
GWS Discussion Paper 2004/4

ISSN 1867-7290

The TSA project in Germany: Results & Reactions

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Paper presented at the 30th Meeting of the Statistical Working Party of the OECD
Tourism Committee
in Vienna, Austria, 13 December 2004

Abstract

In 2003 the Institute of Economic Structures Research (GWS mbH) has developed a tourism satellite account (TSA) for the Federal Republic of Germany relating to the year 2000.¹ During the process of empirical compilation the Federal Statistical Office (as an external partner outside the GWS) has been fully integrated and provided partially unpublished data.

In the first part of this paper some empirical results of the monetary TSA-tables T 1 to T 6 and the employment table T 7 for the German TSA are presented. In 2000, the gross value added of tourism activities of private households in Germany made up nearly 57.5 billion Euros, meaning a share of 3.2 % of the total gross value added. In the second part some first reactions and objections to the results are discussed. Mainly it focuses on the question whether the TSA concept respectively the present German TSA pilot version ascertain all relevant tourism activities.

Keywords: tourism; tourism satellite accounts; economic relevance of tourisms

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b *The Institute of Economic Structures Research (GWS ltd.) was founded in 1996 and is a private financed research institute. Its main focus is the analysis of industry structures. It has developed a unique system of macroeconomic forecasting and simulations models that distinguish different industries and regions. The models are estimated econometrically and are based on national accounts statistics and theme specific satellite accounts.*

¹ The research assignment was carried out for the German Federal Ministry of Economics and Labour and has been cofinanced by the European Commission.

1 Introduction

Measuring the economic role of tourism is very complex, because tourism is an amalgam of industries such as transportation, accommodation, food & beverage service, recreation & entertainment and travel agencies. Unlike output defined industries, such as agriculture or manufacturing, the primarily demand defined tourism industry (by visitor) is not measured as a sector in its own right of National Accounts. Most of the provided statistical information on the specifics and developments of tourism is primarily based on arrivals and overnight stay statistics as well as balance of payment information. In the past the description of tourism focused on characteristics of visitors, on the destinations they travelled and the conditions they stayed.

The increasing awareness of this deficit has been recognized over a number of years and a number of countries and international organizations. In the late 80th the OECD, UN and WTO pushed the evolution of a tourism specific economic data system. The discussion process generated a tourism economic data system, which measures the economic impact of tourism by associating the purchases of visitors to the supply of these goods and services within a country in a way that is coherent with the concepts, classifications and definitions of national accounting standards.

In the current System of National Accounts (SNA 93) the conceptual basics for measuring the size of specific economic activities by functions in theme specific economic accounts – the so-called satellite accounts – is drafted (United Nations 1993, chap. XXI). The corresponding manual “Recommended Methodological Framework”, which has been published by the Commission of the EC, OECD, UN and WTO (2001) is the most important source for studying the conceptual features of the Tourism Satellite Accounts (TSA). Eurostat (2002) has worked out an implementation manual for the EU with the aim to provide operative guidelines for empirical compilation of the tourism satellite account in an efficient procedure.

In a research project, financed by the German Federal Ministry of Economics and Labour, the Institute of Economic Structures Research (GWS mbH) has developed a TSA for the Federal Republic of Germany relating to the year 2000. In the course of elaborating the TSA the Federal Statistical Office as an external partner outside the GWS has been fully integrated and provided partially unpublished data. In the first part of this paper some empirical results for the German TSA for the year 2000 are presented. In the second part of this paper some first reactions and objections to the results are discussed.

