

Adoption of a Tourism Satellite Account (TSA) in a Municipal Area: a Case Study in Suzhou, China

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I hereby declare that I am the sole author of this thesis. This is a true copy of the thesis, including any required final revisions, as accepted by my examiners.

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Abstract

Assessment of tourism's contribution to the economy of a country or a region is extremely complicated because of the nature of tourism. A tourism satellite account (TSA) is a major recent contribution in this area. It involves building a specific tourism account in the context of a national account. After more than 20 years of development, the current trend in TSA research is to refine and implement the method.

This paper summarizes the methodology developments of TSA and explores the feasibility of adopting a TSA in municipal area. Thus, it discusses the TSA system from a municipal perspective. Because it is a new topic, a qualitative method is adopted by using a case study in Suzhou, China.

The paper discusses and provides a definition of TSA from varied perspectives. It also provides a technical framework for a municipal TSA, illustrates the driving forces and institutional attitudes behind the development of such a TSA, and examines the limitations and advantages of the TSA methodology in a municipal context.

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Abbreviations

BEA: U.S Bureau of Economic Analysis

CDVCS: Chinese Domestic Visitors' Consumption Survey

COVCS: Chinese Oversea Visitors' Consumption Survey

ECC: Commission of the European Communities

EU: European Union

IMF: International Monetary Fund

ISIC: International standard industrial classification of all economic activities

JSTSA: The Jiangsu Regional Tourism Satellite Account

NSA: National Satellite Account

OECD: Organization for Economic Co-operation and Development

TAB: Tourism Administration Bureau

TEA: Tourism economic account

TSA: Tourism Satellite Account

TSA-RMF: *Tourism Satellite Account: Recommended methodological framework*

SA: Satellite Account

SICTA: Standard International Classification of Tourism Activities, third version

SNA: System of National Account

SNA'93: System of National Account, 1993

SZTSA: Suzhou Municipal Tourism Satellite Account

UN: United Nations

UNWTO: The World Tourism Organization of United Nation

WB: World Bank

WTTC: World Tourism and Travel Council

Chapter 1: introduction

1. 1 Background

Tourism as an economic activity plays an increasingly important role in many countries and regions. However, an assessment of tourism's contribution to the economy of a country or a region is extremely complicated. The difficulties in assessing tourism stem from the nature of tourism and the development of research on this topic.

- All research concerning the tourism economic impacts should be based on the recognition that tourism is not a traditional industry when viewed from the supply side; while from the demand side, tourism industry have the same economic characteristic which is that they concern the consumption of visitors.
- Tourism-related definitions can be extremely varied for they can be made from both the supply-side and the demand-side. Wide-ranging definitions of what tourism actually is have hindered the creation of a generally accepted definition because the academic community, the tourism industry and governments have defined the tourism from their own perspectives.
- Furthermore, tourism can be measured using different methods at various levels. However, research using different methods normally brings out different results concerning tourism's economic contributions in the same area. This fact weakens the reliability and legitimacy of tourism economic impact assessment.

All these issues had frustrated tourism researchers and the tourism industry communities

until the Tourism Satellite Account (TSA) was created. TSA is regarded as a “revolution” in the tourism industry and tourism administration because it is constructed on generally accepted definitions, using a framework drawn from the System of National Account (SNA). Since the publication of the first national TSA 15 ago, the implementation of TSAs at the national level developed rapidly after 2001, when the *Tourism Satellite Account: Recommended Methodological Framework* (TSA-RMF) was published.

Nonetheless, some facts concerning TSAs should be noted as follows:

- After the TSA-RMF was published, most countries that build a TSA used TSA-RMF. However, some countries used a different system to assess their tourism industry. For example, Korea adopted the methodology of World Tourism and Travel Council and WEFA Group (WTTC/WEFA). In 1991, the Organization for Economic Co-operation and Development (OECD) developed its Tourism Economic Accounts (TEA) system, which is a system established by the OECD before they adopted TSA methodology. Some OECD member countries still use this system. Therefore, various methods are still used to assess tourism industry globally.
- The adoption of a TSA in a sub-national or regional area has come under discussion only in recent years. Although national TSAs have been implemented in more than 70 countries, while only five regional TSAs have been created, namely in Canada, France, Spain, UK and China. Discussions of a regional TSA have focused on feasibility and methodology. For example, questions would include whether a regional TSA is a smaller version of a national TSA, what the

methodology of a regional TSA consist of, and so on.

- TSA implementation is another crucial issue because the adoption of a TSA occurs in the particular context of the given country or region. The statistical data could be organized in different ways. Additionally, tourism-related surveys may not meet the requirements of a TSA.

While the doubts about the feasibility of a regional TSA are still under discussion, a program to develop a municipal TSA has been proposed, discussed and arranged. Until now, no municipal TSA has been announced, nor has a feasibility study been released on the adaptation and adoption of a TSA in a municipal area. Thus, the adoption a TSA system in a municipal area is worthy of exploration.

Moreover, the spatial implications of a TSA have not been systematically discussed before, although a regional perspective was discussed by some researchers such as Jones, C. in 2005. However, such research will definitely benefit from a consideration of all of the research concerning the national and regional TSAs.

In this research, at this stage, the TSA will be generally defined as a satellite account for the tourism industry or tourism activities. Satellite accounts, as System of National Account, 1993 (SNA'93') indicated, "Generally stress the need to expand the analytical capacity of national accounting for selected areas of social concern in a flexible manner, without overburdening or disrupting the central system" (SNA'93', paragraph 21.4). The central system definitely refers to the System of National Accounts developed by the Commission of the European Communities (ECC), the International Monetary Fund (IMF), the Organization for Economic Co-operation and Development (OECD), United Nations (UN) and the World

Bank (WB).

The purpose of this case study is to discuss the TSA definition from various perspectives, to explore the characteristics and the obstacles to development of a municipal TSA, and to propose a municipal TSA structure. The paper also describes a preliminary program for developing a municipal TSA in Suzhou, China, as a case study and the implementation of two regional TSAs in China as background.

1. 2 Statement of Research Questions

In a different pattern from other countries, China is seeking to develop both a national TSA and municipal TSAs after successfully developing a regional TSA system. This study will examine the development of a municipal TSA in Suzhou, a large city in Jiangsu province, People's Republic of China.

The objectives of the research are as follows:

1. To assess the feasibility of adopting a TSA system in a municipal area;
2. To discuss and explore the structure of a municipal TSA system with a local development orientation;
3. To discuss the essential factors of TSA from a municipal perspective.

In order to accomplish these objectives, the following questions should be answered.

1. What is the background to developing a municipal TSA in Suzhou? This question includes several contents such as: What is the statistical system of Suzhou and the main driving force of the project?

2. Is it possible to adopt a TSA in Suzhou of China? How will all the participants, such as Statistics Suzhou, Suzhou Tourism Administration Bureau (TAB), and so on, be involved? Will Suzhou's experience be meaningful to other cities?

3. What issues and which officials are most concerned about in the creation of a TSA?
4. What are the experiences with the regional TSAs of Jiangsu Province and Zhejiang Province, especially in the realm of methodology, data collection and local adjustments?
5. What is the municipal orientation in a TSA system? What are the differences between national, regional and municipal TSAs?
6. How is a municipal TSA defined from amalgamated perspectives? How can the balance between the universal criteria of TSA methodological and the variety of TSA be kept?

1.3 Study Area: Introduction of Suzhou, China



Figure 1 Suzhou in China

(Source: http://www.lib.utexas.edu/maps/middle_east_and_asia/China_pol01.jpg)

Suzhou is located in the centre of the Yangtze Delta, abutting the renowned metropolis of Shanghai as figure 1 illustrated. It is one of the biggest cities in Jiangsu Province, covering an area of 8,488.42 square kilometers; the Suzhou central city covers 392 square kilometers, with a population of over 6 million. Suzhou has a vast number of lakes, ponds and streams and the Grand Canal cross the city from north to south and 90% of Taihu Lake is within the territory of Suzhou. The city is famous for its combination of lands, lakes and rivers because rivers cover 42.5% of entire area. The old city of Suzhou still maintains 35 kilometers of rivers and 168 bridges.

Suzhou is one of the most venerable cities in China, with a history of more than 2,500-year-old. “Wu”, was the name often applied to refer to Suzhou, derived from the local tribes living there in the 11th century BC. In 514 BC, King Helu of Wu built his capita city of the site of Suzhou, a capital known as the “Great City of Helu”. Since then the city’s site and scale has remained unchanged for thousand years, making Suzhou a rare city with a precious historical and cultural heritage.

Suzhou is an important city, with a GDP of 57 billion CND. Manufacturing is the main industry in Suzhou; but Suzhou is also one of the top ten tourism destinations in China both for domestic and international tourists. Suzhou’s private gardens are a fine example of the Chinese art of gardening and also contain rare examples of Asian architecture. The gardens also reflect a traditional Chinese viewpoint on art and philosophy. Suzhou’s rich cultural heritage is featured in locations such as the Kunqu Opera, which is designated as a World Cultural Heritage. Suzhou's arts and crafts represent a unique cultural style and workmanship developed over a thousand years. Arts most representative of Suzhou are its embroidery, fans,

traditional instruments, lanterns, mahogany furniture, jade carving, silk tapestry, traditional calligraphy and painting etc.

1. 4 Thesis Framework

This thesis is organized as follows:

After the introduction of the research background and statement of research questions in the first chapter, chapter 2 reviews the theoretical context of the related research. The process of research design, the methodology of research and the list of data sources are explained in chapter 3. After that, chapter 4 describes the case study of Suzhou. Analysis and findings are discussed in Chapter 5. Finally, conclusions are presented in chapter 6.

Chapter 2: Review of Related Literature

2.1 The profile of TSA methodological development

In the last two decades of the 20th century, TSAs developed from a concept to a solid tourism statistical system determined by universal organizations and several creative countries. The UN et al (2001) summarized the TSA development history and gave prominence to the outstanding contributions of UNWTO, OECD, Eurostat and Canada.

In this part, the methodology development of TSAs is divided into three stages: the conceptual development stage, an exploration stage, and an amalgamation and implementation stage. In each stage, the important literatures and universal conferences will be illustrated.

2.1.1 Conceptual development stage: the 1980's

The concepts and methodology of TSAs were discussed from 1980's onwards. Before that, the discussion of tourism statistics focused on the general definitions and classifications for international tourism statistics. For example, in 1953, after several years' study, the basic concept "international visitor" was established. (Eurostat, et. al, 2001: 6). Ten years later, in 1963 the UN Conference on International Travel and Tourism recommended some crucial definitions such as "visitor", "tourist" and "same-day visitor". All these achievements lead to the *Provisional Guidelines on Statistics of International Tourism* which was published in 1978, and following this universal concepts concerning tourism were created.

From the early 1980's, the UNWTO played a positive role in the TSA enhancement. In 1983, in order to advocate the importance of tourism and its interdependence with other economic and social activities around the world, The UNWTO published a report demonstrating the possibility in describing tourism within the contemporary SNA. What the report suggested was not implemented, but the report was regarded as a general guideline relating to tourism concepts and statistics. Moreover, the UNWTO declared that the importance of tourism was demonstrated by the SNA.

Teillet discussed the possibility of assessing special industries such as education by revising the NA. He also highlighted that a SA should aggregate the monetary flows relating to their field to meet the managerial interest; and the TSA should progressively group the non-monetary data of the field including employment, and fixed capital stocks. (Teillet, 1988: 412) Although he did not directly discuss TSAs, his research also provided the profile for a TSA.

2.1.2 Exploration stage: the 1990's

Landmarks which established the beginning of this period were the Canadian proposal on TSA and OECD's manual on TEA. Moreover, one great event which has great impact on TSAs methodology was the publication of SNA'93. From then on many countries and universal organizations became involved in TSAs' methodology exploration.

In 1991 the UNWTO held an International Conference on Travel and Tourism Statistics in Ottawa. The conference's great contribution was that a consistent system of tourism concepts, definitions and classifications were published. In addition, the UNWTO emphasized the

requirement of a tourism information system which was integrated with the SNA; that is, the UNWTO accepted the concept of a TSA as a practical approach.

The main impetus of this change was the report, *A Satellite Account and Information System for Tourism*, which is prepared and presented by Statistics Canada during the conference. This proposal demonstrated an entire TSA framework, discussed the majority of basic problems including the concept and the scope of the TSA, the basic definitions of tourism, the framework of methodology, data sources and implementation etc. After that, the results of the Canada National TSA, the first published national TSA, were published in 1994. Canada's revolutionary achievement placed the foundation stone for TSA development globally. The first TSA is believed to be the France TSA, but it is not published.

Just prior to the publication of the first TSA, the UN published the System of National Account, 1993. In the SNA'93, all independent industries were defined from the supply side, that is, different industries were categorized by the main products of the unite. However, tourism can not be defined from the supply side alone because tourism-related unite produce different products and services rather than one similar product. The different products and services related to tourism are categorized into respective industries, such as accommodation, transportation, civil aviation, and so on. For those special activities which can not be defined from the supply side, such as tourism, education, the UN accepted the idea that some special activities could be assessed by an auxiliary account which shared the concepts and structure with the SNA, and provided a conceptual structure of a SA.

In 1994 the UNWTO published *Recommendations on Tourism Statistics* and the Standard International Classification of Tourism Activities (SICTA). The formal document provided a

set of universal tourism-related definitions, all of which were limited to “strictly statistical purposes”. That made all the definitions practical and clear and hereafter these definitions are adopted by most of the countries.

Another universal organization, the OECD also contributes significantly to the development of TSAs. In 1991, the OECD developed its Tourism Economic Accounts (TEA) and published the *Manual on Tourism Economic Accounts*. The OECD examined several of the crucial problems related to the measurement of tourism, including “the reconciliation of supply and consumption, and the treatment of packages tours”. (Eurostat, et al, 2001: 7).

The TEA is regarded as another attempt to assess tourism industry in the national area. The main difference between a TEA and a TSA is that the TEA was still limited to the data on the characteristic tourism industries, such as hotels and restaurants. It did not consider non characteristic tourism industries, such as transportation, cultural and sporting activities, and so on. TSAs provided the profile of entire commodities and industries related to visitors’ consumption. From 1992, OECD continued their effort on TEA focusing on policy orientation.

All the research on TEA contributed to the change from TEA to TSA in the OECD context. The first proposal of TSAs for OECD countries was published in 1997; that is, the OECD accepted the TSA methodology, and suggested to their member countries to build TSAs. In 1999, the OECD Tourism Committee approved the methods on TSA and employment in tourism, and published them in 2000 as *Measuring the Role of Tourism in OECD Economies*. This manual presented TSA methodology recommended by the OECD and the implementation experiences of 16 countries all of which were OECD member

including Canada, France, Australia, UK, USA, Spain, and so on. All these countries contributed to and benefited from the creative and durative research on TSA by OECD.

The Statistical Office of the European Communities (Eurostat) prepared a community methodology on tourism statistics to cater to the special needs and context of the member states of the European Union (EU). In 1995, Eurostat adopted a legal framework for an integrated system of basic statistical information on tourism supply and demand to harmonize and improve the statistical data produced by member states.

As mentioned before, Canada took great strides on building the TSA system by developing an entire and practical TSA proposal in 1991, and in 1994, the results of Canada's initial national TSA were published. This is the first published version of national TSA all over the world. Moreover, they built regional TSAs for every province by building a detailed national survey which tracks every trip taken by tourists in respective provinces and main municipalities. All these facts earned Canada the reputation of a courageous herald of both national TSA and regional TSA.

2.1.3 Amalgamation and refining stage: from 1999 to now

Frechtling (1999) has expressed his worries on TSA development. The UNWTO and the OECD are developing their own multi-national standards; but “there is no guarantee that they will agree with each other”. (Frechtling, 1999: 169)

However, just in the same year, the UNWTO held another crucial conference, the Enzo Paci World Conference on the Measurement of the Economic Impact of Tourism in Nice. The three universal organizations, UNWTO, OECD and Eurostat, which have built similar TSA

methodology and conceptual systems, approved the creation of a UNWTO-OECD-Eurostat Inter-Secretariat Working Group to develop a common conceptual TSA framework of TSA. Two years later, in 2001 the Canadian Tourism Commission (CTC) held an international Conference on TSA in Vancouver; and on the conference, the Eurostat, OECD, UNWTO and UN Statistics Division published a universal guideline, Tourism Satellite Account: Recommended Methodological Framework (TSA-RMF), which was the most popular and influential document for all countries over the world.

This document represents the consensus on the methodology of TSAs, and the beginning of the global standardized implementation process.

All primary manuals and guidelines concerning the TSA are illustrated in Table 1 as follows.

Table 1 Main Manuals of TSA methodology

	1991	1993	1994	1996	1997	1998	1999	2000	2001
EEC-Eurostat, IMF, OECD, UN and World Bank		System of National Accounts 1993							
EEC-Eurostat						Community Methodology on Tourism Statistics			Tourism Satellite Account: Recommended Methodological Framework
OECD	Manual on Tourism Economic Accounts			OECD Tourism Statistics: Design and Application for Policy	First proposal for TSA			Measuring the Role of Tourism in OECD Economies	

UN			Recommendations on						
UNWTO			Tourism Statistics				UNWTO Tourism Satellite Account (TSA): The conceptual Framework		
WTTC		Travel & Tourism: A new economic perspective					Simulating Travel and Tourism Satellite-Accounting Research: a Technical Manual		
Canada	TSA Proposal		First published TSA						

After the amalgamation of the TSA's methodology in 2001, TSA implementation was widely discussed. The topic of TSAs shifted from methodology to more practical items, such as data collection techniques (Frechling, 2005; and Smith, 2000 and 2001.) and implementation experiences (Sharma & Olsen, 2005; Fleetwood, 2005). Another refining of TSAs was the TSA regionalization process of TSAs; for example, the fact Canada and so on, built their regional TSAs by regionalizing the National TSA.

The latest UNWTO conference entitled as The Tourism Satellite Account (TSA): Understanding Tourism and Designing Strategies was held in Iguazu Falls, Argentina/Brazil/Paraguay, in October 2005. The experiences of many countries on implementation of national TSA following the recommended methodological framework were presented, and some new topics were discussed, such as the methodology and implementation experience of developing a regional TSA system (Jones, 2005).

However, a different methodological framework entitled the National Satellite Account (NSA) persisted in its own methodology. In 1993, the WTTC, which is a coalition of chief Executive Officers from various tourism-related companies, presented its methodology to assess the contribution of "Travel & Tourism" to the world economy. The purpose of this methodology was "convince governments to include Travel & Tourism in their charts of National Accounts". (WTTC, 1993: 1) In 1996 WTTC/WEFA published their 20 principles for a Travel and Tourism NSA.

The NSA has not only a title similar with that of to the TSA, but also the same purpose with a TSA, measuring the size of the tourism industry. Moreover, it led to an academic discussion on the different methodologies, which actually clarified many controversial

concepts and issues.

2.2 Initiation of the TSA

2.2.1 The linkage between SNA and Satellite Account

If the Tourism Satellite Account is a satellite as the name implies, which is the planet? The System of National Account would fulfill this role. The linkage between SNA and SA builds an approach to shuttle from the planet to the satellite. Therefore, a review of the linkage is necessary before discussing TSA initiation.

The most modern and universal version of the national accounts is the SNA'93 created by the Commission of the European Communities (ECC), the International Monetary Fund (IMF), the Organization for Economic Co-operation and Development (OECD), the United Nations (UN) and the World Bank (WB). The System is built around a sequence of "interconnected flow accounts" linked to "different types of economic activity" taking place within a given period of time, together with "balance sheets" that record the values of "the stocks of assets and liabilities held by institutional units or sectors at the beginning and end of the period." (ECC, et al, 1993, paragraph 1.3) Basically, the SNA records economic flows and stocks between pairs of operators; and it also records the stocks of assets and liabilities held at a given point.

