care services for lower costs than patients pay at home.</p> <p>Data on medical costs for foreigners in the Caribbean are limited. However, stakeholders regularly stated that price was a key advantage for the industry in BMCs. Meanwhile, current trends indicate that the price of health care in key source markets, particularly the US, is increasing.</p>
Quality of Care	<p>Quality health care services are an important driver of medical tourism. Patients from the US, Canada, and Europe are accustomed to a high level of care, while patients from developing countries require a greater breadth and standard of health services in order to travel for medical purposes.</p> <p>The components that make up quality of care include sophisticated facilities and equipment and qualified doctors and nurses. These features can be signaled to tourists through marketing, word of mouth, and international accreditations.</p>
Accessibility	<p>Accessibility is a multi-faceted factor that is critical to attracting medical tourists to the BMCs. The components that make up accessibility include:</p> <ul style="list-style-type: none"> • Geography: The BMCs benefit from close proximity to the US and Canada, especially compared to the major Asian medical tourism players – India, Thailand, Singapore, and Malaysia. However, stakeholders mentioned that the region requires upgrades in transport links in order to provide better infrastructure for sick or disabled people. • Language: Since English is commonly spoken, Americans and Canadians may feel more comfortable and be able to communicate more easily with doctors and nurses, compared to receiving treatment in non-English speaking countries. • Good Tourism Infrastructure: The BMCs are regular tourism destinations and can provide adequate hotel, restaurant, and internal transportation services in order to host medical tourists.

Case Study: Medical Tourism Index Ranking of Jamaica

The Medical Tourism Index evaluates the attractiveness of countries as medical tourism destinations. The Index methodology is based on four factors:

1. Country Environment
2. Tourism Destination
3. Medical Tourism Costs
4. Medical Facility and Services.

In 2015, Jamaica was the only BMC ranked among the top 30 medical tourism destinations globally, with a rank of 17. This ranking was ahead of other developing countries in the Caribbean and Central America, such as Colombia, Dominican Republic and Panama. Of the four factors assessed, Jamaica earned the most points for the Tourism Destination category, suggesting that the country can leverage its brand as a tourism destination for the purposes of marketing medical tourism. Jamaica's relatively strong performance is also attributable to the quality of its health professionals, whose training incorporates links to other Commonwealth countries.

The lack of BMCs within the Medical Tourism Index ranking, however, indicates that the region is a relatively nascent player on the global medical tourism scale. See Appendix II for an overview of the Medical Tourism Index

Drivers of Economic Impact

Despite potential differences in spending patterns between medical and general tourists, medical tourism provides similar opportunities for economic impact as those provided by general tourism. Medical tourists naturally require accommodation and have other common living expenses, such food, beverages and entertainment, during their stay.³²

While data from the Caribbean is limited, reviews of the industry globally provide useful insights:

- Medical tourists often spend more than general tourists in host countries. A 2015 review of the global industry found that medical tourists spend an average of USD 2,750 per person (excluding all medical related costs), contrasted with non-medical tourists that spend USD 1,065 on average.³³
- A 2015 review of the global medical tourism industry found that half of all medical tourists come with an average of two companions.³⁴ Key spending categories include accommodation, transportation, and retail trade.
- Medical tourism may not be as seasonal as general tourism. Therefore, it would help to address one of the major weaknesses of the tourism sector in the BMCs. Additionally, in general terms, medical expenditure is less affected by economic cycles and prices shocks relative to general tourism expenditure. This would also help to reduce economic volatility in the BMCs.

In addition to the regular tourism impacts, there are also impacts associated with the medical services aspect of the visit. The medical facilities provide employment opportunities for locals in both clinical and administrative capacities. Facilities can also spend on goods and services related to the operations and maintenance of hospitals and clinics (e.g., contracts with local cleaning and food service providers). Notably, facilities often bundle goods and service contracts over a period of time, providing a consistent stream of supply for businesses.

The scale of these impacts will depend on the volume and consistency of visitation in host countries. It should be noted that patients travelling abroad typically travel with a specific procedure planned and are sent home as soon as they are medically cleared to do so. Ongoing post-operative care, for example, is typically resumed at home. As a result, spending on post-operative care may not be realised within host countries. Similarly, care for intervention associated with complications that arise after returning home may be done in home markets. These factors can limit the range of impacts realised by BMCs.

Similarly, spending on recreational or tourism activities may be limited because of the invasiveness of procedures undertaken. For example, a recovering patient is unlikely to partake in significant levels of additional recreational and entertainment spending.

³² Because some of the inputs to health treatments and procedures (e.g. medical supplies, devices) are likely imported, the economic impact of the health expenditure by medical tourists is somewhat limited.

³³ J. Hanefeld, D. Horsfall and N. Lunt, *Handbook on Medical Tourism and Patient Mobility*, 2015.

³⁴ Ibid.

Stakeholders also noted that local spending on goods is limited in the medical tourism sector, given the requirement for highly specialised medical equipment and medications, for example.

Long-term impacts

Medical tourism has the potential to produce long-term economic impacts in the Caribbean. To what extent these impacts will affect the BMCs is still undetermined. This will be influenced by how much the industry develops and how governments regulate it. Given the modest scale of medical tourism in the Caribbean, the industry is unlikely to generate significant long-term impacts without major growth.

Mechanisms of long-term economic impact associated with medical tourism could include:

- Revenue generated from medical tourists could be used to subsidise domestic patients and purchase equipment that locals can use.
- Growth in medical tourism industries could encourage public and private investment into domestic medical systems, leading to improvements from which locals can benefit.
- Medical tourism could help retain local health care workers and attract foreign health care workers, particularly doctors and nurses.
- Improvements in domestic health care systems, driven by medical tourism, could help retain wealthier local patients, who might otherwise pursue treatment in a more advanced country.

Despite these positive long-term impacts, there is also a risk that if not managed appropriately, medical tourism could lead to two-tiered health systems or draw local doctors and nurses away from treating domestic patients. However, this risk may be more prominent in countries with large scale medical tourism industries.

5.2. EDUCATIONAL TOURISM

Educational tourism is a broad term that describes tourists travelling internationally to study at an academic institution abroad. In the Caribbean, the main educational tourism offering is medical school programmes. These programmes operate almost entirely for training foreigners – the majority being American – who intend to practice medicine in their home country after their studies. Given its prominence in the Caribbean’s education tourism sector, this chapter focuses specifically on medical education tourism.

Overview of educational tourism in the BMCs

The main reason international students pursue medical degrees in the Caribbean is because they do not have the grades required by most schools in the US. Universities in the Caribbean typically have lower admissions requirements than universities in the US and other key source markets. Accordingly, they represent a back-up option for many aspiring doctors. According to the Association of American Medical Colleges (AAMC), the average GPA for US medical school matriculates in 2015-2016 was 3.70. By comparison, Grenada’s St. George’s University (SGU), which has the most rigorous requirements in the Caribbean, reports a GPA of 3.40 for its average student. This falls considerably below the U.S. requirements.

Despite having lower entry requirements, many of the region’s universities are certified by local or international accreditations. Medical school accreditations signal quality to international students and can determine whether Caribbean trained graduates are eligible for residency positions in their home country, which is typically where the students hope to practice eventually.

Table 5 provides an overview of key medical school accreditations and the number of Caribbean programmes certified by them.



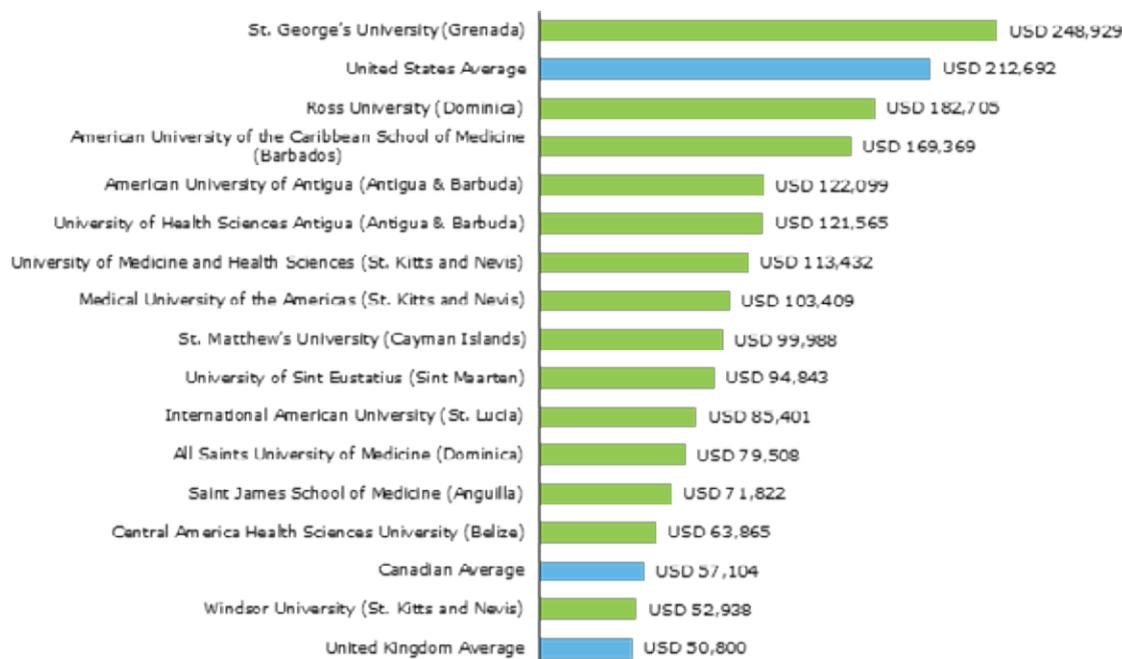
Table 5: Key accreditations for medical programmes in the BMCs

Accreditation	Number of universities	Significance
Educational Commission for Foreign Medical Graduates (ECFMG)	47	American accreditation that determines whether students can write the United States Medical Licensing Examination (USMLE), which is required to apply for US residency positions.
The Caribbean Accreditation Authority for Education in Medicine and other Health Professions (CAAM-HP)	10	Caribbean accreditation that provides assurance that medical schools meet regional and international quality standards.
Local Boards and Ministries	17	Domestic accreditations that provide assurance medical schools meet national quality standards.
Other accreditation bodies	11	International organizations, such as the World Health Organization (WHO), that certify medical schools meet independent standards of quality.

In addition to offering the opportunity to foreign students to pursue their studies, the Caribbean’s proximity to the US and Canada, combined with the quality and cost of living in the region, renders the region attractive for study. In 2015, the prices of consumer goods and services in the BMCs were approximately 60% lower than in the US.

Contrastingly, as demonstrated in Figure 16 below, tuition for the largest Caribbean programmes is roughly on par with that of US³⁵ programmes, and most Caribbean universities are more expensive than Canadian or UK universities.³⁶

Figure 16: Total Tuition Costs at Caribbean Medical Schools



Source: American Association for Medical Colleges, Macleans.

³⁵ The World Bank, World Development Indicators.

³⁶ The largest Caribbean medical schools are SGU, Ross University, and American University of the Caribbean School of Medicine.

Drivers of Economic Impact

International medical students in the Caribbean generate two major streams of expenditure that positively affect the local economy: school expenditures and general expenditures.

The first major stream of expenditure – school expenditure – includes tuition, books, and other fees required for enrollment at Caribbean medical schools. Tuition for foreign medical students in the region is significant, with a median tuition cost of approximately USD 23,000 annually. This revenue generates and sustains employment for locals, including administrative, maintenance, transportation, and catering positions. These jobs at Caribbean medical schools tend to be of high quality. Data collected by the Swedish Development Advisors illustrate that medical school staff in St. Kitts earned approximately 30% above national average.³⁷

The second major stream of expenditure – general expenditure – refers to living expenses, such as housing, and spending on typical tourist activities, such as planned trips. The magnitude with which general expenditures impact the local economy largely depends on the number of years international students live in the host country and whether they attract friends and family to visit. As an illustration, the 3,800 international medical students at St. George’s University in Grenada typically spend between USD 20,000 and USD 24,000 per year in general expenditure. This includes USD 175 spent weekly on food and beverage, which is income mostly retained by the island.³⁸ According to the Swedish Development Advisors, foreign medical students and faculty contributed 5.5% to Grenada’s GDP and 8.3% to Dominica’s GDP in 2002.^{39 40}

Medical education tourism could also produce positive externalities for the general health care sector. Caribbean medical schools make donations of medical equipment and improve research on local health issues.

Long-term impacts

Medical education tourism has the potential to produce long-term economic impacts. In some universities, revenue generated from international medical students is used to subsidise tuition for local students, which provides an opportunity to train and educate local workers. At SGU, 100 full scholarships are distributed to locals, 15 of whom are medical students. Furthermore, medical universities can give rise to new market segments in Caribbean countries. International students and professors will demand different goods and services and create a need for new businesses.