2 The macroeconomic relevance of tourism in Germany

All relevant data calculations for compiling the pilot version of the German TSA were carried out on the level of the deeply disaggregated supply and use matrices displaying 59 products (P60) and 59 industries (A60). Both tables were supplemented by the activities additionally reported within the TSA (Ahlert 2004b). In the process of data preparation a strong emphasis lay on the maintaining of the system of double-entry

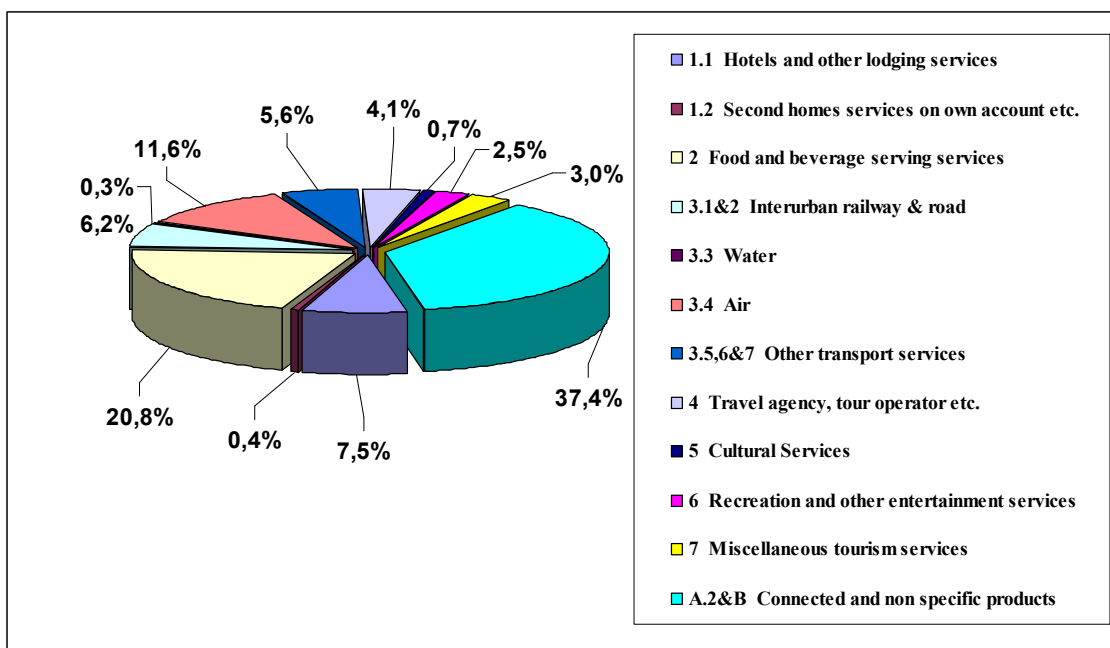
accounting. Only as the last step of this process, the data ascertained within the extended supply and use-matrix (i. e. a deeply disaggregated linkage matrix of tourism – TSA table T 6 – with 93 rows and 97 columns) were transferred to the various TSA tables T 1 to T 6.

2.1 Tourism consumption

The TSA drawn up for the first time for the Federal Republic of Germany shows that a total of 157.9 billion Euros has been spent on internal tourism consumption in cash and in kind. A share of about 19.2 % (30.4 billion Euros) of the internal tourism consumption can be allocated to business trips as intermediate consumption, whilst almost 81 % (127.6 billion Euros) can be allocated to private travelling in Germany.¹

Diagram 1 provides a survey of the structure of goods and services of internal tourism consumption (in cash and in kind). It becomes evident that in the course of tourist activities, besides the services of accommodation, food & beverages and passenger transport, there is demand for a wide variety of other, non-tourism specific products (about 37.4 %).

Diagram 1: The product structure of internal tourism consumption in cash and in kind in 2000



Source: own calculations.

With 131 billion Euros, the major share of the internal tourism demand was stimulated by domestic tourism consumption. The inbound tourism related demand on

