THE TOURISM SATELLITE ACCOUNT
A Primer

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Abstract: The Tourism Satellite Account (TSA) is a popular method of measuring the direct contributions of tourism consumption to a national economy. Its unique role in quantifying economic contributions of visitors in a country derives from its nature as an account rather than a model and its observance of the principles of national economic accounting. This discussion of TSA concepts, definitions and structure, the five macroeconomic variables produced and the special cases of accounting for travel agencies/tour operators, business travel consumption, and tourism specific durable goods is designed to make the TSA accessible to non economic accountants. Research issues yet to be resolved relate to tourism gross fixed capital formation, tourism collective consumption, and subnational TSAs. Finally, standards now distinguishing the TSA from other economic impact methods are recommended.

Keywords: tourism satellite account, economic impact, tourism consumption, national economic accounts.

INTRODUCTION

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: 2008 Tourism Satellite Account: Recommended Methodological Framework (herein TSA:RMF, 2008) and 2008 International

Despite the voluminous literature on the TSA (see below), there is no basic explication accessible to those outside of the national income accounting fraternity of what the TSA is, its purpose, its component parts, its defining principles and its distinguishing characteristics. Hara (2008) provides a sound introduction to the TSA that requires a firm grounding in Input-Output analysis and an accountant’s head for detailed tables. Moreover, this contribution does not benefit from the final explications of the TSA methodology, structure and statistical system. It seems appropriate at this time to present the basics of the TSA presented in these two reports, to assist users of tourism statistics and other tourism economic information (from both official and non-official sources) produced by national statistical offices industry organizations and associations, technical institutes and consultants, to correctly comprehend the essence of the TSA, the structure of a valid TSA, how it is related to the System of National Accounts, and the importance of distinguishing valid TSAs from other measures of tourism’s economic contributions. This paper is designed as a “primer” to do this, in the tradition of “a small introductory book on any subject; something introducing or providing initial instruction on a particular subject, practice, etc.” (Trumble & Stevenson, 2002, p. 2344).

In 1993, the United Nations and four other major international organizations published new standards for national economic accounts entitled System of National Accounts 1993 (herein “SNA, 1993”) (Commission on the European Communities, International Monetary Fund, Organization for Economic Cooperation and Development (OECD), United Nations and World Bank, 1993). SNA (1993) is “a coherent, consistent and integrated set of macroeconomic accounts, balance sheets and tables based on a set of internationally agreed concepts, definitions, classifications and accounting rules.” (p. 1) These accounts organize a great volume of information about a complex network of economic flows (e.g., transactions) and stocks (e.g., corporate assets) within a national economy, and the interactions of establishments, companies, households and other institutions in the economy. SNA (1993) specifies in detail how macroeconomic aggregates, such as Gross Domestic Product and National Income, are defined and computed (Kendrick, 1996). SNA (1993) defines five mutually exclusive institutional sectors for the national economy: nonfinancial corporations (e.g., manufacturing, service-producing), financial corporations (e.g., banks), general government, households, and nonprofit institutions serving households (e.g., private hospitals, private universities) (Kendrick, 1996). The accounts and macroeconomic aggregates are widely used for economic analyses and policy-making, and decision-making.

For the first time in the development of this system of national economic accounts, a certain extension of the national accounts was promoted: the “satellite account”, a specific framework “semi-integrated with the central System of National Accounts framework designed to make apparent and to describe with more depth aspects that are
hidden in the accounts of the central framework” (SNA, 1993, p. 51). Tourism was specifically referenced in this new extension:

Tourism is a good example. Various aspects of producing and consuming activities connected with tourism may appear in detailed classifications of activities, products and purposes. However, specific tourism transactions and purposes appear separately only in a few cases. In order to describe and measure tourism in a national accounts framework, it is necessary to make a choice between two approaches: either subdivide many elements in the accounts of the central framework to get the required figures for tourism and pay the price of overburdening and imbalancing the various components of the accounts, or elaborate a specific framework for tourism. The latter approach, the only feasible one actually, also allows adaptation of the various classifications and measurement of additional aggregates, such as national expenditure on tourism, which may cover intermediate and final consumption. (SNA, 1993, p. 51)