Medical education tourism could also produce positive externalities for the general health care sector. Caribbean medical schools make donations of medical equipment and improve research on local health issues. There are also cases of foreign medical professors providing consulting services to domestic health care facilities, improving knowledge transfer and development of these facilities. Meanwhile, international medical students can be a valuable resource to local facilities during their clerkship. Investment in equipment and facility improvement could also take place in order to partner with universities and attract medical clerks.

5.3. CONSIDERATIONS FOR ENHANCING ECONOMIC IMPACT

Below are considerations that are likely to determine the potential of medical and educational tourism to generate economic impacts in the BMCs.

1. Investing in supportive infrastructure

development: The quality of air and road access is critical to the viability of large, medical tourism facilities. Specifically, requirements for air ambulance facilities were identified as needed infrastructure to making a destination attractive to developers. Depending on the scale and type of medical tourism activity, requirements for dedicated patient transportation infrastructure (e.g., air ambulance, chartered flights or receiving stations co-located at hospitals) may be required to prevent the spread of communicable diseases or hospital-borne infections. This is of particular relevance to the Caribbean, given the importance of the tourism industry which would be adversely affected by pandemics or illnesses.⁴¹

³⁷ Swedish Development Advisors, *Background Paper: Offshore Education in the OECS*, 2004.

³⁸ These numbers are based on Consultations with stakeholders from the University.

³⁹ Swedish Development Advisors, *Background Paper: Offshore Education in the OECS*, 2004.

⁴⁰ Grenada and Dominica host the largest number of foreign medical students among the BMCs.

⁴¹ N. A. Freire, “The Emergent Medical Tourism: Advantages and disadvantages of the medical treatments abroad,” *International Business Research*, 2012.

- 2. Developing medical talent and specialisation:** Attracting and retaining top medical talent in sub-specialties, or with expertise in new medical techniques, are viewed as critical to enabling medical tourism activities in the region. Given the competitiveness of the global medical tourism industry, BMCs are more likely to achieve commercial success in the industry if they are able to build specialisation in a specific field.⁴² For several BMCs, this may be a significant challenge, as some countries struggle to meet current local demand for sub-specialty care. For example, in the Turks and Caicos Islands and Cayman Islands, shortages in sub-specialties were identified as a systemic weakness in their healthcare systems. This has led to a reliance on imported doctors. Similarly, in Jamaica, low wages have been attributed to an out migration of qualified specialist nurses, seeking higher incomes elsewhere in the U.S.A and Canada.⁴³ Notably, the challenge is not so strong in general nurses or nurse practitioners. For BMCs, further investment in specialty medical training and incentives for private medical schools to train local physicians in fields where there are shortages are strategies to consider.
- 3. Developing tailored concessions to unlock opportunities:** Given that medical tourism facilities operate in a highly regulated environment, investors in this space require partnership with government officials to develop and execute business models. Support or direct concessions to developers are policy choices for BMC governments to consider. There can be significant trade-offs associated with supporting developers, and it is possible that governments may face resistance from local stakeholders adversely affected by the establishment of new facilities. An example from Health City is presented in the case study on the following page.
- 4. Aligning medical tourism with medical educational opportunities in the region:** Accredited medical tourism facilities can be viewed as assets to a country's medical education ecosystem. Ensuring that these capabilities are included in medical education in the region could help to increase the standard of teaching by exposing students to specialised training. Around the world, medical tourism hubs globally have used international partnerships with established centers of excellence to enhance the standard of care and training. Destinations such as India, Turkey and the UAE have developed affiliations with schools such as Harvard Medical International and Johns Hopkins. BMCs could consider supporting facilities in fostering these relationships through government to government collaboration.
- 5. Considering impacts on public healthcare systems:** While medical tourism can contribute to GDP, there is a risk of it creating or exacerbating disparities in care between public and private facilities. To ensure local populations are better positioned to access private facilities, BMC governments can consider policy instruments that can limit these inequalities. For example, take steps to ensure compensation between public and private physicians is brought closer together, avoiding an incentive for local physicians to leave the public system. In 2008, faced with significant internal brain drain, the Thai government nearly doubled public physicians' total salary in all community hospitals and significantly invested in public healthcare infrastructure to counteract identified inequalities between the two systems.⁴⁴ These types of investments can be made through revenues governments receive from medical tourism activities, or special taxes applied to these activities.



⁴² J. Connell, and X. Fara, "Medical Tourism in the Caribbean islands: A Cure for Economies in Crisis," *Island Studies Journal*, 2013.

⁴³ Jamaica Information Services, "Steps being taken to address nurse shortage," <http://jis.gov.jm/steps-taken-address-shortage-nurses/>

⁴⁴ A. T. NaRanong, and V. NaRanong, "The Effects of Medical Tourism: Thailand's experience," *Bulletin of the World Health Organisation*, 2011.

Case Study: The Role of Government Concessions in Securing Investment in Health City, Cayman Islands

The Health City facility in Grand Cayman is one of the most significant examples of foreign direct investment in medical tourism in the region. In 2010, Narayana Hrudayalaya, an Indian healthcare provider signed a joint venture with the Cayman Islands government to build a hospital staffed by Indian specialists. The company had considerable success in developing other Health City facilities in India, and sought to enter the medical tourism market in the Caribbean via Cayman Islands. Cayman Islands was attractive for the investment based largely on its lack of income and capital gain taxes, lack of taxes on non-residents and legal restrictions on foreign ownership of property.

In addition, the government offered concessions in key areas to secure the investment:

- **New legislation:** Cayman Islands passed a Health Practice law that enabled nurses and doctors trained in India to work in the country, and amended malpractice laws. These changes were contested by local medical stakeholders, and required significant negotiation and consideration.
- **Infrastructure investments:** The government agreed to supporting upgrades and investments at the national airport, and on local roads to handle the anticipated increase in medical tourist arrivals.

- **Preferential utility rates:** The government agreed to provide water to the facility at preferential rates.
- **Immigration amendments:** Creation of visa and visitation frameworks for entry of patients into Health City.
- **Steps to protect from competition:** The government took steps to limit the level of competition in Cayman Islands after Health City was established.
- **Changes to organ donation and transport regulations:** The government ensured a hospitable regulatory environment for the transport of patients and organs within the region and across borders to facilitate foreign patients entering and exiting Cayman Islands.

The Caymanian experience provides examples of concessions that BMCs may need to consider should they court international investment in medical tourism. Each type of support could represent a trade off with other types of public spending and may not be attainable across the region. Given the variance in economic position and political climate across BMCs, the ability for other countries to undertake these types of actions may be limited.

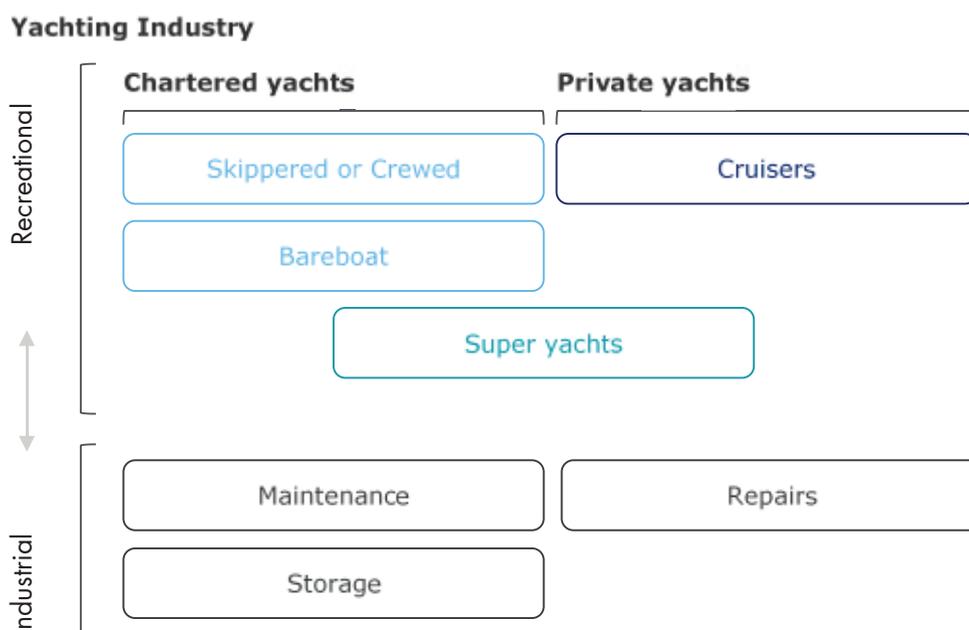


6 INDUSTRY FOCUS: YACHTING

The yachting sector, or pleasure boat industry, is defined as the complex of activities required to sustain charter boating and cruising in the Caribbean. Within the industry there are different segments depending on purpose (i.e. recreational or industrial) and vessel ownership (i.e. chartered or private):

Figure 17: Segments of the yachting industry

The yachting sector, or pleasure boat industry, is defined as the complex of activities required to sustain charter boating and cruising in the Caribbean.



Source: Authors' analysis.

Each of these segments requires specialised infrastructure and skilled labour to varying degrees. For example, while some types of skippered and bareboat chartered yachts require minimal marina infrastructure and skilled labour, super yachts generally require full-service marinas with specialised staff and deep water harbours.

The business establishments serving the yachting sector can be segmented into two groups: yachting establishments and tourist establishments. Yachting establishments represent businesses that provide technical services specific for yachting, such as marinas, boatyards, repair and parts shops. Tourist establishments represent businesses providing services that complement the yachting experience and mostly overlap with general tourist needs, such as restaurants, night clubs and grocery stores.

Yachters also require specific tourist establishments that offer high-end products, ranging from imported specialty food and drinks to high-end retail shops (e.g. jewelry, clothing). Both yachting and tourist establishments are the direct recipients of yachting tourist expenditures.

6.1. DEMAND DRIVERS

There are three major demand drivers for the yachting industry in the Caribbean:

1. Natural Drivers;
2. Infrastructure Drivers; and
3. Recreational Drivers.

Natural Drivers

The Caribbean's warm weather, sandy beaches, small islands, and marine parks are significant drivers of yachting tourism to the region. In addition, the generally calm waters year round appeal to yachters looking to travel from island to island. The potential to experience different islands within one yachting trip is a key feature of yachting in the Caribbean.

Highly indented coastlines are a natural feature of Caribbean islands that attracts yachting tourism. These indented coastlines afford yachters safe access, anchorage and shelter, as well as nautical benefits, such as easy sailing conditions, and reliable prevailing winds. In addition, islands with highly indented coastlines also offer more berths for yachts.⁴⁵

Yachting tourist inflows to the Caribbean are seasonal and depend on two major factors:

- 1. The hurricane season:** the hurricane season that runs from June to November deters live-aboard yachters and crewed charter yachters from much of the region.
- 2. Northern hemisphere winter travel season:** the demand for charter yachting fluctuates with the general seasonal patterns in the Northern hemisphere, particularly North America. The Caribbean's high season is mid-December to mid-April, which is largely driven by winter weather in North America and Europe. The impact of seasonality varies by segment.
 - According to the Economic Commission for Latin America and the Caribbean (2004) analysis, countries with large residential bareboat fleets or a large residential yachting sector appear to be more resilient to the effects of seasonality than those with more privately owned yachts and crewed charter boats.
 - Mega-yachts are highly mobile and therefore contribute to the seasonality of yachting tourism. For example, Antigua and Barbuda, with a yachting sector that relies on foreign owned mega yachts and crewed charter boats, is affected by seasonality.
 - The British Virgin Islands (BVI), Saint Lucia, and Grenada have significant bareboat yachting activity, and are less affected by seasonality. The year-round presence of bareboats can cushion the adverse socio-economic effects associated with an inactive off-season.

Infrastructure Drivers

Marinas in the Caribbean vary in the number of berths, the ability to house vessels of different sizes, and the sophistication of services offered. Marinas in the Caribbean can accommodate crafts ranging from 40 feet in length to 360 feet in length, with draughts of up to 30 feet. Services provided by marinas include: wet storage and anchorage; charter services; boat servicing, repairs, and chandlery; accommodation and recreational amenities; and hurricane shelter. Marinas are fairly evenly distributed throughout the Caribbean. There appears to be no advantage in terms of size of the island since the largest numbers of marinas are in Anguilla (11); Antigua and Barbuda (9); The Bahamas (10); Cuba (9); Grenada (11); Saint Maartin (13); and the United States Virgin Islands (11).