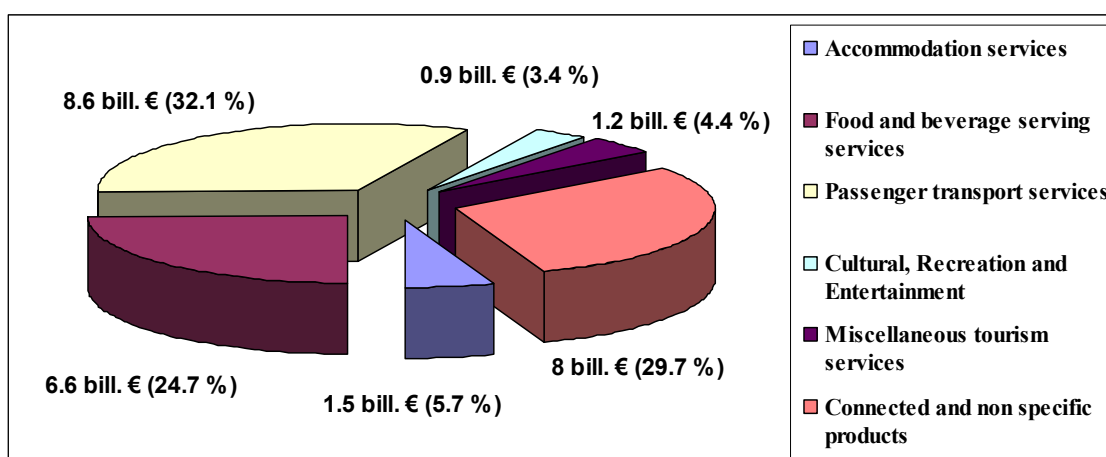
¹ Just before completion of the research assignment two new studies were published which show that the relevance of business trips has been underestimated in earlier surveys. In view of tourism business expenses the whole TSA calculations should be updated.

the side of foreigners ranged at a mere 26.9 billion Euros in 2000, making up merely 17 % of the internal tourism related demand.

Ranging at 7.5 billion Euros, at least 28 % of inbound tourism consumption were generated by foreign business travellers as shown in studies on tourism activities by the German central bank (Deutsche Bundesbank 2003). Of course, the major share of the expenditures (19.4 billion Euros) lay on the side of holiday visitors. Moreover, conservative estimates show that with 1.8 billion Euros a mere 7 % of all inbound tourism consumption by non-residents can be allocated to foreign same-day visitors. The major share of their expenditures, the total being more than 25 billion Euros, is spent in the course of more than 42.6 million overnight stays.

A look at the structure of the total of inbound tourism consumption (cf. diagram 2) shows that more than 6.6 billion Euros or 24.7 % of all expenditures respectively benefited the food and beverage serving services with further 1.5 billion Euros benefiting the domestic accommodation services.

Diagram 2: The product structure of the inbound consumption expenditures by non-resident visitors in 2000



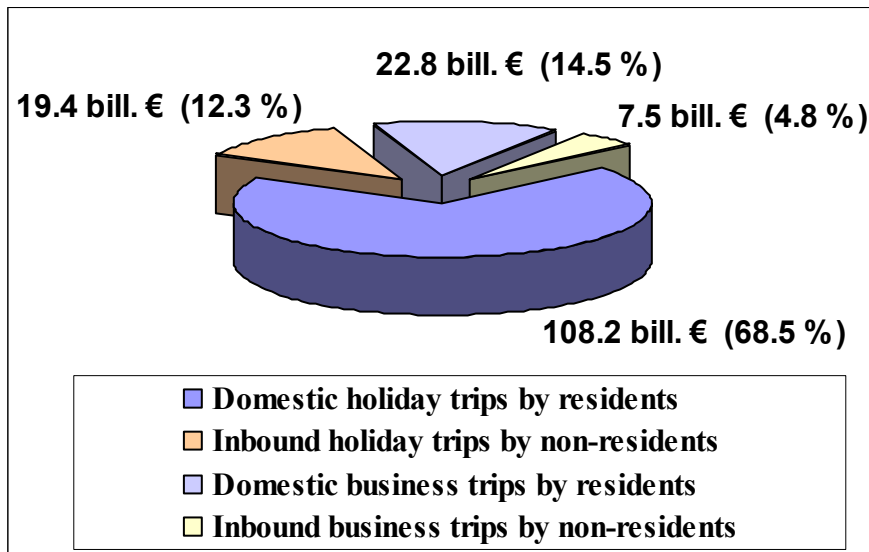
Source: own calculations.

More than 8.6 billion Euros were spent by non-resident visitors in the inland on passenger transport services, with 6.3 billion Euros alone, being 23.5 % of all inbound tourism consumption, paid directly to the German air traffic sector. Sectors not directly related to tourism, however, benefit from foreign visitors as well: Calculations show that with nearly 8 billion Euros almost 30 % of all inbound tourism consumption expenditures were spent directly by non-resident visitors in Germany outside tourism specific sectors.

