Implementation of Tourism Satellite Account: Assessing the Contribution of Tourism to the Croatian Economy

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INTRODUCTION

The System of National Accounts (SNA) is a comprehensive accounting framework for compiling and presenting data on complex economic activities within a national economy and its links with the rest of the world. In the 1993's version (Commission of the European Communities, International Monetary Fund, Organization for Economic Cooperation and Development, United Nations, & World Bank, 1993; below SNA 1993), the SNA enables flexible extensions of national accounting through so-called satellite accounts. The satellite accounts are designed to recognize and emphasize important economic activities hidden within the main framework of the SNA. Tourism is one of the activities for which the compilation of satellite account is recommended as 'delineating tourism activities raises a lot of difficulties' (SNA 1993, 21.16). The necessity for a special treatment of tourism resulted in an impulse for the development of a methodological framework for compiling a Tourism Satellite Account (TSA). As a link between tourism statistics and standard national accounts tables, TSA is based on reliable and

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internationally comparable statistical observations organized and reconciled in the form of accounts. It measures the direct economic impact of visitors to a country's economy (Frechtling, 2010). Measurement of the total economic impact, on the other hand, implies the use of different types of economic models. Among them, the most common are input-output models (I-O) and computable general equilibrium (CGE) models (Frechtling, 2013; Los & Steenge, 2010; Song, Dwyer, Li, & Cao, 2012).

Basic TSA concepts have been developed since the late 1970s, and several attempts at the measurement of the contribution of tourism had been made (Alriquet & Herbecq, 1979; Lapierre, 1991; Organisation for Economic Cooperation and Development, 1991; World Tourism Organization, 1983) even before the first international conference with the main topic of TSA was organized in Ottawa in 1991. The framework for internationally harmonized measurements of the macroeconomic contribution of tourism and the calculation of the main tourism macro-aggregates was initially set by 2001 Tourism Satellite Account: Recommended Methodological Framework (Commission of the European Communities, Organisation of Economic Co-operation and Development, United Nations, & World Tourism Organization, 2001; below TSA:RMF 2001). The updated version, 2008 Tourism Satellite Account: Recommended Methodological Framework (United Nations, World Tourism Organization, Eurostat—Commission of the European Communities, & Organisation for Economic Co-operation and Development, 2010a; below TSA:RMF 2008), was aligned with a new version of the International Recommendation of Tourism Statistics (United Nations & World Tourism Organization, 2010b). The inauguration of these documents initialized the compilation of TSAs in many countries. By 2004, 70 countries or regions were in the process of TSA development (Libreros, Massieu, & Meis, 2006), while by 2009, 20 EU countries were regularly compiling TSA or were in the process of its experimental or pilot phase (Eurostat, 2009). In spite of the inaugurated methodological framework, various approaches have been taken to constructing TSA tables, from methods of estimation of internal tourism consumption to the definition and scope of tourism industries and products. The myriad of different solutions is primarily a reflection of an imperfect system of tourism statistics, both from the perspective of its given structure and its development on national levels. Recognizing the underlying issues, the European Commission stresses the 'need to improve the availability, completeness and comprehensiveness of the basic tourism statistics as an input for compiling TSA' (European Union, 2011, p. 17).

Attempts to assess the contribution of tourism have also been made in Croatia. Prior to the international adoption of TSA:RMF 2001, these attempts, due to inadequate tourism statistics and/or nonaligned methods, only partially measured tourism consumption and its contribution (Car, Cicvarić, Radnić, & Sekulić, 1975; Ivandić & Radnić, 1997; Radnić, 1990; Radnić & Ivandić, 1999). Significant improvements of the Croatian system of tourism statistics (STS) occurred in the early 2000s (Horak, Marušić, & Radnić, 1999; Institute for Tourism, 2003), followed by efforts to enrich knowledge of different aspects of tourism impacts (Blažević, 2007; Kesar, 2006) and to evaluate the feasibility of TSA compilation (Institute for Tourism, 2007). An experimental TSA for Croatia was compiled for 2005 (Institute for Tourism, 2008) and 2007 (Institute for Tourism, 2010), followed by the first TSA developed for 2011 (Ivandić, Marušić, Šutalo, & Vuglar, 2014). During that time, parallel efforts were made in the application of tourism impact models based on both the CGE and the I-O approach (Gatti, 2013; Šutalo, Ivandić, & Marušić, 2011).

