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The Tourism Satellite Account: Possibilities and Potential Benefits for the Eastern Caribbean Islands Tourism Development

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ABSTRACT

The Tourism Satellite Account (TSA) is a method for estimation of the role of tourism in the economy based on the collection and processing of large numbers of statistic data. TSA can be created on a national or regional levels and reflect aggregates which connect with the planning and development of tourism. This approach can improve the overall quality and consistency of the system of national accounts of a country. The Caribbean region, quite like other areas of the world, have had some challenges in creating the TSA. The main aim of this paper is to examine the concept of the Tourism Satellite Account and its potential benefits for the Eastern Caribbean Islands.

Keywords: Tourism, Tourism Satellite Account, Benefits, Caribbean Islands.

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Introduction

While there is a broad agreement on the importance of tourism for the development of the Caribbean region as seen in map 1., statistics to measure the contribution of tourism to the economy and livelihood of the citizens are insufficient and inaccurate. As it stands now the countries in the region have disproportionately relied upon visitor arrival numbers and to a lesser extent visitor expenditure estimates in their desire to assess the scale and importance of tourism. A number of regional institutions and several governments in the region have acknowledged the necessity for measurement of tourism using a more effective and more precise instrument. The Tourism Satellite Account (TSA) is globally utilized as the most reliable method for measuring the economic contribution of the tourism sector in any given country. The region needs a consolidated approach to TSA implementation from which all countries can benefit regardless of stage of development in their tourism and other statistical systems. It is extremely important to have the most complete data about various aggregates and developing process for successful work in any sphere, tourism is no exception. Tourism attracts investors who need databases on tourism for making thoughtful management decisions to minimize risks. Government also needs a feedback to provide efficient services in tourism management.

Experts from Commission of the European Communities, Organization for Economic Co-operation and Development, World Tourism Organization and United Nations Statistics Development created the Tourism Satellite Account (TSA) in an effort to have an effective tool for creating international statistics of tourism that can be used for a tourism process management. According to research from the World Travel & Tourism Council (WTTC, 2012), the global Travel & Tourism industry is now double the size of automotive manufacturing and roughly one-third larger than the chemicals manufacturing industry, direct contribution to the world Gross Domestic Product (GDP) was US\$2 trillion (2.8%). This is more than automotive manufacturing in every region of the world, three times more in the Americas and twice as much in Europe. Travel & Tourism generates roughly the same GDP as the global education and communications sectors, and about half that of the global banking and financial services industry. The sector's total contribution to world GDP; taking direct, indirect and induced impacts into account; of US\$6.3trillion (9.1%) in 2011 compares with 8% contribution of automotive manufacturing and mining.

In terms of employment, the importance of the sector is even more pronounced. After education, Travel & Tourism is the top job creator with an average of 50 jobs generated by each US\$1 million in spending; this is twice as many jobs as created by financial services, communications and auto manufacturing.

In 2011, 98 million people were directly employed by Travel & Tourism in the world. This is:

- 6 times more than automotive manufacturing
- 5 times more than the global chemicals industry
- 4 times more than the global mining industry

- 2 times more than the global communications industry
- A third more than the global financial services industry

Taking the indirect and induced employment into account, Travel & Tourism sustained 255 million jobs in 2011, 1 in 12 of all jobs in the world. This exceeds the jobs impact of automotive manufacturing, chemicals manufacturing and mining and is slightly less than education, communications and financial services. Further, travel & tourism directly sustains more jobs than the automotive and chemicals manufacturing industries combined across every region of the world. In Europe, employment by this sector reached 10 million in 2011, exceeding automotive manufacturing by a factor of three; and in Asia, there are 7 times as many travel and tourism jobs as auto manufacturing jobs and 5 times as many chemicals manufacturing jobs. In every region of the world, Travel & Tourism directly sustains more jobs than the financial services, communications, and mining industries. In 18 out of the 20 economies analyzed, a new dollar in Travel & Tourism generates 20% more for the wider economy than the average of all sectors. Travel & Tourism also outperforms the majority of the key sectors that were analyzed in terms of generating GDP across the entire economy.

Despite of the remarkable growth of the travel and tourism sector during the last century, statistical information on this activity has traditionally been limited to a few spheres; physical flows, number of tourists, number of room nights, etc., demand variables; the travel item of the balance of payments, consumption of tourism related products, etc. and supply data; output of tourism related industries, number of accommodation establishments, etc.. Even though this information is useful in itself, it fails to provide an overall view or render possible an economic analysis of the tourism sector either by means of balancing supply and demand, or by estimating the impact of tourism in the main macro-aggregates of the corresponding economy. Tourism Satellite Accounts tries to overcome these analytical limitations by compiling fully fledged supply and demand tables with a specific focus on tourism activities. For these reasons, the international methodology on TSA, the "*Tourism Satellite Account: Recommended Methodological Framework*" (TSA-RMF 2000), drawn up jointly by the World Tourism Organization (WTO), United Nations (UN), Organization for Economic Co-operation and Development (OECD) and Eurostat, in general terms follows all the concepts, definitions, accounting principles and valuation criteria established in the *System of National Accounts 1993* (SNA 93) and other related international manuals.