Recreational Drivers

Sporting

A large number of nautical sporting events attract yachters to the Caribbean. Some highlights in the BMCs calendar of events include Antigua Sailing Week, which is celebrating its 50th edition from April 29-May 5, 2017, and the Grenada Sailing Festival which occurs at the end of January. Some major Caribbean nautical sporting events that take place outside the BMCs include the Heineken Regatta, which is in March in St. Maarten, and the St. Barths Bucket Regatta, which is also in March. There are also transatlantic regattas, one of which, the Atlantic Rally for Cruisers, ends in Antigua. The Caribbean is also home to some of the most popular fishing tournaments. One of the oldest fishing tournaments is the Bimini Native Fishing Tournament held in The Bahamas during the month of August. Other tournaments include the Antigua and Barbuda Sport Fishing Tournament held in May as well as the BVI Open in August.

The Caribbean is also home to some of the most popular fishing tournaments.

Cultural Events

Similar to sporting, cultural events attract yachters to the Caribbean. These include New Year's Eve in the BVI and

⁴⁵ Willard Phillips, *Towards Diversification of the Tourism Sector: A Recreational Demand Study of Yachting and Marina Services in the Caribbean*, UN ECLAC, 2014.

the Antigua and Barbuda Yacht Show (December). Other cultural events such as Carnival in Trinidad and Tobago as well as the Jazz Festival in Saint Lucia also attract yachters.

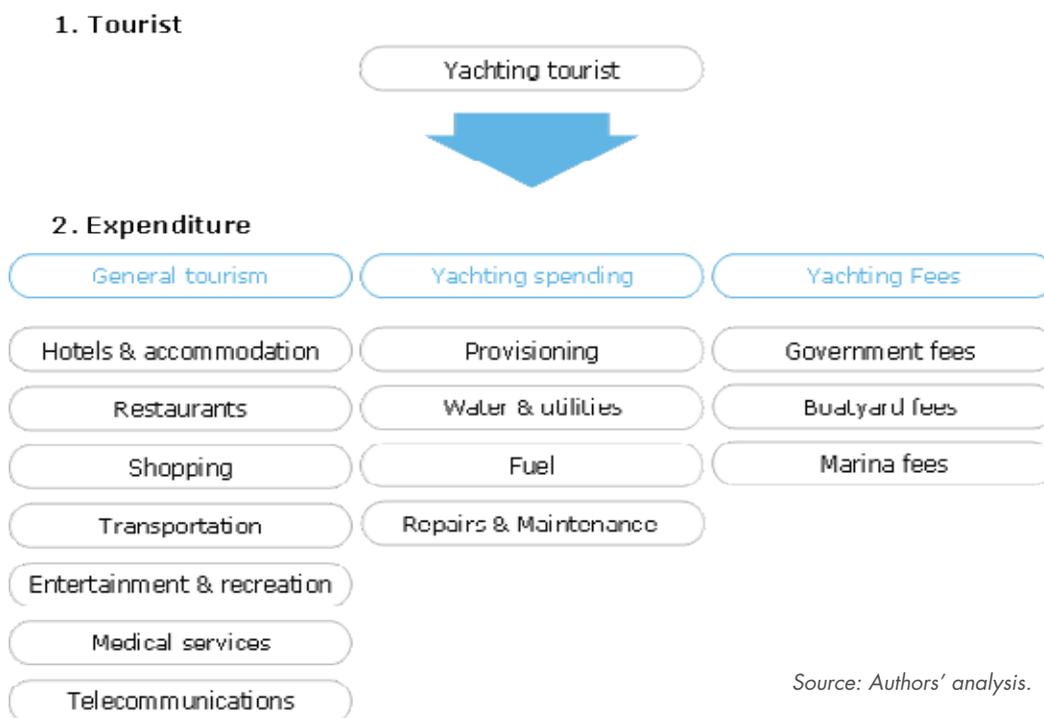
Restaurants and Nightlife

Many islands in the Caribbean attract yachters because they offer a developed restaurant and nightlife scene. With almost 100 bars, the BVI is popular amongst yachters for its nightlife scene. Jost Van Dyke is a popular spot to which many yachters will sail to have a few drinks in the BVI.

6.2. DRIVERS OF ECONOMIC IMPACT

To a certain extent, yacht tourists are similar to long-stay tourists, but because of their longer length of stay and patterns of spending, they may generate more benefit to the local economy than regular tourists. In addition, part of the spending by yachters tends to be specific to the industry, and in many cases has stricter ties to the local economies than other forms of spending by tourists.

Figure 18: Drivers of economic impact associated with the yachting industry



Source: Authors' analysis.



There are three major streams of spending from yachters: general tourism, yacht spending, and fees. While the general tourist stream overlaps with what regular tourists tend to spend on – with the exception of a few items that relate to the long-term nature of yachters visits, the yacht spending and fees streams are unique to the yachting sector. These relate to spending directly attributable to yachting activities, such as yacht repair & maintenance, marina fees, fuel, and others.

Research done in Grenada shows that total spending per yacht in 2012 was approximately USD 4,198 for short-term charters, USD 9,354 for short-term privately owned yachts, USD 20,080 for long-term visitors, and about USD 98,000 for super yachts.⁴⁶ Factoring in the average length of stay, these numbers imply a daily spending between USD 301 and USD 1,744.⁴⁷

General tourism

Yacht tourists tend to spend significantly on common tourism activities, such as accommodation, transportation, entertainment and shopping. This spending has impacts on the local economy by generating revenue to restaurants, hotels, taxi drivers, inland tour operators and retail owners. In addition, because of the longer stay nature of yachters, some specialised services are demanded by this group, which are not common for general tourists. Examples of these are medical services and telecommunications (e.g. cellphone and data plans).

Research and consultation with stakeholders also suggest that yachters tend to spend on activities that are more closely connected to the local economy than general tourists. In many of the BMCs, marinas have connections with locally owned boutique hotels that cater to yachters. This helps to ensure that more revenue stays in the local community, which is not the case for large hotel chains preferred by general tourists. Furthermore, stakeholders confirm that yacht tourists tend to spend more time than general tourists exploring the islands they visit, leading to greater spending in local communities and enhancing their economic impact.

Yacht spending

The major differentiator between general tourists and yachters is their yacht-specific spending. These specific spending items include water, electricity, fuel, maintenance and repairs, and importantly, provisioning. When yachts come to an island they have a long list of items they require, including basic household items and produce. Research shows that provisioning accounts for between 9.2% and 18.3% of total expenditure per yacht.⁴⁸ Consultations with stakeholders revealed that provisioning is an important channel for the yachting industry's contribution to the rest of the local economy.

Despite the fact that yacht spending represents an extra source of economic impact, it should be noted that many items in this stream of spending require imported goods. This is particularly true for the provisioning of super yachts and maintenance and repair of vessels, such as electronic parts and components or luxury food and drinks requested by yacht owners. Nevertheless, there are economic impacts that would accrue to local businesses and individuals. However, higher levels of imports would tend to limit the overall economic impact.

Yachting fees

In addition to tourism and yacht spending, governments generate revenue from yachting activity through customs and other government fees charged at the point of arrival. For example, research shows that customs and other government fees comprise 6% of total estimated yacht expenditures in Saint Lucia.⁴⁹ It should be noted that these fees vary by island.

Furthermore, Caribbean marinas generate revenue from: renting berths; chartering boats; providing utility services; storage; restaurant services; chandlery; and sale of fuel and food. Rental fees vary considerably, and are dependent on season, length and type of craft, and range of services offered by the marina. A 2012 study of marina prices in Eastern Caribbean islands revealed that the average rental rates range from USD 7-8 per foot, per day, for vessels up to 40 feet. For larger vessels (up to 130 feet), average rental rates range from USD 23-32 per foot, per day, during the high season and USD 17-18 per foot, per day, during the low season.⁵⁰

⁴⁶ André Vincent Henry, *Economic Impact Assessment: The Marine and Yachting Sector in Grenada*, Ideas to Business Limited, 2013.

⁴⁷ Average length of stay was not supplied for super yachts. Therefore the range mentioned only includes short and long-term charter and privately owned regular-size yachts.

⁴⁸ André Vincent Henry, *Economic Impact Assessment: The Marine and Yachting Sector in Grenada*, Ideas to Business Limited, 2013.

⁴⁹ Data provided by stakeholders based on yachting visitor surveys.

⁵⁰ Countries included in Hathaway's study: US Virgin Islands; British Virgin Islands; St. Martin; Antigua and Barbuda; Saint Lucia; St. Vincent and the Grenadines; Grenada; and Trinidad and Tobago.

Local economy impacts

Each of the spending streams impacts the local economies in the BMCs. Some of these effects are direct, such as people directly employed in providing yachting services. The yachting sector employs a variety of professionals in Caribbean islands. Those directly employed by the yachting sector include: dock masters; crane operators; marina managers; boat yard managers; sail makers; sail loft; electrical engineers; charter companies; fuel operators; mechanics; riggers; fiber glass workers; reservations workers; marina restaurant workers; and supermarket workers.

Several Caribbean industries may be indirectly impacted by yachting activity. Key examples include demand for laundry services and garbage disposal; taxi services; car rental; supermarkets; security; travel agencies; tour guide services; banking and foreign exchange services; and fueling operations.

These impacts are not limited to employment. Local businesses experience boosts in revenues and profits, while governments collect sales taxes (e.g. VAT) and other fees.

Not all impacts are positive from a value-added standpoint. Because some of the items demanded by yachters are not produced in the Caribbean, their yachting and tourist spending may require an increase in imports. More imports signify a decrease to the local economies' value-added, or GDP. In this case, however, there is some level of offset given that governments may be able to collect import taxes.

6.3. STRATEGIES FOR ENHANCING ECONOMIC IMPACT

The historic growth, and indeed the future potential of the yachting industry, is not uniform across all the BMCs. The strength of the industry is influenced greatly by the natural geographic qualities of the countries and the Caribbean Sea which offer unique recreational experiences.

Given the natural assets of the islands, the yachting industry has developed over the years in some particular BMCs that possess the proper characteristics. But even among those countries, their yachting industries are at different levels of development or cater to different segments of the market.

Looking forward, further development of the yachting industry across BMCs will depend on addressing some common challenges and taking advantage of available opportunities to improve the economic impact of the industry.

Research and consultations revealed six common challenges facing the yachting industry in the BMCs:

- Standardising and expediting border crossing and customs;
- Guaranteeing safety & security for yachters;
- Developing consistent data collection methodology and practice;
- Linking yachting to other tourism offerings;
- Human resources development, training and inclusion of locals in the sector; and
- Fine-tuning the role of public policy, regulation and incentives.

The degree to which the challenges above affect each of the BMCs may vary, but these are common insights into further developing the yachting industry across the region.

Standardising and expediting border crossing and customs

Cross border movement is important for yachters, but the lack of standardisation of the immigration process causes problems and delays. Customs procedures impose a time and monetary cost on yachters. Such procedures include: inward and outward clearance of yachts; clearing of goods and implementation of duty free concessions to foreign flag boats; as well as collection of a departure tax.

Stakeholders suggest that the process can be very bureaucratic with different countries requiring a varying number and types of forms. Yachters also point to procedures being unhelpful. For example, while some countries give yachters about 24 hours to leave the country once they clear customs, Trinidad & Tobago provides 4 hours, and in some cases less than that. In addition, to enter the country, yachters must complete many forms as opposed to just one, which is the norm in many other Caribbean countries. When asked what the government could do to support the industry, boating stakeholders in several countries identified streamlining the required approvals for yachters and boaters.

One initiative that has been introduced in some countries is the electronic clearance system, but according to stakeholders, the adoption is not widespread in the Caribbean mainly due to high costs. Two major systems currently are being used in the Caribbean: eSeaClear and SailClear. These are "advance notification" systems that attempt to ease the clearance procedures for yachters

by allowing them to enter all customs and immigration clearance details online prior to arrival. The yachters must then update the details as they cruise between the islands. The information inputted into the advance notification websites is available to the different national border agencies, facilitating the declaration process on arrival. While yachters still have to report to Customs and Immigration on arrival to present their identification documents, the time spent doing so is greatly reduced. Both services are optional and free of charge.

- **eSeaClear:** The more established of the two systems, eSeaClear was intended to include 22 countries, but Antigua & Barbuda was the only country to adopt it. Using eSeaClear makes the clearance process on arrival very efficient, as customs, immigration and the port authority will all have access to the yachter's data. There is also an established eSeaClear office in English Harbour (Antigua); with a computer and on-site staff for those who need the service on arrival if they do not have internet access to complete their details. This service aims to speed up the process of clearing into the country by around 75%. About 50,000 people were cleared using eSeaClear from December 2012-June 2014. Currently, eSeaClear is concentrating on Antigua and Barbuda to optimize the system before deploying it in other countries.
- **SailClear:** This is the newer service developed by the Caribbean Customs Law Enforcement Council (CCLEC); which parted company with eSeaClear in July 2012. SailClear is a project approved by the CCLEC Council. Thus, all members of CCLEC have agreed to implement the system. While it may take time for some countries to become compliant, the majority (if not all) will be using SailClear in the future. SailClear will be active in Anguilla; Bermuda; BVI; Curacao; Dominica; Saint Lucia; Turks and Caicos; St. Vincent; and Grenada.