Since the assessment of the role of tourism in a national economy is a very complex task (Ahlert, 2007) characterized by different solutions in applying the TSA methodological framework on the national level (Eurostat, 2009), this paper aims to discuss the application of theoretical concepts provided by the TSA methodological framework to measure tourism flows in conditions limited by lack of relevant and reliable data. The case of Croatia was used for this exercise, reviewing different issues and possible solutions that arise in the process of TSA development.

The paper has six parts. Following the introduction, the second section deals with the relevance of TSA and its main concepts. The third part reveals an approach to measurement of internal tourism consumption, while, in the fourth part, internal tourism consumption is combined with total output, stressing the issue of unregistered flows. The fifth section is focused on Croatian tourism macro-aggregates and their international comparison, while the last part gives a number of TSA policy implications and recommendations for the future work on TSA development.

TSA—Concepts, Tables and Benefits

Why doesn't the SNA methodology thoroughly assess the contribution of tourism activity? The answer lies in the fact that tourism is not defined by the nature of its output, inputs used or techniques of production employed (SNA 1993) but rather by the position of the customer—the visitor.

Tourism has to be considered as a set of production activities led by demand created by visitors. TSA is 'a step forward in quantifying the direct effects of tourism on the basis of a clearly understandable, uniform and internationally binding accounting system' (Ahlert, 2007, p. 285). Such an assessment of tourism implies, from the perspective of the country of residence of visitors and the country of reference (distinguishing domestic, inbound and outbound tourism), a more specific understanding of a number of issues of which the most important are the visitor, a usual environment, tourism expenditure and tourism consumption (TSA:RMF 2008).

Building on the framework and methodology of the standard SNA tables from a functional perspective (TSA:RMF 2001), a TSA is comprised of ten tables. The core tables (TSA Tables 1, 2, 3, 4, 5, 6, 10) are related to monetary and non-monetary indicators of tourism expenditure and consumption and the output of tourism industries. In particular, TSA Tables 1, 2 and 3 present a division of tourism expenditures by inbound, domestic and outbound visitors, respectively, according to products and services aligned with Central Product Classification and organized into tourism-specific products, tourism characteristic products, non-tourism-related consumption products and non-consumption products. TSA Table 4 presents estimates of total internal tourism consumption, summing inbound (TSA Table 1) and domestic (TSA Table 2) tourism expenditures as well as additional components of tourism consumption. TSA Table 5, based on Supply and Use Table (SUT), connects products (rows) and output of tourism and other industries (columns). Tourism industries, those that produce tourism characteristic products, are in accordance with International Standard Industrial Classification of all Economic Activities. Integrating internal tourism consumption (TSA Table 4) with domestic supply (TSA Table 5), TSA Table 6 is the 'heart' of TSA tables enabling the calculation of the direct contribution of tourism to the economy. Other tables examine employment in tourism industries (TSA Table 7), tourism gross fixed capital formation (TSA Table 8) and tourism collective consumption (TSA Table 9).

In addition to the ten mentioned tables, a TSA includes five macro-aggregates as indicators of the size of tourism in a national economy. Two of them are related to consumption and three to production: (i) internal tourism expenditures, (ii) internal tourism consumption, (iii) gross value added of tourism industries (GVATI), (iv) tourism direct gross value added (TDGVA) and (v) tourism direct gross domestic product (TDGDP). GVATI is a sum of the total gross value added of all establishments belonging to tourism industries, regardless of whether all their output

is used by visitors and of the degree of specialization of their production process. TDGVA is a sum of the parts of gross value added generated by tourism industries and other industries of the economy that directly serve visitors, responding to internal tourism consumption. TDGDP is a sum of part of gross value added (at basic prices) generated by all industries in response to internal tourism consumption plus the amount of net taxes on products and imports included within the value of this expenditure at purchaser's prices.

TDGVA and TDGDP are measures of the direct economic contribution of tourism to the economy, but it should be taken into account that they only measure internal tourism consumption and do not consider other components of total tourism demand, namely, tourism gross fixed capital formation and tourism collective consumption. This is of particular relevance when comparing TDGDP with the gross domestic product of other industries.

Despite its limitations (Jones & Munday, 2008; Smeral, 2006), the TSA today represents state-of-the-art methodology for collecting, presenting and comparing national tourism statistics (Kenneally & Jakee, 2012), and it provides a significant advance for those wishing to undertake tourism economic analysis (Jones & Munday, 2008). Numerous potential benefits of TSA are recognized (Frangialli, 2006), among which it is worth mentioning the improvement of the information base for conducting a national tourism policy and marketing strategy and adjustments and fine-tuning of STS and the increase of the use of tourism research results in the private sector (Ivandić & Marušić, 2009).