Map 1. showing the entire Caribbean Region

1. Caribbean Tourism

The Tourism sector is a major driver of economic growth for most Caribbean economies. The World Tourism Organization Yearbook of Tourism Statistics 2010 lists the Caribbean as the most tourism dependent region in the world with 7 of the 10 most tourism dependent countries located in this region. This industry accounts significantly to the GDP of most Caribbean countries (UNWTO). According to the World Travel & Tourism Council Caribbean Tourism Economic report 2012, the direct contribution of Travel & Tourism to GDP was US\$15.1bn (4.5% of total GDP) in 2011, and is forecast to rise by 2.6% in 2012, and to rise by 3.1% per annum from 2012-2022, to US\$20.9bn in 2022 (in constant 2011 prices). The total contribution of Travel & Tourism to GDP was US\$47.1billion (13.9% of GDP) in 2011, and is forecast to rise by 2.0% in 2012, and to rise by 3.1% per annum to US\$65.5billion in 2022. In 2011 Travel & Tourism directly supported 614,000 jobs about 3.8% of total employment. This is expected to rise by 1.7% in 2012 and rise by 1.8% per annum to 747,000 jobs or about 3.8% of total employment in 2022. Supported by the tourism industry, was 12.1% of total employment or 1,976,000 jobs. This is expected to rise by 0.9% in 2012 to 1,994,000 jobs and rise by 1.8% per annum to 2,378,000 jobs in 2022 or 12.2% of total employment. Visitor exports generated US\$24.7billion i.e. 15.4% of total exports in 2011. This is forecast to grow by 2.3% in 2012, and grow by 2.8% per annum, from

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2012-2022, to US\$33.5 billion in 2022 or 13.6% of total. Travel & Tourism investment in 2011 was US\$5.6 billion, or 11.8% of total investment. It should fall by 0.3% in 2012, and rise by 3.6% per annum over the next ten years to US\$7.9 billion in 2022 or 12.3% of total.

The fortunes of the tourism dependent economies are sensitive to external factors such as global economic crisis, spending power of consumers, global climatic events and policy measures—such as the aviation tax imposed by the UK government which increased the cost of travel to the Caribbean. These factors highlight the fragility of the region to the developments in the major tourism source markets. The Caribbean recorded a rise in tourist arrivals in 2011 when compared to 2010 according to The Caribbean Tourism Organization (CTO). 23.8 million stay-over visitors were in the region in 2011, an increase of 3.3 percent over 2010. Cruise passenger arrivals, however, were flat, rising marginally by 0.03 percent from 12.3 million to 12.7 million over the same period. Recent Caribbean hotel occupancy statistics show incremental increases in line with improved arrival statistics at several regional destinations. Occupancy rates in the Caribbean through May climbed to 69.5 percent in the first five months of 2011 compared with a 66.1 percent rate for the same five months in 2010, according to statistics from Smith Travel Research (STR). At the same time, average daily rate in the Caribbean during the first five months of the year grew only slightly, to \$181.66 in the first five months of 2011 compared with \$180.74 for the same period in 2010, although revenue per available room rose 5.8 percent for the period, to \$126.44. Several Caribbean destinations reported tourist arrival increases in 2011 versus 2010, according to recent Caribbean Tourism Organization (CTO) statistics. The growth was led by Curacao, with an 11.6 percent increase in first-quarter 2011 arrivals versus 2010, Barbados was up by 9.9 percent, the Cayman Islands was up by 8.2 percent, Antigua & Barbuda was up by 7 percent, Bermuda was up by 6.8 percent and Jamaica was up by 6.3 percent. According to STR, there were 3,894 new hotel rooms under construction during 2011 among Caribbean destinations and an additional 1,001 rooms were in the planning stages.

There are several reasons that make tourism an especially suitable economic development sector for Eastern Caribbean States (ECS) as seen in map 2.,:

1. Tourism is consumed at the point of production; the tourist has to go to the destination and spend his/her money there, opening an opportunity for local businesses of all sorts, and allowing local communities to benefit through the informal economy, by selling goods and services directly to visitors.
2. Most of the ECS have a comparative advantage in tourism over developed countries. They have assets of enormous value to the tourism industry; culture, art, music, natural landscapes, wildlife and climate, including World Heritage Sites. Visits by tourists to such sites can generate employment and income for communities as well as helping in the conservation of cultural and natural assets.
3. Tourism is a more diverse industry than many others. It has the potential to support other economic activities, both through providing flexible, part time jobs that can complement other livelihood options, and through creating income throughout a complex supply chain of goods and services.