Diagram 3 allocates the internal tourism consumption in cash and kind to the two purposes of visit of business and holiday trips. With nearly 19.4 billion Euros, about 12.3 % of the tourism related inland demand is generated by non-resident holiday visitors, whilst 7.5 billion Euros, or 4.8 % respectively, are generated by foreign business visitors.

Apart from inbound business trips by non-resident visitors, however, business trips of the domestic industry within the inland making up a total volume of estimatedly more than 22.8 billion Euros. With more than 31 million overnight stays, the accommodation services in particular benefits directly from business travellers, earning more than 6.8 billion Euros. Moreover, the air traffic expenditures of the domestic economy related to business travellers range at 7.7 billion Euros, making evident the importance of business travel for the domestic passenger aviation sector. ¹

Diagram 3: Internal tourism consumption in cash and in kind dependent on the purpose of visit in 2000



Source: own calculations.

The internal tourism consumption in cash amounts to more than 134.4 billion Euros, making up a share of nearly 12 % of the overall consumption expenditures of private households in 2000, the total being 1126.3 billion Euros. The two consistent parts of internal tourism consumption in cash are the inbound tourism consumption (26.9 billion Euros) and the domestic tourism consumption of private households in cash (107.5 billion Euros).

By adding the value of the safely estimated expenditures on second homes services on own account or for free, making up about 681 million Euros, to the domestic tourism consumption in cash, you get as the result the domestic tourism consumption of domestic private households in cash and in kind.² With more than 108.2 billion Euros, about 68.5 % of this domestic tourism consumption in cash and in kind was allocated to domestic holiday travellers (cf. Diagram 3). As a result, about 9.8 % of all consumption expenditures by domestic private households in 2000 (1104.7 billion Euros) are directly

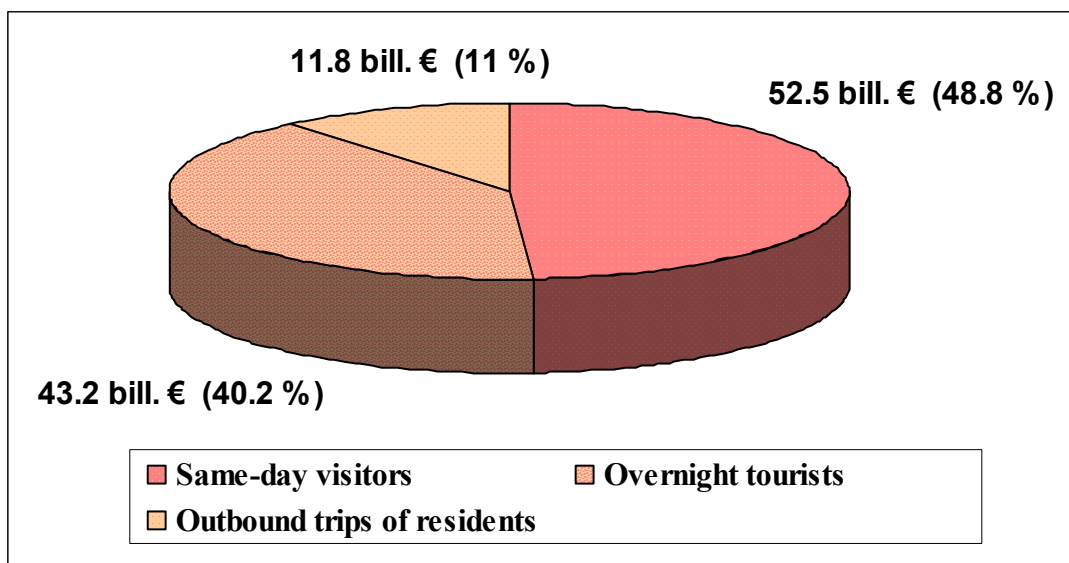
¹ Compare footnote 1 on page 3.