Assessment of Internal Tourism Consumption: The Case of Croatia

A large number of scientific and professional papers deal with the estimation of tourism expenditures as an important economic driver (Sainaghi, 2012). Frechtling (2006) compares seven most frequently used methods for estimation of tourism expenditures and concludes that visitor surveys and cost-factor models, if correctly applied, produce the most valid estimates. Stynes and White (2006) emphasize the importance of measurement units, spending categories and the segmentation of visitors. Wilton and Nickerson (2006) stress the importance of applying the appropriate survey methods in order to reduce non-sampling errors such as recall bias that usually results in spending underestimation.

The assessment of STS in Croatia found it as mostly satisfactory for the estimation of internal tourism consumption within the TSA framework (Ivandić & Marušić, 2009) as it is based on relevant and accurate, although not fully appropriate, surveys. The surveys upon which the data is derived from are (i) Survey on expenditures of foreign visitors in Croatia in 2011, Croatian National Bank (below border survey), (ii) Tourism—monthly survey on tourism arrivals and overnights in commercial accommodation facilities in 2011 (Croatian Bureau of Statistics, 2012; below accommodation occupancy survey), (iii) Survey on attitudes and expenditures of tourists in Croatia in 2010 (Institute for Tourism, 2011; below visitor survey), (iv) Survey on attitudes and expenditures of nautical tourists in Croatia in 2012 (Institute for Tourism, 2013; below nautical visitor survey) and (v) Survey on travel pattern of domestic population in 2011 (Institute for Tourism, 2012; below travel household survey). However, the level of development of STS does not yet allow the compilation of a complete TSA. The limitations of these data sources are that they currently do not cover all segments of tourism demand (e.g., inbound tourists entering Croatia by water and railway border crossings and tourists on Croatian cruise ships), while the level of disaggregation of tourism expenditures does not fully meet TSA criteria (e.g., expenditures for culture, sport and recreation are aggregated as well as expenditures for transport services). Compilation of TSA Tables 1 to 4 therefore assumes partial assessment of expenditures from the supply side based on ad hoc surveys of specific service providers, as well as aggregation of some tourism characteristic products. Regarding the disaggregation of tourism expenditures by segments of demand, the chosen approach and sources presented in Table 8.1 comply with the proposed framework.

Total internal tourism consumption in Croatia in 2011 is estimated at 8.6 billion Euro (Ivandić et al., 2014). Inbound tourism expenditures make up 76.5 per cent, and domestic tourism expenditures 19.5 per cent of internal tourism consumption, while four per cent are related to imputed accommodation services of vacation homes. The accommodation services for visitors generate the largest part of internal tourism consumption (27 per cent) within tourism characteristic products, followed by food and beverage services (22 per cent), transport services (five per cent) and cultural, sports and recreational services (four per cent). Expenditures for other products and services make up 40 per cent of internal tourism consumption. The high percentage of expenditures being attributed to other products and services, idiosyncratic to the Croatian TSA, can be explained

by the inclusion of the category Transport equipment rental services in other products and services but also, in a larger extent, a sole reflection of Croatian tourism demand characteristics. Most of Croatian tourists arrive by means of car transport where the dominant types of accommodation facilities are camps and households as well as second homes and friends and relatives accommodation. Finally, this results to a large part of tourist expenditures generated in retail (for food and beverages as well as fuel) and highway tolls.

The applied methodological approach revealed two crucial areas of particular importance due to their significant contribution to the total tourism consumption and due to the reliability of the available data sources used for the obtained estimations: (i) the expenditures of tourists in household accommodation and (ii) the expenditures of nautical visitors (yachting, cruising).

The estimation of total volume of physical demand has shown to be a major issue in calculating the expenditures of tourism in household accommodation. Household accommodation is the most important part (49 per cent in 2011) of Croatian total tourism accommodation capacity measured by the number of beds (Croatian Bureau of Statistics, 2012) which makes 35 per cent of total overnights. Since the official data are based on the supply side approach, they face problems of accuracy of reporting and quality of registers, particularly in the case of household accommodation. Therefore, a specific approach has been developed combining supply and demand side data, as described in Table 8.1, which resulted in doubled estimation of the number of tourists in household accommodation compared to the official data. This has at least two implications for tourism policy in general: (i) recognition of unregistered tourism flows and (ii) distortion of productivity indicators based on TSA. The latter is a consequence of the fact that employment in household accommodation is not taken into account within employment in tourism industries (TSA Table 7). The issue of unregistered tourism flows should also be taken into account in the production side of TSA.