4. Tourism is labor intensive, which is particularly important in tackling poverty. It also provides a wide range of different employment opportunities especially for women and young people; from the highly skilled to the unskilled and generally it requires relatively little training.
5. Tourism creates opportunities for many small and micro entrepreneurs, either in the formal or informal economy; it is an industry in which start-up costs and barriers to entry are generally low or can easily be lowered.
6. Tourism provides not only material benefits for the poor but also cultural pride. It creates greater awareness of the natural environment and its economic value, a sense of ownership and reduced vulnerability through diversification of income sources.
7. The infrastructure required by tourism, such as transport and communications, water supply and sanitation, public security, and health services, can also benefit poor communities.



Map 2. showing the Islands of the Eastern Caribbean

2. Literature Review

The UNWTO has published a voluminous literature on the development and implementation of the TSA concept (Department of Statistics & Economic Measurement of Tourism, 2001a, 2001b, 2002, 2003, 2004). In addition, a number of researchers have reported on the progress of the TSA conceptual development and implementation through presentations at tourism conferences and articles in scholarly journals. The earliest appears to have been Meis, Joyal, Lapierre, and Joice (1996) in their report on the release of the first Tourism Satellite Account results for Canada for 1994. Subsequent articles reported on progress in developing the TSA conceptual framework at UNWTO and other international organizations (Edmunds, 1999; Frechtling, 1999; Heerschap, 1999; Holtz-Eakin, 2001; Libreros, Massieu, & Meis, 2006; Smith, 2000). Other researchers address the uses of the TSA in tourism analysis (Blake, Durbarry, Sinclair, & Sugiyarto, 2001; Dwyer, Deery, Jago, Spurr, & Fredline, 2007; Meis & Wilton, 1998), individual countries' progress in implementing the TSA (Ahlert, 2007; Bryan, Jones, & Munday, 2006; Fleetwood, 2004; Heerschap, de Boer, Hoekstra, van Loon, & Tromp, 2005; Martín, 1999; Meis, 1999; Meis, Lapierre, & Joice, 2004; Planting, 1998; Rivera, 1999; Sharma & Christie, 2006), and evaluations of TSA's role in economic impact analysis (Dwyer, Forsyth, Spurr, & Van Ho, 2008; Smeral, 2006; Smeral, 2005). Additional papers suggest methods for compiling the TSA at subnational levels (Department of Statistics & Economic Measurement of Tourism, 2005; Jie & Ming Yao, 2005; Jones, Munday, & Roberts, 2003; Rutter & Berwert, 1999).

2.1 What is a Tourism Satellite Account?

There is an acute shortage of reliable information on the role of tourism in the Caribbean and other national economies worldwide. The question is how can we measure the economic impacts of tourism to a great degree of certainty? The benefits are always proclaimed in general terms: tourism is labor intensive and is therefore a major generator of employment; international tourism is a key export generating foreign exchange earnings; the economic multiplier effects of tourism are significant; and so on. Occasionally input-output analyses have been conducted, which have provided some details. However, in March 2000 the United Nations Statistical Commission approved a new tool to measure tourism's impact on national economies, the Tourism Satellite Account (TSA) standards. A Satellite Account is a term developed by the United Nations to measure the size of economic sectors that are not defined as industries in national accounts. Tourism, for example covers a number of industries such as transportation, accommodation, food and beverage services, recreation and entertainment and travel agencies, and relies upon suppliers of a very wide range of goods and services from other sectors to function.

Tourism measurements, in order to be credible and comparable with other industries in a country's economy, must follow concepts and definitions consistent with internationally accepted macroeconomic guidelines such as the System of National Accounts (SNA93). The Tourism Satellite Account (TSA) is a method of measuring the direct economic contributions of tourism consumption to a national economy.

Its unique approach derives from employing the principles and structure of the internationally-adopted System of National Accounts to measuring the direct economic impact of tourism. It comprises a unique set of inter-related tables that show the size and distribution of the different forms of tourism consumption in a country and contributions to gross domestic product (GDP), national income, employment and other macroeconomic measures of a national economy. While the concept of a satellite account for tourism is nearly three decades old, it was only in early 2008 that two documents exhaustively elaborating the concepts and data requirements for a TSA were approved by principal international economic and statistical bodies.

The value of the TSA may be illustrated by considering the variety of information that can be obtained and be very useful to small Island State like those of the Eastern Caribbean. This will include:

1. Tourism's over-all contribution to the economy of a given country and its ranking relative to other sectors and in comparison with other countries. Utilizing this information, policy makers of both public and private enterprise will enhance their capacity to make decisions about tourism with a level of confidence previously lacking.
2. Identifying industries that benefit from tourism, and the extent to which they benefit, particularly industries that are not traditionally associated with tourism. For example, certain enterprises will be able to determine how tourism influences their business performance and subsequently use this information to enhance their business strategies and thus increase their competitive edge.
3. Quantifying for governments the amount of tax generated as a result of tourism activity. This is particularly important for demonstrating to municipal, provincial, regional and national authorities the role of tourism and the advantages of encouraging further development and investment in tourism.
4. Providing data relative to visitor demand and the extent to which it is matched by domestic supply.
5. Improving knowledge concerning jobs generated by tourism and their characteristics, thus allowing more targeted human resource training programs (WTO 2002). TSAs are complicated and many developing countries lack the relatively sophisticated statistical collection systems needed to underwrite the TSA exercise. Thus, in terms of an aid donor contribution to a developing country, assistance in this area would make a valuable contribution to national development.