There are technical challenges to implementing these systems. Computer infrastructure is required to run the system, and hardware on yachts is also required. Operators also need to be trained in order to use the system, but currently there are no initiatives for training. The few proposed initiatives on training staff for using the system have been introduced by private non-profit associations. For example, in Antigua, the local yachting association is trying to establish a training programme, but funding requirements are an obstacle to implementation.

Guaranteeing safety & security for yachters

The yachting industry's biggest challenge is security. Break-ins and other crimes can disrupt the industry and have large negative effects. Stakeholders report that one negative event could have permanent negative consequences. Yachters are by definition mobile and can simply sail away if they feel unsafe.

Although the issues vary by island, a common challenge to most islands is the limited patrolling of marina premises. In some islands, the crimes tend to be opportunistic theft, rather than serious violent incidents. Places such as British Virgin Islands and Dominica were pointed out as good examples of better development in terms of security. According to stakeholders, this is a result of better engagement with local communities and higher participation of locals in the yachting industry – which leads to “self-patrolling”. Another island that is relatively successful in reducing crime is Grenada. There, one important step taken by yachting stakeholders was the development of a security plan in collaboration with the local police. But Grenada faces challenges with the coast guard, which is well-developed, but is underfunded from the stakeholders' perspective. This makes enforcing rules and patrolling difficult. Similarly, the Turks and Caicos Islands have invested in 24-hour security at the Grand Marina in Providenciales to respond to concerns raised by yachters about crime during night time.

Violent crime and perception of an unsafe environment have been a particular problem for islands such as St. Vincent and the Grenadines and Trinidad and Tobago, according to stakeholders in these countries. In both cases, reports of assault and violent crimes involving firearms have had significant negative impacts on the local yachting industries. More importantly, crime reports have long-term effects. In the case of Trinidad and Tobago, for example, even though authorities have worked to eradicate some forms of crime, the general perception is that the country is a dangerous location. This continues to damage the local yachting industry. Additionally, attacks by Venezuelan pirates on yachters crossing from Grenada to Trinidad and Tobago have recently had a negative impact on yacht arrivals.

Table 6: Number of reported crimes against yachts and yacht tourists

Type of incident	2014	2015
Theft	38	39
Assault	3	11
Attempted Theft	8	11
Burglary	17	8
Piracy	0	4
Vandalism	0	3
Attempted Piracy	1	1
Attempted Robbery	4	0
Robbery	2	0
Attempted Burglary	3	0

Source: CSSN Annual Report 2015 Reported Yacht Crime – Caribbean.

Development of consistent data collection methodology and practice

To fully understand the impact of yachting, data on arrivals and yacht expenditure must be consistently gathered and analysed. There is a consistent lack of data on the yachting industry across the Caribbean. This prevents the study and strategic planning of the sector.

Insights and analyses of the yachting sector in the BMCs must rely on interviews with those involved in the industry, rather than precise data on arrivals and expenditures. All stakeholders indicated the need for data collection for the industry in a standardised manner that would allow for proper economic analyses and attribution of impacts to the BMCs' economies. Stakeholders in Grenada contracted a consulting firm to develop a methodology for collecting yachting data. The methodology was not perfect, but would be useful if followed in practice.

There are some technical challenges with collecting yachting data. Some yachters arrive in the islands by air and then charter a boat or retrieve their privately owned vessel from storage. Current data collection methodologies do not count these individuals as yachting tourists, thereby underestimating the size of the sector. In addition, individuals living on boats are also not accounted for.

Linking yachting to other tourism offerings

The yachting industry cannot fully develop without being integrated into other parts of the tourism industry. Apart from yachting-specific spending, yachters are similar to general tourists and generate demand for similar goods and services. Stakeholders expect yachting tourists to have much higher economic impact than regular tourists. This is because yachting tourists tend to want to "live like locals" and spend money on groceries, local restaurants, services, and other expenditures that directly contribute to the local economy. Improving the connections between yachting and other sectors of the tourism industry can help expose the yachters to inland options, further increasing their level of spending on activities and in local businesses.

Yachters tend to want to travel around the country, while other types of tourists, particular cruise passengers, tend to stay confined to specific areas of the island. The low integration between yachting and other areas of the tourism sector, however, prevents the country from reaping full benefits from the yachting industry. Although in some BMCs there are good connections between the yachting industry and other tourism activities, in most cases there are not strategies or formalised plans in place to ensure the connection. Greater connection with other aspects of tourism, which can help the development of more entertainment options for yacht tourists, is also crucial. In places such as Saint Lucia, industry stakeholders have observed that the lack of options may be driving away repeat visits, leading to low growth or contraction of the yachting industry.

Human resource development and inclusion of locals in the industry

Further engagement of nationals or locals with the yachting industry is a crucial strategy for boosting growth and development of the industry. In general, stakeholders reported that in islands where locals participate more in the yachting industry, greater economic returns from tourism and the industry have been observed. More participation of locals could also improve safety and environmental conservation. It could also enhance the overall economic impact by generating higher employment options, increasing labour income and GDP, and generating more government revenue. But the inclusion of locals in the sector depends on training and human resource development.

Difficulty in finding locals with skills relevant to the sector is a challenge. In many cases, stakeholders pointed out that

it is not just technical skills and knowledge of yachting that are missing, but also basic skills, such as swimming and even reading. Training is important, and some countries are taking measures to improve the skillset of local workers. For example, Grenada's yachting association is involved with the training association and is helping to develop standards for yachting qualification. There is a need for ensuring that the islands follow international standards for the yachting industry. Education and training are required for this, and the results can be significant for growth in yacht arrivals and fostering strong industry development.

Given the BMCs' natural and geographical characteristics, training related to the yachting industry could go beyond professional training alone. For example, Antigua has developed a sailing academy in order to add yachting to the regular curriculum of schools. This can help with the early development of necessary skills for the young local population, which would assist in integrating yachting further into the local economy.

Similarly, stakeholders associated with a major marina in the Turks and Caicos Islands noted the need to ensure that interest in sailing is developed in children and youth, given the long training requirements to become professional and internationally competitive. Stakeholders reported limited government funding for these types of initiatives. A current sailing camp, for example, is largely subsidised by local businesses associated with the marina.

In some cases, the lack of training and skills related to the yachting sector lead to more complex issues involving public policy. For instance, one major problem facing yachting in Antigua is the number of illegal workers. According to stakeholders, most of these are individuals from UK, US, and Australia who come to work in the industry in the Caribbean without a permit or proper documentation. While this does not necessarily hurt the yachting industry, it limits opportunities for local residents and therefore reduces the economic impact of the industry on the local community.

Two further barriers for local residents entering the yachting industry are the lack of access to credit and taxation. Lack of lines of credit and high taxes prevent locals from owning vessels that could be used for charter services and day tours. For example, in Saint Lucia, stakeholders estimate that taxation can be as high as 23% of the value of the vessel. In addition, scarcity of lending combined with stringent criteria lead to few opportunities for nationals to be fully integrated into the yachting industry. Some of the lack of credit lines in the islands can be explained by crowding out effects from large

infrastructure expenditures on resorts, hotels, and other tourism assets. Large multinational corporations entering the local markets tend to monopolise the available credit, given that their risk profile and return prospects are better than those of local individuals trying to enter the yachting sector.

The high borrowing costs preventing locals from entering the yachting industry may also lead to longer term effects. In almost all cases, the yachting industries of the BMCs were initially started by UK expatriates. These business owners are gradually retiring. This means that their businesses are in need of new ownership or leadership. If locals cannot take part in such opportunities due to a lack of resources, businesses may ultimately disappear.

Apart from the training of local populations on the recreational side of the industry, specialisation in the industrial side, which includes the servicing, maintenance, repair and storage of yachts, can help create meaningful, skilled employment in the BMCs. Countries such as Trinidad and Tobago, Grenada and Antigua have strengths in servicing yachts – repairs, painting, and shelter during hurricane season. The servicing side of the industry requires specialised knowledge. Employment in the servicing of yachts offers the potential for many people to develop careers, become entrepreneurs and eventually employ others.

In addition to human resources, specialised infrastructure is required for BMCs to be able to offer yachting services. This can create a barrier for countries to enter the yachting industry. Yet, investments in required infrastructure may pay off in the future, as many of the skills required to service yachts are transferrable and can benefit local economies more broadly. For example, stakeholders in Trinidad and Tobago asserted that many former workers in the yachting industry found later employment or started their own businesses in car repairing and maintenance and other skilled occupations.

Fine-tuning the role of public policy, regulation and incentives

According to yachting stakeholders, the industry has been overlooked or not fully included in policy decisions and considerations. Many believe that although the physical infrastructure is present, there are potential gaps in regulation. Perhaps one of the reasons for this is the government agencies' lack of understanding of the industry and its benefits. This, in turn, could stem from inconsistency in data gathering and the inability of stakeholders to clearly pinpoint the economic effects of yachting.

Despite these divergences between yachting stakeholders and government, most ministries in the BMCs believe in the industry's great economic potential. In many cases, the lack of government involvement and inclusion of yachting in policy decisions is the result of a country's distribution of ministerial responsibilities. For example, in Trinidad and Tobago, yachting falls under the Ministry of Trade rather than Ministry of Tourism. This hinders the drafting of better policies connecting yachting and tourism activity. This tends to be more problematic in larger countries, such as Trinidad and Tobago, and less so in smaller islands.

One crucial point raised by numerous stakeholders is that the yachting industry relies on concessions. Firstly, in many BMCs, the yachting sector is exempt from the value-added tax (VAT). This means that many imported parts and inputs are exempted. Secondly, to attract more yachters, many countries rely on duty-free status of items commonly demanded by these tourists. Lastly, part of the infrastructure required by the industry needs to be financed and maintained by governments.

Although some level of incentives and concessions can be expected, the BMCs should exercise caution when providing tax relief to the yachting industry. This form of policy, while well-intended, can lead to a race-to-the-bottom among Caribbean nations competing to develop their yachting industry. By providing more and greater concessions to the industry, governments would be eroding part of the benefits that they should expect via taxation. This stream of benefits is important for the economic development of the BMCs, since it helps with income redistribution and funding of programmes devoted to local communities.

Industry regulation, rather than concessions, may be a more efficient area for governments to intervene. Reduction in red tape for businesses in the yachting industry was pointed out by stakeholders as an area for government intervention. Improved monitoring of the industry, ensuring proper registration of vessels, and enforcement of rules would be other areas that the government could efficiently use to spur growth. For example, one stakeholder in Antigua stated that a major reason behind high premiums in yacht insurance in the Caribbean is the number of uninsured yachts. The high premium can negatively impact market size of the yachting sector in the region. This can be particularly important for the yacht storage segment of the industry, as a portion of the high premiums (higher than other regions in the world) would be incurred for the six-month period in which the yacht is not being used.

Regulation can also play a role in improving collaboration between the BMCs. Differences in pricing of yachting services, or the lack of standardised pricing schemes for the industry, can cause reduction in overall visits to the Caribbean. Some stakeholders stated that wide variations in prices of standard services, such as chartering and marina fees, may discourage yachters from exploring multiple islands. By developing collaborative pricing standards, local governments can ensure healthier competition between the BMCs. In addition to pricing regulation, governments can also help to develop industry standards, such as safety and labour regulations.

Review of BMCs with potential for development

The yachting industry of each of the BMCs is in a different stage of development or caters to different segments of the overall market. While some islands cater to cruisers and charter yachts, which tend to be smaller boats, other islands focus on super-yachts and events that require specialised infrastructure and service offerings. Some BMCs have developed the industrial side of the yachting industry, offering repair, cleaning, and maintenance services as well as storage mainly in the summer months. This helps to counteract the inherent seasonality of the sector and to develop skillful and meaningful employment in the countries. Trinidad and Tobago is an example of a BMC that is focused on this part of the sector. Grenada and Antigua also have great capabilities in yacht servicing.

Stakeholders believe there is potential for further development of the yachting industry in the Caribbean, and that it has a larger impact on the economy than other forms of tourism. They also pointed out local governments' lack of understanding of what the industry can offer. In some islands, stakeholders pointed out that the yachting industry is not well-connected to other tourism subsectors and offerings. Linking the yachting industry to other parts of tourism can ensure that yachters can participate in land tours, prolong their stay, and increase their economic impact. Stakeholders in Saint Lucia and Trinidad reported that yachters were not exposed to the other tourism offerings the islands have, leading them to stay in their boats rather than taking tours and exploring the islands.

Industry regulation, rather than concessions, may be a more efficient area for governments to intervene.

