

The Economic Impact of Cultural Tourism Measured through the Interconnection of the Tourism Satellite Account and Satellite Account on Culture

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Abstract

Europe is a leading tourist destination with 5% growth in 2013 (UNWTO, 2014). It has also always been an important destination, basing tourism on its rich cultural and historical heritage. The Czech Republic is characterized by great cultural diversity and high cultural density. A new marketing strategy of the Czech national tourist board "CzechTourism" is based on cultural heritage.

Culture has an economic impact that can be measured according to its contribution to the tourism sector and to employment. The aim of this paper is to find the overlap of the Tourism Satellite Account (TSA) and Satellite Account on Culture (SAC), from the point of view of the results, in order to clarify the contribution of cultural tourism to the economy.

Key words

Cultural tourism, Tourism Satellite account, Satellite Account on Culture, economic impact

Introduction

Cultural tourism is very difficult to define and numerous definitions exist (McKercher and Du Crus, 2002). Cultural tourism is officially defined by the United Nations World Tourism Organization (UNWTO) in the following way: "Culture tourism includes movements of persons for essentially cultural motivations such as study tours, performing arts and other cultural tours, travel to festivals and other cultural events, visit to sites and monuments, travel to study nature folklore or art or pilgrimages" (WTO, 1985).

Cultural tourism is about the convergence of tourism and cultural consumption. Measurement of economic and social impacts of cultural tourism is both very important and required.

The cultural heritage of the Czech Republic forms the basis particularly for inbound tourism, but also for domestic tourism as well. The current marketing strategy of Czech Tourism defines four basic tourism products, which it promotes in both the international and domestic markets. One of them is the product "Journeys of discovery." The product is based on Prague, along with sites inscribed on the UNESCO list, the cultural landscape, cultural journeys and spiritual tourism. Within cultural tourism, cultural heritage dominates, with a preference for the tangible over the intangible, followed by performances, concerts, theater, festivals, the film industry and last but not least, local traditional cuisine.

The use of culture in tourism, particularly at the regional and local levels, has the following positive impacts:

- contributes to the growth of the local economy;
- is able to create new jobs (but with a higher degree of seasonality);

- has a positive impact in the social sector, strengthening local identity and social cohesion, and has an educational function;
- contributes to the economization of cultural monuments, which often form the core of the product or part of it.

From the above, it is clear that the combination of culture and tourism is of great importance, not only in the Czech Republic, and that it is beneficial to both the participating sectors and the overall economy of the country or region.

Statistical monitoring and measuring of tourism

Tourism and culture are sectors that are very difficult to measure as the availability of comprehensive data is low. Furthermore, they must constantly prove their importance and indispensability, especially to political representatives. Services and products provided by both sectors are essential and very susceptible to any changes in the economy.

The main statistical tool of tourism, and the only one approved by the UN Statistical Commission, is the Tourism Satellite Account (TSA)(UNWTO, 2011). The satellite account is necessary because tourism is not considered a separate industry in national accounts. The Czech Republic is one of approximately 60 countries that have a consolidated TSA (UNWTO, 2011). In the Czech Republic, the Czech Statistical Office (CZSO) is responsible for the TSA and has been producing it on the national level since 2003. In practice, the use of TSA outputs is at a very low level. A survey conducted by the author in December 2013 shows that the majority of counties, or the officials responsible for tourism in those counties, does not utilize the outputs of the TSA. The main reason given is that they need data broken down by region, which the TSA does not provide.

Over time various methods and instruments have been developed with the aim of measuring tourism's contribution to the economic growth of a country, namely the input-output analysis, computable general equilibrium, the tourism satellite account, econometric models, and various survey techniques. For each of these instruments an important amount of data is necessary in order to indicate the economic growth induced by tourism. It is evident from all experiences that measuring the economic impacts of tourism is more difficult as the analysis moves downward from the national level through the regional to the local level. This is due to a lack of statistical data and information about tourism demand and supply. The availability of data at the regional level is not a problem only in the Czech Republic, but in other countries as well. Some countries, such as Austria, Finland, and Spain, have regionalized the TSA, although uniform methodology for regionalization is still missing. Even though the methods and instruments noted above are known, their use is not widespread among tourism managers on any level – national, regional or local. Instead, several approaches have been established and applied in practice. These approaches are focused mostly on the measurement of the economic impacts of tourism, but we can also find some of them focused on the measurement of the total impact of tourism - economic, socio-cultural, and environmental. The following three approaches are given as examples of measuring the impact of tourism on a regional or local level:

➤ *LATI Model (Local Area Tourism Impact Model, UK)*

The LATI model, established by the London Development Agency, uses a “top-down” approach, starting with London level tourism data from national tourism surveys. It is principally used to disaggregate tourism expenditure over the 33 London boroughs, using

information that is both robust and relevant to the types of spending that visitors undertake (Petříčková, 2011).

➤ *Local Tourism System (UK)*

Local Tourism System is focused on the measurement of the economic impacts of tourism in a region. It was established by the Office for National Statistics of the United Kingdom and is based on Standard International Code of Tourism Activities (SICTA, 42 codes).

The aim of the approach is to measure the ratio between tourism demand and tourism supply. This ratio is important for showing the relative importance of tourism-related activities in relation to the overall regional economy. It is a good indicator to compare regional economic performance (Buccellato, T., Webber, D., White, S., Ritchie, F., Begum, S., 2010).

➤ *Local Tourism System (Italy)*

The goal of this approach is to create a monitoring system able to control specific destination dynamics over time and to monitor stages of the life-cycle of the destination. It is based on a bottom-up approach when indicators at the municipality level are aggregated at the regional level (Manente, 2006).

Statistical monitoring and measuring of culture

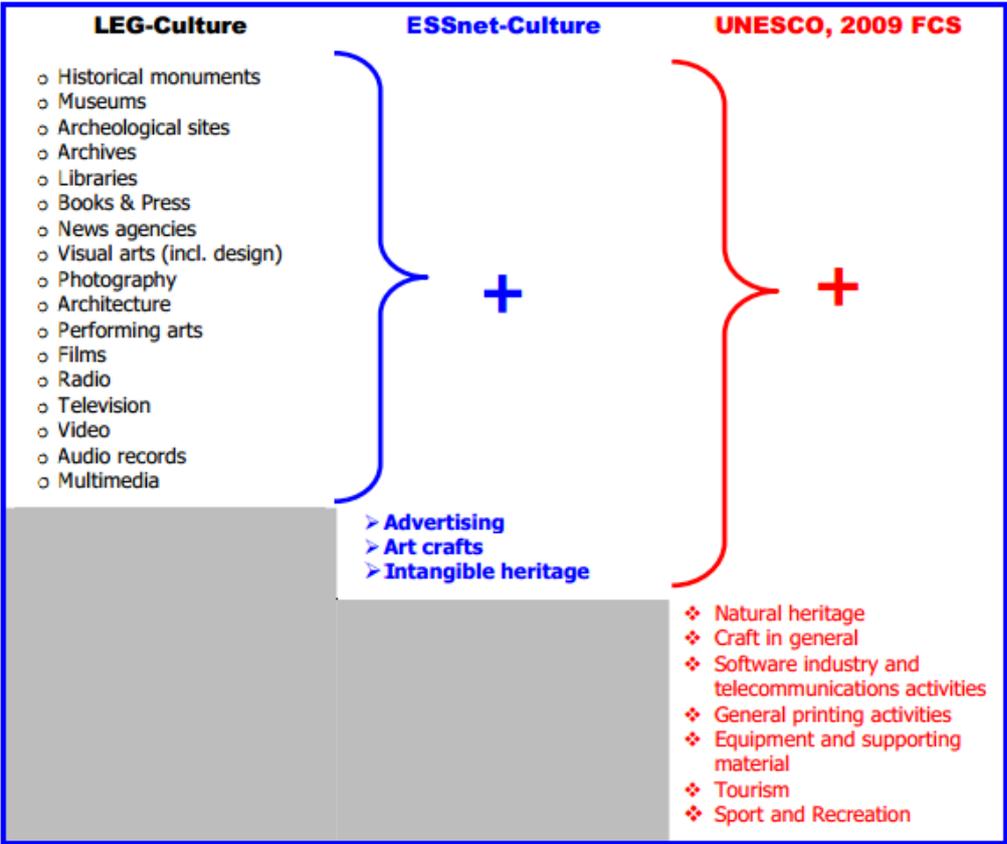
EU countries are newly reinforcing the challenges to better monitor financial inputs and outputs in relation to cultural institutions, for example through the drawing up of satellite accounts in the field of culture, similar to the ones that are being compiled in other areas of social interest (health service, social security, tourism, environment,...).