² Because of lack of data respectively not freely available reliable studies the individualized tourism expenses in kind by the state (the so-called tourism social transfers in kind) are not included in the present German TSA. Only the private share of these expenses of private households is considered.

due to tourism related activities by domestic private households such as day trips, visits to friends and relatives, and holiday trips.

Expenditures in the course of same-day trips made up a share of about 52.5 billion Euros, being nearly 49 % of the domestic tourism related consumption by inlanders (cf. Diagram 4). The big share of same-day tourism, surprising at first sight, shows that in the process of the analysis of the macroeconomic significance of tourism the importance of same-day tourism definitely has to be included. Nearly 20 % of all expenditures in same-day tourism were spent on food and beverages serving services, further 60 % were spent on consumption purposes related to tourism (clothing, leisure products, mineral oil products, etc.).

Diagram 4: Domestic tourism consumption of private households in 2000



Source: own calculations

Apart from day trips, in the course of 53.6 million overnight trips with more than 343.6 million overnight stays, goods and services worth 43.2 billion Euros were bought. The tourism related expenditures by inlanders in the course of overnight trips therefore determine no less than 40 % of all tourism related consumption expenditures by inlanders. Among other things, 5.6 billion Euros were spent on accommodation services, whilst more than 13.2 billion Euros were spent on catering services provided by the catering trade. Moreover, more than 1.2 billion Euros were paid for road and interurban railway passenger transport services as well as recreation and other entertainment services respectively.

Apart from the total of the expenditures by private households on same-day and overnight trips ranging at about 95.6 billion Euros, the expenditures by residents in the course of private outbound trips and their effects on domestic demand, of course, need to be referred to. Of the respective overall expenditures of about 11.8 billion Euros the major share is made up by the expenditures by resident tourists, bearing effects on the inland economy, in the course of more than 74.4 million outbound overnight trips. Nearly 10.4 billion Euros of their travel expenditures bore inland effects. The major

share of these expenditures directly benefits the suppliers of travel services. Transport services required, for example, yielded nearly 4.2 billion Euros for air traffic companies and about 4.9 billion Euros for travel agencies and tour operators.

By adding the domestic tourism consumption by resident private households (about 107.5 billion Euros) to the outbound tourism consumption, you get the national tourism consumption by private households. With 158.9 billion Euros, the domestic private households spent about 12.1 % of their disposable income (1310.38 billion Euros) on tourism purposes with about a third (51.4 billion Euros) allocated to outbound private trips. The overall national tourism consumption (comprises the intermediate and final consumption of resident visitors within and outside of Germany) amounted to 186.2 billion Euros in 2000.