Also in 1993, the World Tourism Organization (UNWTO) began to develop the concept of a Tourism Satellite Account that would observe the principles of SNA (1993) and elaborate the “specific framework for tourism” that it promoted. This program was inspired by a presentation by Statistics Canada in 1991 at UNWTO’s International Conference on Travel and Tourism Statistics in Ottawa calling for a program to establish a credible means of comparing tourism-related activities to other industries in a domestic economy (Frechtling, 1991). Space does not allow a complete recounting of TSA documents published over the ensuing decade, but such can be found in TSA:RMF (2008) and IRTS (2008). In 2000, the United Nations Statistical Commission for the first time endorsed the document, 2000 Tourism Satellite Account (TSA): Recommended Methodological Framework. However, the pre-TSA UNWTO document, Recommendations on Tourism Statistics was not updated at that time to reflect the adaptations that were required as a consequence of the structural link of the TSA to SNA (1993).

With the cooperation of UNWTO experts from France, Canada, Spain, Italy, the United States, Australia and other countries, and the assistance of the Organisation for Economic Co-operation and Development, the World Travel and Tourism Council, the International Labor Organization and other organizations, work progressed culminating in the adoption of International Recommendations for Tourism Statistics 2008 (IRTS, 2008) by the United Nations Statistical Commission in March 2008 (Massieu, 2008). This document is designed to “provide a common reference framework for countries to use in the compilation of tourism statistics” (IRTS, 2008, p. 1). In pursuit of this objective, IRTS (2008) presents a system of definitions, concepts, classifications and indicators that are internally consistent, and that facilitate the link to the conceptual frameworks of the Tourism Satellite Account, the national accounts, balance of payments, and labour statistics, among others.” (IRTS, 2008, p. 1) At the same time the Commission received the report, Tourism Satellite Account: Recommended Methodological Framework 2008 (TSA:RMF, 2008), jointly presented by UNWTO, the United Nations Statistics Division, Eurostat and the Organisation for Economic
Co-operation and Development. This document updated the version the Commission had endorsed in 2000 and was described as “the culmination of many years of efforts by numerous institutions, countries and individuals with the purpose of integrating the measurement of tourism as an economic phenomenon within the mainstream of macroeconomic statistics.” (TSA:RMF, 2008, p. 5).

So 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. The purpose of this paper is to provide an overview of the TSA in its concepts, definitions and structure, leading to the designation of a set of characteristics that distinguish it from other economic impact measurement methods. The relationship of the TSA to the internationally-adopted System of National Accounts is detailed, with particular attention given to the macroeconomic aggregates that the TSA defines for tourism activities. The deleterious effects of consultancies and others releasing studies that do not follow the requisite definitions or methodological framework are detailed and recommendations made to distinguish the TSA brand from other methods presenting the economic contributions of tourism to a nation.

A PRIMER ON THE TOURISM SATELLITE ACCOUNT

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 Joisce (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, & Joisce, 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 & MingYao, 2005; Jones, Munday, & Roberts, 2003; Rütter & Berwert, 1999).
Given the focus on developing TSA principles, concepts and structure at the highest international levels, it is not surprising that controversy has developed over what constitutes a valid TSA. The World Travel and Tourism Council, an international tourism industries group, developed a system for producing “simulated tourism satellite accounts” in the early 1990s (Boskin, 1996). Reviews of this methodology found differences from the TSA in assumptions, definitions, concepts and measurement methods that effectively question the validity of the approach (Smith & Wilton, 1997; Wilton, Joyal, & Meis, 1996). The controversy over what constitutes a valid TSA approach continues to the present (Department of Statistics & Tourism Satellite Account, 2008), indicating that confusion still exists over what distinguishes the TSA methodology from other approaches to measuring the economic consequences of tourism activities.