As illustrated by the case of the importance of household accommodation, the process of TSA compilation should be based on linkage and thorough verification of coherence and consistency of data sources. On the other hand, the TSA framework does not allow deeper insight into the importance and characteristics of specific tourism products, such as cultural, business, sun and beach, sport tourism and so on. One example of such products is yachting and cruising tourism, both on the sea and rivers,

Table 8.1   Methodological approach for assessment of internal tourism expenditures in Croatia in 2011

Inbound tourism expenditures	
Number of visitors (NI)	Due to the overestimation of number of inbound visitors obtained by border survey (Ivandić & Marušić, 2009), the estimates are based on:
	Distribution of inbound visitors by length of stay and type of accommodation: border survey
	Number of tourist arrivals in hotels and similar accommodation: accommodation occupancy survey
	The obtained estimates are modified for:
	Multiple arrivals to hotel and similar establishments during one trip: visitor survey
	Number of visitors in nautical tourism: nautical visitors survey
Average tourism expenditures (AEI)	Border survey with exemption of expenditures for durable goods
Total tourism expenditures (TEI)	$TEI = \sum_{1}^{n} NI_i AEI_i$, where i represents segments of tourism demand by length of stay and type of accommodation
Domestic tourism expenditures	
Number of visitors	Number of visitors on domestic trips, both within country (NDC) and abroad (NDA): travel household survey
Average tourism expenditures	Trips within country (AEDC): travel household survey
	Outbound trips (AEDA): travel household survey with expert estimates of share of goods and services used on domestic part of outbound trip
Total tourism expenditures (TED)	$TED = \sum_{1}^{n} NDC_i AEDC_i + \sum_{1}^{n} NDA_i AEDA_i$, where i represents segments of tourism demand by length of stay and type of accommodation
Tourism expenditures per product and service	
Accommodation and food and beverage services	Inbound tourists: border survey with correction for expenditures on package trips
	Domestic tourists: travel household survey with correction for the expenditures on package trips
	Package trip expenditures were disaggregated into the components using information on cost structure and margins obtained from tour operators and travel agencies (ad hoc survey)
Passenger transport services	Expenditures of inbound, domestic and outbound visitors on particular transport services are estimated from the supply side based on expert assessments by the main Croatian transport service providers, collected through in-depth interviews; the interviews covered data on passengers and revenues in domestic and international transport and expert assessments of inbound and domestic tourism expenditures; in water passenger transport services, only maritime passenger transport services were included due to lack of data on river and lake transport

Table 8.1   (continued)

Inbound tourism expenditures	
Travel agencies and other reservation services	Border and travel household survey for expenditures on package trips and ad hoc survey of tour operators and travel agencies for package cost structure and margins
Cultural, sports and recreational services	Border and travel household survey (this product category also includes expenditures for boat charter and berths in marinas)
Other products and services (retail trade, toll, other)	Border and travel household survey (residual between the total expenditures and expenditures on abovementioned products)
Other issues regarding expenditures	
Expenditures on renting of transport vehicles	Car and other transport vehicles (other than boat charter) rental services are not treated as tourism characteristic products but as expenditures on other products and services
Country-specific tourism goods and services	Not estimated
Other components of tourism consumption	
Housing services provided by vacation homes on own account	Includes imputed accommodation services of vacation homes estimated by share of vacation homes in total housing (11.1 per cent of total housing services in Croatia in 2011); it should be noted that Eurostat (2012) recommends application of a cascade system to trips to vacation homes meaning that those second homes within a municipality would by default be part of the usual environment
Tourism social transfers in kind and other imputed consumption	Not estimated

referred to as nautical tourism (Lück, 2007; Lukovic, 2013). Given the fact that Croatia is internationally recognized for its long rugged coastlines and numerous islands, nautical tourism is of outmost importance for the country, significantly contributing to the total tourism consumption. Nautical tourism is characterized by a specific structure of tourism consumption product expenditures that is significantly different from the majority of other tourism products. Namely, the dominant parts of nautical tourist expenditures are expenditures for sport (berths in marinas), renting and leasing (renting of yachts and recreational boats) and transport (renting yachts with crew, berths in public ports) services. There is almost no expenditure for accommodation services within nautical tourism. Its relevance for total tourism flows in Croatia might cause misun-

derstanding of the importance of some of tourism-specific products and activities. This requires special attention of tourism policy makers and even compilation of a specific satellite account (Diakomihalis & Lagos, 2008; Dwyer, Deery, Jago, Spurr, & Fredline, 2007) for nautical tourism, having in mind the limited availability of the production side data on such a highly disaggregated level. Alternatively, there is a possibility to extract nautical tourism into the country-specific tourism consumption product. Nevertheless, that extraction is not only having the problem of data availability but is also burdened by the fact that nautical tourism comprises several different tourism products (Marušić, Ivandić, & Horak, 2014).