Contributions of the culture sector can be measured by the Satellite Account on Culture (SAC) as in the tourism sector. There are several studies which have tried to present a basic methodological framework for this tool, for example from Finland, Spain or Canada. A Czech institution called The National Information and Consulting Centre for Culture (NICCC) (established by the Ministry of Culture) has made efforts to develop the SAC with results for the years 2009, 2010 and 2011 with cooperation of the Czech Statistical Office. The Czech Republic has 303 heritage objects open for the public, with the number of visitors at 12.2 million in 2011. Culture had a 1.7 share on GDP, and household expenditures on cultural heritage decreased over this period.

Monitoring the contribution of the cultural sector has recently undergone very dynamic and important phases of the process. In 2006 the work *The Economy of Culture in Europe*, in which the cultural sector is clearly and newly defined. The cultural sector is added by creative sector. The culture sector is divided into non-industrial sector producing non-reproducible goods and services aimed at being consumed on the spot and then industrial sector producing cultural products aimed at mass reproduction, mass-dissemination and exports. The creative sector includes activities such as design, architecture and advertising. Another breakthrough achievement is the Eurostat ESSnet-Culture project, which has brought together various experts from European countries. The ESSnet "Culture" consisted of several European Statistical System organisations, working together on methodological developments with the aim to produce results useful for all ESS members and leading to the generation of comparable statistics on culture within a reasonable time frame. The project, led under auspices of Eurostat, has been coordinated by the Ministry of Culture of Luxembourg, which

has worked in association with 4 other core co-partners – the French Ministry of Culture and Communication, the Czech Statistical Office, Statistics Estonia and the Dutch Ministry of Education, Culture and Science (ESSnet, 2012). Another well-known study is the Framework for Cultural Statistics, created by UNESCO in 2009. The difference between the two approaches defining the importance and impact of culture on economic and social spheres of society is the inclusion of tourism and recreation in activities statistically monitored within the culture. ESSnet-Culture proposed to exclude some activities from the general framework for cultural statistics, bearing in mind the proposed definition of cultural activities (related to artistic and cultural expressions and values) as well as the need for quality and availability of data (possible identification of selected activities within statistical classifications). Some areas of excluded activities are leisure activities (games, entertainment activities, gambling etc.) and tourism and natural reserves, zoos or botanical gardens. UNESCO’s study mentions cultural tourism without providing a clear definition of it and even less a statistical one. It is not an identifiable activity but rather a grouping of several cultural experiences that visitors may get: it may be regarded as within heritage, performing arts and cultural participation (visits to museums and cultural sites, attendance of performance etc.). This study includes tourism, sport and recreation into cultural statistics.

Figure 1: Comparison of cultural domains covered by European and UNESCO frameworks for culture statistics



Source: ESSnet – Culture, 2012

Cultural tourism

According to the 2009 Eurobarometer survey, cultural attractiveness is the second motivation for Europeans (after value for money) when deciding on a holiday destination or accommodation (EUROSTAT, 2011).

The Tourism Satellite Account is well developed in the Czech Republic and uses data on the consumption of “cultural services” such as performing arts, museums and other cultural services in the categories of inbound and domestic tourism, and then collects the number of jobs in these cultural services. Cultural tourism is a broad term and includes more elements than the cultural services defined in the TSA. In addition to the heritage sector, which includes performing arts and visual arts, which are mostly use by tourists, there is a very important part of culture which is called the creative industry and is also used by tourists. This includes architecture, design and advertising.

Looking at table 1, it is obvious that tourism is present in six of the nine sub-sectors of the culture industry, where there is overlap and the creation of a positive effect.