These papers have addressed elements of the TSA and the TSA implementation process and related issues, but none have attempted to elaborate the authorized TSA for general understanding. Given the rise in popularity of the TSA as a method of estimating the direct economic effects of visitor spending on a national economy (UNWTO reports 70 countries have developed TSAs as of 2007: Libreros et al., 2006), it is appropriate upon the United Nations Statistical Commission’s acceptance of the TSA and a national statistical system designed to feed it to provide such a primer. This can contribute measurably to reducing confusion and controversy over what constitutes a valid TSA.

What is a Tourism Satellite Account?

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.” Tourism is 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 (though not necessarily a contiguous one) 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 SNÁ (1993). It is subordinate to and dependent upon the concepts, definitions, structure and compilation rules of SNÁ (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 tables:

The Tourism Satellite Account comprises a set of ten interrelated tables... 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, 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 (see Figure 1).

What is the Purpose of the TSA?

TSA:RMF (2008) notes the TSA purpose 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)
The reader should note that in the SNA, 1993 structure, 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).

Note that 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 accommo-

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### Table Outputs:

<table>
<thead>
<tr>
<th>Table Outputs:</th>
<th>Tourism Demand</th>
<th>Tourism Supply</th>
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<tbody>
<tr>
<td>Table 1. Inbound tourism expenditure by products and classes of visitors</td>
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<td>Table 2. Domestic tourism expenditure by products, classes of visitors and types of trips</td>
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<td>Table 3. Other components of tourism consumption:</td>
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<tr>
<td>(a) Services of vacation accommodation on own account;</td>
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<td>(b) Tourism social transfers in kind;</td>
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<td>(c) Other imputed consumption</td>
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<td>Table 4. Internal tourism consumption by products</td>
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<td>Table 5. Total domestic supply and internal consumption (at purchasers’ prices)</td>
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<td>Table 6. Total production accounts of tourism industries and other industries (at basic prices)</td>
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<td>Table 7. Employment in the tourism industries</td>
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</tbody>
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**Figure 1. Tourism Satellite Account Tables Required for Estimating Macro-economic Aggregates**

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- **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 accommo-
dations, 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, this 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).

What Tables Comprise a TSA?

The TSA documents are quite clear that the essence of the TSA is the compilation of ten inter-connected tables or accounts (TSA:RMF, 2008, pp. 3–4, 37). Table 6 is labeled “the core of the TSA system” (TSA:RMF, 2008, p. 47) because it develops the gross value added attributable to visitor spending for each of the industries that serve visitors. This requires a valid Supply and Use Table for the economy under study, the foundation of Input-Output modeling. Two of these accounts are outlined for elaboration at a later date once there is more experience with developing them among countries: Table 8 Tourism Gross Fixed Capital Formation and Table 9 Tourism Collective Consumption. One account (Table 3) arrays expenditures for outbound travel in other countries by product and class of visitors and thus does not contribute to the main macroeconomic aggregates that have been selected to characterize tourism impact in the country under study. One table (Table 10) presents certain non-monetar y measures of tourism activity, such as flows of visitors and related nights spent away from home.

Figure 1 shows the six tables required for estimating the five macroeconomic aggregates for a national economy and how they are related. The complete set of ten tables is elaborated in TSA:RMF (2008).

What are the Principle Concepts Defining the TSA?

There are a number of concepts and terms employed in developing the TSA that are defined in specific ways. These are discussed below.
Tourism expenditure and tourism consumption. A principle concept driving demand variables in the TSA is “tourism expenditure.” It is defined as “the amount paid for the acquisition of consumption goods and services, as well as valuables, for own use or to give away, for and during tourism trips” (IRTS, 2008, p. 35). This is a broader definition than often employed in tourism impact studies as it includes (1) expenditures by visitors as well as expenses paid for by others (e.g., business travel reimbursement), (2) expenditures for own consumption as well as gifts for others (e.g., gifts for friends and relatives visited), and (3) expenditures for goods purchased in anticipation of trips (e.g., camping equipment, luggage).