March 2008 is a major landmark in the history of international tourism statistics: the adoption by the United Nations of a set of recommendations on tourism statistics and the updated framework of the Tourism Satellite Account in the 2008 Tourism Satellite Account: Recommended Methodological Framework (herein TSA:RMF, 2008) and 2008 International Recommendations for Tourism Statistics (herein IRTS, 2008) (TSA:RMF,2008, pp. 5–9). One way to distinguish the essential characteristics of a "Tourism Satellite Account" is to analyze this term. First, the TSA deals with a specific

set of human activities called “tourism,” defined by UNWTO as “specific types of trips: those that take a traveler outside his/her usual environment for less than a year and for a main purpose other than to be employed by a resident entity in the place visited.” (TSA:RMF, 2008, p.12) “Usual environment” is defined as “the geographical area within which an individual conducts his/her regular life routines” (TSA:RMF, 2008, p. 13). So the TSA deals strictly with the activities of “visitors” (defined as a traveler taking tourism-type trips (IRTS, 2008, p. 10)) in a country, including both residents of the country and non-residents, who leave their usual environment for any purpose but to be employed by a company or other organization in the places visited. The TSA should scrupulously avoid including any effects of expenditures or other consumption activities of local residents remaining in their usual environment. Second, the TSA is a “satellite” to a larger body, in this case the system of national accounts presented in SNA (1993). It is subordinate to and dependent upon the concepts, definitions, structure and compilation rules of SNA (1993). As a satellite, it must define its major outputs (“macroeconomic aggregates”) in reference to those that are defined and measured in SNA (1993). As discussed below, these outputs are specified in TSA:RMF (2008). Finally, at its core, the TSA is an “account”, that is, a table or set of tables “which records, for a given aspect of economic life, the uses and resources or the changes in assets and the changes in liabilities and/or stock of assets and liabilities existing at a certain time” (SNA, 1993,p. 26). This recording is based on observations or counts of economic variables. Other methods of estimating economic consequences of tourism activity are “models”: “a simplified description of a system, process, etc., put forward as a basis for theoretical or empirical understanding” (Trumble & Stevenson, 2002, p. 1805).

While the TSA necessarily requires a modeled component estimation of tourism shares of the productive activities serving visitors, it is essentially a set of accounts presented in ten interrelated tables as shown in Table 1. These tables are consistent with the general supply and use tables established by countries at the national level to describe the general economic balance of goods and services and the production accounts of the producers following the System of National Accounts 1993. (IRTS, 2008, p. 77)

These tables and their inter-relationships are elaborated below. It is worth noting that the TSA contrasts with the other popular methods of estimating the economic contribution or impact of tourism, such as integrated tourism economic benefit models (Frechtling,1994), regional travel impact models (Dean Runyan Associates, 2008; Travel Industry Association, 2007), computable general equilibrium models (Dwyer et al., 2008), and input/output models (Fletcher, 1989). As models, these approaches simulate the impact of visitor spending on business receipts, labor earnings and other income and employment and tax revenue. The TSA, on the other hand, uses statistical observation organized and reconciled in the form of accounts to document the contribution of visitors to a country’s economy. TSAs necessarily begin with a visitor expenditure measurement system, which is sometimes a modeled component (Frechtling, 2006). In conjunction with accounting data on industry output, these estimates produce the proportion of the output attributable to visitors. Then these proportions are applied to accounts data arrayed in six tables to derive the TSA macroeconomic aggregates.