2.2 Total output and employment of tourism industries

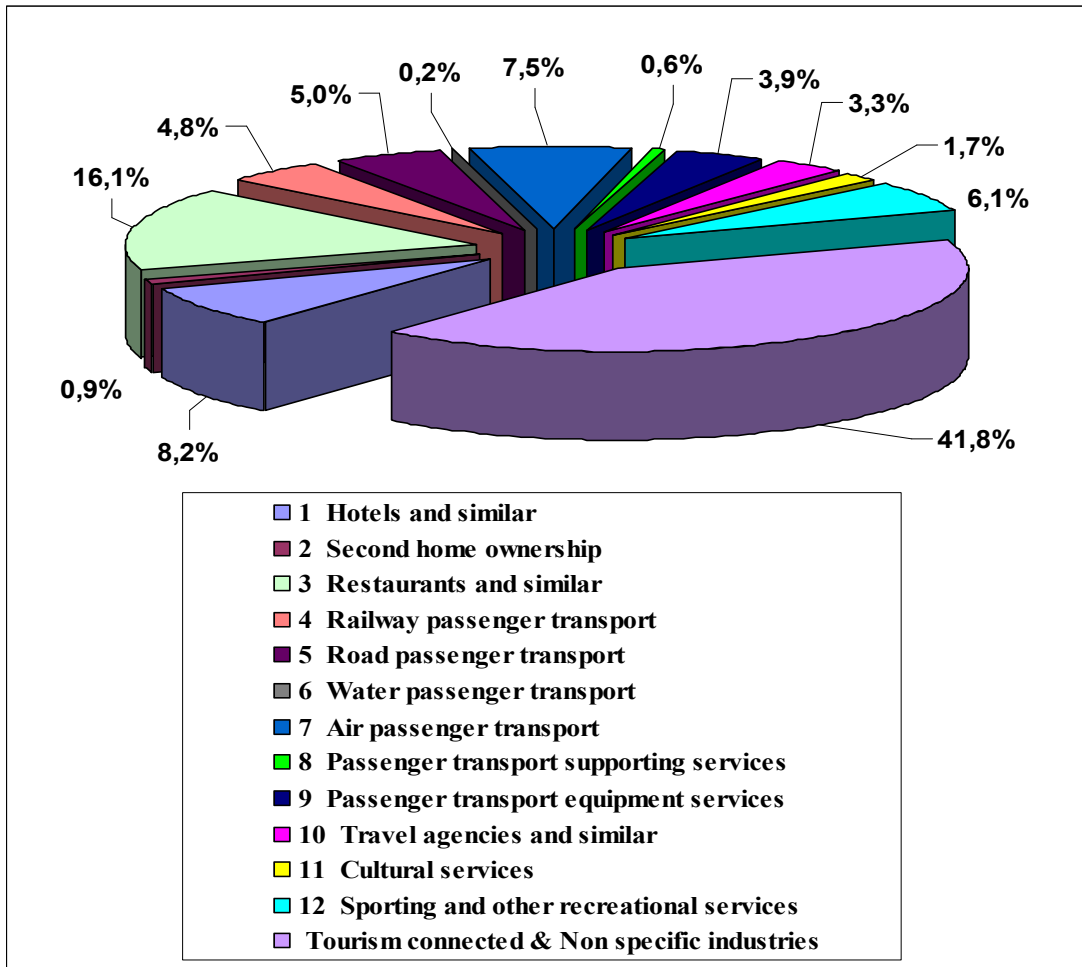
Within the TSA, apart from the tourism demand side the respective supply side is displayed consistently. The total output of the tourism economy stated within the TSA summed up to more than 185 billion Euros, being about 5 % of the total output volume of the Federal Republic of Germany (about 3650.5 billion Euros). This total output of the tourism industries does not only include tourism related production activities as its main activity, but non tourism specific services provided by secondary production are included in the classification scheme as well. In 2000, an estimated number of nearly 1.56 million employees were working in the correspondingly separated economic sectors of the tourism industry.

2.3 Gross value added of private tourism activities

In 2000 the gross value added of tourism activities of private households in Germany made up nearly 57.5 billion Euros, meaning a share of 3.2 % of the total gross value added (about 1823.5 billion Euros).

The TSA concept provides a functionally separated statement due to the calculation procedure of ascertaining the value added of tourism, which mainly is determined by the supply side: On the one hand, it focuses on activities motivated by tourism explicitly, in turn meaning the adjustment of the non-tourism related secondary production, which still has been stated as part of the value added of the tourism industry. A major share of the services provided by restaurants, for instance, is demanded as part of everyday leisure activities. The resulting value added, of course, is not included in the calculation of the tourism related value added which, as a consequence, results in a reduced statement. On the other hand, however, the tourism related secondary production outside the not tourism related, unspecific industries of the national economy is being referred to (cf. Diagram 5). No less than 42 % of the gross value added of tourism activities is generated outside the tourism industries in the various industries of the national economy due to tourism demand.

Diagram 5: Contribution of the gross value added by the various industries to the total gross value added of private tourism consumption



Source: own calculations

On account of the - in the end phase of the completion of the research assignment - published new studies on business trips and the missing information on tourism social transfers in kind we have not calculate tourism value added generated by overall internal tourism consumption. This is also the reason why we refrained from calculation the tourisms GDP, which take into account of the taxes less subsidies on products and imports related to tourism products.

3 First reactions to the results

In this chapter some first reactions and objections of the discussion process in the political sphere are reflected. In Germany the whole discussion of the TSA results in hand is determined by comparing the results with an older study of the DIW as well as the question whether all relevant tourism activities are incorporated into the TSA

concept respectively the present German TSA pilot version. Especially such activities which have a major significance for the German tourism industry (e. g. tourism business expenses, tourism social transfers in kind, activities of trade fair and exhibition services, etc.).