In addition, the TSA recognizes “tourism consumption” by adding certain elements to tourism internal expenditure, often not requiring exchange of money for products. Specifically, these elements are classified as Imputations or Monetary Expenditures by others. Imputations comprise barter transactions as such (e.g., exchange of dwellings for vacation purposes), value of goods produced for own account while away from home (e.g., vegetables grown at a vacation home, game bagged on a hunting trip), and value of accommodation services through use of own vacation homes. (TSA:RMF, 2008, pp. 16–19). Monetary expenditures by others comprise four types: host purchases on behalf of guest visitors (e.g., food, recreation and entertainment), producers’ costs of providing services to visitors (e.g., company-owned airplane or limousine to airport), company net costs of operating resorts and other facilities for use of employees at no or reduced cost, and government consumption expenditures on non-market services that benefit visitors (e.g., subsidies of museum admission fees or public golf course fees).

Tourism Characteristic Products and Activities. The UNWTO TSA structure requires that a TSA address products directly associated with visitor activities in five categories (IRTS, 2008, pp. 44–47). It is helpful to understand SNA, 1993 terminology here: a “product” is defined to be a good or service resulting from production (SNA, 1993, pp. 20–21):

- Tourism Characteristic Consumption Products—consumption products acquired by or on behalf of visitors that either represent a significant share of tourism expenditure or a significant share of the total value of the supply of the product
- Other Consumption Products—other consumption products acquired by or on behalf of visitors
- Valuables—expensive durable goods acquired as stores of value that are not used up in production, such as works of art and precious metals and stones, and jewelry
- Products associated with tourism gross fixed capital formation—not sanctioned by UNWTO yet
- Products associated with tourism collective consumption—not sanctioned by UNWTO yet

“Tourism characteristic activities” are the productive activities that typically produce the Tourism Characteristic Consumption Products (IRTS, 2008, p. 46), and are often called “industries”. It is useful to note here that an “industry” is a group of establishments engaged
in the same or nearly the same productive activity (SNA, 1993, p. 113, 344). To ensure a measure of comparability across national TSAs, UN-WTO specifies a set of “internationally comparable tourism characteristic products” as listed in the first column of Table 1. Note that these products and related industries are represented in the first ten rows. Rows 11 and 12 indicate that countries should specify additional specific tourism characteristic goods and services that are important to representing tourism activities within their borders, and related industries.

Table 1. Classification of Products and Tourism Industries for TSA Tables 5 and 6

<table>
<thead>
<tr>
<th>Internationally Characteristic Tourism Products</th>
<th>Internationally Characteristic Tourism Industries</th>
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<tbody>
<tr>
<td>A. Consumption Products</td>
<td>A.1. Related Tourism Industries</td>
</tr>
<tr>
<td>A.1. Tourism characteristic products</td>
<td>1. Accommodation for visitors</td>
</tr>
<tr>
<td>1. Accommodation services for visitors</td>
<td>1.a. Accommodation for visitors other than 1.b</td>
</tr>
<tr>
<td>1.a. Accommodation services other than 1.b</td>
<td>1.b. Accommodation associated with all types of vacation home ownership</td>
</tr>
<tr>
<td>1.b. Accommodation services associated with all types of vacation home ownership</td>
<td>2. Food and beverage serving industry</td>
</tr>
<tr>
<td>2. Food and beverage serving services</td>
<td>3. Railway passenger transport services</td>
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<tr>
<td>3. Railway passenger transport services</td>
<td>4. Road passenger transport services</td>
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<td>4. Road passenger transport services</td>
<td>5. Water passenger transport services</td>
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<td>5. Water passenger transport services</td>
<td>6. Air passenger transport services</td>
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<tr>
<td>6. Air passenger transport services</td>
<td>7. Transport equipment rental services</td>
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<tr>
<td>7. Transport equipment rental services</td>
<td>8. Travel agencies and other reservation services</td>
</tr>
<tr>
<td>8. Travel agencies and other reservation services</td>
<td>9. Cultural services</td>
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<tr>
<td>9. Cultural services</td>
<td>10. Sports and recreational services</td>
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<tr>
<td>10. Sports and recreational services</td>
<td>Country-specific Tourism Industries</td>
</tr>
<tr>
<td>Country Specific Tourism Products</td>
<td>11. Related industries</td>
</tr>
<tr>
<td>11. Country specific tourism characteristic goods</td>
<td>12. Related industries</td>
</tr>
<tr>
<td>12. Country-specific tourism characteristic services</td>
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</tbody>
</table>
It is clear from Table 1 that a one-to-one relationship of products to industries is lacking. For example, Food and Beverage Serving Services may be purchased from Accommodation for Visitors establishments as well as from Food and Beverage Serving Services establishments. It is also clear that there is no “Tourism Industry” because there is no set of establishments that have as their primary productive activity the production of “tourism”. Rather, UNWTO recognizes “tourism industries” as comprising all of the establishments whose principal productive activity is a tourism characteristic activity. A country’s tourism industries are listed in the right hand column of its version of Table 1.