2.2 The Purpose of the TSA

The purpose of the TSA is to analyze in detail all the aspects of the demand for goods and services associated with the activity of visitors; to observe the operational interface with the supply of such goods and services within the economy; and describe how this supply interacts with other economic activities. (TSA: RMF, 2008, p. iii) and an “economic activity” may be production, consumption or accumulation of assets. (SNA, 1993, p. 3) Moreover, the TSA includes a “structural link to National Accounts aggregates and their general estimation approach from which to derive credibility and legitimacy for tourism statistics data.” (IRTS, 2008, p. 77). These macroeconomic aggregates related to the national economic accounts are developed in a TSA to describe the size and economic contribution of tourism, specifically: Internal Tourism Expenditure: the amount paid for the acquisition of goods and services for and during tourism trips, where “internal” means within the economy of reference, normally a country (IRTS, 2008, p. 14, 35). Internal Tourism Consumption, the most inclusive measure of the acquisitions by visitors in an economy, equal to Internal Tourism Expenditure plus imputed consumption of vacation home accommodations, temporary exchange of dwellings for vacation purposes, net costs of hosts receiving visitors in their homes, subsidized transportation and lodging provided by employers, and government financing of certain non-market services for visitors such as education and recreation services (TSA:RMF, 2008, pp. 16–17). Gross Value Added of the Tourism Industries: value of a productive activity’s (i.e., industry’s) output minus the value of inputs purchased from other productive activities for the collection of industries whose main activities are tourism characteristic activities (also called “tourism industries”) (TSA: RMF, 2008, p. 30, 34). Tourism Direct Gross Value Added in contrast to Gross Value Added of the Tourism Industries: is the gross value added generated by all industries only in response to Tourism Internal Consumption (TSA: RMF, 2008, p. 56). Tourism Gross Domestic Product: tourism activities’ contribution to a country’s GDP, or Tourism Direct Gross Value Added plus net taxes on products and imports at purchasers’ prices (TSA: RMF, 2008, p.57). These five aggregates are defined and measured to be comparable to the macroeconomic aggregates characterizing the overall economy (TSA: RMF, 2008, p. 53).

3. Methodological Approach

Based on previous research and the theoretical developments noted above, personal experience working with Caribbean governments, extensive literature review using published World Tourism Organization (UNWTO) reports and documentation on the subject, emails, desk and Internet research, the case for the Caribbean TSA is presented, followed by possible benefits. Areas covered included TSA methodological frameworks and TSA implementation process. The CTO TSA Workshop provided an excellent forum for the sharing of country experiences, challenges and implementation options as well as helped to clarify a number of technical issues related to the TSA and assisted in the general understanding of TSA concepts, definitions and methodology,

especially as they relate to the Caribbean. The workshop also facilitated the capture of additional qualitative data and insights to supplement information collected from the literature review and readiness assessment and to chart a more realistic way forward for TSA development in the Caribbean region. The study frame consisted of the thirty five countries in the Caribbean region.

4. The 10 TSA Tables

This methodological framework, referred to as the *UNWTO TSA Recommended Methodological Framework* (RMF), involves the compilation of ten tables showing the inter-relationships among the economic variables in the TSA system. The tables were designed to show the interaction of the TSA variables and their link with those of the national accounts. The ten TSA tables are organized in such a way as to present firstly the data on tourism consumption expenditure (in cash) associated with the different forms of tourism (Tables 1 to 3). Next, the non-cash transactions occurring within the domestic economy are added to generate internal tourism-consumption aggregates (Table 4). These in turn can be compared to supply in the domestic economy so as to provide the framework for the development of analyses based on an input-output structure (Tables 5 and 6). Tables 7-9 present employment and other variables such as gross fixed capital formation or tourism collective consumption. Finally, Table 10 presents some important non-monetary indicators associated with tourism. A summary of these tables is presented in Table 1 below. A summary of the stages used to implement TSA is shown in Table 2.

Table 1. The 10 TSA Tables (Source:UNWTO)

Table 1	Inbound Tourism Expenditure (element of aggregate demand)
Table 2	Domestic Tourism Expenditure (part of total consumption)
Table 3	Outbound Tourism Expenditure
Table 4	Internal Tourism Final Consumption
Table 5	Production Accounts of Tourism & Other Industries
Table 6	Domestic Supply & Internal Consumption by Product
Table 7	Employment in Tourism Industries
Table 8	Tourism Gross Fixed Capital Formation
Table 9	Tourism Collective Consumption by Function & Levels of Government
Table 10	Non-Monetary Indicators of Tourism

Table 2: Stages in TSA Development

Stage 1	Establish inter-agency platform
Stage 2	Obtain a thorough understanding of the country's tourism industry
Stage 3	Ensure that there is a good understanding of the TSA RMF (10 TSA Tables)
Stage 4	Conduct a feasibility study (includes diagnosis of STS)
Stage 5	Develop a robust STS
Stage 6	Develop country's national accounts/SUT
Stage 7	Undertake a pilot project to develop the first TSA

(Source:UNWTO)

5. Benefits of the TSA approach

The following benefits may be considered for the Eastern Caribbean States with the full implementation of the Tourism Satellite Account:

- The Tourism Satellite Account is proven to be a useful tool in measuring the demand and supply side of tourism in different countries. It has to be adjusted to the statistical needs of the policy makers, entrepreneurs and citizens and other stakeholder's on the islands.
- TSA provide stakeholders with the improvements of data quality and a widening of the scope of reporting with reliable data to assist them in formulating public policies and business strategies for tourism.
- The TSA is heavily dependent on the data possibilities offered, the more extensive the data the more possibilities. Macro-economic aggregates describing the size and economic importance of tourism.
- The initial phase of implementing the TSA namely the orientation can be very challenging, but gradually the ECS is expecting to apply all the tables of the tourism account.
- Unlike output defined industries, such as agriculture or manufacturing, the primarily demand defined tourism industry is not measured as a sector in its own right in National Accounts. Most of the statistical information provided on the specifics and developments of tourism is primarily based on arrivals and overnight stay statistics as well as balance of payments information. Tourism is one of the most important generators of jobs, wages, economic growth and tax revenue. Furthermore it has influence in every industry of the economy. The tourism industry cannot simply be measured in standard economic accounting systems. Industry is a supply-side concept (the focus is on what is being produced) and 'tourism' is a demand-side concept (the focus is on who is buying products).