7 STRATEGIES FOR ENHANCING THE ECONOMIC IMPACT OF TOURISM IN THE BMCS

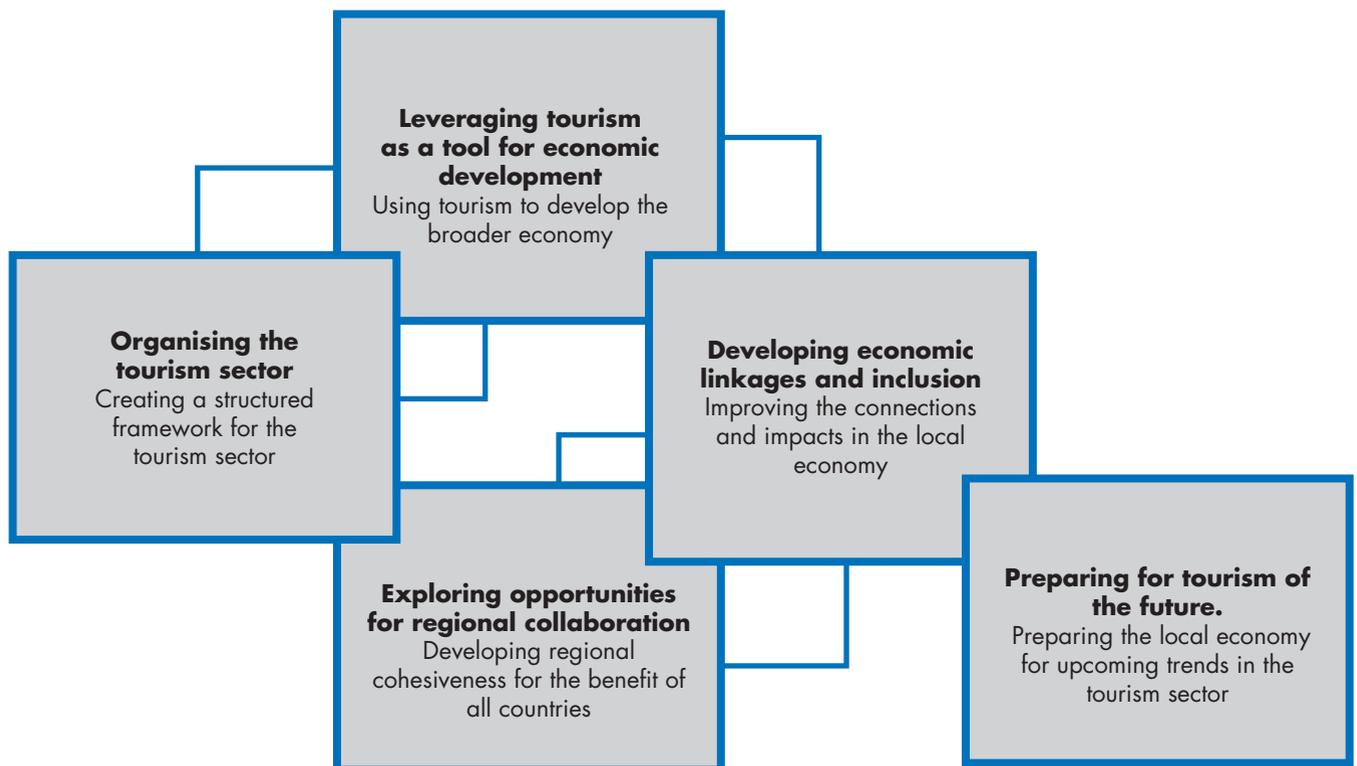
The empirical evidence presented in this report suggests that the tourism sector in the BMCs has provided substantial economic impacts to the region. However, the sector is changing, both in the Caribbean and in the wider global marketplace, and to make the most of the economic development opportunities that arise from tourism, the sector needs to adapt.

Local governments and industry stakeholders play an important role in this adaptation process. The challenges vary across the BMCs and while there is no “one-size-fits-all” solution, there are some common themes to these challenges. Based on the findings in this report, five broad themes have been identified, each with corresponding examples of strategies that BMCs could consider to enhance the economic impact of tourism.

These themes are summarised in Figure 19 and explored in more detail below.

...to make the most of the economic development opportunities that arise from tourism, the sector needs to adapt.

Figure 19: Strategic themes for enhancing the economic impact of tourism in the BMCs



Source: Authors' analysis.

7.1. LEVERAGING TOURISM AS A TOOL FOR ECONOMIC DEVELOPMENT

Tourism is the dominant sector in many BMCs and the dependency on tourism poses risks to the stability of the local economy. Seasonality of demand, competition from other regions, the outbreak of disease, and climate change with its potential to raise sea levels are examples of factors that expose BMCs' economies to risk if they are overly reliant on tourism as the main driver of growth.

BMCs should therefore consider how they can diversify their economies away from tourism. This does not mean de-prioritizing the sector. Instead, BMCs should consider how to use their strong tourism product to diversify their economy and to grow other sectors so that they are more resilient to economic shocks.

Examples of strategies that can be adopted to support this are presented below.



Table 7: Examples of strategies for leveraging tourism as a tool for economic development

Category	Strategy description
Tourism tax	Evaluate the creation of a tourism tax, the revenue from which could be dedicated to investments in basic infrastructure, such as roads, hospitals, and utilities, that can support the BMCs broad economic development goals
Concessions	Link concessions given to tourism segments, such as accommodation and yachting, to long-term economic development goals. Ensure that renewal of concessions is connected to measurable contributions to the economy, such as labour income generated, community investments, labour force training, and local jobs created.

7.2. ORGANISING THE TOURISM INDUSTRY

The tourism industry should not be seen as an informal and fragmented part of the economy. Both government and private sector organisations should work together to ensure there are appropriate standards and regulations to organise the industry in their country. This can be complex because the tourism industry involves different industries, from hotels and restaurants to agriculture and manufacturing. Nevertheless, initiatives can be taken to create a holistic view of tourism that formalises the industry and allows for better policy initiatives and strategies.

By setting the policy framework in which the tourism industry operates, these initiatives could help develop the industry in a way that is sustainable and conducive to economic growth.



Table 8: Examples of strategies for organising the tourism industry

Category	Strategy description
Data Collection	Expand and standardise tourism data collection across the BMCs. This effort should focus on consistently collecting information on tourist spending patterns – for both long-stay tourists and cruise passengers – and accommodation choices. Particular attention should also be paid to collecting more data for different segments of the tourism industry, such as yachting, medical and education tourism. Expansion in data collection should leverage existing assets such as local statistical offices and the Caribbean Tourism Organisation (CTO). Additionally, the BMCs should work on developing of their Tourism Satellite Accounts (TSAs), which would help with continuous efforts to monitor the economic impact of tourism activity.
Industry Standards	Explore further development of quality and health standards for industries directly linked to tourism, such as accommodations, restaurants, and tour operators. Standards should match international best practices and should be adopted across all BMCs to ensure foreign travellers receive a consistent tourism experience. Some examples of areas for development of quality standards include customer service, food preparation, transportation safety, safety in recreation activities, and health inspection of accommodations.

Source: Authors' analysis.

7.3. DEVELOPING ECONOMIC LINKAGES AND INCLUSION

Making the most of the economic development opportunity presented by tourism requires ensuring there are links to the local economy. By facilitating connections to the agriculture, manufacturing, and services sectors and the tourism industry, the BMCs can expand the economic benefits of tourism expenditure.

Tourism is the dominant sector in many BMCs and the dependency on tourism poses risks to the stability of the local economy.

Table 9: Examples of strategies for developing economic linkages and inclusion

Category	Strategy description
Industry Linkages	Explore further connections between segments of the tourism industry, such as hotel and restaurants, to other sectors of the local economies. By including sectors such as agriculture and light manufacturing to the supply chain of tourism-related businesses, more economic impact can be generated from tourist expenditure. Lower connection between tourism and these sectors may point to the opportunity for creating organised farmer's markets where hotels and restaurants can buy local fresh produce. Connections to the local economy need not be limited to supply chain. Connecting tourists' daily activities to local experiences, such as food fairs and crafts shows, can also help improve the linkages of tourism and local economies.
Cruise Conversion	Focus on converting cruise passengers into long-stay tourists, as even small conversion rates can signify large volumes of long-stay arrivals and economic gains associated therein. Better conversion rates may be achieved by developing pan-regional loyalty programmes, hospitality vouchers, and other incentive programmes. Additionally, consider improving transportation links to cruise terminals and expanding the tourism offers for cruise passengers in order to increase their contact with the local economy.
Access to Capital	Explore the creation of dedicated government and private industry funds to finance capital projects for local individuals planning to participate in the tourism sector. Funds could be used to finance the development of locally-owned accommodation capacity, transportation services, and tour operations (e.g. charter yachts).

Source: Authors' analysis.

7.4. EXPLORING OPPORTUNITIES FOR REGIONAL COLLABORATION

As competition from other regions grows, it is becoming increasingly important for the BMCs to capitalise on opportunities for collaboration. BMCs should work together on initiatives that develop the Caribbean tourism and that attract visitors to the region. This can be mutually beneficial to the BMCs. These efforts are likely to be particularly important to the development of the yachting and medical tourism industries, where standards and reputation have a regional element.



Table 10: Examples of strategies for exploring opportunities for regional collaboration

Category	Strategy description
Training institutes	Explore opportunities for further development of the the network of labour training institutions in the BMCs that would focus on helping locals develop skills sought after by the hospitality and other tourist-related industries. The training should include the development of customer service and managerial skills that can be also applied to non-tourism related industries.
Immigration & customs	Consider standardising the border crossing and customs procedures across the BMCs. The standardisation should aim at minimizing the number of forms and ensuring that the same forms are required across all BMCs. Also consider reviewing the protocols and codes of conduct for border agents to reduce variation in how tourists are treated during the customs process. Customer service could be part of agents' training.
Transport links	Investigate the development of ferry services between small and medium-sized Eastern Caribbean islands. This can reduce the dependence and burden on air transportation, while also adding an alternative mode for transporting products. The development of the ferry services may be more easily achieved by forming a pan-regional council that could be overseen by the Organisation of Eastern Caribbean States (OECS).

Source: Authors' analysis.

7.5. PREPARING FOR THE TOURISM OF THE FUTURE

While competition is growing, the needs and expectations of tourists are also changing. Visitors from North America and Europe are increasingly using less cash for everyday transactions, and they are accustomed to accessing information and services on their mobile phones. New business models for transportation and accommodation services, such as Uber and AirBnB, are pervasive in their home countries. BMCs should consider how to keep up with the needs and expectations of the key tourist markets and to adapt their tourism products accordingly.

As the populations in the major markets of origin continue to age, there will be a shift in the preferences in terms of the desired visitor experience. For instance, as millennials begin to form a higher proportion of the target market, the experience that they are looking for will be very different from that of previous generations. They are much less likely to buy a pre-packaged holiday such as a cruise or all-inclusive. They are much more likely to rely on friend's recommendations and social media. They tend to look for ways to experience local culture and eat local foods. In some cases, they are looking to do something meaningful, such as volunteering. These have interesting possibilities and implications for the BMCs ranging from how they connect with millennials, to how to enhance safety and security to enable them to have a more local experience.

Table 11: Examples of strategies for preparing BMCs for the tourism of the future

Category	Strategy description
Payment technology	Work with local businesses and service providers to incentivise and ensure the adoption of electronic forms of payment – such as credit and debit cards – and mobile payment technology in transportation services (e.g. taxis and buses), retail, food and beverage establishments, and other industries that interact directly with foreign visitors.
Shared economy	Work with companies in the shared economy, such as Uber, AirBnB and FlipKey, to develop mutually beneficial policies that spur the development of this tourism segment while bringing tax revenues to the BMCs.
Electronic customs clearance	Explore the implementation of electronic or digital customs clearing procedures to expedite and standardise border crossing. This strategy may be particularly useful for the yachting industry in which multiple border crossing is an obstacle, given the bureaucracy and waiting periods.
Changing traveller demographics	Develop tourism products and marketing approaches that are tailored to the needs of the next generation of tourists. This includes making the most of digital methods and providing the appropriate institutions to support the desire to interact with communities that are not traditionally centres of tourism.

Source: Authors' analysis.



APPENDIX I: TECHNICAL DETAILS OF THE ECONOMIC IMPACT MODELLING

The econometric analysis is divided into four major sections:

1. Literature Review;
2. Econometric Model Development;
3. Macroeconomic Data & Tourism specific Data Collection; and
4. Analysis of Model Results.