Moreover, the SNA uses the "double entry" system to build accounts for economic activities, such as the transactions accounts, the assets and liabilities accounts and rest of the world account (external transactions account), to balance the balance sheet and check the consistency of the accounts. Double entry means that "each transaction must be recorded

twice, once as a resource (or a change of liabilities) and once as a use (or a change in assets).” (ECC, IMF, OECD, UN and World Bank, 1993, paragraph 2.57) This technique can mitigate or avoid the inflation of statistical data.

Furthermore, a SNA collects the data by an input-output (I-O) framework, which provides a tool to summarize clearly both the supply and the demand side of tourism.

The inclusion of SA in a SNA represents “the maturing of a tool that has been found to add substantial flexibility to a nation’s system of accounts”. (Carson & Grimm, 1991: 59) The first satellite account, which was developed for housing, was developed in France in the 1960s. Since then, SAs have been built for such fields as health, education, the environment, nature resources, social protection and tourism.

Although tourism is increasingly accepted as a significant economic activity all over the world, it is not qualified for the conventional definition of industry in a SNA. Just as SNA’93’ states, “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”. SNA’93’ suggests keeping the concepts consistent, not to use alternative economic concepts, but simply to “focus on a certain field or aspect of economic and social life in the context of national accounts”, to “make apparent and to describe in more depth aspects that are hidden in the accounts of the central framework or surface only in a limited number of points”. (ECC, et al, 1993, paragraph 2.246) The SNA’93 provides two possible approaches to assess tourism activities indirectly. One approach is to change the framework of an NSA for the tourism industry, the other approach is to build a semi-independent framework for the tourism based on the SNA. The latter approach is regarded as the only feasible one. It also

allows adaptation of the various classifications and measurement of additional aggregates. SNA'93' declares the SA as "Those special constructs, which are semi-integrated with the central framework." (ECC, et al, 1993, paragraph 2.239) Technically, "a semi-integrated system" in a TSA means the creation a tourism account in the I-O framework in the contents of National Accounts.

Carson & Grimm stated the characteristics associated with satellite accounts for particular fields, which are also suitable for a TSA. They are listed as following:

1. SAs feature data for a whole field of economic activity and provide a framework for arraying more comprehensive information about the field than can be shown in the main accounts. (Carson & Grimm, 1991: 59)
2. SAs are "purpose-oriented"; this criterion provides the linkage between the participants of economic transaction. (Carson & Grimm, 1991: 59) In the TSA, an important transaction, tourism ratio, is created to calculate the tourism contribution to whole economy.
3. SAs are "articulated with the main accounts and contain at least one measure that is also in the main accounts." (Carson & Grimm, 1991: 59) The TSA adopts the same framework as that of the SNA, which are I-O matrices.
4. SAs present information in the ways that are different from the main accounts; "definitions, classifications, and accounting conventions may differ from those used in the main accounts in order to provide the most useful presentation of information about the field". (Carson & Grimm, 1991: 59) Technically, the TSA is the amalgamation of the definitions related to tourism and the methodology of SA.

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5. SAs often contain tables that answer several questions: “Who is producing, and what are the means of production? Who is financing? What is the result of the expense, and who is benefiting or using the result?” (Carson & Grimm, 1991: 59) Basically, the TSA answers the questions: Who produce and sale the goods and services to the tourists? What is the impact or result of the tourists’ consumption?
 6. SAs often encompass “monetary and physical” data in an integrated fashion. Physical data may relate to production, for example, the number of persons employed in the field or the stocks of equipment. Physical data may also relate to beneficiaries, for example, the number of persons being affected by activities in the field. (Carson & Grimm, 1991: 59)

All these characteristics present the strong and detailed linkage between the TSA and the SNA.

It should be mentioned that another statistical system was created in the 1990s. Named the System of Material Product Balances (MPS), it was developed by and dominated by the Union of Soviet Socialist Republics and Eastern Europe socialist countries during the Cold War period. The TSA stems from the SNA’93; therefore, one block in the countries where the SNA was not developed is the lack of related data compiled by SNA criteria. China experienced the change from a MPS system to a SNA in 1992-1993.

SNA’93 illustrates not only the whole complicated national account system but also the rationality and profile of SA as an auxiliary of SNA. The strong relationship between the SNA and the TSA invites the conclusion that the TSA have an advantage when compared with other conventional industries in SNA.

2.2.2 The Canadian TSA proposal

Before the 1991 Canadian proposal, four important proposals for TSA in 1980s from OECD, WTO, France and Canada had been put forward. (Lapierre, et al, 1991: 18) Two characteristics stand out: 1. all these preliminary proposals are based on I-O framework, which is still the core frame of a TSA today; 2. all these preliminary proposals were limited to accounting the tourism characteristic industries, excluding the tourism activity related to non-characteristic industries. These preliminary researches made the concept of a TSA well known and acceptable in some countries.

As mentioned in chapter 1, Canada contributed the first published national TSA to the world. The National Task Force on Tourism Data (1987) asked Statistics Canada to develop a TSA for Canada. (Smith, 2000: 229) In 1991, Jocelyn Lapierre, an official in the Education, Culture and Tourism Division of Statistics Canada, led a research term and created a proposal for a Canadian TSA. Stewart Wells presented the proposal on the International Conference on Travel and Tourism statistics, held by WTO and Tourism Canada, in Ottawa.

The Canadian proposal in 1991 for the first time systematically presented the conceptual and methodological basis for the TSA, defined the TSA from three levels: concepts, structure and methodology, and assessed the economic magnitude of the whole tourism activities not limited to characteristic tourism industries. All these innovative achievements make the proposal become a milestone in TSA development.

In particular, one contribution was the proposal to transform research track from a SNA to a TSA. For example, the tables of the TSA methodological framework subsequently recommended by Eurostat, OECD, WTO and UN Statistics Division in 2001 were simplified

to make the system more operable especially on input-output tables. This proposal illustrates the complicated process in deducting the I-O tables of the SNA'93' into the I-O tables of a TSA. (Lapierre, et al, 1991; 19-23) From that, we can understand where the TSA came from, and further realize where the TSA will go.

2.3 Definition of TSA and tourism industry

2.3.1 Definition of a TSA

A TSA's definition research normally focuses on tourism-related definitions, rather than the definition of the TSA itself. A TSA can be defined from different perspectives.

From the original perspective of SA, the SA is defined as "those special constructs, which are semi-integrated with the central framework" (ECC, et al, 1993, paragraph 2.239). This definition stresses the linkage between SNA and a SA, but is too abstract to obtain TSA details.

From the TSA components perspective, the Canadian TSA was designed to "put tourism activities into perspective within the domestic economy". It is "a four-layer accounting system which collects, orders and interrelates statistics on all significant and measurable aspects of tourism activities, within a framework that structures tourism data according to the 'real world' relationships from which they originate". (Lapierre, et al, 1991: 17)

This definition highlighted the following significant facts:

1. The main function or purpose of a TSA is to put tourism activities into perspective within "the domestic economy"; that is, tourism is researched in a given area to discover tourism's contribution of tourism to the entire economy.

2. The information system proposed was a four “layers” system, including the monetary measures (covering tourism activities and non-tourism activities), the quantification (the volume statistics and employment figures), the characterization of tourism activities (economic details of tourism activities) and information related to tourism planning and analysis (data related to the social, demographic, economic and other aspects of tourism activities).

3. A TSA assesses all tourism activities; therefore, the definition of tourism is a crucial issue for building a TSA.

4. The structure of TSA will follow the prototype of the tourism activities, breaking down the data of other industries in a national account system to obtain all data related to tourism activities.

While only the “four layers” design is under discussion, the other three points are accepted around the world.

From the methodological perspective, Smith (2000) defined a TSA as “a method for creating a synthetic tourism industry by combining the bits and pieces of conventional industries that produce tourism commodities”. (Smith, 2000, 229) He emphasizes two essential qualities of a TSA: 1. the estimates of the size of tourism can be “reliably and consistently” compared to the size of traditional industries in a NA. Except this, no other method can do that. 2. Because the I-O matrices keep balance, the framework prevents an underestimate or an overestimate of the industry’s size. This definition made technical criteria to distinguish a TSA from other macroeconomic assessment systems for tourism, such as the NSA developed by the WTTC/WEFA.

The TSA's definition of is not much discussed in the literatures partially because the definition of a TSA is not significant in practice compared to the methodology; and partially because as an official institution, a TSA could be different in varied contexts. However, in refining what a TSA is, a clear definition is necessary.

2.3.2 Technical definition of tourism

The main purpose of a TSA is to estimate the size of tourism, no matter tourism activities or tourism industry. However, before clarifying the concepts of tourism activities or tourism industry, it is necessary to define the concept of tourism, not an easy task.

Numerous definitions of tourism exist and this is considered as a problem in research and practice. A survey of eighty travel and tourism studies conducted by Frechling in 1976 yielded forty-three definitions of the three terms of traveler, tourists and visitors. (Reported in Mathieson & Wall, 1982: 10) This problem of defining tourism and travel frustrated not only the research community but also governmental sectors. For example, the U.S. Senate Committee on Commerce, Science, and Transportation believed the problems were "due to the need to establish narrow 'operational' or functional definitions for tourism and/or travel to suit particular needs of researchers, business people, or government officials". (U.S. Senate Committee on Commerce, Science, and Transportation, 1978: 6) Therefore, most of these operational definitions have been "useful and meaningful" for the purpose of those constructing them, but "limited or unacceptable and incomparable" with the definitions established by others. (US Senate Committee on Commerce, Science, and Transportation, 1978: 6)

Leiper (1979) catalogued the approaches to define tourism into an “economic definition”, a “technical definition” and a “historical definition”. The first category emphasized tourism’s economic or business implications; and the last one attempt to embrace "the entire" essence of the subject. The technical definition was developed to meet the need to collect comparable statistics in order to monitor the size and characteristics of tourist markets. (Leiper, N, 1979: 392-394) A TSA is build up on the technical definition of tourism; hence, only technical definitions are discussed in this paper.

Concerning a TSA, the technical definitions are extremely significant. Therefore, the technical definitions of tourism are reviewed in this paragraph.

In 1937, the council of the League of Nations proposed the first operational definition of “foreign tourists”: anyone visiting a country, other than that in which he or she usually resides for a period of at least 24 hour. (OECD, 1973: 7) The committee explicitly excluded workers, migrants, commuters, students, one-day tourists and travelers who did not stop en route through a country on their way to another country. This definition made “tourism” and “tourist” a “particular technical meaning” for the first time, (Smith, 2000: 226) that is, tourism activities and tourists can be assessed technically. This definition was slightly amended by the International Union of Official Travel Organization (IUOTO) at the Dublin conference in 1950. Then in 1953, the UN Statistical Commission established the concept of “international visitor”.

In 1963, the UN Statistical Commission recommended a definition for the terms “visitor”, “tourist” and “excursionist” proposed by IUOTO. Visitor was defined as “any person visiting a country other than that in which he has his usual place of residence, for any reason other

than following an occupation remunerated from within the country visited”. This definition covered two categories, tourists and excursionists. Tourist referred to “temporary visitors staying at least twenty-four hours in the country visited and the purpose of whose journey can be classified under one of the following headings: leisure, business, family, mission, meeting”. (UNWTO, 1981:5)

These definitions were endorsed by the UN Statistical Commission in 1968. After that, the UNWTO adopted these definitions in the *World Tourism Statistics*, one of the most used statistics source for international tourism published by the UNWTO from 1947. (UNWTO, 1981:5; 1983)

The consensus on the definition of tourism was reached during the International Conference on Travel and Tourism Statistics, held by the UNWTO and the Government of Canada in Ottawa in June 1991. The delegates agreed that the concepts and terminology about the tourism should: 1. be of worldwide practical applicability, both to developing and developed nations; 2. emphasize simplicity and clarity; 3. be limited to strictly statistical purposes; 4. be consistent with current international standards and classification in related areas; that is as Smith mentioned, “permit integration with statistics drawn from System of National Accounts”; (Smith, 2000: 226) and 5. be expressed in simple and measurable terms. (UN & UNWTO, 1994: 3)

The Conference adopted a set of resolutions that defined the statistical needs of the industry for analysis, market research, industry performance and tourism forecasts; and defined that “Tourism comprises the activities of persons traveling to and staying in places outside their usual environment for not more than one consecutive year for leisure, business

and other purposes.” (UN & UNWTO, 1994: 5)

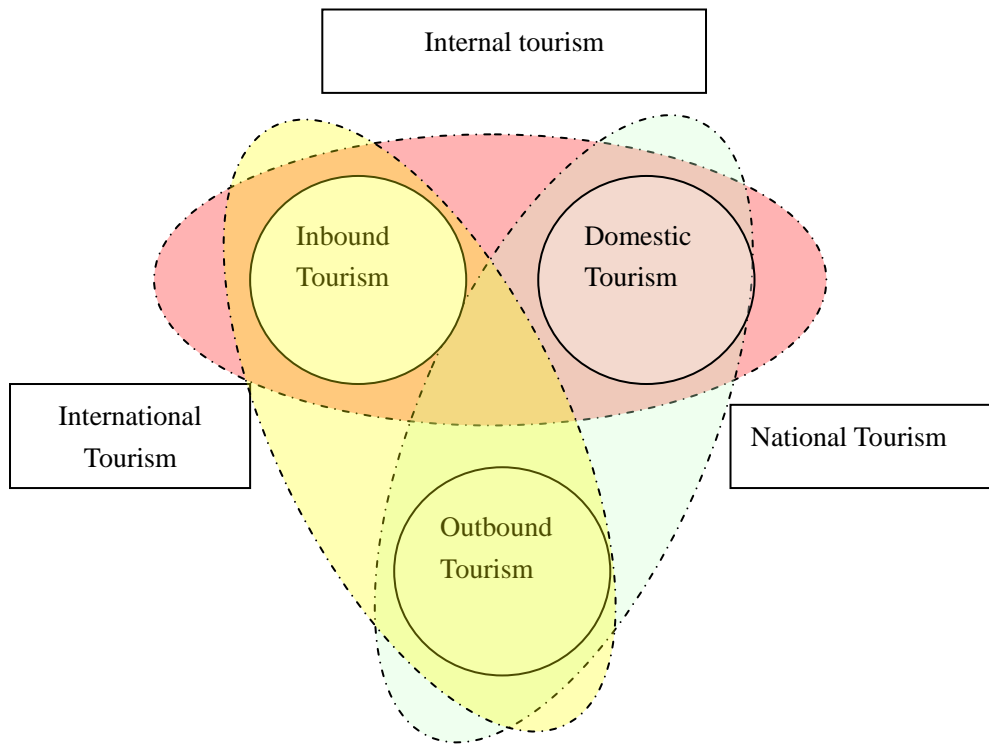
Consequently, the definition of tourism includes four limitation factors: firstly, tourism is a set of activities such as traveling and staying, rather than an industry; secondly, tourism consist of trips out of a person’s usual environment; thirdly, tourism’s time limitation is not more than one consecutive year; and the last one, the purpose of tourism includes not only leisure or pleasure, but also business, visiting friends and relatives and personal purpose such as health treatment. The latter three factors are technical limitations for statistics or marketing survey, and the first factor is a qualitative limitation.

Furthermore, Tourism is divided into three categories from a nation’s perspective: domestic tourism, inbound tourism and outbound tourism.

For example, in Canada, domestic tourism refers to the tourism by Canadian residents within Canada; inbound tourism refers to the tourism by non-Canadian residents within Canada; and outbound tourism refers to the tourism by Canadian residents outside Canada.

Three new concepts stem from these three basic conceptions by combining two of them. Internal tourism includes inbound tourism and domestic tourism, and internal tourism consumption is the basic data of the TSA. National tourism, which describes the activities of the residents in a given country of area, includes outbound tourism and domestic tourism. International tourism, which describes the payment balance of a given country of area, includes outbound tourism and inbound tourism. Figure 2 illustrates the relations between these two groups of concepts.

Figure 2 Tourism concepts



2.3.3 Tourism industry and tourism commodity

The UNWTO defines tourism as an activity rather than an industry according to the SNA'93 principles. However, the purpose of a TSA is to compare tourism with other industries in the national account reliably and consistently, if tourism is not an industry, how can we compare them? Furthermore, what exactly does a TSA assess?

From a traditional supply perspective, an industry is defined as “the set of all production units engaged primarily in the same or similar kinds of productive economic activities.” (UN, 1990: 8) That is, an industry is defined by what these units produce and how to produce them. However, a “same or similar” kind of productive economic activities can not be located in the tourism context. That is the reason why the definition of “tourism industry” is to some extent controversial.

Smith noted that the tourism industry is not an industry in the conventional sense ‘because its contents (individual business) do not provide a common product or service and they do not use the same fundamental technology. This is a critical point.’ (Smith, 1997: 251) Convention industries are defined from supply side. However, tourism has to be defined from the demand side. For example, the United Nations Conference on Trade and Development (UNCTAD) 1971 wrote that to define the tourist sector or tourism industry “can be broadly conceived as representing the sum of those industrial and commercial activities producing goods and services wholly or mainly consumed by foreign visitor or domestic tourists.” This definition suggested the following industries belong to tourism sector: accommodation,

restaurants, transportation, souvenir production, leisure facilities and government related to tourism. (UNCTAD, 1971: 30)

Leiper also suggested that “The tourism industry consists of all those firms, organizations, and facilities which are intended to serve the specific needs and wants of tourists.” (Leiper N, 1979: 400)

Although there is no tourism industry in the conventional sense of the term, one can still speak of tourism industries- these are “the industries that produce tourism commodities”. (Smith, 2001: 41)

Furthermore, in Canada, the scope of tourism industry was classified in two groups: the industries of the first group which, “in the absence of tourism, would essentially not exist”. These industries were to be considered 100% tourism industries. The industries of the second group which, “without tourism, would be significantly smaller”. These industries were “each assigned a percentage related to its contribution to the tourism industry (likely between 15% and 50%)”. (National Task Force on Tourism Data, 1985: 4)

This opinion was emphasized and developed by Canada National Task Force of Tourism according to Smith’s report in 1998. He noted that there were too many definitions for tourism, and he suggested tourism is “the aggregate of all businesses that directly provide goods or services to facilitate business, pleasure, and leisure activities away from the home environment”; moreover, a two tiers system for tourism industry were illustrated.

“This distinction can be formalized by considering travelers' commodities as belonging to two separate groups or ‘tiers.’ Tier 1 commodities are basically ‘pure tourism.’ Businesses that provide Tier 1 commodities, such as airlines, would cease to exist if there were no travel.

Tier 2 commodities, on the other hand, are ‘mixed’ commodities. These are provided by businesses such as restaurants that serve both travelers and residents. Tier 2 businesses would continue to exist if there were no travel, but they would exist at a substantially reduced level.” (Smith, 1988: 184) The tourism-related industries are categorized into two levels: tier 1 and tier 2 by the significance of visitors’ consumption impact on these industries. However, the two tiers is now seen as no longer relevant or current; that is, it has now been phased out as a concept because tourism ratio substitute this concept as a precise and quantitative concept.

Therefore, in TSA system, there are two categories related to tourism business: a tourism industry and non-tourism industry in TSA. A tourism industry is defined as an “industry which supplies goods and services to visitors and which relies on tourism for a significant part of its revenue.” (Delisle & Meis, 1998:73) Whilst, “non-tourism industries include all industries which do not supply goods or services directly to visitors or which, if there were no tourism, would continue to exist and would to do so without a significant reduction in their level of activity.” (Delisle & Meis, 1998:73)

Thus, a tourism commodity is defined as a product or service produced mostly for tourism. Similarly, a non-tourism commodity is defined as a product or service not characteristic of tourism. (Delisle & Meis, 1999:73)

The complex issue within the tourism activities is that the tourism industry does not produce or serve all tourists, and non-tourism industries also produce and serve tourists; nor are all tourism commodities supplied to visitors, as they are also supplied to non-visitors. Consequently, in a TSA system tourism industry, non-tourism industries, tourism commodities and non-tourism commodities all should be considered.