Table 1: Overlap of sub-sectors of the creative industry with other sectors of the economy

Group of CI sub-sectors	Related sectors which may benefit from spillover effect from CI sectors
Heritage	tourism ^b ICT trade branches located nearby manufacturing of machinery and equipment
Archives, Libraries	ICT trade branches located nearby education sector
Visual arts and (art) Crafts	publishing ^b real estate tourism ICT education sector
Performing arts	trade catering health services (incl. music therapy) other personal services tourism ICT trade branches located nearby
Architecture	real estate ^b construction branches ICT tourism KIBS (testing equipment, measuring, manufacture of process equipment) ^a
Design	All sectors may benefit from spillovers from design sector
Advertising	ICT KIBS (computer manufacturing, market research, database consulting) ^a
Audiovisual and multimedia (radio, television etc.)	ICT ^b tourism education sector manufacture of machinery and equipment
Books and press	ICT education sector manufacture of computing machinery

Note:

KIBS – knowledge intensive business services

^a based on NESTA co-location study

^b CI probably has direct impact on this sector in addition to spillover effects

Source: ESSnet – Culture, 2012

Satellite accounts created for each of the monitored sectors contain significant amounts of critical data and information based on various sources, whether from existing statistics in the system of national accounts or other additional investigations. The following table lists the name of each table and the data source for both accounts.

Table 2: Overview of data sources for the TSA and SAC

Tourism Satellite Account		Satellite Account on Culture	
Table	Source of data	Table	Source of data
T1 Inbound tourism consumption in the Czech Republic	Investigation of visitors at collective accommodation establishments. Investigation on the borders (MMR, STEM/MARK)	T1 Sources of financing culture according to cultural area	State budget Local budgets Household survey – CZSO CULT – CZSO Survey of non-profit institutions Business statistics – CZSO
T2 Domestic tourism consumption in the Czech Republic	Sample survey of tourism	T2 Sources of financing culture according to provider of cultural services	State budget Local budgets Household survey – CZSO CULT – CZSO Survey of non-profit institutions Business statistics – CZSO
T3 Outbound tourism consumption in the Czech Republic	Sample survey of tourism	T3 Location of financial resources according to areas of culture and cultural services providers	Synthesis of T1 and T2
T4 Internal tourism consumption in the Czech Republic	Synthesis of T1 a T2	T4 a) Revenue and expenditure by cultural institutions cultural areas T4b) Income and expenses cultural institutions by providers of cultural services	Business statistics
T5 Production accounts of tourism industries and other industries in the Czech Republic	Statistics from the national accounts	T5 Macroeconomic indicators according to areas of culture	Statistics of the national accounts

T6 Domestic supply and consumption of internal tourism according to product in the Czech Republic	Statistics from the national accounts	T6 Selected indicators in the three sector breakdown of culture	Statistics of the national accounts CULT – CZSO Non-profit institutions CULT –The National Information and Consulting Centre for Culture (NIPOS) Business statistics
T7 Employment in the tourism sector in the Czech Republic	Sample survey of the labor force National accounting	T7 Employment and wages in culture	CULT – NIPOS CULT – CZSO Non-profit Institutions Business statistics
T8 Creation of gross fixed capital in tourism in the Czech Republic	National accounting	T8 Sources and scope of investments of the cultural sector	CULT Non-profit institutions Business statistics State budget
T9 Collective consumption	<i>CZSO does not fulfill</i>	T9 a) External trade in the cultural goods sector b) External trade in the cultural services sector c) External trade in the cultural goods and services sector	Czech National Bank
T10 Non-financial indicators in tourism in the Czech Republic	Household surveys, accommodation, border statistics	T10 Basic indicators of the cultural sector	Synthesis of tables T1, T5, T6 and T7
Main indicators of the national economy and tourism in the Czech Republic		T11 Number of selected providers of cultural service	CULT – NIPOS
		T12 Relative expression of performance of providers of cultural services in natural cultural indicators	CULT – CZSO CULT – NIPOS