Literature Review

There is an extensive body of literature on the effect of tourism on economic growth. Many of the academic studies focus on small open economies – in some instances, island economies – to understand the dynamics of economic development and the role of tourism. Six academic papers served as the basis for the development of the model:

- Seetannah, Boopen, "Assessing the dynamic economic impact of tourism for island economies," *Annals of Tourism Research*, 2011.
- Narayan, P.K., S. Narayan, A Prasad and B.C. Prasad, "Tourism and economic growth: a panel data analysis for Pacific Island countries," *Tourism Economics*, 2010.
- Sequeira, Tiago Neves, and Paulo Maçãs Nunes, "Does tourism influence economic growth? A dynamic panel data approach," *Applied Economics*, 2008.
- Sequeira, Tiago Neves, and Carla Campos, "International tourism and economic growth: A panel data approach," *Advances in Modern Tourism Research*, 2007.
- Eugenio-Martin, Juan Luis, Noelia Martín Morales, and Riccardo Scarpa, "Tourism and economic growth in Latin American countries: A panel data approach," *Nota di Lavoro*, *Fondazione Eni Enrico Mattei*, 2004.
- Castro-Nuño, Mercedes, José A. Molina-Toucedo, and María P. Pablo-Romero, "Tourism and GDP: A meta-analysis of panel data studies," *Journal of Travel Research*, 2013.

These studies provided the background knowledge on the variables commonly used to estimate the effect of tourism on GDP growth, pitfalls and data corrections required for a robust analysis, insights on peculiarities of tourism in island economies, and data sources.

Econometric Model Development

Theoretical models that consider a causal relationship between tourism and economic growth are a relatively recent phenomenon. Some of the first studies to rigorously analyse this issue from an empirical point of view date from 2007. These studies stemmed from the development of the tourism-led growth hypothesis (TLG)—that is, the hypothesis that tourism generates economic growth which was tested empirically. TLG was developed in an attempt to reconcile data findings suggesting high economic growth in countries that did not have high-technology sectors and substantial research and development spending, or an abundance of physical and human capital, or which benefitted from scale economies— variables commonly considered in modern growth theories.

The TLG hypothesis has been investigated empirically through cross-sectional – i.e. many countries at single point in time – as well as time-series analyses – i.e. one country or region over time. Recently, as is the case in other economic analyses, panel data has become the norm for studying the effects of tourism on economic growth. The combination of cross-section and time-series, panel data consists of studying a particular phenomenon for many countries or regions over time.

This type of data has some major advantages:

- 1. Sample size and degrees of freedom:** It greatly increases the number of observations and the degrees of freedom in the dataset.
- 2. Control for time-invariant effects:** Panel data allow for the analysis to control for characteristics that may be specific to each of the countries or regions included in the study, making the results more generalised.
- 3. Data corrections:** Leveraging the two advantages above, panel data analysis helps to reduce some common data problems – e.g. endogeneity and reverse causality.

Model Specification

Following the literature on TLG, the model was built using the standard Cobb-Douglas production function:

$$Y_t = A_t K_t^\alpha H_t^\beta$$

with Y_t being a measure of output, A_t a measure of production technology, K_t physical capital (e.g. machinery & equipment), and H_t human capital (e.g. skilled workers). For the TLG, this production function is augmented to include exports and one of its components: tourism.

$$Y_t = A_t K_t^\alpha H_t^\beta EX_t^\gamma TR_t^\delta$$

With EX_t being a measure of exports (or trades of goods and services), and TR_t a measure of tourism activity, the coefficient of interest is δ , which defines the relative share of tourism in generating output for an economy.

To estimate this equation empirically, the model is converted into a logarithmic linear form to allow for the use of standard econometric techniques (with lower case letter denoting the natural logarithm form of each of the variables defined above):

$$y_t = a_t + \alpha k_t + \beta h_t + \gamma x_t + \delta tr_t$$

Empirical Model

Based on empirical growth theory studies, there two major types of panel data models that can be used:

Table 12: Description of non-dynamic (or static) and dynamic panel data models

Category	Strategy description
Non-dynamic (or static)	<p>Non-dynamic, or static, models estimate the impact of tourism on GDP without accounting for effects that may expand over time. The tourism coefficient in this case represents the entire effect of tourism on GDP per capita.</p> <p>Basic econometric specification:</p> $y_{it} = \alpha_t + \delta tr_{it} + \beta x_{it} + u_i + \varepsilon_{it}$ <p>y_{it} =GDP per capita α =period specific intercept tr =measures of tourism activity x =set of non-tourism? explanatory variables u =time invariant,unobserved country specific characteristic ε =error term</p>
Dynamic	<p>Dynamic Dynamic models account for the fact that current GDP per capita is also determined by past values, or lagged values, of GDP per capita. This means the tourism coefficient in the econometric specification only accounts for part of the effect – the same period effect. Looking at the dynamic effect allows determination of the long-term effects of tourism through the connections between current GDP per capita and past values of GDP per capita.</p> <p>The econometric specification is the same as above, but with the addition of the terms y_{it-1}, which represents the lagged or previous year value of GDP per capita:</p> $y_{it} = \alpha_t + \theta y_{it-1} + \delta tr_{it} + \beta x_{it} + u_i + \varepsilon_{it}$ <p>The effect of tourism, therefore, depends on both δ and θ.</p>

Source: Authors' analysis.

Although both models can yield interesting results, the dynamic model is the focus of our analysis as it fully captures the effect of tourism over time in the BMCs.

Estimation Approach

Properly estimating the effects of tourism on growth depends on both the econometric specification (dynamic

or non-dynamic) and the estimation method. Although there is much debate on the proper methods for estimating impacts of tourism on GDP, there are two basic methods that are widely adopted in the literature, with their advantages and disadvantages dependent on data characteristics, such as number of countries or regions and years being considered.

Table 13: Description of fixed effects and generalised method of moments models

Fixed Effects	Generalised Method of Moments (GMM) ⁵¹
<p>The Fixed Effects (FE) approach accounts for endogeneity – or correlation between dependent variables and unobserved characteristics – due to time-invariant characteristics of a country or region. The FE estimators tend to be more consistent for samples with a small number of cross-sections (i.e. countries or regions) and long time periods (generally, greater than 20-25 years).</p> <p>Despite this general rule, some research shows FE estimators to be better than GMM estimators for panels with small cross-section and small time-series.</p> <p>The major problem in dynamic panel analysis is that the lagged dependent variable is necessarily endogenous, which can bias the estimators. With larger samples, this problem tends to be reduced as any bias introduced by the lagged dependent variable is diluted over time.</p>	<p>The GMM estimators essentially differ from the FE estimators in that the former attempt to account for time-varying endogeneity, while the latter only accounts for time-invariant effects. This is accomplished by using “internal” instrumental variables, which are generally lagged values (differenced or levels) of the endogenous variable.</p> <p>There are various types of GMM estimator, which are generally attributed to authors that first developed the reasoning and models behind them, and they basically differ in how “moment conditions” are defined.</p> <p>Although GMM methods may correct for the endogeneity of the lagged dependent variable, they also introduce problems. By generating many instruments from lagged differences or levels, these models consume degrees of freedom and risk over identification of the model being estimated.</p> <p>These problems are exacerbated in larger samples, making them more ideal for panels with a large number of cross-sections (e.g. regions, countries) but short time-series.</p>

For the model estimations, both the FE and GMM methods, as well as an intermediate estimation method which uses two-stage least square (2SLS) to correct for the endogeneity of the lagged dependent variable, were utilised.^{52 53}



⁵¹ Manuel Arellano, and Stephen Bond, “Some tests of specification for panel data: Monte Carlo evidence and an application to employment equations,” *The Review of Economic Studies*, 1991; Douglas H. Eakin, Whitney Newey, and Harvey S. Rosen, “Estimating vector autoregressions with panel data,” *Econometrica, Journal of the Econometric Society*, 1988.

⁵² Theodore Wilbur Anderson, and Cheng Hsiao, “Formulation and Estimation of Dynamic Models Using Panel Data,” *Journal of Econometrics*, 1982.

⁵³ We also performed panel unit root and cointegration tests. Although these can be difficult to assess in panel data settings, our tests rejected the null hypotheses. This led us to favour fixed effects and GMM approaches.

Macroeconomic data and tourism specific data collection

One essential step for constructing the model is defining the variables that need to be included as measures of tourism activity and explanatory variables of general economic growth – or control variables.

Vast amounts of data were collected from the BMCs in two general streams: macroeconomic data and tourism specific data. The Macroeconomic data consist of macroeconomic variables that will serve as both dependent variables and controls in the econometric specification. Examples include GDP, population, employment, private capital investment, and exchange rates. The data sources included:

- Penn World Tables;
- The World Bank;
- UN – CEPALSTAT: Economic Commission for Latin America and the Caribbean; and
- United Nations Development Programme (UNDP).

The tourism-specific data consist of variables directly related to tourism activity in each of the BMCs. These variables include both arrivals and expenditure information, and the major sources used were:

- Caribbean Tourism Organisation (CTO);
- World Travel & Tourism Council (WTTC); and
- UN World Tourism Organisation (UNWTO).

Model variables

Finding consistent data across the BMCs was a challenge. For this reason, two model specification alternatives, based on the data available, were developed:

- **Standard model** estimates the impact of tourism on GDP per capita, while controlling for standard control variables – which are the major components of GDP and standard across the literature (see table below). The results of this model specification are the ones reported in the main body of the study.
- **Augmented model** uses the standard model as the base, and introduces other control variables found in the literature. It was developed as part of the robustness tests for the estimations. Due to lack of data, some of the other control variables are not consistently available for all countries.



Below are described the variables used in the estimation. The Standard control variables were used in the Standard model, and the other controls were included in the augmented model. GDP and tourism statistics were the same across the different specifications.

Table 14: List of variables used in the estimations

Variable type	Variable name	Unit/Metric	Log form	Rationale
Dependent variable	Real GDP per capita	USD PPP	Yes	Measure of output for the BMCs' economies
Key variable	Tourism expenditure per	USD PPP	Yes	Measure of tourism activity in the BMCs
	Tourist arrivals	Number of people	Yes	
Standard controls	Lagged real GDP per capita	USD PPP	Yes	1-year lag of dependent variable, measures the dynamic effects in an economy and the rate of convergence to "steady state".
	Investment ratio	Ratio investment to GDP	No	Used as a proxy for physical capital investment.
	Government ratio	Ratio government spending to GDP	No	Measures long-term crowding-out and effect of government consumption on long-term growth.
	Trade ratio	Ratio imports plus exports to GDP	No	Measures trade activity and is considered to be a measure of a country's openness.
	Time fixed effects	Year dummy variables	No	Controls for random shocks and business cycles for each year in the dataset.
Other controls	Employment	Number of people	Yes	Used as a proxy for human capital availability and formation. Studies generally use enrolment in secondary education, but this data was not consistently available for the BMCs.
	Life expectancy	Years (measured at birth)	Yes	Used as a proxy for health – commonly viewed as a determinant of productivity and savings behaviour of households.
	Country risk	Lending rate minus treasury bill rate (%)	No	Measures the sophistication of institutions and rule of law (compiled by the World Bank).

Source: Authors' analysis.
These variables enter the non-dynamic and dynamic models described above.

Analysis of model results

Having defined the theoretical framework and the variables to enter the model, it was estimated using five distinct regression models:

1. **Static Fixed Effects (FES):** Static model with country and time fixed effects
2. **Dynamic Fixed Effects (FED):** Dynamic model with country and time fixed effects
3. **Dynamic First-difference (FDD):** Two-stage least square (2SLS) dynamic model in first differences following the work of Anderson-Hsiao.⁵⁴
4. **Unrestricted GMM (ABU):** Arellano-Bond linear dynamic panel-data estimation – difference GMM – unrestricted in terms of number of lag instruments.

5. **Restricted GMM (ABR):** Arellano-Bond linear dynamic panel-data estimation – difference GMM – with a restricted number of lag instruments: 2-8 period lags
6. **Restricted GMM with forward orthogonal deviations (ABR FOD):** Arellano-Bond linear dynamic panel-data estimation – difference GMM – with a restricted number of FOD transformation instruments: 2-8 periods.

Standard model

The first set of results was derived with respect to the relationship between visitor spending per capita and GDP per capita. Visitor spending includes expenditures by both cruise passengers and long-stay tourists in the destination country (i.e. one of the BMCs).

⁵⁴ Theodore Wilbur Anderson, and Cheng Hsiao, "Formulation and Estimation of Dynamic Models using Panel Data," *Journal of Econometrics*, 1982.

The results reported in the main body of the report are for the FED and ABR estimations in Table 15 below. These two models were considered the most appropriate. Firstly, the FED model incorporates the standard panel data analysis techniques, and can be used as the basis for comparison with other model results. In addition, with 26 years of data for each panel, the dataset is close to the threshold of T=20 for which the Arellano-Bond estimators

may not be superior to fixed-effect estimators. Secondly, the ABR model restricts the number of instruments between 2 and 8 lags of the endogenous lagged dependent variable. This restriction can be beneficial, since the large number of time periods produces a large number of instruments (as seen in ABU). Unrestricting the number of lags can exacerbate overidentification problems.