2.4 The methodology of TSA

2.4.1 Different planets or different satellites

The exploration and discussion on the TSA methodology span the entire last decade of the last century. As mentioned previously, a controversial methodology to assess the tourism's magnitude was published in 1993. The WTTC used its methodology to assess the contribution of "Travel & Tourism" to the world economy in order to "convince government to include Travel & Tourism in their charts of National Accounts". (WTTC, 1993: 1) Furthermore, in 1996 WTTC/WEFA published their 20 principles for travel and tourism NSA. Some principles led a methodological gap between the WTTC/WEFA's NSA and the TSA. For example, principle 1 declared that "The nomenclature 'tourism' for purpose of the Satellite Account should be superseded by the nomenclature 'Travel & Tourism'." Additionally, its methodology relied on an economic model rather than the framework of the National Account (WTTC/WEFA, 1996) The TSA recommended by the UNWTO and the OECD are based on the SNA in each given country, and the basic concepts of tourism given by UNWTO. On the contrary, the WTTC/WEFA's approach is based on comparison between different countries with U.S not the national account system, and the concepts are totally different from that of UNWTO.

The WTTC's approach provides a possibility to assess the contribution of travel and tourism under the condition that special data related to tourism can not be acquired within a given country. Compared with building a tourism statistical system, this approach is inexpensive and time-saving. However, the methodology of WTTC had flaws, and the WTTC

conclusion generally inflated that of the TSA greatly.

The discussion on the differences of the TSA methodology began with Boskin's "cold review" report on WTTC/WEFA's NSA in 1996. Although he "did not examine every single assumption that the WEFA Group made or go back over all the source data" (Boskin, 1996: 4-5), he concluded "a good job has been done in moving the work from a novel, innovative beginning, to developing a much more credible and increasingly professional approach". (Boskin, 1996:9) This conclusion was too vague to give us any valuable facts concerning the differences between the methodology of WTTC and UNWTO although he did discuss some contentious issues and gave some recommendations.

In regard to Boskin's "cold review", Smith discussed the methodological differences between TSA of UNWTO and WTTC/WEFA's NSA from 4 perspectives: definitions, data sources, concepts measured, and analytical techniques. He concluded WTTC/WEFA's "methodology is flawed; does not use UNWTO/UN definitions, and is not based on accepted national accounting principles for measuring the size of an industry". (Smith, 1997: 262)The paper demonstrated successfully the NSA of WTTC/WEFA was totally different from that of TSA.

Hansen & Jensen also could not accept WTTC's employment forecast associated with travel and tourism in Denmark. They compared the approaches of the Danish Tourist Board, the Danish Institute of Border Region Studies and the WTTC. The conclusions included the huge inflation derived from WTTC's approach stemmed from the fact that the WTTC use the input-output table from West Germany, they used US business travel patterns for Danish economy, and the WTTC included all expenditures before and after trips including public

consumption and tourism investment. So for “those who are interested in the real economy of Denmark, the WTTC calculations produce information of little or even negative value.” (Hansen & Jensen, 1996: 301)

2.4.2 The methodology differences of the UNWTO and OECD TSA

Before the amalgamation of the UNWTO and the OECD methodology, some literatures discussed the methodological differences.

The Department for Culture, Media and Sport of the U.K prepared a feasibility report for adopting a TSA in U.K. in 1998. In this report, four TSA versions were compared, including the Statistics Canada version, the UNWTO version, the OECD version and the WTTC version. The author stated that the TSA concept continues to be “the subject of discussion and consultation”, and “a narrow of differences between at least the OECD and UNWTO version.” However, there is “likely to be continuing differences with the broad definitions used by WTTC which may not be so easily resolved”. (The Department for Culture, Media and Sport of U.K, 1998: 8) This report’s contribution was its summary of the methodological differences between the various versions of TSAs and provided a practical model of the feasibility study on the adoption of a TSA in a given area.

In 1999, two reports were compiled to compare the differences between the UNWTO TSA, OECD TSA and the Canadian TSA. One was prepared by Statistics Canada. This report compared the detail methods of the UNWTO TSA, OECD TSA and Canadian TSA from the Canadian perspective. This comparative analysis implied that these TSAs were generally similar in their core methodology with little differences on detailed conceptions.

Libreros (Belgium) & Quevedo (Spain) prepared another compared analysis report for the OECD-EUROSTAT-UNWTO inter-secretariat working group, which was built on the Enzo Paci World Conference in 1999 to develop a common conceptual framework of TSAs. This 28 page report also provided the same conclusions as that of the Canadian report. These two reports prophesied the fusion of the UNWTO and OECD TSA.

2.5 The implementation experience of the TSA

2.5.1 The profile of the implementation of National TSA

The first published national TSA was set up by Canada in 1991, and the TSA conclusions were published in 1994. After that, a new ferment of the discussion and research on the methodology of TSA grew. In Europe, the member countries of the OECD such as Australia, Finland, France, Iceland, Sweden, Norway, started their developing program in the second half of 1990s. Canada furthered its exploration on regional TSAs. U.S. improved the US Travel and Tourism Satellite Accounts (TTSA) system, which analyzed the economic contribution of both the travel industry and the tourism industry.

As a milestone, *Tourism Satellite Account: Recommended Methodological Framework* declares the reconciliation and integration of the methodology of UNWTO, OECD and EEC-Eurostat. The implementation of TSA worldwide relies on increasingly on this manual.

In 2001, the UNWTO Department of Statistics and Economic Measurement of Tourism undertook an evaluation of the implementation of the TSA worldwide. With the information that was then available, 44 countries were identified as having already established a TSA, or who were expecting to do so before 2003, or who had recently developed relevant studies on

the economic importance of tourism (UNWTO 2001, 1:192).

In 2004, a second assessment was announced. 62 countries worldwide had been identified as having implemented a TSA or certain form of it or who had done some preliminary work with the object of measuring the economic importance of tourism. (Libreros, et al, 2006: 83) Most of the countries relied on TSA-RMF to construct the national TSA (2001) or the OECD manual on tourism satellite accounts and employment (2000), such as Australia, France, Mexico, New Zealand, Finland, and Sweden etc. From 2001, both implementation and improvement were spreading rapidly, not just in Europe, but also other countries, such as Chile, Colombia in South America, Indonesia, Philippines in Asia. (Libreros, et al, 2006: 86)

However, some alternative methodology was also used. For example, in 1996, the Danish Tourism Board started a project to provide a reliable key economic data on tourism at the regional level, financed by the Danish Ministry of Business and Industry. Based on the UNWTO's definitions of tourism, a regional economic model was used to construct Danish Tourism Satellite Account, which was not based on an input/output structure analysis but a simplified economic impact model; Therefore, OECD commented on the Danish experiences as "an alternative method of estimating the economic impact of tourism in Denmark". (OECD, 2000: 218).

Another example is that the methodology of the Korean TSA was based on the indirect approach developed by the WTTC.

The UK government was cautious about the TSA development because of the monetary cost and other factors. Therefore, a feasibility Study of compiling a TSA was completed in 1998. However, a regional TSA was developed in Scotland.

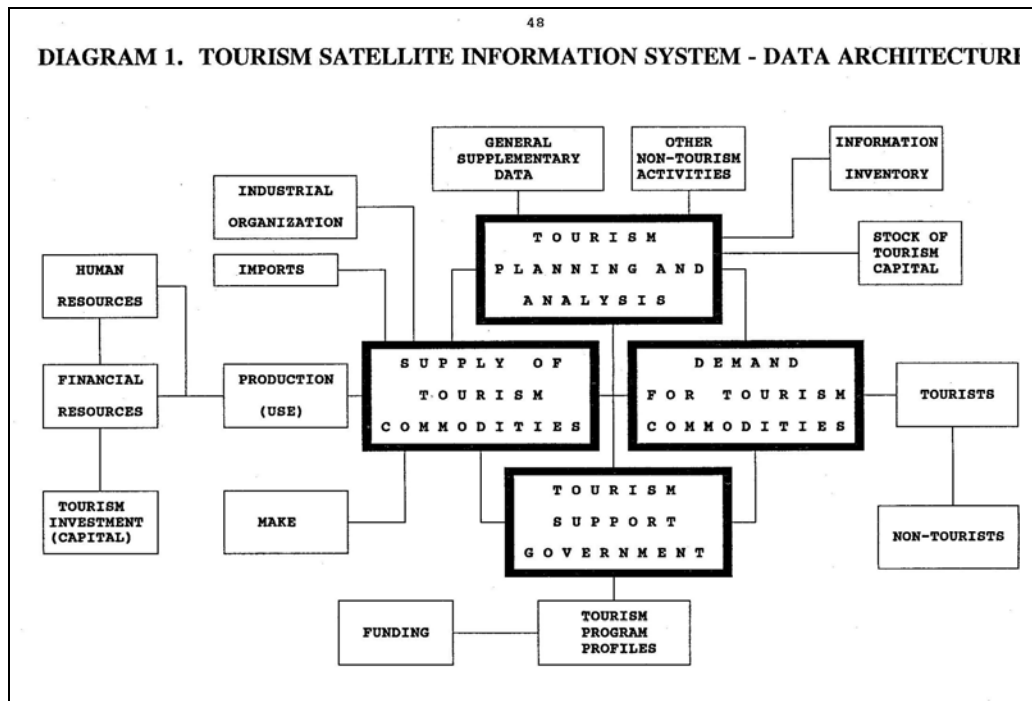
2.5.2 Canada's Experience

Every developmental stage of the TSA benefited from the Canadian TSA experiences since the Canadian government (including Statistics Canada) demonstrated great creativity and execution power in this area.

On the subject of building a TSA, the first report was *the Development of Tourism Satellite Accounts for Canada* which was delivered to the National Task Force on Tourism Data in 1987. This report was the blueprint for the TSA for Canada; moreover, it discussed crucial concepts and potential cells in input-output tables; but also included a feasibility report for building a TSA, discussing the cost and potential issues in data collection.

The proposal for the Canada TSA in 1991 proposed and discussed every details of a system of TSA, including concepts, framework and data collection; moreover, it provided a Tourism Satellite information System is designed to provide different users more friendly and accessible tourism information system as illustrated in figure 3. Government, planer, business sectors and marketing promoters can be provided special information which they are interested in, rather than the whole information in the TSA.

Figure 3 Tourism Satellite Information System



(Source: Statistics Canada, 1991:48)

Barber-Dueck, et al, (2002), governmental employees for Statistics Canada, published their research paper concerning the provincial and territorial TSA (PTSA) for Canada 1996 on-line in the Statistics Canada web pages. They chose 1996 as a possible reference year primary because this was the earliest year for which provincial input-output tables were available by province and territory based on the SNA'93. The concepts, methodology and framework of the PTSA have small differences from Canada's national TSA. The development of PTSA benefited from a well-developed sub-national economic accounting structure. For example, the main tourism survey, Canada Travel Survey (CTS) and International Travel Survey (ITS), provided detailed data for both the national TSA and PTSA

by recording every trip in each provincial area. Moreover, Canada also benefited from an occasional series of I-O Tables (1974, 1979, 1984, 1990 and 1996).

Building a TSA system relies strongly on the I-O tables. I-O tables which are compiled every five or six years, even more years; therefore the results of TSA have to be limited to the years when I-O tables were provided, and updated every 4 to 6 years with the evolution of I-O tables, thus losing timeliness. However, from the research perspective, “this lag is not likely to be as serious as one might assume”. (Smith, 2000: 230) The Input-output matrices illustrate the fundamental relationships among industries in terms of production and consumptions. “These basic relationships usually do not change dramatically over a few years”. (Smith, 2000: 230) On the other hand, in terms of providing information support for decision making in policy analysis and planning, the more timely data are indispensable.

Therefore, the National Tourism Indicators (NTI) was developed. The NTI provided timely information which are “based on the ratios and relationships identified in TSA, and combine these with data drawn from the visitor surveys to provide quarterly data within 75 days after the end of the reference quarter”. (Smith, 2000: 232) The NTI covers the domestic supply of tourism commodities, the demand of these commodities by Canadian tourists and international tourist, and the employment and GDP generated as a result of this demand, updating every quarter. The data sources of the NTI include the TSA, which provides benchmark totals and some critical variables such as the ratio of demand to supply, CTS and ITS .

Canada is going to refine their TSA from two perspectives: developing an expanded labor market module to provide more detailed information including part-time, full-time, seasonal

and year round jobs, hours and wages, and PTSA. Besides the NTI, an analysis tool, a national tourism Economic Impact Model is under development based on the national TSA to assess direct and indirect impact of tourism rather than only direct impact in the TSA. (Smith, 2000: 231-233)

Canadian experiences are precious resource for all the countries; almost all TSA issues are discussed and given answers in the Canadian perspective. Developing a TSA is a labor and data intensive job; therefore, strong decision, stout faith and implementation capability are all indispensable during the period of developing or refining a TSA system. Canada leads the research in this area from 1991, showing the great creativity, pioneered technique and faith for the reliability of the data. The development of TSA around the world benefits from Canadian research and exploration on this area.

2.5.3 Experience of other countries

Much of the literature also illustrated the implementation of TSA in different countries; such as, Rivera's (1999) work on Mexican experience in founding its Tourism Satellite Account.

The OECD (2000) illustrates the TSA implement experiences of 16 countries including Australia, France, Mexico, New Zealand, U.K, and U.S. Some experiences reminded us that the development of the TSA in Europe; for example, in Austria, the TEA was used as the starting point for the development of the TSA. Results were submitted for reference years 1985, 1990, 1993 and 1996. TEA is the former version of TSA developed by OECD in 1991. Poland also started to develop its TSA based on the TEA methodology in 1996. In 2000,

Switzerland launched a project to adjust the TEAs system to TSA system reacting to the development of methodology recommended by the OECD.

The experience of the U.S. was illustrated in 1998 (Okubo, & Planting, 1998) and in 2000 (OECD, 2000: 264-267). The U.S. Travel and Tourism Satellite Account (TTSA) has a slight different name and alternative definitions system for TTSA. Table 2 shows the little differences between the definitions used by Bureau of Economic Analysis of U.S. (BEA), OECD and WTO. BEA avoided the discussion on what is the exactly the tourism activities and tourism industry by using the relatively faint concept of travel and tourism. The main definition methods and criteria were similar to that of the OECD and the WTO. Moreover, the framework of TTSA was also based on Input-output matrices, and the foundational data came from the National Account and special tourism Survey. Therefore, U.S TTSA was regarded as one of the important formal experiences of the TSA.

Table 2 Alternative framework for measuring travel and tourism activities

	BEA	OECD	WTO
Statistical unit	Visitor	Visitor	Visitor
Concept of visitor	Person traveling outside of usual environment for less than 12 months.	Same as BEA	Same as BEA
Concept of usual environment	Place of usual activities—residence, work, leisure. Minimum distance determined by available data sources—between 50 and 100 miles from residence.	Place of usual activities—residence, work, leisure. Tourism determined by minimum distance from usual environment. Minimum distance defined by country	Same as OECD
Criteria distinguishing tourism from non-tourism expenditures.	Direct contact between visitor and supplier of tourism commodities.	Same as BEA	Same as BEA
Tourism demand	Expenditures by visitors	Same as BEA	Same as BEA
Tourism commodities/tourism industries	Determined by what U.S. visitors do	Determined by share of commodity purchased by visitors or produced primarily as an attraction for visitors.	Same as OECD
Infrastructure investments—private and public.	Future extension of TTSA's	Private purchases of fixed assets, for example, capital investment in hotel structures. Public purchases include airports, long-distance bus stations. List still under discussion	Private purchases of fixed assets are same as OECD Public purchases not discussed

BEA Bureau of Economic Analysis
 OECD Organisation for Economic Co-operation and Development
 WTO World Tourism Organization

(Resources: Okubo, & Planting, 1998: 11)

Because of the rapid growth of international tourism in 1980s, Australia began research on building an Australian TSA (ATSA) in 1996. In 2000, Australia released its first TSA for the benchmark year 1997-1998. The conclusions showed that tourism's contribution (4.3%) to gross total value added were just lower than mining (4.7%), but higher than agriculture, forestry and fishing (3.3%), communication services (3.2%) and electricity, gas and water (2.7%). Although some institutions debated that the ATSA results showed a lower economic contribution by tourism than had previously been estimated in general, industries and government bodies widely welcomed the availability of the first ATSA. Strong interests were encouraged to develop a sub-national TSA, refinement of the ATSA data and assessing the indirect economic impacts of tourism. (Fleetwood, 2005: 6). To enable effective international comparison, the ATSA compared its results with the results from New Zealand, Canada, and U.S. by adjusting a small number of variables in the ATSA. Some facts were found; such as, tourism's share of gross value added is higher in Australia than in Canada or the U.S., but lower than in New Zealand. (Fleetwood, 2005: 7) Although all these achievements were exciting, it is believed that it will be a long time before the potential of the TSA can be fully exploited.

UK executed a feasibility study for compiling a TSA for the UK in 1998. This report summarizes critically the development and methodology of TSA, compares the TEA developed by OECD and TSA, and estimates the data sources and main issues for building a TSA in the UK. (DCMS, 1998) The positive conclusion of this report led to the first step project of the UK TSA in 2004. The report of UK TSA first steps project presents the preliminary results of UK TSA, as well as summaries the development, methodology and

implementation experiences of TSA. Especially the parts of the comparison of different methodology and different implementation experiences of various countries are extremely comprehensive and detailed. (DCMS, 2004) Some conclusions are enlightening. For instance, the report declared a two “pronged approach” to the derivation of a TSA was appropriate. The first strand of a project could construct an “experimental” TSA, which would “use existing data sources and require some estimation to derive an experimental account”. This method could provide a conclusion on the importance and magnitude of tourism, but might be subject to error from the data source, structure and concepts. The second strand of the TSA project should seek to “improve the reliability of the account in the longer term”. This method might harmonize with the framework and method of the SNA, and continue refining data resources and methodology. (DCMS, 2004: 12)

The next step of the UK TSA project will focus on institutional and structural developments, and data quality improvement, including: improving and intensifying the UK TSA; that a ‘user survey’ be carried out in the context of the TSA First Steps dissemination process; investigating private sector tourism providers involvement (or their representatives) in TSA development; monitoring the conceptual development of the TSA internationally; investigating the creation of a Tourism Statistics Unit for the UK, as recommended in the Review of Tourism Statistics; the collection of information on tourists’ expenditure in more detail, giving more prominence in the surveys of tourists in the future, and harmonizing all related surveys such as International Passenger Survey, UK Tourism Survey and GB Day Visits Survey. (DCMS, 2004: X)

Sharma & Olsen (2002) proposes a framework for evaluating the implementation of the

TSA .They (2005) described the process of implementing TSA in Tanzania, and to presented the benefits of using a “bottom-up” approach in implementing its framework.

2.5.4 The implementation experience of the sub-national TSA

Few sub-national TSAs were developed because the development of TSA rely largely on the I-O tables in the National Account. Therefore, a full TSA can only be constructed for areas which have a set of economic accounts preferably supported by I-O tables. Therefore, “full TSA development is likely to be limited to nation states and those constituent regions which have well developed regional accounts”. (DCMS, 2004: 13) Although broad and strong attentions for sub-national TSA are increasingly growing, some literatures discuss or describe the sub-nation TSA compared to national TSA.