Assessment of the Total Domestic Supply and Tourism Ratios: The Case of Croatia

In TSA Table 5, the production of tourism and other industries in the economy is analyzed. For each industry (column), the output (at basic prices) is broken down by product, intermediate input at purchaser's prices and gross value added at basic prices.

The main data sources for compilation of TSA Table 5 for Croatia are those used for the calculation of gross domestic product (GDP) for 2011 (Croatian Bureau of Statistics, 2013a) which is based on the accounting framework given by The European System of National and Regional Accounts (ESA 2010), including estimates of non-observed production. Business entities are grouped within activities as institutional units and not solely as homogenous kind-of-activity units.

According to the TSA framework, tourism activities in TSA Table 5 are in line with the national classification of economic activities for 2007. As Croatian GDP is compiled on a two-digit (division) NACE level only, corrections based on specific surveys were needed in order to obtain reliable estimates at appropriate three- (group) or four-digit (class) NACE levels. As a result of this aggregation of some tourism products in TSA Tables 1 to 4, classification of tourism industries in TSA Table 5 does not fully meet the recommendations. Output of transport equipment rental is allocated to output of other industries, while output of cultural, sports and recreational industries is aggregated together. Finally, no country-specific tourism characteristic industries were specified. The adopted approach is presented in Table 8.2.

TSA Table 6 combines internal tourism consumption and total domestic supply. The rows are identical to those in TSA Table 5, while columns are organized in three blocks: (i) output and tourism share per industry,

Table 8.2 Methodological approach for assessment of output, intermediate inputs and gross value added of tourism industries in Croatia in 2011

Accommodation for visitors	Data for accommodation activities (division 55 of national classification of economic activities 2007) from national accounts are decomposed per specific products based on survey on hotel and restaurant activity (Croatian Bureau of Statistics, 2011) for 2010
	Similar to the demand side, housing services provided by vacation homes are imputed accommodation services of vacation homes estimated by share of vacation homes in total housing; issue of housing services (imputed value) provided by vacation homes is of particular importance for Croatia, as for other Mediterranean countries (Frent, 2008)
Food and beverage serving industry	Data for food and beverage service activities (division 56) from national accounts are decomposed per specific products based on survey on hotel and restaurant activity (Croatian Bureau of Statistics, 2011) for 2010
Passenger transport industries	Data from national accounts are decomposed per specific passenger transport industries based on structural business statistics (annual financial statements for legal persons and income tax return for crafts and trades):
	Railway passenger transport: data on passenger transport from national railway company (exclusive service provider)
	Road passenger transport: share of other passenger land transport (49.39) and taxi operation (49.32) was applied
	Water passenger transport: share of sea and coastal passenger transport (50.10) was applied
	Air passenger transport: data on passenger transport from the biggest national airline company
Travel agencies and other reservation services industry	Data for travel agency, tour operator and other reservation service and related activities (division 79) from national accounts
Cultural, sports and recreational industry	Data for section R—Arts, Entertainment and Recreation from national accounts

(ii) adjustments for calculation of domestic supply at purchaser's prices and (iii) internal tourism consumption and tourism ratio. A detailed approach for compilation of key elements of TSA Table 6 is outlined in Table 8.3.

The presented application of theoretical concepts of the TSA framework in the case of Croatia in 2011 resulted in 5.2 billion Euro value of output of tourism industries or 6.8 per cent of total output of domestic producers (Table 8.4). Tourism products and services generating the highest output are accommodation for visitors (1.7 billion Euro), food

Table 8.3   Methodological approach for assessment of TSA Table 6 in Croatia in 2011