Table 15: Impact of visitor expenditure on GDP per capita

Standard model: Visitor expenditure						
<i>Model:</i>	FES	FED	FDD	ABU	ABR	ABR FOD
Visitor expenditure	0.186** (0.080)	0.0583*** (0.015)	0.0939*** (0.015)	0.0731*** (0.018)	0.0886*** (0.023)	0.0630*** (0.016)
Investment ratio	0.229*** (0.073)	0.0706** (0.029)	0.0656* (0.038)	0.0374 (0.026)	0.0507 (0.043)	0.0763** (0.029)
Government ratio	-0.0607 (0.163)	-0.049 (0.042)	-0.0603 (0.080)	-0.102* (0.056)	-0.0137 (0.063)	-0.0496 (0.044)
Trade ratio	0.0724 (0.044)	0.0162 (0.014)	0.0122* (0.007)	-0.00617 (0.010)	0.0165 (0.011)	0.0182 (0.014)
Lagged GDP per capita	- -	0.887*** (0.029)	0.487 (0.766)	0.845*** (0.037)	0.692*** (0.062)	0.855*** (0.028)
Observations	415	399	382	382	382	383

Note: Standard errors reported in parenthesis, below coefficients; “*” represent level of statistical significance (* p<0.10, ** p<0.05, *** p<0.01). For the FDD model, variables should be read as first differences. All models included year dummy variables.

Source: Deloitte analysis.

Model fit

To test the model’s validity, one compared the predicted values – or fitted values – of GDP growth that the model generated against observed GDP growth for the BMCs. By comparing predicted and observed values one can evaluate if the model would generally track or explain the variations in GDP growth.

Overall the model shows a good fit, and explains well the variations in GDP. There is variation across the countries included in the dataset. That is, the model explains variations in GDP better for some countries than others.

Based on evaluation, the model performs well for all countries, except for four: Haiti, British Virgin Islands,

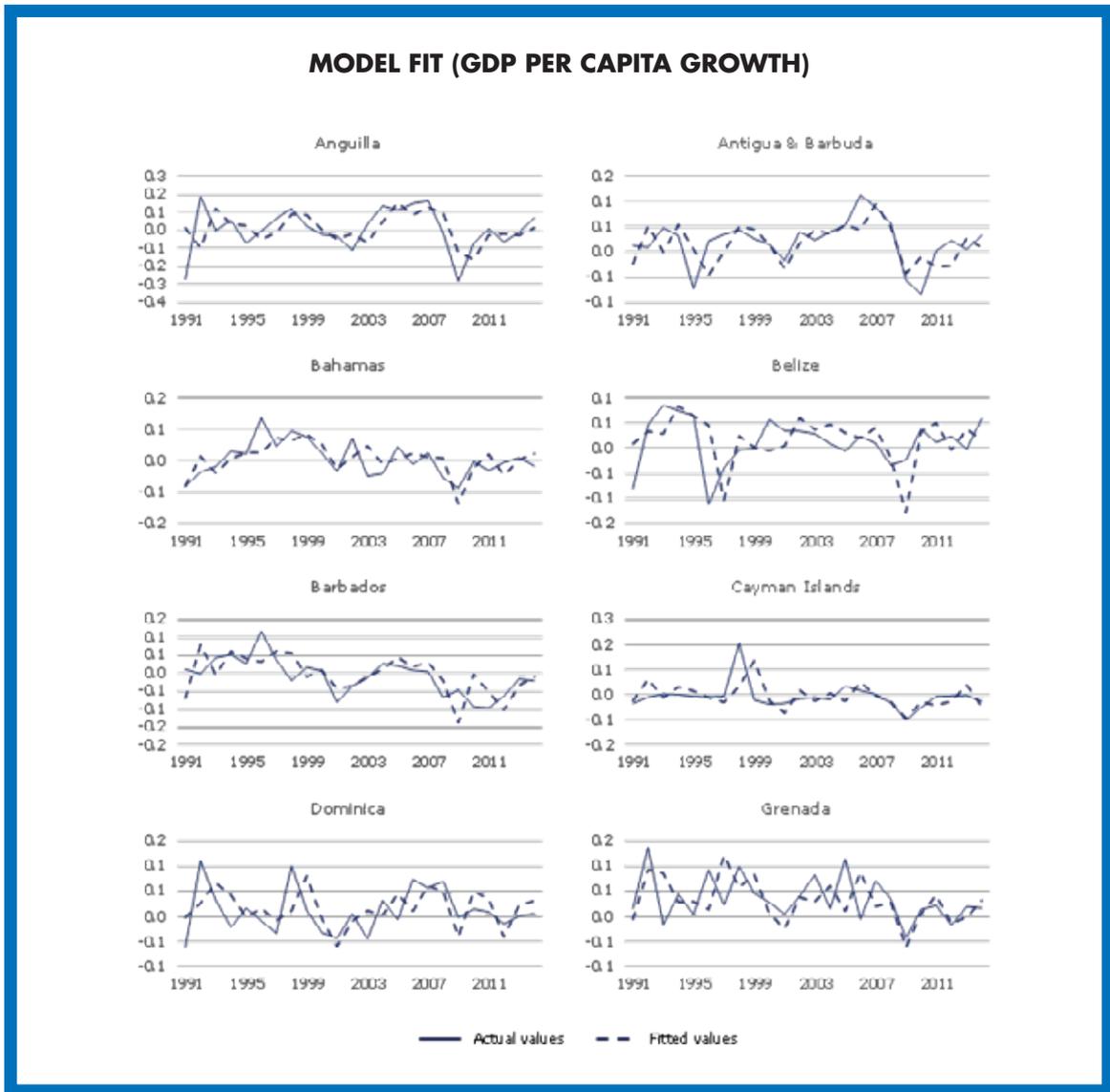
Anguilla, and Trinidad and Tobago.

This was expected to some extent in the cases of Haiti and Trinidad and Tobago,⁵⁵ since these countries are very large and with more diversified economies (i.e. less dependent on tourism). In the cases of Anguilla and the British Virgin Islands, it is difficult to assess what other characteristics may be driving the relatively poorer model fit.

Figure 20 shows the model fit for each of the BMCs included in the model.

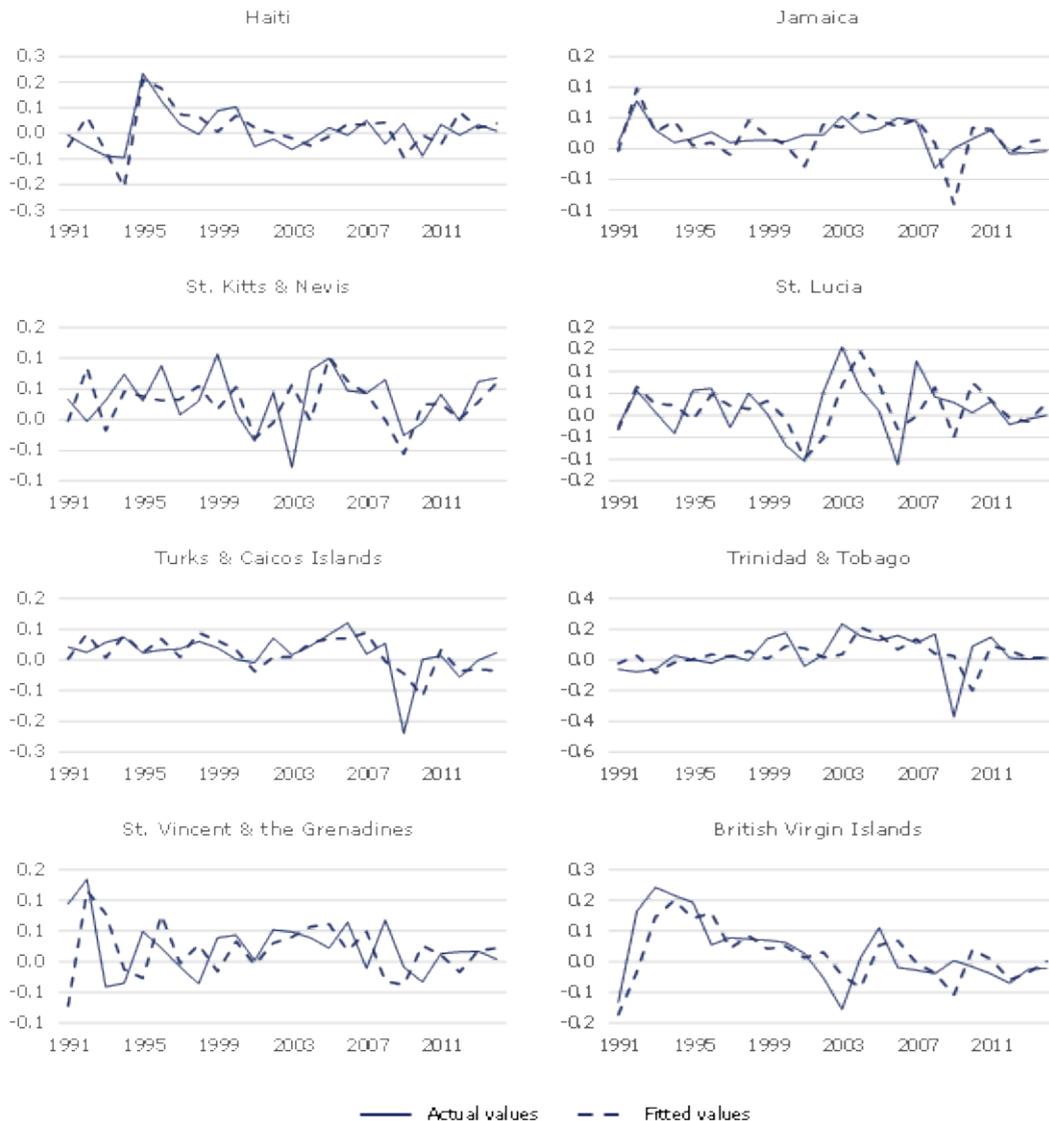
⁵⁵The evaluation was done based on the root mean squared errors (RMSE) for each individual BMC compared to the total RMSE for the dataset. Haiti, Trinidad and Tobago, British Virgin Islands, and Anguilla showed RMSE higher than the one found for all panels. Contrastingly, the other BMCs showed lower RMSE than the one for all panels. The ABR model specification was the base model for this evaluation.

Figure 20: Evaluation of model fit using GDP per capita growth



MODEL FIT (GDP PER CAPITA GROWTH) CONT'D

Model fit (GDP per capita growth) – cont'd



Note: Based on ABR model.

Source: Authors' analysis

Augmented model

The augmented model was also estimated using two additional controls often found in the growth theories: life expectancy and country risk. As is also often the case in the literature, these variables had little effect on the coefficients for visitor expenditure, and their coefficients were almost always statistically indistinguishable from zero. The result may indicate that these variables are

not good predictors of economic activity, or that they are not good proxies for the variables they are trying to measure. Furthermore, they may be highly collinear with some of the other controls, such as investment and government spending ratios, which could cause problems for the estimations. Table 16 summarises the results from the augmented model. Only the results from the FED and ABR models are reported.

Table 16: Augmented model including life expectancy and country risk

Augmented model: Visitor expenditure							
<i>Model:</i>	FED (1)	FED (2)	FED (3)	ABR (1)	ABR (2)	ABR (3)	
Visitor expenditure	0.0552*** (0.015)	0.0611** (0.025)	0.0650* (0.032)	0.0691*** (0.011)	0.0767** (0.027)	0.0973** (0.038)	
Investment ratio	0.187 (0.105)	0.138 (0.110)	0.164 (0.119)	0.0501 (0.153)	0.0167 (0.157)	0.0852 (0.131)	
Government ratio	-0.124 (0.088)	-0.051 (0.054)	-0.098 (0.085)	-0.103 (0.190)	0.0141 (0.123)	-0.108 (0.123)	
Trade ratio	0.0583 (0.044)	0.0648 (0.040)	0.0613 (0.050)	0.0443 (0.042)	0.051 (0.040)	0.0336 (0.040)	
Life expectancy	-0.183 (0.542)		0.351 (0.647)	-0.265 (1.116)		1.000 (0.581)	
Country risk		-0.0234 (0.019)	-0.0202 (0.020)		-0.0177 (0.022)	-0.0131 (0.022)	
Lagged GDP per capita	0.913*** (0.023)	0.922*** (0.016)	0.917*** (0.023)	0.821*** (0.062)	0.833*** (0.051)	0.880*** (0.041)	
Observations	256	271	229	240	258	212	

Source: Authors' analysis

Note: Standard errors reported in parenthesis, below coefficients; "***" represent level of statistical significance (* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$). All models included year dummy variables.