France, Norway and Canada have developed the regional TSA after implementation of the national TSA. Norway built the regional TSA (RTSA) based on the regional account which was developed in Norway and the experiences of national TSA. (Braendvang, et al, 2001)

Jones highlighted the value of the RTSA using a case study of the Norway RTSA from the policy making perspective. (Jones, 2003) He examined some methodological issues, such as issues in applying I-O tables and issues of different approaches of building a RTSA. He believed that although I-O framework has some limitations, there is little doubt that I-O remains “the most comprehensive method available for studying the impact of tourism” (Fletcher, 1989, p. 529); and I-O matrices can enhance the TSA system at either a national or regional spatial scale. Therefore it will be some time before the RTSA is improved to be a

useful policy tool. (Jones, 2003: 2793)

Two approaches were applied to construct a regional TSA: top-down approach, regionalizing the National TSA (TSA-R), and bottom-up approach, constructing a regional TSA (R-TSA). (Jones, 2005: 1) Jones believed that if a regional TSA was going to be built, regions need to carefully consider the scope and nature of the account they need. Moreover, he declared that regional tourism economic accounts will vary widely, driven by regional needs and data availability. (Jones, 2005: 16)

2.6 Summary

With the development of only over 20 years, the literatures concerning TSA covered four main topics: statistics definitions, methodology, implementation and new development of TSA.

Some universal tourism organization or economic organizations, such as the UNWTO, the OECD, the UN, the Eurostat, contributed greatly to the formulation of basic definitions. With the first published national TSA around world, Canada became the leader in creating a national TSA, developing a regional TSA by using “top-down” approach, and developing economic analysis tool based on the national TSA. Finally, a universal guideline for national TSA was published in 2001 by the UN, WTO, OECD and Eurostat, which significantly benefited from some countries’ initial work, some academic scholars’ critical research and effective cooperation between different universal organizations.

After the consent on the methodology as achieved, the implementation and refinement of the TSA drew much more attentions. The difficulties in refining the quality of data resources

and data collection were greatly highlighted; however, the solutions to these problems still frustrate academic scholars and executors because of the complication in keeping the balance between the requirement of authenticity and limited sources such as money, time and labors.

Some regional TSA including R-TSA and TSA-R, have been built as a mirror of a national TSA in a given regions. The implementation of regional TSAs showed more complexity in its methodology, the data resource and the data collections for the area adopted by a TSA became smaller. Therefore, the doubt about whether a TSA can be adopted generally in a regional area is still vague for some academic scholars.

Chapter 3: Methodology

3. 1 Research Design

3.1.1 Qualitative approach selection

A qualitative approach has been adopted for this study. Riley (1996) defined a qualitative approach as an investigation taking place in “settings where subjects of interest exist, in effort to bring meaning and understanding to different phenomena, as seen by the people who experience them.” Moreover, Riley noted that the data “does not lend itself to quantification because the inquirer is seeking to describe parts of a complicated world through the situational and perspectival differences of people.” Although this approach is dominated by knowledge and interpretation of researchers, qualitative researchers are trying to “represent the knowledge as faithfully as possible” (Riley, 1996: 38).

Dann & Philips (2000) noted 7 advantages of qualitative methods in tourism research:

1. Qualitative methods are particularly useful “in theory construction, for exploring relationships and concepts rather than verifying existing hypotheses”. That is, qualitative research is more suitable to pilot investigations.

2. They frequently yield “the valid information (rather) than the reliable information typically yielded by quantitative techniques.”

3. They may also be beneficial in gaining access to the field, particularly to “hidden populations” who are perceived as deviant such as bar girls.

4. They may be more appropriate for the examination of delicate topics; for example, research on the discriminatory practices of tourism employment are far better handled through a small number of in-depth interviews than a telephone survey or mailed questionnaires.

5. They are more process orientated; therefore, they are quite appropriate for “longitudinal study which requires a focus on mental and behavioral development”.

6. They can “accumulate a greater depth of data than that customarily acquired via quantitative techniques based solely on sampling”.

7. They are more “freewheeling” than quantitative techniques; therefore, they are more likely to have the effect of “modifying initial theory or even of refocusing an entire research project.” (Dann & Philips 2000: 253-255)

The disadvantages of qualitative method are also well known. This method may lead to abuse of interpretation for author’s special use and over-dependence on author’s knowledge and experiences. Moreover, qualitative method normally can not provide quantitative results which are believed to be more valuable in implementation and practice. Actually, quantitative method is a widely accepted and conventional method in tourism research area. It is believed to dominate tourism research area for a long time. (Dann & Philips, 2000) Quantitative method is normally used to research tourism from business perspective or management perspective.

However, in this research, a qualitative approach has been selected because of the main research problems.

The purposes of the paper include discussing the feasibility of TSA in a municipal area, exploring the structure of a municipal TSA, and discussing a practical TSA definition and

essential contents of a TSA. A pilot investigation concerning a municipal TSA is executed in this research with some assumptions on methodology and structural adjustments in a municipal TSA.

Certain types of social research problems call for specific approaches. Therefore, in this explorative research, a qualitative approach has been adopted for this study, and understanding the context and further interpretation are believed to be compulsory.

3.1.2 Strategies and methods

In this study, one strategy and two methods associated with the qualitative approach are used. The strategy refers to the case study; whilst the two methods refer to interpretation and structuralism.

Case study

The case study is a strategy, “in which the researcher explores in depth a program, an event, an activity, a process, or one or more individuals” (Creswell, 2003: 15). A case study is expected to catch the both complexity and particularity of a single case, “coming to understand its activity within important circumstances” (Stake, 1995: XI). Moreover, when a case study is carried out, normally “both their uniqueness and commonality” of a single case are meaningful. (Stake, 1995: 1)

Stake categorized case studies into intrinsic case study, instrumental case study, and collective case study. If a case study is carried out because of the particularity of the case rather than the requirement to understand some general problem, this method could be titled as an “intrinsic case study”. If a case study is carried out for understanding and getting insight

into a certain question, this method could be entitled “instrumental case study”. Furthermore, if several cases are used to understanding the particular question, it could be considered as a “collective case study”. (Stake, 1995: 3-4) Normally, in an intrinsic case study, “the case is dominant; the case is of the highest importance”. Whilst, in an instrumental case study, “issue is dominant; we start and end with issues dominant” (Stake, 1995: 16; 2000: 437)

Stake also noted that it is difficult to generalize a concept or theory by using a case study because only one or a few cases are studied. However, a case study can contribute to generalization at length. In a case study, it is common in the research that “increasingly the generalization is refined, not a new generalization but a modified generalization”; that is, it is seldom that an entirely new understanding is reached but the refinement of understanding (Stake, 1995: 7)

No municipal TSA has been announced anywhere; therefore, the case in Suzhou is extremely particular. Moreover, although two regional TSA have been built recently in China, the feasibility of implementing a municipal TSA in China is still an important issue. Thus, the purpose of this study is to understand the adoption of a municipal TSA in a special environment of China.

Interpretation

Wolcott (2001) proposed a distinction between analysis and interpretation. Analysis is a standard process for observing, measuring, and communicating with others about the nature of the real world. On the contrary, interpretation is not “derived from rigorous, agreed-upon, carefully specified procedures, but from our efforts at sense making, a human activity that includes intuition, past experience, emotion” (Wolcott, 2001: 33). Therefore, from this

perspective, analysis is a more objective process using various scientific methods, and interpretation is a more subjective process to construct the meaning of the facts based on personal education, past experiences, and so on.

As a research method, interpretation is believed to be the most distinctive characteristic of the qualitative approach. In a case study, interpretation should be carried out during the entire field research. Moreover, with the observation and interpretation process, a research question could be “modified or even replaced” in order to understand the case thoroughly. By complying with the rule of evidence and rules of logic, researchers can locate the final assertions by analysis and interpretation (Stake, 1995: 9).

Furthermore, standard qualitative designs call for “the person most responsible for interpretation to be in the field, making observation, exercising subjective judgment, analyzing and synthesizing, all the while realizing their own consciousness” (Stake, 1995: 41). To the contrary, standard quantitative designs call for an effort to “limit the role of personal interpretation” (Stake, 1995: 41).

Structuralism

The study of the social world from a structural perspective reveals “certain organization rules and patterns that give it a definite form and structure”. This form and pattern is “the proper subject of structural analysis”. The social phenomena are viewed as “constituent parts of complex system (or wholes). Their meaning is determined by their organizational role within a complex system” (Baronov, 2004: 85).

Moreover, systems are believed to be open and self-regulating. Systems are open; that is, they “interact with and are influenced by the environment outside the immediate system.”

Thus, systems are “dynamic” and can be “highly flexible”. They are also self-regulating; that is, they rely upon “a set of internal mechanisms to sustain themselves.” Moreover, each system is able to “adapt to social changes and recognize its parts to meet changing needs” (Baronov, 2004: 86).

The Suzhou municipal government is viewed as being an integrated system. Its Tourism Bureau is one part of it. Building a municipal TSA is not a project just belonging to the Suzhou Tourism Bureau, but a project associated with many parts of Suzhou municipal government. Therefore, adoption of a TSA in Suzhou municipality should be analyzed within the context of the Suzhou municipality.

3.1.3 The selection of study area and sites

Identification of the case is a crucial process in a case study, for the reason that a case study is “both process of inquiry about the case and the product of that inquiry”. Normally, “the more the object of study is a specific, unique, bounded system, the greater the usefulness of the epistemological rationales” (Stake, 2000: 436) Therefore, the selection of the case study follows these requirements of particularity, uniqueness, and bounded system. A bounded system means that a case is an integrated system and can be clearly defined from certain perspective.

According these principles, the reasons for choosing Suzhou as the research site can be indicated as follows:

1. Suzhou is a comparatively developed city with the largest GDP in Jiangsu Province. It is also one of the most famous international and domestic tourism destinations in China;

therefore, the local government, including Suzhou Tourism Administration, is eager to build a municipal TSA to assess the magnitude of tourism industry. Moreover, it also can afford to build a municipal TSA with considerable municipal financial support, for developing a municipal TSA is not only money-consuming but also requires cooperation. Therefore, Suzhou could be the first city having a municipal TSA in China, if not the first one in the world.

2. As a typical large city in China, Suzhou is famous for its traditional private gardens. The tourism industry has become increasingly important but is still not dominant in the municipal economy. Therefore, the experience of Suzhou is valuable to many similar cities both within and outside of China.

3. The first TSA developed in China is a regional rather than a national TSA. It is rooted in Jiangsu Province. During the period of developing this regional TSA, the program team researched and surveyed in Suzhou as one of their main research sites. Therefore, certain recognition of the TSAs among the local government and tourism industry exists.

4. Suzhou is a bounded system administratively. The boundary of the case study can be defined clearly. Therefore, the case study in Suzhou can be carried out smoothly.

3.1.4 Time frame of the research

The research was comprised five phases chronologically, namely (1) literature review, (2) research design, (3) site research and data collection, (4) data analysis and complementary research., and (5) writing thesis.

The review of literature in English was largely done during January to April 2006 at the

University of Waterloo, and the Chinese part was carried out later in May to June 2006 in Beijing.

A research proposal was completed in April 2006 as the course requirement of TOUR 602, in which a large part of research design was completed with objectives, methodology and anticipated results briefly stated. The further specification of study sites and interview design (including key informant selection and design of interview questions) was completed after preliminary field work..

Site research was carried out in Suzhou during July 2006. I worked in the Planning and Statistics Department of Suzhou Tourism Administration as an assistant for 30 days to draw up a practical scheme for developing a municipal TSA. During the period, several research techniques were used, including participant observation, in-depth interviews, and secondary data searching and collection.

After the research in Suzhou, I visited officials of Jiangsu Tourism Administration in Nanjing and Zhejiang Tourism Administration in Hangzhou. I interviewed the officials who took charge regional TSA development, and collected the data of Jiangsu Regional TSA and Zhejiang Regional TSA.

After the completion of fieldwork, the process of analysis and interpretation of the data lasted from early September, 2006 to the end of November, 2006. At the same time, thesis writing was executed. The final version of the thesis was finished at the end of December, 2006.

3. 2 Methods

As mentioned before, a qualitative approach was adopted in this research. Thus, several of the usual research methods associated with a qualitative approach were used. These included field observation, open-ended interviews and qualitative content analysis.

3.2.1 Participant observation

I persuaded the leader of the Suzhou Tourism Administration to let me work in the Planning and Statistics Office for a month to provide some help in preparing a report concerning the practicality of building a municipal TSA. Before I started to collect pertinent data and interview officials, I worked with them to ensure they felt comfortable with me. Although my observer role was known, I hoped that they believed I was one of them and forgot that I came to do special research through working as a participant. This method was helpful to understand the Chinese government's working system, and also helpful for future data collection.

3.2.2 Open-ended Interviews

Open-ended interviews are a normal method in a qualitative approach. During the interviews, the researcher does not provide any or little optional answers to respondents. The respondents can express their opinion freely. Therefore, this method is used to create an in-depth interview.

I visited Statistics Jiangsu, Statistics Suzhou, Jiangsu Tourism Administration and Suzhou Tourism Administration. I held semi-structured interviews with some related officials.

Interview questions

Part I Self introduction and introduction of the research topic

Dear Sir, thank you for taking time to do this interview with me. I am a graduate student from the University of Waterloo. Now I am doing my master's thesis on the municipal Tourism Satellite Account. Actually there is no municipal TSA in China, however Suzhou government is attempting to develop the first municipal TSA in China.

A Tourism Satellite Account is a revolutionary statistical system to assess the magnitude of the tourism industry, in order to compare it with other industries in the National Account System. One of the main outcomes is a measure of Tourism Value Added.

Part II The perception of TSA

1. What do you think the Tourism Satellite Account is? How do you appraise the TSA?
Why do you think it is important for the Tourism Administration or the Tourism Industry?
2. What are the most useful statistical data for you?
3. In your opinion, what are the main purposes of a municipal TSA? Or who should a municipal TSA serve - government, planners or the tourism industry?

Part III Costs and benefits

1. Developing a municipal TSA system needs the cooperation of many departments such as the statistics department, cultural department, garden department, and so on. Moreover, developing a municipal TSA also needs a lot of funding. How can you evaluate the benefits and costs of developing a municipal TSA?

During this period a number of interviews were conducted with tourism and statistics officials to identify their perceptions and opinions of TSAs generally. Those interviewed

included the following people:

Date	Interviewee	Position
26/04/06	Haiyan Zhang	Leader, Statistics Office of Chinese National Tourism Administration (CNTA);
26/04/06	Zhengming Jiang	Official, Statistics office of CNTA;
12/05/06	Bing Tang	Leader, Tourism Cities Office of CNTA;
17/05/06	Ling Long	Leader, External Trade Office of Statistics China;
17/05/06	Xiaohong Cui	Leader, External Trade Office of Statistics China;
05/06/06	Wenjuan Shen	Chairman, Suzhou Tourism Administration;
05/06/06	Weirong Xu	Leader, Administration Office of Suzhou Tourism Administration;
06/06	Rudong Wang	Leader, Planning and Statistics Office of Suzhou Tourism Administration;
06/06	Peilei Shi	Official, Planning and Statistics Office of Suzhou Tourism Administration;
06/06	Jiajia Tao	Official, Planning and Statistics Office of Suzhou Tourism Administration;
14/06/06	Sheng Wu	Vice-leader, External Trade Office of Statistics Suzhou;
21/06/06	Xuewen Shao	Vice-leader, Planning and Statistics Office of Jiangsu Province Tourism Administration;
21/06/06	Jinsong Chen	Official, Planning and Statistics Office of Jiangsu Province Tourism Administration, who enrolled in building the Jiangsu Regional TSA;

21/06/06 Ge Xiao Leader, Planning and Statistics Office of Zhejiang Province

Tourism Administration;

21/06/06 Xiongwen Zhang Official, Planning and Statistics Office of Zhejiang

Province Tourism Administration.

3.2.3 Qualitative Content Analysis

Some preliminary analysis of data were conducted to identify missing information and to give some suggestions to the Suzhou Tourism Administration; however, the in-depth analysis was performed in Canada between September and December 2006.

The qualitative analysis tracked back to the basic concepts of the satellite account in SNA'93' and the development of TSA, compared national and a regional TSA implementation experiences, and explored the methodology and structure of a municipal TSA. I also compared the regional TSA of China with the regional TSAs in Canada and UK.

3.2.4 Limitations

The program of developing a municipal TSA in Suzhou is not complete program, but is in the preliminary stage. Therefore, some issues are still hidden to researchers and new issues were revealed. In addition, the fact that no municipal TSA has been published before also restricts an in-depth discussion on this topic.

Just as the name of the TSA implied, the TSA is a supplementary system to the SNA in a local municipality; that is, the TSA is one part of the entire statistical system. However, because of limited time and funds I could not research the entire municipal system, but

focused solely on the tourism bureau and the statistics bureau.

Some information on the methodology and the implementation of TSAs was published in languages other than English and Chinese, such as in French, Spanish, which I can not understand.

3.3 Data Sources

In addition to the first-hand data gained through interviews and observations, secondary data comprises a large part of the data on which this research is based. The main sources of secondary data are listed below:

Official TSA manuals compiled by WTO, OECD and WTTC;

Experiences on developing a national TSA of other countries, such as Canada, Australia, and U.S. etc;

Experience on developing a regional TSA of other countries, such as Canada, U.K and Norway;

The academic literature on the TSA methodology;

The methodology and conclusions of the Jiangsu Province Regional TSA of China;

The methodology and conclusions of the Zhejiang Province Regional TSA of China;

And, Suzhou Year Book 2004.

3.4 Summary

In this research, the author locates a particular issue, adopts a qualitative approach, and chooses a case study as the primary strategies. Furthermore, structural analysis and

interpretation are a crucial method in constructing and discussing the meaning of different people's attitudes and in understanding the mechanism employed by a Chinese municipality. Moreover, because of the exploratory characteristic of this study, the research is based on both first-hand data and secondary data obtained through a number of data collection methods.

Chapter 4: The Case of Suzhou

4.1 Local government context

The context of the proposed Suzhou municipal TSA concerns three levels of governments, which are the national, provincial and municipal governments. This research will concentrate on these levels, although there are still more two levels lower than the municipal government.

Generally, two principles are adopted in China concerning the relationship between a higher level government and a lower level government. One principle is that the lower level government will copy all the institutions of a higher level government; that is, the lower government has all counterparts to the sectors and offices of the higher level government. Another principle is that the lower level government has the responsibility to execute all the policies of the higher level government. The local government can not normally change the policies of the higher government, but can have flexibility in executing the policies to some extent.

The Statistics Bureaus are one of the main components of local government. Their main responsibility is to compile and provide official statistical data for the economy in a given area. Therefore, the data provided by the Statistics Bureaus are believed to be the most reliable and are most applicable to all levels of government. Additionally, Statistics Bureaus organize various surveys and publish a statistics year book for the given area.

All components of the government can compile special statistical data on their own area; however, only the data published by the Statistics Bureaus is regarded as official statistical

data which are the most reliable in China.

Tourism Administration Bureaus (TABs) are normally components of government. The main responsibilities of the TABs include administrating tourism-related sectors, especially travel agencies, hotels and tour guides, and market promotion which is funded by various governments. Moreover, tourism planning in a given area, steering the tourism-related labor market, and tourism-related assessment are also regarded as their important responsibilities. Therefore, a TAB has not only the responsibilities to promote the destination, as a destination marketing organization (DMO) does in North America or Europe; but also has the government's power and means to influence, induce and administer the tourism industry.

Governments are believed to always play an important role in tourism promotion and development in China. For instance,

- Many sport and tourism events are held and promoted by the government. For example, both the central government and the Beijing government take charge in holding the 2008 Olympic Games in Beijing. Moreover, almost all local tourism festivals are supported and funded by the local government.
- Most of the funding for infrastructure construction related to tourism is provided and managed by the government. For example, all highway building fees, all airport building fees, and part of facilities building fees come from government funding.
- Most of the international and domestic tourism promotion events are organized by government, especially TBAs.
- Most of the tourism general plans are organized, supported and supervised by

governments. These plans will have significant impact on the future of tourism in China.

- Government has great influence on the tourism industry through administrative measures, such as some permission policies.

The three levels of government discussed in this paper are the national government of China, the Jiangsu Province government, and Suzhou municipal government. In each government, the Statistics Bureau and TAB will play crucial roles in building a TSA system.