Output of tourism industries	Output (basic prices), intermediate consumption (purchaser's prices) and total gross value added (basic prices) of domestic producers from TSA Table 5
Internal tourism consumption	TSA Table 4
Tourism share by tourism industries	Accommodation for visitors: expert assumption that production is in total generated by tourism demand
	Food and beverage serving industry: production generated by tourism demand based on border and travel household survey, production generated by local (non-tourism) demand based on household survey and travel household survey
	Passenger transport, travel agencies and other reservation services industry, culture, sports and recreational industry: internal expenditure at basic prices
Tourism share in other industries	Residual between the total tourism expenditures at basic prices and sum of: (i) expenditures on tourism products and services at basic prices and (ii) imports of goods and services for tourism consumption
Imports of goods and services for final consumption	Imports of goods and services for final consumption are treated as part of other products and services since: (i) accommodation, food and beverage, culture, recreation and sport services are provided by Croatian economic entities only, and (ii) passenger transport services and travel agencies/tour operator services are estimated for Croatian providers only
	Tourism's share of imports is estimated based on ratio of internal tourism consumption and total output
Taxes on goods and services and subsidies	Ministry of finance budgetary central government revenue for value added tax (VAT), excise duty, other types of taxes on goods and services and subsidies
	Allocation of VAT by products and services, as well as custom duty on imports of goods and services for final consumption based on SUT for 2005 (Croatian Bureau of Statistics, 2013b)
	Allocation of excise duty and subsidies by products and services based on expert assessment
Tourism ratio	Internal tourism consumption (at purchaser's prices) as a proportion of domestic supply in per cent. Estimates of internal tourism consumption for accommodation and food and beverage services exceed the total estimated output indicating higher level of unregistered tourism flows than those applied in GDP for 2011

and beverage services (1.5 billion Euro) and cultural, sports and recreational services including mooring services in nautical ports, like marinas (0.7 billion Euro). In total, these three categories account for three quarters of total output of tourism industries.

Table 8.4 Total domestic supply and internal tourism consumption (elements of TSA Table 6) for Croatia in 2011

	Total tourism industries		Other industries		Output of domestic producers (at basic prices)		Imports (of final goods and services) euro mil	Net taxes on products euro mil	Domestic supply (at purchaser's prices) euro mil	Internal tourism consumption euro mil	Tourism ratios in %
	Output euro mil	Tourism share in %	Output euro mil	Tourism share in %	Output euro mil	Tourism share in %					
A. Consumption products	5,214.4	79.5	71,810.7	3.7	77,025.1	8.8	8,008.6	6,318.9	91,352.6	8,581.6	9.4
A.1 Tourism characteristic products	5,006.4	79.4	0.0	0.0	5,006.4	79.4	0.0	509.4	5,515.8	5,145.4	93.3
1. Accommodation services for visitors	2,057.6	99.9	0.0	0.0	2,057.6	99.9	0.0	167.6	2,225.2	2,340.9	105.2
1.a. Accommodation services for visitors other than 1.b	1,704.7	99.9	0.0	0.0	1,704.7	99.9	0.0	167.6	1,872.2	1,987.9	106.2
1.b. Accommodation services associated with all types of vacation home ownership	353.0	100.0	0.0	0.0	353.0	100.0	0.0	0.0	353.0	353.0	100.0
2. Food and beverage serving services	1,529.0	75.0	0.0	0.0	1,529.0	75.0	0.0	220.4	1,749.5	1,856.8	106.1
3. Railway passenger transport services	123.8	25.5	0.0	0.0	123.8	25.5	0.0	-39.9	83.9	38.9	46.3

(continued)

Table 8.4 (continued)

	Total tourism industries		Other industries		Output of domestic producers (at basic prices)		Imports (of final goods and services) euro mil	Net taxes on products euro mil	Domestic supply (at purchaser's prices) euro mil	Internal tourism consumption euro mil	Tourism ratios in %
	Output euro mil	Tourism share in %	Output euro mil	Tourism share in %	Output euro mil	Tourism share in %					
4. Road passenger transport services	79.8	85.0	0.0	0.0	79.8	85.0	0.0	13.6	93.4	83.4	89.3
5. Water passenger transport services	140.6	39.0	0.0	0.0	140.6	39.0	0.0	-22.3	118.3	67.4	57.0
6. Air passenger transport services	295.6	67.7	0.0	0.0	295.6	67.7	0.0	0.4	296.0	246.3	83.2
7. Travel agencies and other reservation services	123.0	92.6	0.0	0.0	123.0	92.6	0.0	18.4	141.4	140.0	99.0
8. Cultural, sports and recreational services	657.0	46.0	0.0	0.0	657.0	46.0	0.0	151.1	808.1	371.7	46.0
A.2 Other consumption products	208.0	81.9	71,810.7	3.7	72,018.7	3.9	8,008.6	5,809.5	85,836.7	3,436.3	4.0
Total output (at basic prices)	5,214.4	79.5	71,810.7	3.7	77,025.1	8.8	8,008.6	6,318.9	91,352.6	8,581.6	9.4
Total intermediate consumption (at purchaser's price)	1,967.0	73.0	37,157.5	3.7	39,124.5	7.1					
Total gross value added (at basic prices)	3,247.4	83.4	34,653.2	3.7	37,900.6	10.5					

Source: Ivandić et al. (2014)

The tourism industry generated 3.2 billion Euro of gross value added or 8.6 per cent of Croatian total value added, making it the industry with the highest gross value added per unit of output.