Source: own 2014

Data collection in the field of tourism and the area of culture is very difficult and complex. The sphere of culture undoubtedly has one advantage and that is the ticketing system. Tourism statistics for movement of people both for inbound as well as for domestic tourism in the Schengen area are very difficult to obtain. The most difficult group to track is day visitors, both foreign and domestic. The ticketing system allows for tracking the number of people visiting particular cultural sites such as castles and palaces, as well as museums, theaters, festivals and concerts, which form the core of cultural tourism in the Czech Republic. The satellite account of culture gives data on the number of visitors to various cultural sites in

total, irrespective of whether they are foreign or domestic visitors, and at the national level. However, NICCC has detailed data broken down by region, which lists the number of visitors to cultural sites. The data series are available from 1980. Another source of data that could refine the number of visits to cultural sites and monuments is the statistical database of the National Heritage Institute (NHI), which has data on the number of visitors to castles (which are owned by the state; 104 objects) for individual days of the year. For some important sites, the database provides information on the number of foreign and domestic visitors. However, the NHI is limited by two factors, namely inconsistent methodology, a short time series (four years) and in particular the fact that the database is not public. In addition to the number of visitors, the database shows the amount of sales by division according to the major activity (meaning admission), sales for cultural events, revenues from ancillary activities (e.g., souvenirs, space available for rent) and other revenue.

Table 3: Cultural tourism - possible sources of data

	Tourism Satellite Account	Satellite Account on Culture	National Heritage Institute	NICCC
Demand	Consumption Cultural services Inbound tourism Domestic tourism Internal tourism	Household expenditure Number of visitors per 10 thousand people	Number of visitors – domestic, foreign (based on the number of tickets purchased and rental of foreign language materials or tours in a foreign language) Visitors to cultural events Sales by category Average revenue per visitor	Number of visitors to museums and galleries by region of the Czech Republic Number of visitors to sites by region Number of visitors to exhibitions, concerts, cultural events by region Visitor expenditure on admission - theaters, monuments, galleries, museums, etc.
Supply	Production Cultural services	Production		
PxN	Share of tourism to supply (22.7%)			
Employment	Number of employed persons in tourism – Cultural services (4.6%)	Number of employed persons		Number of persons employed broken down by site/object