Moreover, some other main departments of government are also important in data collection, such as,

- The Cultural Bureau, whose responsibilities include promoting and administering the cultural development in China;
- The Transportation Bureau, which takes charge in supporting and supervising transportation infrastructure building;
- The Civil Aviation Administration Bureau, which takes charge in supporting and supervising airport building.
- The Construction Administration Bureau, which takes charge of main construction projects in urban areas and protected areas.

Therefore, building a TSA system in a municipal area is a project based on the collaboration between all these government departments. The level of communication and collaboration between these departments will decide the success or failure of the municipal TSA project.

4. 2 An Overview of Suzhou Tourism Statistics

Tourism statistics resources have two origins: the statistics bureaus of various governments and the tourism administration bureaus of various governments. All the tourism statistical institutions are built by a “top-down” approach, that is, the central government will create the statistical institution and apply it to all areas including provinces, cities and even smaller areas through the local governments. The National Statistics Bureau and all local Statistics Bureaus are engaged in statistics according to the National Accounts of China. Additionally, the CNTA has the power to create and manage the tourism statistics, entitled as the “department statistics”.

Suzhou, as all of the municipalities in China, has had basic tourism statistics for many years which complied with the system of the Chinese National Tourism Administration (CNTA). CNTA built a tourism statistics and survey institution and applies to it to all provinces and municipalities. The local governments including provincial and municipal even smaller area governments have the responsibility to execute the tourism statistics and survey institutions according to the CNTA at the local area. For example, the Suzhou Statistics Bureau will apply all institutions such as statistics definitions, surveys and statistics tables which are created by the National Statistics Bureau. Moreover, Suzhou Tourism Administration will also apply all policies from the CNTA.

This uniform system of statistics means that the central government can collect the data from all local areas, and analyze the entire country’s economy and compare the data from different areas.

4.2.1 Tourism statistics system

Both Suzhou Statistics Bureau and Suzhou TAB carry out tourism-related surveys and provide tourism-related statistical data. Just as all the other Statistics Departments, Suzhou Statistics Bureau collects information according to the industry categories of SNA to assess various industries. Some information from the industries is used to compile a tourism-related input-output matrix for tourism. Moreover, the Suzhou Statistics Bureau also collects information on the local government's use of funds. Because a lot of government funds, from the central government to local governments, are used on tourism-related activities, this information is useful for implementing a TSA system.

The Suzhou Statistics Bureau collects and publishes the following information:

1. Data of business volume, supply inventories on accommodation, food and beverage establishments (including food and beverage operations in hotels), train transportation, highway transportation, aquatic transportation, and airline transportation, and so on.

2. The use of government funding for public libraries, theaters, and museums, park management, and nature conservation. All these institutions are normally invested in and supported by the governments. Moreover, the income information on these institutions is also collected.

3. The information of many kinds on units of various industries, such as monetary flow, the number of employees, income, tax, salary and fixed capital stock etc.

The Suzhou TAB collects tourism-related information concerning tourism marketing and tourism administration as follows:

1. visitor Information including the number of visitors who are domestic tourists,

overseas tourists and one-day visitors, duration of stay of overseas tourists, average daily expenditure of overseas visitors, total expenditures of overseas visitors, purpose of visit, the manner of tourism (package or not) and activities engaged in during the visit.

2. Information on tourism-related establishments, such as occupation rates of accommodation facilities including hotels and other facilities providing accommodation services. Moreover, the main attraction sites' information is also collected, such as the monthly number of the monthly visitors, income including entrance fee, retail sales and food and beverage sales, the number of the employees, the expense for payment of taxes and salaries, and new investment projects in a given period.

3. Tourism education and labor force information, including the number of graduated students of tourism-related programs every year, the training conditions of the tourism-related establishment for their employees, and so on.

4.2.2 Main Tourism Surveys

The Suzhou Statistical Bureau executes a few economic surveys according to the needs of the SNA. These surveys provide the basic data for compiling the I-O matrices which is need for TSA. Normally it is not full I-O matrices, but a simple I-O matrices containing make, use and final demand matrices. On the other hand, the majority of tourism-related surveys are executed by Suzhou TAB. Two surveys are related to the development of a municipal TSA: China's Overseas Visitors' Consumption Survey (COVCS) and China's Domestic Visitors' Consumption Survey (CDVCS).

The Chinese Overseas Visitors' Consumption Survey in Mainland China (COVCS)

In the COVCS, the overseas visitors are defined as visitors who come from countries and regions outside of mainland China, and who stay less than 3 months, including one-day visitors and tourists. The time limitation of the tourists' definition is shorter than the one-year limitation of the general definition recommended by the WTO. The overseas countries or regions of origin are listed as Taiwan, Hong Kong, Macau, major Asia, Europe, North America and Oceania visitors' origin countries. The report of the survey is published annually.

The contents of the COVCS comprise of the following items:

1. Visitors' demographic information, such as nationality (or region), country of residence, gender, age, occupation and purpose of visit;
2. Duration of visit and the form of the visit, that is whether the visit is part of a package;
3. Total visitor's consumption and composition;
4. The quality of service for tourist assessment; in this part, the respondents assess the service quality of hotels, restaurants, transportation, entertainment, shopping, tour guide and communication.
5. The categories of souvenirs and other merchandise bought during the visit, such as silk/attire, Chinese medicine/health food, tea/food, liquor/cigarettes, pottery, imitation antique, carpet/tapestry, jewelry/pearls and electric appliances.
6. The itinerary before and after the visit.

The survey venues include various ports and hotels; and the inquirers normally have been specially trained. The three main international port cities are Beijing, Shanghai and Guangzhou; therefore, this survey is mainly executed in these three cities. Additionally, the major travel agencies will do the survey to the tourists on package visits.

The total sample size is 42,000. About one quarter of the respondents are found in various ports of entry. More than half of the respondents are accessed in the hotels or scenic sites, and the remaining 3,800 respondents are picked from one-day visitors.

This survey provides the information on the average consumption of the overseas visitors, average stay time of the overseas visitors, ratio of the one-day visitors to total visitors, and average consumption of the one-day visitors. With these data, the total consumption of the overseas visitors can be computed.

The Chinese domestic visitors' consumption survey (CDVCS)

In the CDVCS, a domestic visitor is defined as a Chinese person traveling to and staying in places at least 10 km away from their usual environment, and who travel more than 6 hours but less than one consecutive year for any reason other than following a remunerated occupation. Domestic visitors also cover one-day visitors and tourists.

The CDVCS focuses on the structure of the domestic visitors, the origin cities, the purpose of visit, stay time, total consumption and contents of the consumption. The sample size is recommended to be not less than one thirty-thousandth of the total number of the domestic visitors. Considering the variety of the different provinces and cities, some sampling techniques are used, such as stratified and clustered methods.

The survey will be carried out in picked hotels and tourism-related sites, which are normally primary tourism gated attractions. The CDVCS provides the average consumption of the domestic visitors, the average stay time, the ratio of the one-day visitors to total visitors, and the average consumption of the one-day visitors. With these data, the total consumption of the domestic visitors can be computed. The report of the survey is published annually as is

the COVCS.

4.2.3 Summary and Comments

As a part of the government, a Tourism Administration Bureau plays a crucial role in the development of tourism in the a Chinese context. One of their main responsibilities is organizing tourism-related surveys; therefore, the basic national information on tourism activities has been collected from the early 1990s, although it is a difficult work to collect data in a country with a very high population and many extremely different districts.

Both Suzhou Statistics Bureau and Suzhou TAB carry out tourism-related surveys. The COVCS and the CDVCS carried out by Suzhou TAB provide the primary tourism consumption data.

The COVCS and the CDVCS are not very expensive surveys because some of the surveys are carried out by the TAB system, and reporting related data is the responsibility of tourism-related establishments. Nevertheless, the surveys could be refined in their implementation and the sample could be enlarged with a realistic budget.

4. 3 Developing a Municipal TSA

4.3.1 Background to developing a municipal TSA in Suzhou

Suzhou is known by the title “the heaven under the sky”. It is a famous tourism destination in China with more than 2,500 years of history. However, now the most impressive image of Suzhou to tourists is its combination of the traditional culture and modern economic system. Two facts illustrate that Suzhou is a historical and cultural tourism

destination. One is that Suzhou's traditional private gardens are listed as the World Culture Heritages sites. The other is that Suzhou was one of the most important ports on the Grand Canal. The Grand Canal was built in the 5th century BC, rebuilt in the 13th century, and played a great role in linking North China and South China until the 19th Century.

After 1978, Suzhou began to focus on economic development. In 2004 the GDP of Suzhou was close to 345 billion RMB (about 48 billion USD), and was the 5th city in China just behind Beijing, Shanghai, Tianjing and Chongqing. All these cities are administrated by the central government directly; that is, the level of these cities is the same as province from an administrative perspective.

Suzhou's primary industries range from manufacturing and construction, and wholesale and retail trade. Most of the manufacturing workshops are owned by famous multinational companies such as Nokia, Samsung, Philips, Siemens, and so on. Therefore, Suzhou is regarded as one of the most competitive cities in China's economic development.

Suzhou's government thought about and decided to develop a municipal TSA in 2005, just after the Jiangsu regional TSA was published. Since May 2006, Suzhou has been carrying out feasibility research on creating a Suzhou municipal TSA (STSA); while, communication with related government sectors is initiated to seek future cooperation in building a municipal TSA.

Several crucial factors have encouraged Suzhou TAB to develop a municipal TSA.

- The development of TSAs in China

At the early beginning of the new millennium, Jiangsu's regional TSA was developed as a tentative exploration of the concept. The TSA, as a new concept of the statistical system, had

not been accepted generally; therefore, China began with a regional TSA rather than a national TSA. Another reason is that developing a regional TSA was that it thought to be less expensive than developing a national TSA.

In the end of 2005, Jiangsu's regional TSA was published and got a high appraisal from both Statistics China and CNTA. Although the conclusion that the contribution of Tourism Value Added (TVA) to GDP at 4.2% was a little lower than what was anticipated, the conclusion was accepted by sectors of local government as the first reliable statistical data for the tourism industry.

Heartened by this good example, the CNTA decided to push the project of building a national TSA into a practical stage and encouraged new attempts to develop a regional TSA by other provinces. Consequently, Zhejiang, a neighbor of Jiangsu Province, developed a regional TSA and published its conclusions in April 2006.

Furthermore, several municipal TAB are thinking about the possibility of building a municipal TSA, such as Chengdu and Dalian. Pilot research was executed in Xiamen in 2001 (Zhao & Wei, 2001).

- The developed municipal economy and rich funding made it possible to build a municipal TSA in Suzhou.

Suzhou TAB is eager to advocate the contribution of tourism to the local economy. If the building of a municipal TSA project is admitted by government, Suzhou government can provide enough funding for this project.

- The tourism promotion and further development in Suzhou increasingly relies on reasonable decision making.

The absence of integrated tourism data can not meet the needs of decision makers in government and planners. Tourism consumption normally is invisible to a municipal government. For example, total tourism consumption may be huge, but the tax income from tourism establishments will be small compared with it. What is more, planners normally have no idea about the real role of tourism in the municipal economy. Therefore, the tourism industry is normally ignored in the municipal general plan or other municipal plans. From this perspective, the concept of the TSA is really attractive to various TAB including the provincial and municipal TBAs.

4.3.2 Main obstacles to building a municipal TSA in Suzhou

Some obstacles appeared from the beginning of the project.

- Input-output matrices should be compiled for TSA building.

The entire statistical system in China has been changed into the SNA'93 system; the input-output matrices are not compiled at the municipal level normally; although the data are existed. This became the biggest barrier because the input-output matrix is regarded as the core framework of a TSA.

- The bureaucracy of the municipal government.

Various sectors have their own interests and responsibilities; and a TSA system is particularly tourism-related. The only way to seek cooperation of other government departments is through communication and private friendship between officials. The latter factor sometimes is more effective in a Chinese context.

- The absence of professional statistics experts in the TAB.

Suzhou TAB will carry out and support the earlier research, such as assessment of the methodology and budget. However, the absence of professional statistics experts would be a significant obstacle.

- The budget

Budget is always a sensitive topic. A tiny budget will decrease the reliability of the TSA; on the contrary, a giant budget will become a barrier for launching a TSA project.

4.3.3 The process of building the Suzhou TSA

The Suzhou TSA is planned to be built in three stages.

1. Carrying out feasibility research and communication with related sectors of municipal government.

This stage is planned from April 2006 to the end of 2006.

Although a regional TSA could be the prototype of a municipal TSA, many issues are still pending. For example, whether a municipal TSA is a smaller regional TSA? It cost more than 3 million RMB (about more than 400,000 CND) to built the Jiangsu TSA. The budget for building a municipal TSA also needs careful assessment.

Effective communication is indispensable before the project is launched usually. The Statistics Bureau takes charge in developing a TSA system according to the implementation experiences. However, in this case, the Suzhou TAB showed more fervor than the Suzhou Statistics Bureau did. The attitude of the Suzhou Statistics Bureau is cautious.

Moreover, some special data should be given to various related sectors other than the Statistics Bureau. For example, the Statistics Bureau only provides the data on the total funds

governed by the Cultural Bureau, but not all the funds of the Cultural Bureau are related to tourism. Thus, the data concerning the funds invested in museums and libraries should be derived from the Cultural Bureau.

2. Methodology research and survey design.

The second stage is to research and explore the methodology and design the survey.

The methodology of the national TSA and regional TSA needs to be assessed in Suzhou's context. The reliability and pertinence of the available data need to be assessed as well.

A complementary survey is expected; therefore, survey design is crucial after the integrated assessment on the methodology and available data. This stage is planned to last half a year.

3. Carrying out the complementary survey.

The survey is carried out as a complement of the COVCS and CDVCS according to the design in the former stage. This stage is planned to last half a year.

4. Data analysis and conclusion publication.

4.4 Summary

Although the project of the Suzhou TSA just began, the complexity of building a municipal TSA has surfaced. Building a municipal TSA requires assessment of all of the municipal statistical systems. What is more, the entire survey related to tourism will be assessed by the TSA principle and definitions.

The main driving force to build a municipal TSA comes from the municipal TAB; therefore, they have to communicate with different related sectors of the government to get

the data and technical support they need.

Several barriers have arisen in the early stage of this project. One of the major barriers is the absence of the input-output matrix, which has to be compiled just for the TSA.

The real challenge is how to remove all the barriers with a realistic budget, since project funds are always limited.

Chapter 5: Analysis and Findings

5.1 A Chinese “Municipal” View of the TSA

5.1.1 Two approaches

Two approaches have been executed in developing a regional TSA. One is a “top-down” approach, which is adopting or adjusting key indicators from a national TSA into a regional TSA. This method, regionalizing the national TSA, is believed to have the following benefits and costs. The benefits include the approach in cost and time saving, regional comparability and consistency within the nation, credibility to the central government and so on. The costs of this approach include inflexibility on variable selection and lack of attention to regional policy needs.

From a regional perspective, a region is considered to be a small country; therefore, the structure of a regional TSA can stem from a national TSA especially by using a top-down approach. Some regional TSAs, such as Canada, Norway and France, support this statement. (Braendvang, et al, 2001; and Jones, 2003)

Another option is the “bottom-up” approach that means constructing a regional TSA by using the TSA’s methodology and principals and collecting related data from regional sources. The benefits of this approach are sensitivity to local needs, more decision-making orientation, detailed understanding of the regional tourism economy, and so on. The costs of this approach

could be non-standard procedures, time and money consuming, and possible fragmentation of TSA development. Table 3 illustrates the advantages and disadvantages of TSA-R and R-TSA.

Table 3 Some advantages &disadvantages of TSA-R and R-TSA

	<i>Needs</i>	<i>Benefits</i>	<i>Costs</i>
TSA-R [Top Down]	<ul style="list-style-type: none"> ● Proactive CSO (Central Statistics Organization) ● regionally stratified national surveys 	<ul style="list-style-type: none"> ● relatively quick may be inexpensive ● regionally comparable ● expertise of CSA (Central Statistics Agency) ● credibility in central government etc. 	<ul style="list-style-type: none"> ● limited no of variables ● may not account for regional uniqueness ● inflexible to policy needs ● Low potential for 'spin off' analysis
R-TSA [Bottom up]	<ul style="list-style-type: none"> ● developed regional account ● regional tourism consumption data ● adequate technical human capital 	<ul style="list-style-type: none"> ● flexible to policy need ● full suite of results ● detailed understanding of regional tourism economy ● base for additional analyses 	<ul style="list-style-type: none"> ● long term option ● costly ● non-standardized across regions ● risks fragmentation of TSA development

(Resource: Jones, 2005: 8)

In creating the Suzhou municipal TSA, an amalgamated approach could be adopted in order to take advantages of both approaches.

The JSTSA was built successfully in 2005, and the conclusions of the JSTSA were published in 2005. In the complementary survey of the JSTSA, around one third of

respondents to accommodation facilities and tourism-related private entertainment establishments were located in the Suzhou area. For example, the total sample size of accommodation facilities was 255; and 80 were located in Suzhou. Therefore, the data collected in this survey can be used in Suzhou TSA.

However, the method of directly adopting the main key indicators of the JSTSA will weaken the reliability and the value of Suzhou TSA. The reasons include the following:

- The sample size is not applicable enough to support a municipal TSA. For example, the number of private establishments in the accommodation industry is 729. Although it is assumed that all of the establishments in the accommodation industry are private establishments, an accurate number of all accommodation facilities is not available in the Suzhou Statistics system (Source: Suzhou Statistics Year Book, 2005).
- Suzhou is the most developed municipality in Jiangsu province. It also has the most international and domestic visitors in Jiangsu province. Therefore, it is reasonable to assume that the main indicators of Suzhou are different from the average situation in JSTSA.
- Some statistical data are absent in the JSTSA for Suzhou. For example, the complementary survey did not have samples of the restaurant industry in the Suzhou area.
- Moreover, regionalizing a national TSA is based on a developed survey system in which every trip is recorded in detail. For example, the main tourism survey, Canada Travel Survey (CTS) and International Travel Survey (ITS) record all provinces and

cities which are visited in every trip. Therefore, it is possible to calculate data from both national and provincial perspectives. In the Suzhou context, the tourism statistical data are collected by Suzhou TAB. These data are adopted by both the provincial and national governments. Therefore, the data are collected by a bottom-up approach.

Thus, an amalgamated approach would be chosen in this case. Before adopting some key indicators, an assessment concerning the adaptability of these key indicators should be carried out. Some key indicators have to be calculated according to available municipal data, such as tourism ratios of various tourism-related industries. The complementary survey for SZTSA should be designed in the Suzhou context.

5.1.2 Two perspectives

Implementation of a TSA in a municipal area involves two different TSA perspectives. One is a methodology perspective, or a technical perspective. The other one is an institutional perspective; that is, if a TSA is considered to be an official statistical institution.

Most of the literature concerning TSAs discusses the technical perspective on the TSA. From this perspective, the main topics include the framework, the basic concepts, the data collection methods, and so on.

However, from the institutional perspective, a TSA is a statistics system adopted by the government. The main advantages, such as reliability and applicability to government, are based on this characteristic of the TSA. Several facts can support this point as follows:

- The implementation of a national TSA is normally executed by the national Statistics

Bureau, for the reason that the Statistics Bureau is regarded as being a privileged agency in building a statistics system.

- The results of a TSA are normally published by the Statistics Bureau because the statistical data published by a Statistics Bureau are thought to be the most reliable among all government statistical data (including statistical data collected and published by various departments of government).
- Building a TSA requires an adjustment in related business surveys to locate the statistical data related to a TSA. TSA-related data can be categorized as demand-side data and supply-side data. The demand-side data was collected by a tourism consumption survey, which can be executed by a TAB or Statistics Bureau; while, the supply-side data are collected by various business surveys which are carried out by the Statistics Bureau, rather than any other government agencies. Therefore, a TSA should be integrated into the existing Statistics System.