Tourism generates 79.5 per cent of output and 83.4 per cent of the gross value added of tourism industries. Besides accommodation services for visitors and travel agencies and other reservation services, which are, by default, predominantly generated by tourism (99.9 per cent and 92.6 per cent, respectively), highly tourism-dependent products and services are also passenger transport services and food and beverage serving services. Tourism share of other consumption products is 3.9 per cent.

Domestic supply at purchaser's prices, calculated as domestic output at basic prices increased by imports and net taxes, is 91.4 billion Euro of which tourism characteristic products generate six per cent. A lower share of tourism characteristic products in the domestic supply at purchaser's prices than in domestic output at basic prices is a result of imports of final goods and services, while the share of net taxes in domestic supply at purchaser's prices of tourism characteristic products is higher than that share in other consumption products.

Internal tourism consumption makes up 9.4 per cent of total domestic supply at purchaser's prices. A numerical difference between the tourism share and tourism ratio, the difference being their calculation either from the supply or demand perspective, respectively, indicates a potential problem of unregistered flows. The internal tourism consumption of food and beverage serving services is 6.1 per cent higher than the recorded level of domestic supply at purchaser's prices. Since these services include local consumption as well, the level of unregistered flows is obviously much higher than estimated within the national accounts. The recent process of fiscalization carried out in Croatia during the 2013 has confirmed such findings (Vizek, 2014). Furthermore, a tourism ratio over 100 per cent is also recorded for accommodation services for visitors. Similar discrepancies are also found in some other countries like the Czech Republic, Hungary, Slovenia and the United Kingdom (Eurostat, 2009). The observed issues clearly indicate a need for better understanding and dealing with the flows that are, at least partly, generated within household accommodation. However, it should be noted that the observed differences did not affect the calculation of gross domestic value of tourism since the calculation is derived from the production share of tourism with the purpose of conforming to national accounts.

Finally, tourism directly contributes 10.4 per cent to Croatian GDP (4.61 billion Euro) based on balancing the internal tourism consumption to the level of total output at purchaser's prices in accommodation and food and beverage services.

CROATIA TSA MACRO-AGGREGATES AND INTERNATIONAL COMPARISONS

Among 17 EU member states (Table 8.5), Germany, the United Kingdom and France have the highest internal tourism consumption. Tourism gross value added (at basic prices) is reported by 13 countries, with the highest reported in Germany, Italy and the United Kingdom, among which data for France and Spain were not collected (Eurostat, 2013).

Although Croatia is among countries with a lower level of, both, internal tourism consumption and tourism gross value added, its tourism ratio indicates that Croatia has the highest dependence on tourism demand.

Table 8.5 Tourism gross value added and internal tourism consumption for EU countries (million euro)

Country	Reporting year	Tourism gross value added (at basic prices)	Internal tourism consumption	Tourism ratio in %
Croatia	2011	3,974	8,582	9.4
Austria	2011	16,463	30,437	3.9
Czech Republic	2011	3,609	8,488	1.6
Estonia	2008	539	1,452	3.1
France	2005	–	137,577	–
Germany	2010	97,049	278,317	4.7
Italy	2010	82,833	114,016	3.2
Latvia	2005	416	642	2.2
Lithuania	2010	689	1,397	2.0
Netherlands	2009	13,670	35,145	2.2
Poland	2008	–	13,198	–
Portugal	2007	6,209	15,467	3.8
Romania	2009	1,909	4,527	1.6
Slovakia	2010	1,595	3,560	1.7
Slovenia	2009	1,102	3,348	3.6
Spain	2008	–	120,889	5.7
Sweden	2010	–	25,992	3.1
United Kingdom	2009	81,586	141,507	3.7

Source: Eurostat, 2013, and Ivandić et al., 2014, for Croatia

Particularly, Croatian internal tourism consumption equals 9.4 per cent of domestic supply, while Spain with 5.7 per cent has the second and Germany with 4.7 per cent the third highest tourism ratio. However, regardless the Croatian above average tourism contribution among EU member states, there is a significant growth potential of tourism in Croatia recognized by *Croatian Tourism Development Strategy to 2020* (Ministry of Tourism, 2013).

CONCLUSIONS AND RECOMMENDATIONS

Estimating the size and the importance of tourism for the Croatian economy, the compilation of TSA provides relevant support for the tourism policy formulation. Revealing the high significance of tourism for Croatia and recognizing the set of heterogeneous industries dependent on tourism demand, TSA results presented in this paper give a set of baseline criteria for resource allocation within tourism policy and the further evaluation of its effectiveness, as well as indicators for targets in tourism strategy formulation.