3.1 Variances from the DIW study concerning value added of tourism

As I mentioned before gross value added of tourism activities of private households in Germany made up nearly 57.5 billion Euros, meaning a share of 3.2 % of the total gross value added. By contrast the input-output based tourism account (IOTEA) presented by the DIW in the year 1999 identified that tourism share of total gross value added amounted to 7.5 % (Filip-Köhn, Hopf & Kloas 1999). A thorough comparison of the results of this TSA study and the IOTEA study shows that the identified variance concerning the share of the value added of tourism can be clearly allocated: They are based on conceptual differences as well as differences in definitions.

First, the TSA concept - developed and adjusted on an international level from the end of the 80s onwards - provides a binding methodological framework. In contrast to the IOTEA presented by the DIW in the year 1999, which consists of merely one table, the TSA system is a hierarchically constructed logically structured table system additively interlinked.

Secondly, the calculation procedures utilized in the course of this research assignment are completely compatible with the deeply disaggregated data of the macroeconomic accountings – especially those of the input-output analysis (Ahler 2004b). In contrast to the calculations by the DIW, these tables can be consistently integrated into the deeply disaggregated basis tables of the Federal Statistical Office for the reporting year 2000.

Apart from these two conceptual reasons, especially differences in terms of definition result in considerable variances. Thirdly, in the course of the calculation of the share of tourism value added the TSA concept only assigns the tourism related inbound consumption in cash and kind. On account of severe data problems (compare paragraph 3.2 and 3.3) we restrict the calculation of tourism value added to the activities of private households. In contrast to this, the DIW additionally includes both the expenditures on business trips and the tourism related state consumption expenditures within its calculations. Moreover, in a calculation approach by the DIW going even further, the tourism gross fixed capital formulation is taken into account. These additional extensions are based partially on doubtful assumptions and calculations, too.

Finally the TSA manual provides a clear-cut definition for the calculation of the economic significance of tourism. In contrast to the practice of the DIW, which calculates the contribution of tourism GDP exclusively with reference to the demand side via all the components of the final demand, the recording within the TSA is oriented more towards the supply side (DIW 1999, p. 103 ff). For each tourism activity the tourism value added is the product of supply-side calculated sectoral value added and the demand-side calculated ratio of inbound tourism consumption by different products. As a result, in the course of calculating tourism value added, besides its

significance for the demand side, the significance of tourism related production for the supply side within the scope of the productions process is taken into account, too.

The application of the latter two TSA definitions to the DIW study shows that the two surveys certainly are compatible with each other: In the course of the ascertainment of the tourism value added, the exclusive reference to inbound private tourism consumption benefits within the DIW survey results in a reduction of the share of the value added by about 2.2 %. Here, tourism business intermediate consumption alone make up 1.4 %, whilst the tourism related government consumption expenditures determine about 0.8 % of the macroeconomic gross value added. When, in the course of the calculation of tourism value added, you take into account both the significance on the demand side and on the supply side – according the TSA concept - in the DIW study for the reporting year 1995 a tourism share of gross value added of merely 3.3 % can be estimated.

3.2 Tourism business expenses

Tourism related intermediate consumption of businesses, government units and non-profit institutions serving households (NPISH) are components of tourism business expenses. They do not include some other expenses corresponding to employees on business trips paid by businesses, such as payments for meals or lump sums allocated to them to cover their other travel costs, which are considered as remuneration in kind or in cash (EC, OECD, UN and WTO 2001, 27p.). As a consequence they do not represent total consumption of visitors on business trips.

Just before completion of the research assignment two new studies were published (VDR 2003, Deutsche Bundesbank 2003) which show that the relevance of business trips has been underestimated in earlier surveys. Although the TSA vector of tourism business expenses has been compiled for the present German TSA in view of the published new studies the whole TSA calculations should be updated. This has been also the reason why we refrained from calculating the tourism's GDP, which takes into account of the taxes less subsidies on products and imports related to tourism products.