Zhao and Wei's pilot research on Xiamen TSA (1998) contributed in the methodology development of a municipal TSA. However, from the institutional perspective, this research provided a reference for building a real municipal TSA but a municipal TSA has not yet been implemented in Xiamen.

5.1.3 Data collection

Is a municipal TSA a simplified national TSA or a simplified regional TSA? The answer to this question is "No", at least in the Suzhou case. The TSAs have to wholly integrate all tourism-related data from the system of National Accounts related to the local governments at

various levels. Thus, a municipal TSA also has to examine the whole statistical system, find all tourism-related data from the input-output matrices, and aggregate them to get the crucial indicators for tourism.

China has a uniform policy and government system at various levels of government; therefore, in most cases, a lower level of government will copy all the institutions of the higher level of government. For this reason, it can be assumed the data sources of the Suzhou municipal TSA will be similar to those of JSTSA to a large extent.

The data sources of JSTSA are comprised of the following items.

Concerning visitor consumption expenditure:

1. The overseas visitors' consumption expenditure sample survey 2002;
2. The Jiangsu Overseas Visitor Statistics 2002;
3. The Jiangsu Domestic Visitor Statistics 2002.

Concerning tourism supply:

1. Input-output matrices 2002;
2. Jiangsu Statistics Year Book 2003;
3. Jiangsu Institutions General Survey 2001. This survey provided detailed data concerning all kinds of businesses in the given area, and was carried out by the Statistics Bureaus.
4. Jiangsu Tertiary Industries General Survey. The tertiary industries are the industries that provide services rather than material products. Tourism is thought to be a tertiary industry.

Concerning employment:

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1. Jiangsu Statistics Year Book 2003;
 2. Jiangsu Institutions General Survey 2001.
 3. The Tertiary Industries General Survey in Jiangsu.
 4. Other survey data of the Jiangsu TAB.

Concerning the non-monetary indicators:

1. Tourism Survey data of the TAB.

Suzhou has all these counterparts except the input-output matrix; however this is a big problem for creating a TSA because the input-output (I-O) matrix is indispensable as a basic framework.

5.2 Core factors of a municipal TSA

Varied approaches, variables and indicators could be used in a municipal TSA according to the special political and economic environment. However, as an integrated system, some factors are adaptable to change, but some are not. The parts which can not be changed are the methodology cores in a TSA. That is, these factors determine whether a system is a TSA or not.

Smith (2000) defined a TSA in a simple way as “a method for creating a synthetic tourism industry by combining the bits and pieces of conventional industries that produce tourism commodities.” The term “satellite” indicates this method is “an extension of the system of National Accounts”. This definition highlights the methodology perspective on a TSA. Therefore, from a methodology perspective, a TSA should be composed of the following contents.

5.2.1 Integrated definitions

Integrated definitions means the entire system uses a uniform definitional system, for example, definitions of visitors, inbound, outbound and domestic tourists, same-day visitor, and so on. All these tourism-related definitions were defined by the WTO in 1994. The Chinese tourism statistics system adopts almost all of these definitions.

The contribution of tourism to the nation, region or community stems from tourism consumption. All tourism consumption includes the expenditures of visitors in a given area. Therefore, the definition of visitors will decide the magnitude of the tourism activities, and will influence all conclusions of the TSA.

Visitors

The WTO defines the visitors as “any person traveling to a place other than that of his/her usual environment for less than 12 months and whose main purpose of traveling is other than the exercise of an activity remunerated from within the place visited” (UN & WTO, 1994: 5). Visitors include tourists, who stay one or more nights, and one-day visitors, who visit a place for less than one day. Accordingly, tourism is defined as a complex activity which “comprises the activities of persons traveling to and staying in places outside their usual environment for not more than one consecutive year for leisure, business and other purposes” (UN & WTO, 1994: 5).

Thus, visitors are defined technically by three limitation factors: firstly, visitors travel out of their usual environment; second, the time limitation is not more than one consecutive year; and third, the purpose of tourism includes not only leisure, but also business, visiting friends and relatives and personal purposes such as health treatment, but it does not include seeking

for remuneration from within the place visited.

However, one crucial variable is still uncertain in this definition: the usual environment. The definition of the usual environment is different from country to country. The usual environment is normally limited by the frequency of a person's visit and the distance from the place of residence, but the criterion is not easy to define in a given country. Moreover, after defining the criterion, it is normally difficult to assess the adaptability and reliability of it.

For example, at the third meeting of the Committee on Statistics and Macroeconomic Analysis of Tourism (Madrid, 4-5 February 2002), Canada and Spain decided to create a Working Group to do research on this topic. One year later (In 2003), at the Enzo Paci Conference on Measuring the Economic Significance of Tourism they presented their research findings based on the cooperation of 39 countries. They found that various approaches were used. Twenty countries used a special distance: for example, 80 km one way in Canada, and 40 km one way in Australia. Thirteen countries use frequency of visit as the criterion; for instance, Switzerland and Portugal defined the place where a person visits less than weekly as not the usual environment. Six countries used other criteria such as all overnight trips belong to tourism, as well as a previously planned trip, or the holiday seasons trip. Some countries, such as Finland and Chile, have complex criteria by using both a distance definition and frequency definition. In Finland, the trips 40 km away from the usual environment and not visited weekly are tourism. Nonetheless, a universal criterion can not be defined at present.

In the Suzhou context, visitors are comprised of inbound tourists, inbound one-day visitors, domestic tourists, and domestic one-day visitors. Inbound tourists, inbound one-day

visitors and domestic tourists are defined by general criterion, and the domestic one-day visitors are defined as “the domestic visitors who travel to places 10 km away from their usual environment, for more than 6 hours and less than 24 hours, and do not stay in any accommodation facilities” (The guideline to Regional Tourism Satellite Account, 2005: 41). This limitation seems too flexible when compared to the Canadian criterion of (80km), U.S. (100 km) and Australia (40 km). However, one fact which explains this limitation is that most of the Chinese domestic tourists travel by bicycle and public transportation such as the bus. Actually, this criterion is accepted by all local municipal governments in China.

Visitor expenditure

Tourism expenditure is one of the most vital concepts in the TSA. The WTO defines tourism expenditure as “the total consumption expenditure made by a visitor or on behalf of a visitor for and during his/her trip and stay at the destination” (WTO, 1995: 65). Certain consumption occurring during the trips is excluded from the tourism expenditure: cash given to relatives or friends, capital type investment, and purchases for commercial purpose; that is, a person buys some goods for resale.

From the principle of household consumption in SNA'93, three points can be noted in the following ways:

- “Visitor consumption will include the consumption by visitors for business, leisure and other tourism purposes;”
- “Visitor consumption will include individual services by governments and NPISH (abbreviation for Non-Profit Institutions Serving Households) and consumed by visitors;”

-
- “Visitor consumption will include consumption in kind of various types” (Eurostat, et al, 2001: 23).

Therefore, the contents of visitor consumption are as follows:

- Visitor final consumption expenditure in cash; and the term “in cash” means visitor pay by money, rather than goods or service;
- Visitor final consumption expenditure in kind, that is, a visitor pays a debt in the form of goods and services ;
- Tourism social transfers in kind, that is the service is provided by government or NPISH, and consumed by visitors, such as health, education and social services provided to individuals free of charge or at very low prices that are not economically significant.
- Tourism business expense, the part of visitor consumption paid by businesses (Eurostat et al., 2001: 24)

These contents of visitor consumption stem from the SNA. However, in a Chinese municipal area, one component, visitor final consumption expenditure in kind, would be ignored because it is assumed to be very small. Both in JSTSA and Zhejiang regional TSA, this has not been assessed both because of the difficulty of data collection and assumed very small magnitude.

On the other hand, the tourism social transfers in kind were assumed to be significant in China because it is believed that many government funds are used in tourism-related areas. However, in JSTSA, the sum of the tourism social transfers in kind is 0.15 billion RMB (about 20.8 million CAD), occupying just 0.15 % of the total tourism consumption which is

about 95 billion RMB (about 13.2 billion CAD).

Moreover, in China's visitor consumption survey, the source of consumption has not been recorded and distinguished; therefore, the sum of the visitor consumption actually already covers the tourism business expenses.

Consequently, the categories of visitor consumption are theoretically useful and ideal; however, it is possible that the other components of the visitor consumption, except for the visitor final consumption expenditure in cash, will be ignored if the data collections of those contents are difficult. This possibility weakens the practical value of the categories.

5.2.2 I-O framework

An I-O framework is a macroeconomic analysis tool which describes the flows among the various sectors of economy. Its basic assumption is that total input and the total output balance in a given area. The SNA'93 and the TSA-RMF both use the I-O model to organize both supply-side and demand-side data related to tourism.

The I-O framework is a series of matrices in which "the inputs consumed by every industry from the outputs of all industries are identified and measured" (Smith, 2000: 229). Normally, three kinds of matrices are compiled in a TSA. One is production account spreadsheet. Every industry, including characteristic tourism industries and other, is listed down the rows and every commodity across the columns. Each cell in the spreadsheet provides the value of every commodity produced in a given year by each industry. The second matrix presents the value of every commodity consumed by each industry with the same structure as that of the production account spreadsheet. The third matrix confronts domestic

supply and internal tourism consumption. In these spreadsheets, both the supply and the demand-side of tourism are summarized clearly.

The advantages of I-O matrices can be presented as follows.

- They provide detailed data of products and money flows. Therefore, it is possible to extract all tourism-related activities from SNA;
- The I-O system provides a discipline that “prevents under- or over-estimation of the size of any industry” (Smith, 2000: 230).
- All the data in the input-output framework come from observation, rather than imputation or models. Therefore, the data are applicable for further economic analyses.

The scale change from a national level to a municipal level may have the following implications.

1. Some flows between sectors in a given municipal area may not significant. That is, some number in I-O matrices may be very small. For example, if all beer consumed in the given area is imported from other areas, the local beer supply will be recorded as zero. Therefore, in a municipal TSA, the data in I-O matrices may be extremely different according to local economy.

2. The basic structure of I-O matrices will not change much. The tables recommended by ECC et al in 2001 are based on I-O matrices. These tables may not change in municipal TSA. After 2001, most national TSAs and regional TSAs use these tables.

3. The difficulty in data collection will not ease with the scale change from a national level to municipal level. Compiling a I-O matrices is always a labor tensive job. If I-O

matrices are not accessible in a given municipality, building a TSA will be an impossible mission.

5.2.3 Core indicators

Four core indicators in TSA-RMF

Four core indicators are suggested in TSA-RMF: Internal tourism consumption, Value Added of tourism industries (VATI), Tourism Value Added (TVA) and tourism GDP (TGDP).

Internal tourism consumption is the total internal visitors' consumption. The internal visitors are comprised of domestic visitors and inbound visitors. For example, in Canada, domestic tourism refers to the tourism by Canadian residents within Canada; inbound tourism refers to the tourism by non-Canadian residents within Canada; and outbound tourism refers to the tourism by Canadian residents outside Canada. Accordingly, a national TSA normally organizes the tables concerning tourism consumption as inbound tourism consumption, domestic tourism consumption, and outbound tourism consumption.

For Jiangsu Province in China, the domestic visitors can be categorized as visitors from the local province and visitors from other provinces. Accordingly, the JSTSA organized the table concerning the tourism consumption as out-region visitor consumption including inbound visitor consumption and other province visitor consumption, and in-region visitor consumption. Therefore, in a municipal TSA, the same changes can be adopted to highlight the municipal requirements.

Three indicators concerning the value added are suggested by TSA-RMF. They are VATI, TVA and TGDP.

VATI sums the total value added of all characteristic producers, regardless of whether all of their output is provided to visitors and of the degree of specialization of their production process. It is derived by deducing the intermediate inputs from the value of gross output of the tourism industry.

TVA is defined as the value added generated by tourism industries and other industries of the economy in response to internal tourism consumption. It is derived by combining each value added commodities including tourism commodities or non-tourism commodities.

The difference between TVAI and TVA stems from a distinctive characteristic of tourism from the supply side; that is, the tourism industry both provides tourism commodities (which are provided to visitors) and non-tourism commodities (which are provided to residents, not visitors); and tourism commodities are both provided by the tourism industry and non-tourism industries. A part of value added produced by the tourism industry contributes to TVA, and a part of value added produced by non-tourism industries also contributes to TVA.

Tourism Gross domestic product (TGDP) generated by internal tourism consumption is defined following GDP concepts in SNA'93 with little difference. In SNA'93, GDP is a concept of value added. It is the sum of gross value added of all resident producer units (institutional sectors or, alternatively, industries) plus that part (possibly the total) of taxes, less subsidies, on products which is not included in the valuation of output (SNA'93, paragraph 2.171). Gross value added is the difference between output and intermediate consumption.

One crucial factor in this definition is that GDP is created by resident producer units. Moreover, this equation for calculating GDP also provides the possibility to “establish rules

for measuring GDP generated by visitor consumption” (TSA-RMF: 71). However, one important difference is that TGDP is not the tourism industry GDP of the given area, but tourism GDP generated by internal tourism consumption in the given area.

Table 4 shows the relationship between the three indicators from a supply-side view.

Table 4 Relationship between the different economic aggregates that characterize the magnitude of tourism from the point of view of supply

	VATI	TVA	TGDP
VA (All at basic prices)generated by the supply to visitors by the tourism industries	Yes	Yes	Yes
VA (All at basic prices) generated by the supply to non-visitors by the tourism industries	Yes	No	No
VA (All at basic prices) generated by the supply to visitors by activities not in tourism industries	No	Yes	Yes
VA (All at basic prices) generated by the supply to non-visitors by activities not in tourism industries	NO	No	No
Net taxes on products and imports included in the value of internal tourism consumption (at purchasers’ prices)	NO	NO	Yes

(Resource: TSA-RMF: 71)

The VATI is not illustrated in JSTSA for the reason that the VATI has little realistic meaning compared to the TVA because it is an aggregation of the VA of several traditional industries. The TGDP is not adapted as TSA-RMF recommended mainly because the import

part is very difficult to calculate in a region. To calculate the import part consumed by visitors, one needs to calculate the import ratio of all tourism-related products and the consumption ratio by visitors in the region. Moreover, a region is not an area with only few barriers, such as customs, which can be used to record imported products. Therefore, the difficulty and cost of acquiring such data can only be imagined for a region area, as well as in a municipal area.

A municipal TSA is also comprised of these three core factors. Changing any of these core factors could raise queries about the reliability and adaptability of a municipal TSA; that is, these core factors have a direct relationship with the crucial value of a TSA system, reliability. Therefore, all these factors should be adopted in a municipal TSA. However, a certain adjustment is also required in a municipal TSA system according to different municipal contexts.

Start two new indicators in JSTSA

In the JSTSA, some new indicators are adapted to meet the regional requirement, for example, except for the TVA, the aggregation of tourism producing tax and the components of the operation profits of tourism businesses. The aggregated producing tax created by tourism businesses occupies 1.9% of the whole producing tax. That is the direct contribution of tourism businesses to government income. This is an extremely crucial variable because fiscal agencies normally concentrate much more on this contribution and make next year's budget according to this share.

Another new indicator is the component of operation profit. Operation profit is the difference between the income and the operation cost of a company, which illustrates the ability of a company to make money. In JSTSA, the aggregation of the operation profits of the

whole “tourism industry” and aggregation of it by tourism-related industries are calculated. The conclusion is the accommodation, restaurant, and road transportation are the top 3 industries which contribute the greatest to tourism business operation profits. Therefore, these industries are very important and play a crucial role in tourism.

5.2.4 Tables

The output of a TSA is a series of tables. In a TSA of TSA-RMF, 10 tables are suggested; and in the TSA of OECD, 14 tables are recommended. These tables are based on I-O matrices.

In the recommended TSA of TSA-RMF, Tables 1, 2 and 3 describe separately tourism consumption of inbound tourism consumption, domestic tourism consumption and outbound tourism consumption. Table 4 aggregates the conclusions of Table 1, 2 and 3 to derive one important variable, internal tourism consumption (in cash and in kind), which describes the size of tourism activities from the demand side.

Table 5 uses an Input-output matrix to present the value of production by variety of industries and to acquire the total output of domestic producers, which describe the size of tourism activities from the supply side.

Table 6 transforms the total output of domestic producers from Table 5 to domestic supply, and calculates a tourism ratio by dividing internal tourism consumption from table 4 by domestic supply. In Table 6, four main indicators are shown; therefore, Table 6 is the core table in a TSA.

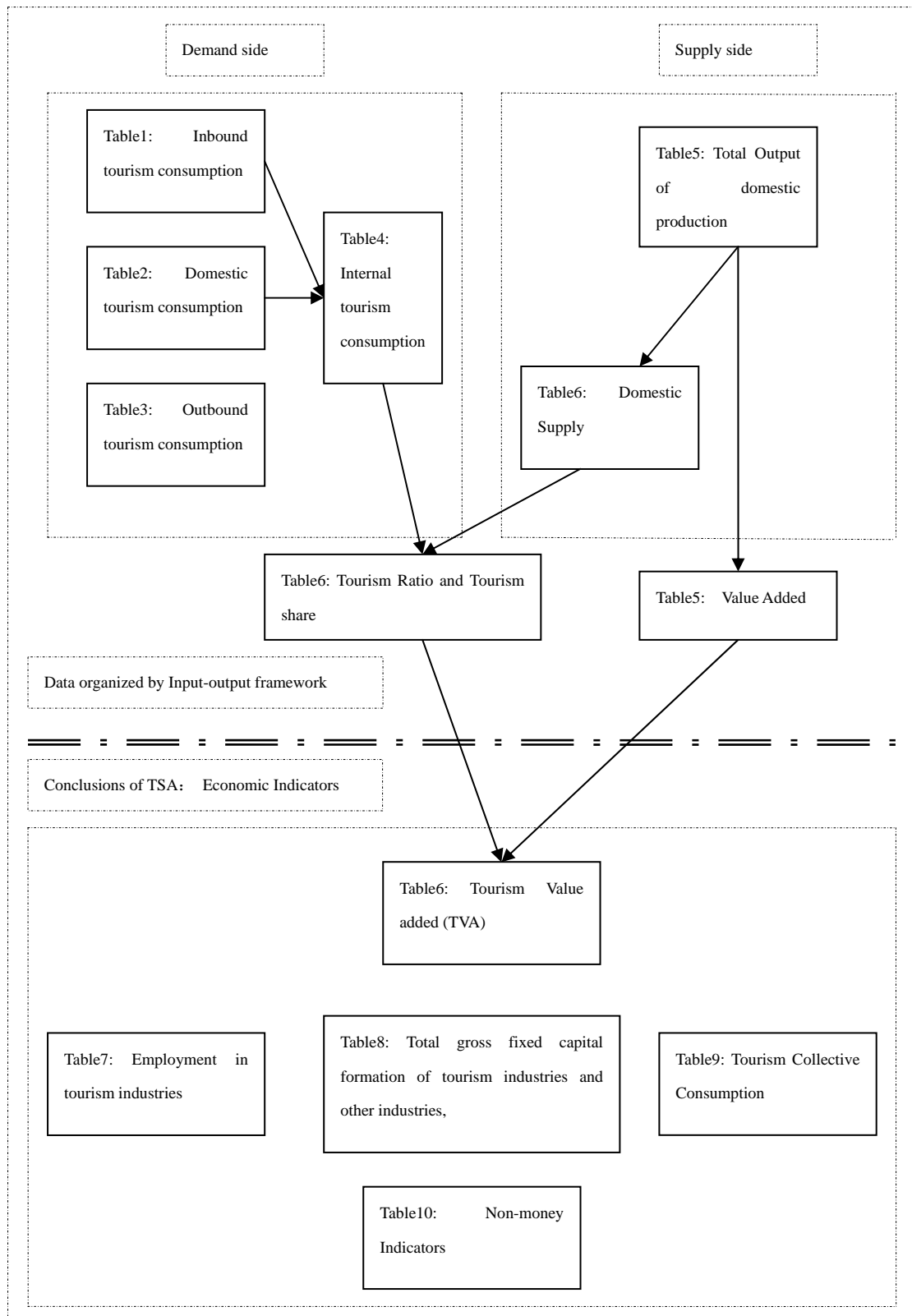
The next 3 tables display different aspects of tourism activities including employment in

the tourism industries, tourism gross fixed capital formation of the tourism industries and other industries, and tourism collective consumption by different levels of government. The last table, Table 10, displays some non-monetary indicators.