- By using a TSA it enables policymakers to benchmark tourism with other economic sectors based on comparable concepts like employment, GDP and wages. The TSA is also consistent with the System of National Accounts (SNA93) approach for measuring an economic sector.
- It is called Satellite Account because it resides outside of the core national accounts. It has a distinct value because the TSA is credible, comprehensive and comparable.

In the Caribbean a host of initiatives designed to facilitate the implementation of TSAs are ongoing with support from institutions such as the Caribbean Development Bank (CDB), the Caribbean Community (CARICOM) Secretariat, and the Caribbean Technical Assistance Centre

(CARTAC), The Eastern Caribbean Central Bank and the Caribbean Tourism Organization. The CTO has been urged and mandated by its Board of Directors and Ministers of Tourism to pursue the coordination of TSA implementation with a view to promoting the introduction of a better, more reliable and accurate mechanism for capturing the true contribution of tourism to economic growth and development. Despite the utility of the TSA tool, its development in the Caribbean has been irregular. While each individual country lacks financial and human resources to identify and carry out all the steps required for the implementation of the TSA by itself, a coordinated system across the region for this purpose has not been established. This is due to the lack of standardization in technical and institutional aspects as well as the absence of a mechanism for interaction between countries to share best practices, knowledge and lessons learned. This situation results in the low credibility of tourism statistics in the region. It also makes international comparison difficult. Additionally, this deficiency of an appropriate statistical framework deters valid comparisons with other sectors, countries and regions.

In response to this inadequacy, in 2006 the Caribbean Tourism Organization (CTO) was mandated by the heads of Caribbean governments to work with the CARICOM Secretariat in coordinating the effort to develop a system of Tourism Satellite Accounts (TSA). Subsequently, the CTO formed a strategic alliance with the Inter-American Development Bank to implement the Tourism Satellite Account System in the region, the project received approval in December 2010. To date only the bigger Islands of the Caribbean have attempted the TSA process, The Bahamas, Dominican Republic, Jamaica and Trinidad & Tobago. In general they have had limited success and not been sustainable. It is important to note that none of these Islands are in the Eastern Caribbean. In the Eastern Caribbean States; Dominica, Grenada and St.Lucia are attempting to implement TSAs. According to tourism officials, Antigua & Barbuda, St.Kitts & Nevis, St.Vincent & the Grenadines are struggling with current visitors' expenditure data and visitor arrivals while also grappling with conversion to SNA 93. Clear, evidence-based analysis of the impact of tourism as an economic driver is highly desirable. This is important in order to inform public policy decision-making, so that governments can invest proportionately in developing tourism within the context of national economic development policies. A desired result throughout the OECS is stronger evidence of the economic impact of tourism, so that a greater

emphasis can be given to tourism in national budget preparation exercises and debates and thereby improving the prospect of adequate and sustainable funding for tourism development and marketing.

The significance of tourism to the OECS and its Member States cannot currently be demonstrated with a great degree of statistical accuracy. Unlike output-defined industries, such as agriculture or manufacturing, tourism, as a primarily demand-defined industry, is not measured as a sector in its own right in National Accounts. The need for more precise measurement of tourism through Tourism Satellite Accounts is well recognized in the OECS, in order to provide policymakers with more reliable information on which to gauge the economic value-added of the tourism sector. A TSA can provide accurate data on the contribution of tourism to the economy, on the level of value added including the impact of tourism's multiplier effect on other components of the economy and on the employment that comes from the sector, and thus can support the advocacy for government recognition of tourism as a key strategic sector for the OECS. Fletcher (1989) warns that policy makers should be extremely careful in interpreting multiplier values. For example, it is often assumed that an increase in final demand will mean an increase in the demand of, particularly, labor. However, this is only the case if these industries are not operating at full capacity. Another condition is that there should be just sufficient labor around to employ as additional staff. Furthermore, other options, such as meeting increased demand by either better utilization of existing personnel or by increasing over-time can also play a part. In such cases, the multipliers will overestimate the effect of final demand increase. In essence, the TSA captures distinct sections from the existing national accounts and restructures them separately to measure the total economic and employment impact of consumer expenditures, capital investment, government revenues and expenditure, foreign trade and business expenditure from tourism. The measurement of the total economic and employment impact incorporates the multiplier effect of successive rounds of tourism expenditure through the economy.