One other observation should be made regarding Table 1. Where tourism characteristic goods have been identified for a country, such as motor fuel and skiing apparel, the associated activity is the retail trade by which such goods are made directly available to visitors. Establishments engaged in the manufacturing of goods do not sell directly to visitors, a requirement to be a tourism characteristic activity (IRTS, 2008, p. 55, 54). Consequently, the output of these retail trade industries devoted to visitor consumption is limited to the appropriate retail margins between the value of sales and the gross value of goods sold, plus any taxes net of subsidies on the good and any transportation costs that end up in purchasers’ prices (TSA:RMF, 2008, p. 88). “The remaining value of goods purchased by visitors is deemed... not to generate tourism direct gross value added but only indirect effects.” (TSA:RMF, 2008, p. 90).

Special Case of Travel Agency and Tour Operator Services. The reader should note the special treatment of Travel agencies and other reservation services (including tour operators) in the TSA. The gross revenues of travel agencies must be disaggregated to separate out the value of the travel products purchased (airline tickets, hotel lodging, airport transfers, etc.) from the gross margin earned by the travel agencies for providing services to visitors (IRTS, 2008, pp. 62–63). Then the resulting values for the individual travel products consumed should be distributed to their respective product and activity categories.

Similarly, the gross revenues of Tour Operators need to be distributed to their respective travel product categories and only such operators’ gross margins should be allotted to the “Travel agencies and other reservation services” category (IRTS, 2008, p. 65). A package tour is not considered to be a product in the TSA tables, but the sum of its travel product components plus tour operator and travel agency gross margins.

Special Case of Business Travel Consumption. SNA (1993) stipulates, “Expenditures by business travelers are part of the intermediate consumption of producers” and do not contribute to final consumption since they comprise inputs to an establishment’s productive activities and are not provided directly to final consumption demand (p. 334). However, the TSA includes expenditures and consumption by individuals traveling for business purposes as part of Internal Tourism Expenditure and Internal Tourism Consumption, respectively (TSA:RMF, 2008, p. 20). This means that Internal Tourism Consumption cannot be directly compared to Household Final Consumption volumes in a
country’s system of national economic accounts, because the latter excludes all intermediate consumption.

Special Case of Tourism Specific Durable Goods. Much but not all of the tourism expenditures included in the TSA occurs during the trip. The definition of “tourism expenditure” is extensive enough to include “the acquisition of consumption goods and services... for and during tourism trips.” (IRTS, 2008, p. 35; TSA:RMF, 2008, p. 15). This requires inclusion of “tourism single-purpose consumer durable goods” among tourism expenditures (TSA:RMF, 2008, p. 22).