Figure 4 presents the relationship of the tables of the TSA recommended by TSA-RMF.

These tables are presented as an appendix of this thesis.

Figure 4 Relationship of Tables Recommended by TSA-RMF



The tables recommended by OECD in 2000 are logically similar to those of TSA-RMF. There are three main differences between the organization of TSA-RMF's tables and OECD's tables. Firstly, OECD's tables have no categories of inbound tourism, domestic tourism and outbound tourism; secondly, one table illustrates visitor characteristics in OECD's tables; and thirdly, OECD describes the tourism supply and demand based on current prices and prices of a previous period separately. Therefore, Table 1 and Table 9 both illustrate production of characteristic tourism industries, and Table 1 is based on current prices, whereas Table 9 is based on prices of a previous period. Table 2 and Table 10, Table 3 and Table 11, Table 4 and Table 12, Table 7 and Table 13, and Table 8 and Table 14 are similar.

5.2.5 Issues

Direct impact and indirect impact

There is the question of assessing direct impact only or both direct and indirect impact. The TSA normally considers only direct tourist demand in order to be in harmony with the National Account system. The direct tourist demand represents the purchases of goods and services by or on behalf of visitors, before, during, and after a trip which are related to the trip itself. In order to avoid exaggeration, it is necessary to have a direct economic relationship between the visitors and the producers of the good or service. Therefore, the TSA prescribes this direct relationship by the I-O framework and calculates the TVA as a main conclusion.

However, the indirect impact is so important for the tourism industry and decision makers that it should not be ignored. One of the methods which can be adapted in the TSA system is multipliers which measure the relationship between an injection of tourism consumption into

an economy and the amount of economic activity that results (Archer, 1977; Archer and Fletcher 1996).

Smeral suggested that these direct and indirect effects could be described through the use of input-output analysis, which allows the calculation of the “direct and indirect value-added” effects of tourism spending (Smeral, 2006: 95). Therefore, this new topic concerning the direct and indirect value-added needs further research.

Further analysis with decision making orientation

After building a regional TSA, some further analyses are needed. For example, the table 5 gives some useful information for decision makers. The key results figure includes the main results of Jiangsu and Zhejiang regional TSA; while, the ratios concerning the impact of total gross consumption illustrate the relationship between those key variables with visitors’ gross consumption.

Table 5 Key results of regional TSA

Key results of Regional TSA		
	Jiangsu Province	Zhejiang Province
Regional output (Billion RMB)	241	111
Gross value added (Billion RMB)	45	56.2
Total tourism-related Employment (Million)	3.8	1.48
Total gross consumption (Billion RMB)	95	132

Source: The research on Jiangsu regional Tourism Satellite Account (2005): 87-88 and Zhejiang Tourism Administration Bureau (2006): 39-42.

Ratio concerning the impact of total gross consumption		
	Jiangsu Province	Zhejiang Province
Regional output	2.54	0.84
Gross value added	0.47	0.43
Employment supported 1 million RMB consumption	0.04	0.01
Gross consumption need to support 1 employment (RMB)	25,000	89,189

Jiangsu province has a relatively bigger regional output than Zhejiang province, which is 2.54 times the regional gross consumption; while Zhejiang has not enough output compared to the tourists' gross consumption. Zhejiang's ratio of the regional output to the regional consumption is 0.84. Therefore, the economic leakage is very significant in Zhejiang province. However, the impact of the gross consumption on gross value added is quite similar, 0.47 to 0.43.

Moreover, more gross consumption is needed to support employment in Zhejiang province than in Jiangsu province; this fact could stem from the significant leakage.

Additionally, similar analyses could be executed on the impact of the gross consumption on the fixed capital formation and non-monetary indicators.

5.3 Other Findings

5.3.1 Driving forces

If a regional TSA has been built, why is a municipal TSA needed? Both the officials of the CNTA, such as Mr. Zhang the leader of Statistics section in CNTA, and some of the officials in municipal government have doubts around developing a municipal TSA. However, Suzhou TAB has decided to do so. The main driving forces of developing a municipal TSA include the need for reliable assessment data, its advocacy function and the uneven development of the tourism industry.

Firstly, detailed and reliable data are deficient. In the Suzhou Statistics Yearbook, only two variables are published by the Suzhou Statistics Bureau: the total consumption and the total person-trips. This annual statical data only describe the trends of these variables, without

giving any further impact information. Therefore, the relationship between tourists' consumption and other conventional industries or the entire economic system is too vague to inform decisions. Moreover, the data in JSTSA are not adaptable in Suzhou municipality because Suzhou is the most economically developed city in Jiangsu Province.

Secondly, Suzhou tourism is facing fierce competition from nearby cities such as Hangzhou, Ningbo in Zhejiang province and Wuxi in Jiangsu province, all of which have a developed economies and ambitious plans to become the top tourism destination in China. Therefore, a municipal TSA is expected to contribute to policy making.

Thirdly, the marketing funds from local government are determined largely by the statistical data. In marketing the tourist destination, the competition is increasingly fierce both in marketing methods and marketing funds; while a municipal TSA is anticipated to have great advocacy functions for local government because of the comparison between tourism industry and other conventional industries which can be executed by a TSA, although the implementations of TSA in various countries do not provide evidence of the outstanding advocacy function of the TSA.

Fourthly, the uneven development of tourism also triggers municipal TSA development. Two economically developed provinces, Jiangsu and Zhejiang, have developed a regional TSA, and the CNTA and Statistics China are cooperating to develop a national TSA, and to encourage more regional TSAs. Therefore, the other provinces feel the pressure. Taking advantage of the first regional TSA in China, Suzhou is eager to explore this new tool and become the leader in this area.

5.3.2 The institution's attitudes

Building a municipal TSA needs complex and effective interactions both within and outside of the municipality.

In the municipality, two levels of involvement exist. One is core involvement in TSA development by two institutions: the TAB and the Statistics Bureau. Although Suzhou TAB expressed great interest in a municipal TSA, the Statistics Bureau expressed cautious support for the reason that tourism is not an important industry in the national account system; and it is even doubted to be an independent industry. However, the involvement of Suzhou Statistics Bureau is indispensable from the beginning to the end of the development process.

The responsibilities of the Suzhou Statistics Bureau include the following:

- Advocating or involvement in TSA funding application from local government;
- Providing the basic statistical data from the supply side of tourism, and compiling the I-O matrices;
- Providing the statistical experts and the technical support for the entire TSA system;
- Involving in or leading the methodology design;
- Involving in and supervising the adjustment of the tourism surveys;
- Assessing and controlling the reliability of the TSA conclusions;
- Publishing the conclusions of the TSA;
- Other responsibilities.

The responsibilities of the Suzhou TAB include the following:

- Advocating TSA funding application from local government;

-
- Organizing tourism consumption surveys;
 - Providing the demand-side data of tourism;
 - TSA system design;
 - Further economic analysis based on the TSA.

Some responsibilities of these two institutions overlap, and communication and cooperation are essential for both institutions. However, as mentioned before, Suzhou TAB and Suzhou Statistics Bureau have different attitudes; that is, the former has much more interest than the latter.

The other institutions involved in TSA development include related government sectors, such as the Cultural Bureau, Sports Bureau, Railway Bureau, Highway Bureau, River Transportation Bureau, and so on. The involvement of these government sectors normally consists of providing special statistical data.

Moreover, some institutions have high interest in the municipal TSA but have low involvement in it, for example local tourism business and CNTA.

Other institutions that are involved include the CNTA, Jiangsu TAB and academic researchers. Figure 4 illustrates the different attitude of each institution by the degree of the interest and involvement.

Figure 5 Interests and involvement matrix

Degree of Interests	High	<p>Local tourism businesses</p> <p>CNTA</p>	<p>Suzhou TBA</p> <p>Jiangsu TBA</p> <p>Academic researchers</p>
	Low	<p>Other local government institutions such as local Cultural Bureau, local Transportation Bureau, etc.</p>	<p>Suzhou Statistics Bureau</p>
		Low	High

The degree of involvement

5.3.3 Limitations and advantages

In this case study, several crucial driving forces push the development of a municipal TSA in Suzhou as mentioned before; however, some limitations of a TSA can not be ignored.

Firstly, a TSA prescribes the magnitude of tourism activities rather than assessing the tourism economic impact; although a tourism economic impact analysis can benefit from a TSA system as mentioned before.

Secondly, some limitations belonging to the I-O model are not overcome in the TSA system. For example, the costs and efforts required in compiling the data are usually more than a small area can afford (Erkkila, 2000: 238). A national TSA is generally based on a

serious of surveys. In order to build a TSA, adjusting some existing surveys or executing some new surveys are necessary. Although non-survey-based and hybrid I-O models are cheaper than a survey-based I-O model, the costs of these methods are a reduction in the reliability of the data. This may not be acceptable for researchers and some decision makers. Therefore, this limitation of the I-O model still frustrates most decision makers and researchers.

Thirdly, a TSA is normally weak in providing speed results. A TSA can be built only on the year when the I-O matrix is acquired and the indispensable I-O tables of a National Account for a TSA are normally compiled every four years or even longer. However, when Smith (2000) criticized the timeliness of a TSA from a research perspective, he noted that this lag is not likely to be as serious as one might assume. It is because the critical aspects of input-output matrices or the basic relations between industries “usually do not change dramatically over a few years” (Smith, 2000: 230-231). But for providing information for decision makers to use in policy analysis, planning and assessing the tourism economic impacts, much more current data are required (Smith, 2000: 230-231).

But all these limitations seem not stop the development of TSAs from a national context to a regional and even smaller context. The reasons include that

- A TSA provides the new method to assess tourism in an economy by aggregating all bits concerning tourism consumption in national account;
- The advocacy function of a TSA is assumed to be eminent in the funding competitions with other industries when applying for development funds from governments;

-
- Moreover, a TSA provides a new perspective for further economic analysis; although indirect impact and induced impact are not assessed in a TSA.

Both the limitations and advantages of a TSA are prominent. Sometimes, the need for solid statistical data will overwhelm all obstacles.

5.4 Discussion

5.4.1 Concept of a TSA

The concept of a TSA is not widely discussed because, at the national level, the TSA methodology recommended by TSA-RMF is generally accepted. The implementation of this methodology framework becomes the core issue in the development of a national TSA. Nonetheless, this basic question comes to prominence with the development of the sub-national TSA primarily because a sub-national TSA has more variety and possibilities.

From the content perspective, a TSA is a system to describe the “static element” of tourism a given area (nation, region or municipality). Mathieson and Wall suggested a conceptual framework of tourism (Mathieson & Wall, 1982: 15). In their framework, tourism was categorized into three elements: dynamic element, static element and consequential element. The dynamic element refers to tourism demand. The static element is comprised of the characteristic of tourists and destination characteristics. The consequential element includes impacts of tourism and impact control. A TSA is a system starting with the dynamic element, and ending by figuring out the static element.

From the methodology perspective, a TSA is a method for creating a synthetic tourism industry account by using two techniques, integrated definitions and I-O matrices, in order to

locate the tourism contribution to an economy.

From the implementation perspective, a TSA is a special tourism statistical institution. Therefore, building a TSA requires the assessment of the whole statistical institution and to communicate with all related departments of government. Moreover, the related surveys, including business surveys and tourism consumption surveys, should be adjusted to meet the TSA's needs.

All these perspectives are important for a TSA system. Therefore, amalgamating all these perspectives, a TSA can be defined as an official tourism statistical institution, which creates a synthetic tourism industry account by using two techniques, integrated definitions and I-O matrices, in order to wholly describe the static element of tourism and locate the tourism contribution to an economy.

5.4.2 TSA as an economic analysis tool

Basically, a TSA provides a new perspective to re-assess all tourism activities with solid data and a virtual "tourism industry" concept from the demand side. Moreover, the final purpose of a TSA is to provide a method to assess the tourism economic impact.

However, the TSAs normally prescribe the magnitude of tourism activities rather than assessing the tourism economic impact as some people assume; although a tourism economic impact analysis can benefit from a TSA system. One of the reasons is that a TSA normally focuses on and is limited to the direct expenditure of visitors.

Generally, the economic impact is categorized as direct impact, indirect impact and induced impact. Archer (1977) and Erkkila (2000) noted that an injection of tourism

expenditure is called direct expenditure or direct impact. In order to provide goods and services to tourists, tourism-related establishments buy and sell goods and services from and to suppliers within the economic area to support their business. This is called indirect impact. Moreover, as wages and salaries within the economy rise, so local consumption expenditure increase and this provides a further impetus to employment opportunities. This is called induced impacts (Archer, 1977, 1982; Archer & Fletcher, 1996; Erkkila, 2000).

Basically, the entire TSA system primarily answers two questions: what is the tourism direct expenditure? What is the contribution of tourism direct expenditure to GDP? Therefore, with the complex data of the TSA, we still can not illustrate the entire tourism economic impact clearly.

Actually, some traditional tourism analysis methods and models can also be used to measure tourism's value. For example, multipliers have been used in tourism analysis and have been discussed for a long time; although they have been abused in numerous cases. However, this method is simple, inexpensive, and straightforward.

Moreover, the Travel Economic Impact Model (TEIM) devised by the U.S. Travel Data Center also provides a straightforward method to assess tourism direct impact based on a sample survey. This model is also inexpensive and straightforward.

However, a TSA can not be substituted when it is needed to prescribe and assess tourism activity and the relationship between tourism and other industries in a given economy.

Jones et al. (2003) noted the development of a TSA can be of real policy value, since a TSA can indicate "the level of value added retained regionally- particularly important in regions where external control of facilities is significant". Moreover, a TSA can provide

quantitative data support to develop “a coherent regional tourism policy”. An appreciation of how different types of tourists interact with the host economy can help identify “higher value” tourism which policy could then encourage (Jones et al., 2003: 2780).

Moreover, a TSA will also contribute to planning. For a regional decision maker, one confusing question is whether to develop tourism or other industries. Comparison between tourism and other industries in a giving region could be helpful to their decision making.

However, one tendency is to over-highlight some conclusions of the TSA such as TVA, while ignoring further exploring the value of a TSA by developing economic analysis tools based on a TSA. This tendency will decrease the TSA’s value by treating it as a program to get a single conclusion.

5.4.3 Trend: diversification or uniformity

After the TSA-RMF was published, the implementation of the national TSAs has tended to be uniform with the promotion of the WTO. Many of the countries benefit from the global information exchange between countries and related global agencies. They shared development experiences and made consensus on TSA methodology which is recorded in the TSA-RMF

The development of regional and municipal TSAs has two different directions. One is the diversification of the framework; the other one is towards uniformity.

The diversification of municipal TSAs is impelled by the government decision makers’ needs for timelier, more reliable and detailed statistics and local specific requirements for decision making and planning. On the other hand, the uniform direction stems from the needs

for global comparison, and sub-national comparison. Moreover, if a top-down approach is used to make a regional or municipal TSA, the tendency to complying with the upper level TSA would be more possible.

All limitations contribute to hesitation or doubt in developing or updating the TSA; furthermore, the timeliness problem and high development cost will drive the regional TSA and municipal TSA to be uniform. However, the uniform tendency will decrease the value of the TSA as a useful policy tool.

Chapter 6: Conclusions

A municipal TSA is a new topic in TSA research area because no municipal TSA has been created and published. However, this fact will not stop an attempt to building a municipal TSA in Suzhou within the Chinese context. Therefore, this pilot research is carried out to discuss the basic issues involved in developing a municipal TSA. The thesis has discussed the TSA system from a municipal perspective.

The TSA system was initiated in the 1980's. The development of the TSA methodology can be categorized into three stages: conceptual development stage in the 1980's, exploration stage in the 1990's, and amalgamation and refinement stage from 2001 to now.

Certain global tourism organizations or economic organizations, such as the UNWTO, OECD, UN and Eurostat, contributed greatly to the formulation of basic definitions. With the first national TSAs in the world, Canada became the leader in building a national TSA, developing a regional TSA by using a “top-down” approach, and developing an economic analysis tools based on the national TSA. Finally, an international guideline for a national TSA was published in 2001 by UN, UNWTO, OECD and Eurostat. After that, the implementation and refinement of TSAs become the main topic of research in this area.

One tendency of TSA development has been the building of regional TSAs. Two approaches, top-down approach and bottom-up approach, have been used and discussed in the academic literature. Moreover, the further development of regional TSAs can be anticipated.

Two regional TSA have been built in China in recent years. JSTSA was the first TSA in China, and provide an example for building both a national TSA and a municipal TSA. In this

context, the Suzhou government launched a project to build a municipal TSA. The initial research on the feasibility of building a TSA in a municipal area has been carried out. Therefore, to learn from this experience, research involved a case study undertaken in Suzhou.

In this research, a qualitative approach was adopted, reflecting the nature of the research questions. The case study is the primary strategy to discuss the framework of a municipal TSA and TSA principles from a municipal perspective. Furthermore, structural analysis and interpretation were the crucial methods used to construct and discuss the meaning of different people's attitudes and understand of the mechanisms of a Chinese municipality. Moreover, because of the exploratory nature of this study, the research is based on both primary and secondary data.

Both the Tourism Administration Bureau and the Statistics Bureau are playing crucial roles in the development of a municipal TSA. Collaboration between them is indispensable during the whole period of building a municipal TSA. Moreover, the applicability of existing statistical data and tourism-related surveys should be assessed according to the TSA definitions and principles.

Several crucial factors encouraged Suzhou TAB to develop a municipal TSA. These factors include the development of other TSAs in China, the highly developed local municipal economy and, thus, the likely availability of funding, and the need for tourism promotion and the desire for further tourism development in Suzhou. The absence of reliable tourism data frustrates both the local government and the tourism industry.

Certain obstacles appeared from the beginning of the project. The obstacles include the

fact that the input-output matrix should be compiled for TSA, various departments of the municipal government have different attitudes towards TSA, professional statistics experts are absent from the TBA, and the available budget has not yet been decided.

Benefiting from the regional TSA experiences, two approaches are discussed in a municipal perspective. One is a “top-down” approach and the other is a “bottom-up” approach. Both of these approaches have advantages and disadvantages. In the Suzhou context, a combination of the two approaches is likely to be adopted.

A TSA can be discussed from both a methodology perspective and an institutional perspective. From the former perspective, the topics concerning a TSA focus upon the definitions, framework and data collection. From the latter perspective, the topics concerning a TSA highlight the implementation procedure and the mechanisms of the local government.

After discussing the municipal view of a TSA, a simple framework of a municipal TSA has been suggested. This framework is comprised of integrated definitions, an I-O framework, core indicators and issues for further development of the municipal TSA.

Besides this technical framework of a municipal TSA, the driving forces, institution attitudes to the municipal project and the limitations and advantages of the TSA methodology in municipal context have been examined.

In a municipal context, a TSA can be viewed from the content perspective, the methodology perspective, and the implementation perspective. All these perspectives are important for a TSA system.

Further studies are suggested that should focus on discussing a TSA as an economic analysis tool, and should consider the contrasting trends towards diversification and

uniformity in TSA methodology development.

Finally, the conclusions of the research are as follows:

1. A TSA system can be adopted in a municipal area. The preconditions of adoption of TSA in municipal area include the existence of an SNA system, accessibility of I-O matrices and a reasonable budget.
2. A municipal TSA has more varieties and possibilities than a national TSA does because it should address varied local needs more. However, a municipal TSA must include three core factors, which are integrated definitions, I-O matrices and indicators concerning valued added of tourism consumption.
3. A TSA can be defined as an official tourism statistical institution, which creates a synthetic tourism industry account by using two techniques, integrated definitions and I-O matrices, in order to wholly describe the static element of tourism and to calculate the contribution of tourism to the economy.