Conclusion

Tourism is one of the most important sectors in the economies of the Caribbean region. Currently, tourism is the most important sector and major source of foreign exchange earnings in all of the Eastern Caribbean States. Developing and maintaining a successful tourism industry has clearly become a major element in the economic and social development of many countries in the region. Whether we talk about Antigua & Barbuda, St.Kitts & Nevis, Dominica, St.Lucia, Grenada or St.Vincent & the Grenadines, tourism is a major employer for many citizens and if managed sensitively can also present opportunities to nurture and showcase the cultural distinctiveness of each country in this vast and expansive region. The TSA is a relatively new statistical instrument designed to address these and related issues and to allow the measurement of the economic importance of tourism according to international standards of concepts, classifications and definitions. A properly constructed TSA will allow valid comparisons of tourism's economic contribution with those of other industries and across territories. Economic performance measures derived for tourism

will also be compatible with other internationally-recognized macroeconomic and sectoral economic statistics and the tourism industry better included in the mainstream of economic analysis.

The TSA provides the basic information required for the development of models of the economic impact of tourism affording tourism researchers the data to explore the performance of individual tourism sectors or of the entire tourism industry relative to that of other industries, domestically and internationally. The environment for the economic analysis of tourism has improved remarkably in the developed countries in the recent past. Improvements can be explained, in part, by better underlying government data on the composition of tourism expenditure with the development of a national level TSA. The approach then works to estimate the supply of those goods and services, through domestic production and imports (Jones *et al.*, 2003). Given the small size of many Caribbean Islands, it is clear at this point that the various TSA exercises require some regional coordination and collaboration if the already difficult task of TSA implementation is to be executed effectively and sustainably. TSA can surely benefit the islands of the Eastern Caribbean as tourism is becoming an even more important economic player for the region.

References

Ahlert, G. (2007). 'Methodological aspects of preparing the German TSA, empirical findings and initial reactions.' *Tourism Economics*, 13, 275–287.

Blake, A., Durbarry, R., Sinclair, M. T., and Sugiyarto, G. (2001). "Modelling tourism and travel using tourism satellite accounts and tourism policy and forecasting models." Discussion paper 2001/4, Christel DeHaan Tourism and Travel Research Institute, Nottingham University Business School. <http://www.nottingham.ac.uk/ttri/discussion_papers.htm#impact> downloaded 4-23-08.

Bryan, J., Jones, C., and Munday, M. (2006). 'The contribution of tourism to the UK economy: Satellite account perspectives.' *Service Industries Journal*, 26, 493–511.

Dean Runyan Associates (2008). California travel impacts by county, 1992–2006. Sacramento, CA: California Travel & Tourism Commission.

Department of Statistics and Economic Measurement of Tourism (2001a). The Tourism Satellite Account as an ongoing process: Past, present and future developments. Madrid: World Tourism Organization.

Department of Statistics and Economic Measurement of Tourism (2001b). Enzo Paci papers on measuring the economic significance of tourism (Vol. 1). Madrid: World Tourism Organization.

Department of Statistics and Economic Measurement of Tourism (2002). Enzo Paci papers on measuring the economic significance of tourism (Vol. 2). Madrid: World Tourism Organization.

Department of Statistics and Economic Measurement of Tourism (2003). Enzo Paci papers on measuring the economic significance of tourism (Vol. 3). Madrid: World Tourism Organization.

Department of Statistics and Economic Measurement of Tourism (2004). Enzo Paci papers on measuring the economic significance of tourism (Vol. 4). Madrid: World Tourism Organization.

Department of Statistics and Economic Measurement of Tourism (2005). Adapting the National Tourism Satellite Account (TSA) project to sub-national levels. Madrid: World Tourism Organization.

Dwyer, L., Deery, M., Jago, L., Spurr, R., and Fredline, L. (2007). 'Adapting the Tourism Satellite Account conceptual framework to measure the economic importance of the meetings industry.' *Tourism Analysis*, 12, 247–255.

AlmaTourism N. 12, 2015: Baker McArthur D., The Tourism Satellite Account: Possibilities and Potential Benefits for the Eastern Caribbean Islands Tourism Development

Dwyer, L., Forsyth, P., Spurr, R., and Van Ho, T. (2008). Tourism's economic contribution versus economic impact assessment: Differing roles for satellite accounts and economic modelling. In Woodside A. and Martin D. (Eds.), *Tourism management* (pp. 459–469). Wallingford, UK: CAB International.

Edmunds, M. (1999). 'Tourism satellite accounts.' *Travel & Tourism Analyst*, 3, 83–110.

Fleetwood, S. (2004). 'Tourism satellite accounts: The Australian experience.' *Estudios Turísticos*, 161(162), 43–53.

Fletcher, J. E. (1989). 'Input-output analysis and tourism impact studies.' *Annals of Tourism Research*, 16, 514–529.