In SNA (1993), “a consumption durable is a good that may be used for purposes of consumption repeatedly or continuously over a period of one year or more” (p. 208). The TSA acknowledges single purpose durable goods as those that “are used exclusively or almost exclusively on trips” (TSA:RMF, 2008, p. 22). While this may differ among countries (e.g., skiing equipment qualifying in Egypt but not in Switzerland), there are a number of such goods that would qualify in all countries, such as luggage, recreational vehicles, airplanes and camping equipment (TSA:RMF, 2008, p. 91). Countries are encouraged to add their own tourism single purpose consumer durable goods to the list and add resident expenditures on these in their usual environment in computing tourism expenditure in the country. Of course, visitor spending on consumer durable goods on a trip must always be included in tourism expenditure.

What Other TSA Issues Need Further Research?

Despite three decades of work, UNWTO recognizes there are still issues that need study in order to legitimately expand tourism satellite accounting. These comprise measuring capital formation and collective consumption related to tourism, and concepts, principles and structures for subnational TSAs.

Tourism Gross Fixed Capital Formation (TSA table 8). SNA (1993) measures gross fixed capital formation as “the total value of a producer’s acquisitions, less disposals, of fixed assets... plus certain additions to the value of non-produced assets realized by the productive activity of the institutional units.” Fixed assets are tangible or intangible assets produced as outputs from processes of production that are themselves used repeatedly or continuously in other processes of production for more than one year (p. 222). Building on this concept, the TSA suggests three categories (TSA:RMF, 2008, pp. 23–25):

1. Tourism specific fixed assets are those used exclusively or near exclusively in the production of tourism characteristic products, including passenger airliners, cruise ships, vacation homes, and hotel buildings, fixtures and equipment.
2. Investment by tourism industries in non-tourism specific fixed assets comprise those required by tourism industry establishments that are not, by their nature, a tourism specific fixed asset, including computers and related systems, hotel laundry facilities, and sight-seeing buses.
Tourism related infrastructure are those established by governments to facilitate tourism, such as intercity passenger terminals, special roads terminating at resorts and facilities built for international fairs and expositions.

The requirements for this table of the TSA have not been elaborated by UNWTO as yet. Countries are encouraged to work on elaborating the table and report their research.

Tourism collective consumption (TSA table 9) Acknowledging that the public sector in many countries provides important “collective non-market services” to visitors and tourism industries free of charge (TSA:RMF, 2008, p. 26, 60), UNWTO recommends the following categories for elaboration in Table 9 as being wholly tourism collective consumption: tourism promotion services, visitor promotion services, administrative services relating to the distributive and catering trade, hotels and restaurants, and administrative services related to tourism affairs (TSA:RMF, 2008, p. 94).

The following categories will usually be partially allocatable to tourism collective consumption in a country: market research, police and fire protection, education and training and educational support services.

UNWTO recognizes that elaborating Table 9 currently faces conceptual limitations and limited computational experience, and proposes it only as a “useful statistical exercise” at the current time (TSA:RMF, 2008, p. 60).

Subnational TSAs. The TSA is closely related to the System of National Accounts, which are elaborated for national states only. After noting that no country can establish a complete system for every region analogous to the System of National Accounts, SNA (1993) states, “It is up to the countries themselves to devise their own regional accounts and statistical indicators, taking into consideration their specific circumstances, data system and resources which might be devoted to this work” (p. 441).

After recognizing the advantages of subnational TSAs, the UNWTO TSA documents note the difficulties of constructing valid satellite accounts at the sub-national or regional levels: lack of a conceptual framework at the regional level equivalent to SNA (1993), not all tourism activities can easily be assigned to regions (e.g., domestic air transportation activities, tourism-related exports and imports), and some productive activities cannot be conceptually regionalized (e.g., headquarters of tourism industry firms, central government tourism services). (TSA:RMF, 2008, pp. 101–102; IRTS, 2008, pp. 83–84). UNWTO is sponsoring additional research and discussions of this important issue (Frechtling, 2008).

CONCLUSION

This paper has taken a complex but constructive concept, the Tourism Satellite Account, and explicated its basic purpose, concepts,
structure, and features. A considerable number of papers are identified on the elaboration and uses of the TSA, but these have consistently assumed that the reader is familiar with the details of this distinctive approach to measuring the economic contribution of tourism. This paper is intended to make the currently defined TSA system accessible to those not versed in national economic accounting and to reduce misunderstanding and misuse of the TSA in economic and other analyses.