Also tested was the augmented model with employment as a proxy for human capital. In growth theory, human capital plays an important role in determining economic growth. Most studies account for it by either including the percentage of population with secondary schooling or the average years of schooling of a country's population. However, neither of these variables was available for the BMCs. The closest measure found was secondary education enrolment rates, but this variable was not consistently reported for the BMCs. Including it in the model would introduce data gaps and greatly reduce the sample size. Accordingly, the overall level of employment was used as a proxy for human capital. Although it may not be a good measure, employment could help partially control for different levels of human capital across BMCs and over time. The results are reported in Table 17. The results of the ABU model are not reported, as it generated a number of instruments too high relative to the sample size.⁵⁶



⁵⁶ Number of observations was lower since some countries did not have consistent data on employment.

Table 17: Augmented model including employment

Augmented model: Visitor expenditure					
<i>Model:</i>	FES	FED	FDD	ABR	ABR FOD
Visitor expenditure	0.196* (0.109)	0.0669*** (0.017)	0.0908*** (0.020)	0.0872*** (0.023)	0.0701*** (0.018)
Investment ratio	0.349** (0.150)	0.136** (0.056)	0.124 (0.089)	0.121** (0.051)	0.141** (0.056)
Government ratio	-0.445 (0.340)	-0.195** (0.066)	-0.179 (0.136)	-0.136* (0.067)	-0.201** (0.070)
Trade ratio	0.0435 (0.048)	0.0132 (0.020)	0.012 (0.018)	0.0191 (0.021)	0.0139 (0.020)
Employment	0.0589 (0.227)	0.0393 (0.041)	0.0715 (0.196)	0.245** -0.099	0.040 (0.045)
Lagged GDP per capita	7.406*** (1.563)	0.885*** (0.037)	0.570 (1.095)	0.789*** (0.063)	0.863*** (0.042)
Observations	278	267	251	251	252

Source: Authors' analysis

Note: Standard errors reported in parenthesis, below coefficients; "*" represent level of statistical significance (* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$). For the FDD model, variables should be read as first differences. All models included year dummy variables.

In general, employment does not seem to be a good proxy for human capital. Apart from its coefficient being statistically insignificant, the inclusion of employment mainly led to decreases in the year dummy variables' coefficients (and their significance). This indicates that employment is primarily capturing business cycles rather than human capital.

Instrumenting with lags

Given the dataset, the GMM models based on Arellano-Bond estimators tend to generate a high number of instruments. This can be problematic as it can cause the overfitting of the endogenous variables. Estimations show that as the number of instruments increases and approaches the number of observations, the regression results tend to look like the biased OLS⁵⁷ coefficients.

As part of the robustness check, the models were re-estimated by varying the restriction in the number of lags used for instrumenting the lagged dependent variable.

⁵⁷ David Roodman, "How to do xtabond2: An Introduction to Difference and System GMM," Stata, 2006.

The standard result uses 2-8 years lags as potential instruments. There is little guidance in the literature on how to establish the optimal restriction. The choice was based on the studies used. Table 18 shows the results from varying the lag restriction.

In growth theory, human capital plays an important role in determining economic growth.

The results show that varying the instrument restriction affects mostly the estimation of the impact of the lagged dependent variable, but the coefficient of visitor

Table 18: Standard model varying lag restriction

Standard model: Visitor expenditure			
<i>Model:</i>	ABR 2-period lags only	ABR 2-4 period lags	ABR 2-8 period lags
Lagged GDP per capita	0.514** (0.237)	0.499*** (0.141)	0.692*** (0.057)
Visitor expenditure	0.0811*** (0.016)	0.0857*** (0.022)	0.0886*** (0.022)
Investment ratio	0.0800* (0.043)	0.0870** (0.044)	0.0507 (0.040)
Government ratio	-0.108 (0.097)	-0.105 (0.090)	-0.0137 (0.058)
Trade ratio	0.00793 (0.008)	0.0114 (0.008)	0.0165 (0.011)
Observations	382	382	382

Source: Author's analysis

Note: Standard errors reported in parenthesis, below coefficients; $p < 0.05$, *** $p < 0.01$. All models included year dummy
 *** represent level of statistical significance (* $p < 0.10$, ** variables.

expenditure is relatively stable and precisely estimated. It is worth noting that even at the "2-period lags only" mode there is still a significant number of instruments generated relative to the number of panels and observations.

Visitor expenditure over time

One of the set of analyses consisted of testing whether or not the impact of tourism has changed over time. To estimate this, three different strategies were used:

- 1. Split dataset:** the dataset was divided into three periods (1989-1997, 1998-2006, and 2007-2014) and re-estimated with the standard model using the same techniques used in the full dataset;
- 2. Period dummy:** the second approach consisted of creating a dummy variable for each of the three periods mentioned above, and interacting it with the visitor expenditure variable; and
- 3. Time dummy interaction:** lastly, based on a similar principle to the strategy above, an

interaction term between the visitor expenditure and the year dummy variables was created.

Strategies 2 and 3 created the problem that more variables were used, reducing the degrees of freedom of the model – this was particularly severe for strategy 3. Strategy 1, on the other hand, did not create this problem, but many experts warn against splitting datasets. This causes biases in estimates for many reasons. The splitting of the dataset can be quite arbitrary, which may lead to meaningless interpretations of the coefficients. Furthermore, since the data came from the same population and followed similar fundamentals, a change that happened in one instance of time could have lingering effects which may cross the artificial periods created for estimation.

Irrespective of the methods used in the estimation of the temporal effects of visitor expenditure, the results show that coefficients on visitor expenditure are not statistically different. This does not necessarily mean that there are no variations over time, but it could mean that the variations are not large enough to be captured by the data available.

Long-stay tourist and cruise passenger arrivals

The last set of results estimated was the potential differences in economic impact of long-stay tourists and cruise passengers. This was accomplished by estimating the Standard model, while substituting the tourist expenditure variable by long-stay tourist arrivals and cruise passenger arrivals.

Data on expenditure for long-stay tourists and cruise passengers was not available, which led to use of arrivals as the measure of tourism activity. The literature on TLG is somewhat split between studies using tourist arrivals and expenditure.⁵⁸

There are some advantages and disadvantages of using arrivals. If expenditures per tourist are increasing, arrivals will tend to underestimate the impact of tourism. Using arrivals rather expenditure can be advantageous if it is believed that tourist expenditure is endogenous.

It is possible that arrivals – or the number of people coming to BMCs – are less correlated with unobserved or omitted determinants of GDP than the expenditure incurred.

After estimating the results for long-stay tourist and cruise passenger impacts, the conclusion is that there is some evidence long-stay tourists have a significantly higher impact on GDP than cruise passengers. In general, the results show that the impact of cruise passengers is statistically indistinguishable from zero. This is not equivalent to stating that cruise passengers have no economic impact on the BMCs economy. Instead it means that the variations in GDP per capita cannot be better explained once variations in cruise arrivals are considered. But given that GDP may vary for a number of reasons, there is much noise, or random variation, in the values from which cruise passenger arrivals cannot be disentangled. Long-stay tourist arrivals, on the other hand, seem to correlate strongly with increases in GDP per capita.

Below are presented the results of the estimation using arrivals data:

Table 19: Standard model using arrivals

Standard model: Long-stay tourist and cruise passenger arrivals						
Model:	FES	FED	FDD	ABU	ABR	ABR FOD
Long-stay tourist arrivals	0.167 (0.109)	0.0459** (0.017)	0.049 (0.033)	0.0431*** (0.011)	0.0946** (0.041)	0.0511** (0.019)
Cruise passenger arrivals	-0.0136 (0.023)	0.00256 (0.005)	0.0139 (0.016)	0.00868 (0.007)	0.0136 (0.010)	0.00182 (0.006)
Investment ratio	0.283*** (0.070)	0.0518 (0.029)	0.0131 (0.029)	0.0443 (0.031)	0.0289 (0.028)	0.0619* (0.030)
Government ratio	-0.11 (0.225)	-0.0563 (0.041)	0.00283 (0.068)	-0.0652 (0.044)	0.00119 (0.056)	-0.0588 (0.047)
Trade ratio	0.0857 (0.052)	0.00776 (0.011)	0.00688 (0.008)	0.0043 (0.010)	0.0124 (0.011)	0.0111 (0.012)
Lagged GDP per capita		0.938*** (0.027)	0.873 (0.899)	0.898*** (0.029)	0.750*** (0.065)	0.896*** (0.033)
Observations	368	356	339	339	339	341

Source: Authors' analysis

Note: Standard errors reported in parenthesis, below coefficients; $p < 0.05$, *** $p < 0.01$. All models included year dummy
 *** represent level of statistical significance (* $p < 0.10$, ** variables).

⁵⁸ The model was also tested using the limited data on long-stay tourist and cruise passenger expenditure, but the sample was greatly reduced when these variables were included in the model, reducing the confidence in the results.

APPENDIX II: THE MEDICAL TOURISM INDEX

The Medical Tourism Index (MTI) assesses the attractiveness of a country as a medical tourism destination. The following four factors constitute the index: Country Environment, Tourism Destination, Medical Tourism Costs, and Medical Facility and Services.

SURVEY

The external validity and generalisation of the MTI scale was achieved by surveying US representative samples on the various items they feel are important in attracting medical tourism. These items (58 in total) were assessed again on a 5 point Likert scale ranging from 1 (not at all important) to 5 (very important). The survey used a representative US population sample with respect to 6-demographic dimensions (gender, marital status, ethnicity, geographical location, age, and educational attainment). The survey received 801 respondents which consisted of: 46% male and 54% female, 32% single, 55% married, and 17% divorced or widows.

In order to determine to which countries to apply the MTI, the researchers analysed the current literature to come up with a preliminary list of 27 countries which have been frequently mentioned as medical tourism destinations. The researchers then conducted a global survey to assess the

importance of a country as a medical tourism destination, and whether there are any other important countries to be considered. The 421 respondents of the survey were from the Medical Tourism Association (MTA) global industry professional mailing list. These respondents rated countries on a 5 point Likert scale from 1 (unimportant) to 5 (very important) as to how important that country is as a medical tourism destination. It can be noted that the US was used as the home country to assess medical tourism destinations. Ultimately, the top 30 countries for medical tourism were the countries that got the highest ranking from all respondents (both US and non-US respondents) of the survey.

After selecting the countries, the researchers then administered another survey. This time the researchers used a US representative sample of 3,000 new respondents. The sample consisted of: 48% male and 52% female, 33% single, 55% married, and 36% from southern US. Each respondent was able to select a country and then rate it against 34 items. When asked why a respondent chose a specific country, the possible reasons included: they are a citizen of that country; have family or friends from that country; have visited or intended to visit that country; a combination of those reasons; or none of the above. The respondents rated the following 34 items that are important in attracting medical tourism:



Factor 1: Country Environment (7)

- Has low corruption
- Is culturally similar to mine
- Has a similar language to mine
- Has a stable economy
- Is safe to travel to
- Has overall a positive country image
- Has a stable exchange rate

Factor 2: Tourism Destination (5)

- Is an attractive tourist destination
- Is a popular tourist destination
- Has many cultural or natural attractions or sites
- Is an exotic tourist destination
- Has great weather

Factor 3: Medical Tourism Costs (5)

- Is low cost to travel to
- Has low accommodation costs
- Has low treatment costs
- Has affordable airfares to travel to
- Has low healthcare costs

Factor 4: Facility and Services (17)

- Has quality treatments and medical materials
- Has hospital or medical facilities with high standards
- Has well experienced doctors
- Has well-trained doctors
- Has reputable doctors

- Has internationally certified staff and doctors
- Has hospital or medical facilities with good healthcare indicators
- Has doctors I would recommend to my family or friends
- Has reputable hospitals or medical facilities
- Has friendly staff and doctors
- Has overall a positive medical tourism image
- Is known for state-of-the-art medical equipment
- Has internationally accredited hospitals or medical facilities
- Has internationally educated doctors
- Has hospitals or medical facilities I would recommend
- Has high quality in healthcare
- Has internationally certified doctors

After all the respondents answered the survey, the researchers calculated the MTI values for all the countries considered. In order to do so they first converted the Likert Scale scores into standardised scores between 0-100 by using the "Percentage of Scale Maximum" (%SM) method. Next they calculated weights for the 4 factors considered. Given that the focus is on the demand side for medical tourism, the researchers used the "participatory approach" to weigh the factors which were: 34% for Country and Environment, 16% for Tourism Destination, 16% for Medical Tourism Costs, and 34% for Facility and Services. Lastly, the researchers applied linear aggregation to calculate a composite number for the MTI of various countries. It can be noted that the researchers also calculated the scores of each factor.



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