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Appendix: Tables in TSA-RMF

(Source: *Tourism Satellite Account: Recommended Methodological Framework*)

Table 1

Inbound tourism consumption, by products and categories of visitors
(visitor final consumption expenditure in cash)
(Net valuation)

Products	Same-day visitors (1.1)	Tourists (1.2)	Total visitors (1.3) = (1.1) + (1.2)
A. Specific products			
A.1 Characteristic products (a)			
1 – Accommodation services	X		
1.1 – Hotels and other lodging services (3)	X		
1.2 – Second homes services on own account of for free	X	X	X
2 – Food and beverage serving services (3)			
3 – Passenger transport services (3)			
3.1 Interurban railway (3)			
3.2 Road (3)			
3.3 Water (3)			
3.4 Air (3)			
3.5 Supporting services			
3.6 Transport equipment rental			
3.7 Maintenance and repair services			
4 – Travel agency, tour operator and tourist guide services			
4.1 Travel agency (1)			
4.2 Tour operator (2)			
4.3 Tourist information and tourist guide			
6 – Cultural services (3)			
5.1 Performing arts			
5.2 Museum and other cultural services			
6 – Recreation and other entertainment services (3)			
6.1 Sports and recreational sport services			
6.2 Other amusement and recreational services			
7 – Miscellaneous tourism services			
7.1 Financial and insurance services			
7.2 Other good rental services			
7.3 Other tourism services			
A.2 Connected products			
distribution margins			
goods (4)			
services			
B. Non specific products			
distribution margins			
goods (4)			
services			
TOTAL			
number of trips			
number of overnights			

X does not apply

- (1) Corresponds to the margins of the travel agencies
(2) Corresponds to the margins of the tour operators
(3) The value is net of the amounts paid to travel agencies and tour operators
(4) The value is net of distribution margins

(a) Even if they are called "products", no goods are included for the time being. Two main reasons led to that decision:
– the importance of the existing differences (both in level and structure) between the types of goods acquired by visitors according to the country and place visited;
– the existing limitations of the available sources of statistical information.
Nevertheless, goods are not totally banned from the analysis, as retail trade services (specialized and non specialized) associated with the sale of goods to visitors are included within the list. This is due to the fact that the associated productive activity is an activity which is in contact with the visitor and thus, given certain circumstances, can be viewed as a tourism activity.
Moreover, the list of products included in each of the 7 groups under consideration is shown in Annex II; the explanatory notes for each of them are also included in Annex I, in order that they may be clearly identified.

Table 2
Domestic tourism consumption, by products and ad hoc sets of resident visitors
(visitor final consumption expenditure in cash)
(Net valuation)

Products	Resident visitors travelling only within the country of reference			Resident visitors travelling to a different country(*)			All resident visitors (**)		
	Same-day visitors (2.1)	Tourists (2.2)	Total visitors (2.3) = (2.1) + (2.2)	Same-day visitors (2.4)	Tourists (2.5)	Total visitors (2.6) = (2.4) + (2.5)	Same-day visitors (2.7) = (2.1) + (2.4)	Tourists (2.8) = (2.2) + (2.5)	Total visitors (2.9) = (2.3) + (2.6)
A. Specific products									
A.1 Characteristic products (a)									
1 – Accommodation services	X			X			X		
1.1 – Hotels and other lodging services (3)	X			X			X		
1.2 – Second homes services on own account of for free	X	X	X	X	X	X	X	X	X
2 – Food and beverage serving services (3)									
3 – Passenger transport services (3)									
3.1 Interurban railway (3)									
3.2 Road (3)									
3.3 Water (3)									
3.4 Air (3)									
3.5 Supporting services									
3.6 Transport equipment rental									
3.7 Maintenance and repair services									
4 – Travel agency, tour operator and tourist guide services									
4.1 Travel agency (1)									
4.2 Tour operator (2)									
4.3 Tourist information and tourist guide									
5 – Cultural services (3)									
5.1 Performing arts									
5.2 Museum and other cultural services									
6 – Recreation and other entertainment services (3)									
6.1 Sports and recreational sport services									
6.2 Other amusement and recreational services									
7 – Miscellaneous tourism services									
7.1 Financial and insurance services									
7.2 Other good rental services									
7.3 Other tourism services									
A.2 Connected products									
distribution margins									
goods (4)									
services									
B. Non specific products									
distribution margins									
goods (4)									
services									
TOTAL									
number of trips									
number of overnights									

X does not apply

(a) See note under Table 1

(*) This set of visitors refers to those resident visitors which trip will take them outside the economic territory of the country of reference. These columns will include their consumption expenditure before departure or after their return.

(**) Due to the fact that some expenditures cannot be associated specifically to any of these categories of visitors (for instance, single purpose consumer durables bought or purchased outside the context of a trip), the estimation of domestic tourism consumption (which corresponds to the last column of the table) will require some specific adjustments. Visitor final consumption expenditure in cash for all resident visitors, is not strictly the sum of this concept for each category of visitors.

(1) Corresponds to the margins of the travel agencies

(2) Corresponds to the margins of the tour operators

(3) The value is net of the amounts paid to travel agencies and tour operators

(4) The value is net of distribution margins

Table 3
Outbound tourism consumption, by products and categories of visitors
(visitor final consumption expenditure in cash)
(Net valuation)

Products	Same-day visitors (3.1)	Tourists (3.2)	Total visitors (3.3)=(3.1)+(3.2)
A. Specific products			
A.1 Characteristic products (a)			
1 – Accommodation services	X		
1.1 – Hotels and other lodging services (3)	X		
1.2 – Second homes services on own account of for free	X	X	X
2 – Food and beverage serving services (3)			
3 – Passenger transport services (3)			
3.1 Interurban railway (3)			
3.2 Road (3)			
3.3 Water (3)			
3.4 Air (3)			
3.5 Supporting services			
3.6 Transport equipment rental			
3.7 Maintenance and repair services			
4 – Travel agency, tour operator and tourist guide services			
4.1 Travel agency (1)			
4.2 Tour operator (2)			
4.3 Tourist information and tourist guide			
5 – Cultural services (3)			
5.1 Performing arts			
5.2 Museum and other cultural services			
6 – Recreation and other entertainment services (3)			
6.1 Sports and recreational sport services			
6.2 Other amusement and recreational services			
7 – Miscellaneous tourism services			
7.1 Financial and insurance services			
7.2 Other good rental services			
7.3 Other tourism services			
A.2 Connected products			
distribution margins			
goods (4)			
services			
B. Non specific products			
distribution margins			
goods (4)			
services			
TOTAL			
number of trips			
number of overnights			

X does not apply

(a) See note under Table 1

(1) Corresponds to the margins of the travel agencies

(2) Corresponds to the margins of the tour operators

(3) The value is net of the amounts paid to travel agencies and tour operators

(4) The value is net of distribution margins

Table 4
Internal tourism consumption, by products and types of tourism
(Net valuation)

	Visitors final consumption expenditure in cash			Other components of visitors consumption (4.4)**	Internal tourism consumption (in cash and in kind) (4.5) = (4.3) + (4.4)
	Inbound tourism consumption (4.1)*	Domestic tourism consumption (4.2)**	Internal tourism consumption in cash (4.1) + (4.2) = (4.3)		
Products					
A. Specific products					
A.1 Characteristic products (a)					
1 – Accommodation services					
1.1 – Hotels and other lodging services (3)					
1.2 – Second homes services on own account of for free	X	X	X		
2 – Food and beverage serving services (3)					
3 – Passenger transport services (3)					
3.1 Interurban railway (3)					
3.2 Road (3)					
3.3 Water (3)					
3.4 Air (3)					
3.5 Supporting services					
3.6 Transport equipment rental					
3.7 Maintenance and repair services					
4 – Travel agency, tour operator and tourist guide services					
4.1 Travel agency (1)					
4.2 Tour operator (2)					
4.3 Tourist information and tourist guide					
5 – Cultural services (3)					
5.1 Performing arts					
5.2 Museum and other cultural services					
6 – Recreation and other entertainment services (3)					
6.1 Sports and recreational sport services					
6.2 Other amusement and recreational services					
7 – Miscellaneous tourism services					
7.1 Financial and insurance services					
7.2 Other good rental services					
7.3 Other tourism services					
A.2 Connected products					
distribution margins					
services					
B. Non specific products					
distribution margins					
services					
Value of domestically produced goods net of distribution margins					
Value of imported goods net of distribution margins					
TOTAL					

X does not apply

(a) See note under Table 1

(*) Corresponds to 1.3 in table 1

(**) Corresponds to 2.9 in table 2

(***) These components (referred to as visitor final consumption expenditure in kind, tourism social transfer in kind and tourism business expenses) are recorded separately as these components are not easily attributable by types of tourism

(1) Corresponds to the margins of the travel agencies

(2) Corresponds to the margins of the tour operators

(3) The value is net of the amounts paid to travel agencies and tour operators

Table 5
Production accounts of tourism industries and other industries
(Net valuation)

Products	TOURISM INDUSTRIES												TOTAL tourism industries	Tourism connected industries	Non specific industries	TOTAL output of domestic producers (at basic prices)	
	1 - Hotels and similar	2 - Second home ownership (imputed)	3 - Restaurants and similar	4 - Railway passenger transport	5 - Road passenger transport	6 - Water passenger transport	7 - Air passenger transport	8 - Passenger transport supporting services	9 - Passenger transport equipment rental	10 - Travel agencies and similar	11 - Cultural services	12 - Sporting and other recreational services					
A. Specific products																	
A.1 Characteristic products (a)																	
1 - Accommodation services																	
1.1 - Hotels and other lodging services (3)		X															
1.2 - Second homes services on own account or for free	X		X	X	X	X	X	X	X	X	X	X				X	
2 - Food and beverage serving services (8)			X														
3 - Passenger transport services (8)			X														
3.1 Intraurban railway (3)			X														
3.2 Road (3)			X														
3.3 Water (3)			X														
3.4 Air (3)			X														
3.5 Supporting services			X														
3.6 Transport equipment rental			X														
3.7 Maintenance and repair services			X														
4 - Travel agency, tour operator and tourist guide services			X														
4.1 Travel agency (1)			X														
4.2 Tour operator (2)			X														
4.3 Tourist information and tourist guide			X														
6 - Cultural services (8)			X														
6.1 Performing arts			X														
6.2 Museum and other cultural services			X														
8 - Recreation and other entertainment services (8)			X														
8.1 Sports and recreational sport services			X														
8.2 Other amusement and recreational services			X														
7 - Miscellaneous tourism services			X														
7.1 Financial and insurance services			X														
7.2 Other good rental services			X														
7.3 Other tourism services			X														
A.2 Connected products			X														
distribution margins			X														
services			X														
B. Non specific products			X														
distribution margins			X														
services			X														
Value of domestic produced goods net of distribution margins		X															
Value of imported goods net of distribution margins	X		X														X
TOTAL output (at basic prices)																	
1. Agriculture, forestry and fishing products																X	X
2. Crude minerals																X	X
3. Electricity, gas and water																X	X
4. Manufacturing																X	X
5. Construction work and construction																X	X
6. Trade services, restaurants and hotel services																X	X
7. Transport, storage and communication services																X	X
8. Business services																X	X
9. Community, social and personal services																X	X
Total intermediate consumption (at purchasers prices)																	
Total gross value added of activities (at basic prices)																	
Compensation of employees																	
Other taxes less subsidies on production																	
Gross Mixed income																	
Gross Operating surplus																	

X does not apply

(a) See note under Table 1

(1) Corresponds to the margins of the travel agencies

(2) Corresponds to the margins of the tour operators

(3) The value is net of the amounts paid to travel agencies and tour operators

Table 6
Domestic supply and internal tourism consumption, by products
(Net valuation)

Products	TOURISM INDUSTRIES								TOTAL tourism industries		Tourism connected industries		Non specific industries		Total output of domestic producers (at basic prices)	Imports [*]	Taxes less subsidies on products of domestic output	Domestic supply (at purchasers prices)	Internal tourism consumption	Tourism ratio on supply
	1 - Hotels and other		2 - Second home ownership (resales)		***		12 - Sporting and other recreational services		output	tourism share	output	tourism share	output	tourism share						
	output	tourism share	output	tourism share	output	tourism share	output	tourism share												
A. Specific products																				
A.1 Characteristic products (a)																				
1 - Accommodation services																				
1.1 - Hotels and other lodging services (3)			X	X																
1.2 - Second homes services on own account or for free	X	X			X	X	X	X			X	X	X	X			X			
2 - Food and beverage serving services (8)			X	X																
3 - Passenger transport services (8)			X	X																
3.1 Interurban railway (3)			X	X																
3.2 Road (3)			X	X																
3.3 Water (3)			X	X																
3.4 Air (3)			X	X																
3.5 Supporting services			X	X																
3.6 Transport equipment rental			X	X																
3.7 Maintenance and repair services			X	X																
4 - Travel agency, tour operator and tourist guide services			X	X																
4.1 Travel agency (1)			X	X																
4.2 Tour operator (2)			X	X																
4.3 Tourist information and tourist guide			X	X																
6 - Cultural services (8)			X	X																
6.1 Performing arts			X	X																
6.2 Museum and other cultural services			X	X																
8 - Recreation and other entertainment services (8)			X	X																
8.1 Sports and recreational sport services			X	X																
8.2 Other amusement and recreational services			X	X																
7 - Miscellaneous tourism services			X	X																
7.1 Financial and insurance services			X	X																
7.2 Other good rental services			X	X																
7.3 Other tourism services			X	X																
A.2 Connected products			X	X																
distribution margins			X	X																
services			X	X																
B. Non specific products			X	X																
distribution margins			X	X																
services			X	X																
Value of domestically produced goods net of distribution margins			X	X															X	X
Value of imported goods net of distribution margins	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X	X	X
TOTAL output (at basic prices)																				
1. Agriculture, forestry and fishery products										X	X	X	X	X						
2. Crude minerals										X	X	X	X	X						
3. Electricity, gas and water										X	X	X	X	X						
4. Manufacturing										X	X	X	X	X						
5. Construction work and construction										X	X	X	X	X						
6. Trade services, restaurants and hotel services										X	X	X	X	X						
7. Transport, storage and communication services										X	X	X	X	X						
8. Business services										X	X	X	X	X						
9. Community, social and personal services										X	X	X	X	X						
Total intermediate consumption (at purchasers prices)																				
Total gross value added of activities (at basic prices)																				
Compensation of employees																				
Other taxes less subsidies on production																				
Gross Mixed Income																				
Gross Operating surplus																				

X - does not apply

(a) See note under Table 1

* Means that all tourism industries of the proposed list have to be considered one by one in the enumeration

** The imports referred here are exclusively those which are purchased within the country of reference.

(1) Corresponds to the margins of the travel agencies

(2) Corresponds to the margins of the tour operators

(3) The value is net of the amounts paid to travel agencies and tour operators

Table 7
Employment in the tourism industries

Tourism industries	Number of establishments	Number of jobs			Status in employment						Number of employed persons		
		total			employees			other			total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
1 – Hotels and similar													
2 – Second home ownership (imputed)		X	X	X	X	X	X	X	X	X	X	X	X
3 – Restaurants and similar													
4 – Railways passenger transport													
5 – Road passenger transport													
6 – Water passenger transport													
7 – Air passenger transport													
8 – Passenger transport supporting services													
9 – Passenger transport equipment rental													
10 – Travel agencies and similar													
11 – Cultural services													
12 – Sporting and other recreational services													
TOTAL													

X does not apply

Table 8

Tourism gross fixed capital formation of tourism industries and other industries

	TOURISM INDUSTRIES												Total tourism industries	Other industries			Total tourism gross fixed capital formation of tourism industries and others	
	1 - Hotels and similar	2 - Second home ownership (imputed)	3 - Restaurants and similar	4 - Railway passenger transport	5 - Road passenger transport	6 - Water passenger transport	7 - Air passenger transport	8 - Passenger transport supporting services	9 - Passenger transport equipment rental	10 - Travel agencies and similar	11 - Cultural services	12 - Sporting and other recreational services		Public Administration	Others	Total		
	Capital goods																	
A. Produced non-financial assets																		
A1. Tangible fixed assets																		
1. Tourism accommodation																		
1.1. Hotel and other collective accommodation		X																
1.2. Dwellings for tourism purposes																		
2. Other buildings and structures			X															
2.1. Restaurants and similar buildings			X															
2.2. Construction or infrastructure for passenger transport by road, rail, water, air			X											(1)				
2.3. Buildings for cultural services and similar			X															
2.4. Constructions for sport, recreation and entertainment			X															
2.5. Other constructions and structures			X											(1)	(1)			
3. Passenger transport equipment			X															
3.1. Road and rail			X															
3.2. Water			X															
3.3. Air			X															
4. Machinery and equipment			X															
A2. Intangible fixed assets			X															
B. Improvement of land used for tourism purposes																		
TOTAL																		
Memo:																		
C. Non produced non-financial assets		X																
1. Tangible non produced assets		X																
2. Intangible non produced assets		X																
TOTAL		X																

X does not apply

(1) Only that which is for tourism purposes

Table 9

Tourism collective consumption, by functions and levels of government

Function	National level	Regional (state) level	Local level	Total tourism collective consumption	Memo (*) Intermediate consumption by the tourism industries
	(9.1)	(9.2)	(9.3)	(9.4)= (9.1)+(9.2)+(9.3)	
Tourism promotion					
General planning and coordination related to tourism affairs					X
Generation of statistics and of basic information on tourism					X
Administration of information bureaus					
Control and regulation of establishments in contact with visitors					X
Specific control to resident and non resident visitors					X
Special civil defence services related with the protection of visitors					
Other services					
TOTAL					

X does not apply

(*) This column reflects the expenditure by the tourism industries in tourism promotion or other services related to the functions described, when relevant.

Table 10
Non-monetary indicators

a. Number of trips and overnights by type of tourism and categories of visitors

	Inbound tourism (*)			Domestic tourism			Outbound tourism		
	Same-day visitors	Tourists	Total visitors	Same-day visitors	Tourists	Total visitors	Same-day visitors	Tourists	Total visitors
Number of trips (*)									
Number of overnights									

(*) In the case of inbound tourism, the variable would be "arrivals"

b. Inbound tourism: Number of arrivals and overnights by means of transport

	Number of arrivals	Number of overnights
1. Air		
1.1 Scheduled flights		
1.2 Non scheduled flights		
1.3 Other services		
2. Waterway		
2.1 Passenger lines and ferries		
2.2 Cruise		
2.3 Other		
3. Land		
3.1 Railway		
3.2 Motor coach or bus and other public road transportation		
3.3 Private vehicles		
3.4 Vehicle rental		
3.5 Other means of land transport		
TOTAL		

c. Number of establishments and capacity by forms of accommodation

	Collective tourism establishments		Private tourism accommodation	
	Hotels and similar	Others	Second homes	Others
number of establishments				
capacity (rooms)				
capacity (beds)				
capacity utilization (rooms)				
capacity utilization (beds)				

d. Number of establishments in tourism characteristic and tourism connected activities classified according to number of employed persons

	1-4	5-9	10-19	20-49	50-99	100-249	250-499	500-999	>1000	TOTAL
Tourism Characteristic activities										
1 – Hotels and similar										
2 – Second home ownership (imputed)	X	X	X	X	X	X	X	X	X	X
3 – Restaurants and similar										
4 – Railways passenger transport										
5 – Road passenger transport										
6 – Water passenger transport										
7 – Air passenger transport										
8 – Passenger transport supporting services										
9 – Passenger transport equipment rental										
10 – Travel agencies and similar										
11 – Cultural services										
12 – Sporting and other recreational services										
Tourism Connected activities										
TOTAL										