The relationship of the TSA to the System of National Accounts adopted by the world's major multi-lateral development bodies has been explained herein and outputs are described that can be directly compared to main macroeconomic aggregates produced by the System, such as Gross Domestic Product. Special treatment of economic activities particularly tourism-related have been described, as well as areas for further research to fill out the accurate comprehension of tourism's direct economic contribution to national income, production and employment.

It seems important to reduce misunderstanding and misuse of the TSA at this time of authoritative adoption of the TSA system by the United Nations. Such misunderstandings and misuse are identified by systematically comparing the definitions, methodologies and source data detailed in the basic TSA documents (TSA:RMF, 2008; IRTS, 2008) with the same presented in studies labeled as “Tourism Satellite Accounts”. In recent years, UNWTO has voiced considerable concern over the misuse of the term, “Tourism Satellite Account”, in studies on the economic impact of tourism on individual countries (Department of Statistics & Tourism Satellite Account, 2008). UNWTO has stated that labeling estimates from approaches that do not employ TSA definitions, concepts, and structure as “Tourism Satellite Accounts” exaggerate tourism’s contribution to Gross Domestic Product (effectively damaging the credibility of valid TSA estimates), contend that tourism is a single industry while no such industry exists in national economic accounting, blur the distinction between visitors and others types of individuals, and provoke conflicts between National Tourism Administrations and National Statistical Offices over the accuracy of tourism economic measures (Department of Statistics & Tourism Satellite Account, 2008). In addition, to these misuses of the TSA are erroneous contentions that the authorized TSA includes the indirect effects of tourism spending and government revenue generated by tourism activities (Spurr, 2006).

In order to avoid these unfortunate consequences, it seems wise to distinguish the TSA approach by recommending standards that identify valid TSAs now, valid in the sense of employing the TSA definitions, concepts and structure to measure what the TSA is designed to measure as specified in the UNWTO TSA documents at this point in time (TSA:RMF, 2008; IRTS, 2008). Based upon these documents, the following standards are proposed to distinguish the TSA as envisioned by UNWTO and its collaborating international bodies from other tourism measurement systems. First, it carefully observes the UNWTO definition of “tourism” as defined above (Department of Statistics &
Tourism Satellite Account, 2008, p. 10); second, it elaborates to a greater or lesser extent seven interconnected tables as accounts, as indicated in Figure 1, that are consistent with the supply and use tables of SNA (1993) (TSA:RMF, 2008, p. 3); third, it limits measurement to the direct economic contributions of tourism only, excluding indirect, induced and multiplier effects (TSA:RMF, 2008, p. 3); fourth, it provides data for ten specific Tourism Characteristic Products sold directly to visitors and the conventionally-defined Industries producing these products, as detailed in the Appendix to this article (TSA:RMF, 2008, pp. 41–42); and fifth, presents four main macroeconomic aggregates: Internal Tourism Expenditure (by residents and international visitors), Internal tourism consumption (Expenditure plus imputations and expenditures by others), Tourism Direct Gross Value Added (an unduplicated measure of income generated by tourism) and Tourism Gross Domestic Product (strictly comparable to GDP for a country) (TSA:RMF, 2008, p. 3). It is essential to note that the above conditions cannot be met without the active participation of a country’s Central Statistical Office and National Tourism Administration.

The standards of concept, definition and structure presented in the foundational TSA documents accepted by the United Nations Statistical Commission in 2008 are clear. This paper endeavors to make these accessible to interested individuals who are not economic accountants. Countries where the Central Statistical Office and the National Tourism administration collaborate on developing accounts applying these standards can honestly lay claim to developing a valid TSA. It seems equally clear that reports or systems that do not follow these standards cannot claim to have produced a Tourism Satellite Account as currently defined by the UNWO and its collaborating organizations.

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