The contribution extends not only to pointing out the macroeconomic policy implications and the related allocation of government expenditure for tourism, but can be crucial to forming a number of policy implications within specific areas of economic policy such as industrial and fiscal policy, investment, marketing, cooperation and improvement of system of tourism statistics. An illustration of some of those implications is given below:

Industrial policy	As prior discussed, Croatian tourism is characterized by dominant share of tourists arriving by means of car transport and those staying in household accommodation, low share of hotel accommodation and low level of expenditures for culture, sport and recreation services. Therefore tourism policy should focus on measures towards the improvement of household accommodation quality, increase of diversity and quantity of hotel accommodation facilities and the development of cultural and sport tourism products. Tourism policy should also incentivize improvement of road service facilities taking into account specific needs of both tourists and same day visitors. Finally, due to the revealed significance of different products and services composing nautical tourism, policy should try to recognize and remove obstacles for growth of this product planned by numerous strategic documents
Fiscal policy	The estimated size of unregistered flows in accommodation and food and beverage services points out the problem of tax evasion and obvious need for a government response

(continued)

Investment	As TSA recognizes the key areas of tourism expenditures as well as linkages between tourism and non-tourism products and services, it offers a platform for investment decisions on macro (national), mezzo (destination) and micro (firm) level. For example, the size of expenditure for other consumption products in Croatia emphasizes the relevance of tourism demand in the process of investment justification
Marketing	Statistics on the number of visitors and the structure of expenditures directly points to the segments of tourism demand that should be targeted by marketing activities. For example, TSA results stress a need for attention on currently neglected segments, such as same day visitors and tourist staying in non-commercial accommodation facilities. Keeping in mind that inbound tourists are the most important segment of demand, maximizing the potential results of promotional and communicational activities would require the use of more detailed data such as data by countries and segments, which are not visible in TSA tables
Inter-institutional cooperation	The disclosure of a palette of different industries that generate national tourism product results in the decentralization of the responsibility of governance of the tourism sector under numerous government bodies. This imposes a need for deeper understanding of the specific governance areas of tourism activity of those bodies and their better cooperation in the formulation of tourism policy

This paper also provides a detailed methodological approach for the transfer of TSA theoretical concepts of estimation of the contribution of tourism on the case of Croatia. It contributes to a better understanding of the TSA compilation, which is still characterized by a surprisingly wide range of 'styles' used by different countries (Eurostat, 2009). Giving the evidence that the current STS in Croatia enables estimation of tourism-generated consumption and production based on the widely accepted methodological framework outlined in TSA:RMF 2008, the paper has also facilitated international comparisons with that of other EU member states.

As the TSA becomes an integral and an important element of STS, there is a need to eliminate the limitations associated with data sources in Croatia, not only for the purpose of TSA compilation but also for the improvement of the SNA and STS as a basis for conducting a successful tourism policy. Several activities are therefore recognized as priorities. The first group of activities is aimed at improving the information base related to tourism spending. The border survey and travel household survey, as two main sources used for measurement of internal expenditures, need to be further adapted to the needs of TSA compilation, especially in

terms of product structure and coverage. Furthermore, the border survey needs to be adjusted for the entry of Croatia into the Schengen area. The second group of activities is related to the accuracy and level of details of SUT table and adjustment of their structure in accordance with the TSA methodological framework. For that purpose it is also necessary to increase the scope and coverage of structural statistics, primarily by updating the register of economic entities and including the monetary indicators. Furthermore, there is a need for deeper investigation of size and characteristics of unregistered flows in Croatia by all stakeholders (Šutalo, Vuglar, & Ivandić, 2012). The third group of activities is focused on further extension of TSA implementation, advocating the measurement of gross investment and collective government spending, as well as introducing country-specific tourism characteristic products and industries, such as retail trade and some forms/parts of nautical tourism. It is also worth considering compiling special TSAs for some relevant tourism products for Croatia (e.g., nautical tourism, sun and beach and so on). Successful implementation of the mentioned activities requires strong inter-institutional cooperation among the main stakeholders.

Finally, in order to most thoroughly capture the potential benefits from TSA and the information base it provides, regional TSAs and TSA approach to measurement of environmental effects of tourism (Frechtling, 2009; Munday, Turner, & Jones, 2013) are seen as an important next step in designing future smart, sustainable and inclusive tourism growth in Croatia.

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