Frechtling, D. (1994). *Assessing the economic impacts of travel and tourism—Measuring economic benefits*. In Ritchie J. R. B. and Goeldner C. R. (Eds.), *Travel, tourism, and hospitality research: A handbook for managers and researchers* (2nd ed., pp. 367–391). New York: John Wiley & Sons.

Frechtling, D. (1999). The Tourism Satellite Account: Foundations, progress and issues. *Tourism Management*, 20, 163–170.

Frechtling, D. (2006). An assessment of visitor expenditure methods and models. *Journal of Travel Research*, 45, 26–35.

Gunn, Clare and Var, Turgut (2002) *Tourism Planning: Basics, Concepts, Cases. 4th ed.* New York and London: Routledge.

Heerschap, N. (1999). 'The employment module for the tourism satellite account of the OECD.' *Tourism Economics*, 5, 383–413.

Heerschap, N., de Boer, B., Hoekstra, R., van Loon, A., and Tromp, L. (2005). A Tourism Satellite Account for the Netherlands: Approach and results. *Tourism*

Holtz-Eakin, E. (2001). 'Capital in a Tourism Satellite Account.' *Tourism Economics*, 7, 215–232.

Jie, L., and MingYao, L. (2005). 'The Jiangsu provincial Tourism Satellite Account and TVA accounting in China'. *China Tourism Research*, 1, 68–77.

Jones, C., Munday, M., and Roberts, A. (2003). *Regional tourism satellite accounts: A useful policy tool?* *Urban Studies*, 40, 2777–2794. Kendrick, J. W. (Ed.). (1996). *The new system of national accounts*. Boston: Kluwer Academic Publishers.

Marti'n, J. A. (1999). 'The elaboration of the regional satellite system for tourism.' *Estudios Turísticos*, 141, 37–50.

Meis, S. (1999). 'The Canadian experience in developing and using the tourism satellite account.' *Tourism Economics*, 5, 315–330.

Meis, S., Joyal, S., Lapierre, J., and Joice, J. (1996). *The Canadian Satellite Account, a new tool for measuring tourism's economic contributions*. In It's showtime for tourism: New Products, markets and technologies, proceedings of the twenty-seventh annual conference of the travel and tourism research association (pp. 408–420). Lexington, KY: Travel and Tourism Research Association.

Meis, S., Lapierre, J., and Joice, J. (2004). 'The Canadian tourism satellite account: A case study of a new tool for measuring tourism's economic contribution.' *Estudios Turísticos*, 161(162), 9–26.

Meis, S., and Wilton, D. (1998). *Assessing the economic outcomes of branding Canada: Applications, results and implications of The Canadian Tourism Satellite Account*. In Travel research roundup: Branding the travel market, proceedings of the 29th annual conference of the travel and tourism research association (pp. 159–169). Lexington, KY: Travel and Tourism Research Association.

Planting, M. (1998). *The development of a Travel and Tourism Satellite Account for the U.S. input-output accounts*. In Travel research roundup: Branding the travel market, proceedings of the 29th annual conference of the travel and tourism research association (pp. 188–219). Lexington, KY: Travel and Tourism Research Association.

Rivera, G. (1999). 'Mexico's experience in setting up its tourism satellite account.' *Tourism Economics*, 5, 345–351.

Ru" tter, H., and Berwert, A. (1999). 'A regional approach for tourism satellite accounts and links to the national account.' *Tourism Economics*, 5, 353–381.

Sharma, A., and Christie, I. (2006). 'Reconciling multiple data sources for implementing the Tourism Satellite Account (TSA) in Tanzania.' *Tourism Economics*, 12, 635–652.

Smeral, E. (2005). 'The economic impact of tourism: Beyond satellite accounts.' *Tourism Analysis*, 10, 55–64.

Smeral, E. (2006). 'Tourism Satellite Accounts: A critical assessment.' *Journal of Travel Research*, 45, 92–98.

Smith, S. (2000). *New developments in measuring tourism as an area of economic activity*. In Gartner W. and Lime D. (Eds.), Trends in outdoor recreation, leisure and tourism (pp. 225–234). Wallingford, UK: CAB International.

Travel Industry Association (2007). *The impact of travel on state economies 2007 research report*. Washington, DC: Travel Industry Association.

AlmaTourism N. 12, 2015: Baker McArthur D., The Tourism Satellite Account: Possibilities and Potential Benefits for the Eastern Caribbean Islands Tourism Development

Trumble, W. R., and Stevenson, A. (Eds.). (2002). 'The new shorter Oxford English Dictionary on historical principles. Oxford, UK: Oxford University Press. United Nations Statistics Division, Statistical Office of the European Communities, Organisation for Economic Co-operation and Development.' *Tourism Economics*, 11, 393–409.

World Tourism Organization (2008). 2008 International recommendations for tourism statistics. Madrid: World Tourism Organization.