3.3 Tourism social transfers in kind

Because of lack of data respectively not freely available reliable studies the individualized tourism expenses in kind by the state (the so-called tourism social transfers in kind) are not included in the present German TSA although these public tourism expenses are directly absorbed by visitors (EC, OECD, UN and WTO 2001, 26p.). Examples of these individual non-market services include public health, leisure and cultural services provided for free to the visitors (e.g. spas) or where the total cost may not be fully attributed to individual visitors. Only the private share of these

expenses of private households (e.g. the explicit charges for museums, swimming baths, etc.) is considered within the compiled German TSA. ¹

Because of the importance of expenses in spas for the German public health system as well as for the tourism economy there is the necessity for clarification the demarcation between health and tourism activities in the scope of the TSA.

3.4 Gradually expansion of tourism value added

In the mentioned study of the DIW the public non-market tourism expenses as well as the tourism gross capital formation of tourism industries were fully included in the demand-side oriented calculation of tourism value added. In the TSA these activities are only part of the TSA-table T 8 (tourism gross fixed capital formation) and the TSA-table T 9 (tourism collective consumption). In contrast to the other tourism specific activities the existing TSA framework intends not to include these expenses in the calculation of tourism value added inside of the TSA core-table T 6 although these activities have a key role for future development of national tourism economies. Without bigger changes in the methodological TSA framework it would be possible to expand the calculation of the tourism value added gradually beyond of internal tourism consumption in cash and kind by including the additional components of internal tourism demand.

3.5 Calculation of indirect value added and employment effects

In the discussion process the calculation of indirect value added and employment effects of tourism activities was suggested. Such additional model calculations are carried out for the Austrian TSA and the United States TSA (Franz, Laimer & Smeral 2001; Kuhbach, Planting & Strassner 2004).

Although such model calculations provoke the double counting of economic activities in the process of calculating value added of economy they would help to determine the full impact of tourism on the German economy. These additional estimates identify the indirect tourism value added effects from tourism activities as a result of production of intermediate inputs used in the production process of products sold to tourists, although there is no direct relationship between the producer of the intermediate inputs and the tourist.

¹ According to the tourism statistics practice activities of spas on the supply-side are separately recorded as characteristic if they really fulfil apart from the health service the tourism purpose, too. Thus wellness and health tourism activities should be largely recorded.

3.6 International comparability of TSA results

Although there is a big agreement that the TSA framework is a great progress as quantifying the economic relevance of tourism on the basis of an uniform international binding accounting system there is scepticism about the particular factual praxis in empirical compilation of national TSA in different countries according the international accepted recommended methodological framework and the European implementation manual. There is the belief that the different initial tourism specific data situation in miscellaneous countries will lead to a bigger degree of freedom in quantifying such expenses (e.g. estimation of tourism expenses during day trips).

4 Conclusions

Besides the question if we should completely integrate the other tourism related final demand components (tourism social transfer in kind, tourism gross fixed capital formation, tourism collective consumption) and thus expand the tourism GDP calculation gradually to the other components of internal tourism demand one central conceptual aspects remained unsolved.

Theoretically, both aggregates (tourism value added generated by overall tourism consumption and tourism GDP) should be independent of the identification of tourism characteristic activities. In practice, however that is not the case because value added by product in the field of tourism is not directly observable (EC, OECD, UN and WTO 2001, 64p). The more detailed the analysis and the more refined and accurate the assumptions on the way tourism consumption affects each productive activity, the more precise the measurement of the economic relevance of tourism.

Therefore the started TSA research strictly speaking its empirical compilation should be consolidated. Besides that there is the need for a continuously work on the database which could be reached by yearly updates of the TSA data system. This could be reached cost-effective by developing a fully integrated TSA model in the context of a sectoral disaggregated macroeconomic model (Ahlert 2004b). Besides that such a model would allow to estimate the potential macroeconomic impacts of tourism related policies or events in a simulation framework (Ahlert 2001, Ahlert 2004a).

Before evaluating and updating national TSA results a broad international dialog of national TSA results regarding the considered statistical data sources and assumptions should start. The first discussions of the TSA project in Germany shows that this is a must for getting really reliable international comparable TSA results.

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