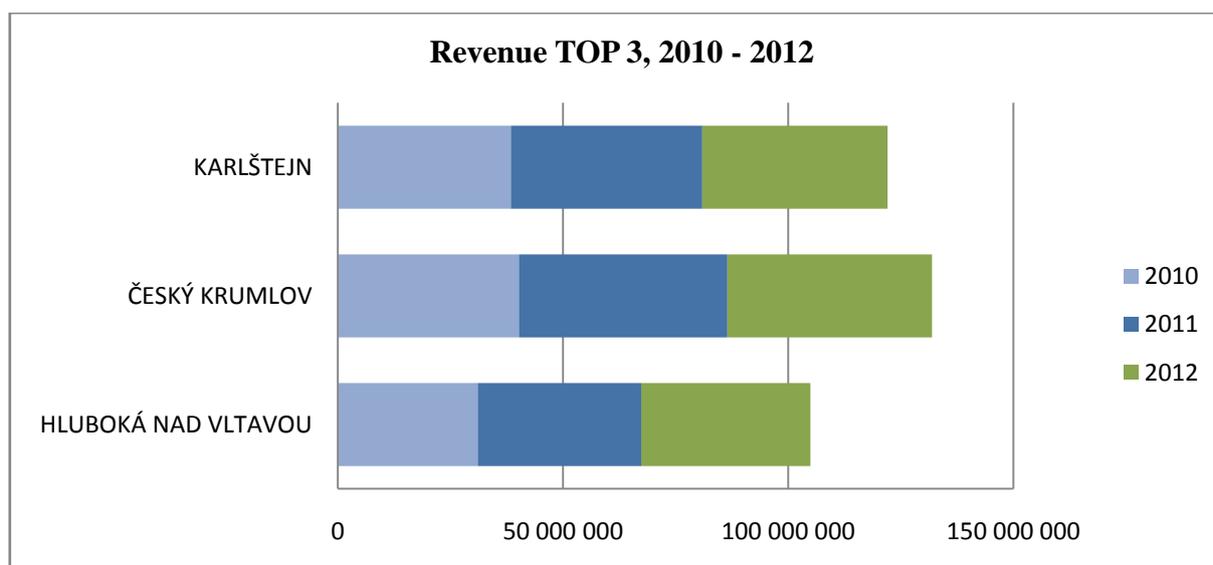
Source: own 2014

If we look at the specific outcomes in the area of culture in the two satellite accounts, the results are as follows: TSA shows consumption for internal tourism at 7.9 billion CZK for the year 2011 in the area of cultural services. The Satellite Account on Culture shows the total number of visitors to monuments, 303 of which are publicly accessible, to be 12.2 million persons. Direct household spending on visiting historical sites amounts to almost 975 million CZK. It is clear that tourism satellite account underestimates the area of cultural services, which in addition to cultural monuments, also includes theaters, concerts, museums, botanical and zoological gardens, national parks and protected areas. Culture outputs are understated in the TSA. There is room for more accurate data in the TSA through use of the SAC.

For the economic impact of cultural tourism on the state / region / place, impact on GDP, employment and on public budgets is most often considered. For example, in 2011 17,545 people were employed in the field of cultural heritage. These jobs are certainly linked to the activities of tourism, with even more jobs generated by the multiplier. Raabová (2010) gives the example of Karlštejn Castle, which employs 16 people and 5 guides full-time year-round, while in full season, the number of guides to the castle increases to 70. Annual revenue is around 39 million CZK. In the village of Karlštejn today there are 12 accommodation establishments operating (2 hotels, 8 B&Bs, 1 dormitory and 1 camp), numerous restaurants, 4 museums, 1 golf course and many other services for visitors. Unfortunately, up till now, how many jobs and how much total income the castle and its related tourism generate has not been calculated.

If we look at the actual sales from the main activities of the three most visited cultural sites in the Czech Republic, the range is between 105 million (Hluboká nad Vltavou) to 132 million (Český Krumlov) for three years. In sum, this is 359 million CZK, i.e. 14.36 million (average rate 25Kč = 1 Euro). The potential of cultural tourism from the perspective of both direct and indirect impacts on the economy of the area is clearly significant.

Graph 1: Revenue of three most important culture sites in the Czech Republic



Source: own 2014

The contribution of cultural activities in the form of cultural tourism depends on the type of activity and on the features of the local economy. X. Greffe highlights that social-economic

impacts expected from developing cultural tourism are not self-fulfilling and that a certain number of criteria are important:

- The permanence of cultural activities;
- The degree of participation by local people in addition to tourists;
- The territory's capacity to produce all the goods and services demanded on this occasion – in other words the local context is paramount;
- Interdependence of these activities to foster “clustering” effects (EC, 2006).

As for the methods to be used to express the economic impact of cultural tourism, the most appropriate at the national level is certainly use of the input - output model, including calculation of multipliers. Use of this model at the regional or local level however, encounters barriers, in particular the absence of supply and use tables, in other words symmetric input-output tables broken down by region. If we were to apply any of the approaches mentioned above, the Local Tourism System of the UK would be useful. This approach is based on Gross Value Added, which is calculated as the ratio of the Tourism Industry to the GVA in the region. In the calculation, which is based on the demand side of tourism, data for cultural tourism (see definition above) would replace data for tourism (will be done in ensuing work).

$$GVA - TI(\%) = \frac{\sum_{n=1}^N GVA_i^{ABI}}{\sum_{k=1}^K GVA_i^{ABI}} \times 100$$

where $n=1,2,\dots,42$ is meant to sum GVA over SICTAs (Standard International Code of Tourism Activities) and $k=1,2,\dots,638$ sum the GVA over the complete set of 5-digits SICs composing the whole economy. ABI = Annual Business Inquiry.

Then this ratio is used to calculate the tourism-related supply of products at purchaser prices for each of the regions SP - TI_i .

$$SP - TI_i^{SUT} = \left(\frac{TOTGVA_i^{ABI}}{TOTGVA_{UK}^{ABI}} \times TOT - SP \right) \times GVA - TI \text{ (Ratio)}_i^{ABI}$$

SUT – Supply Used Tables

Reconciliation between demand and supply sources is then obtained by computing the ‘demand to supply’ ratio. This represents the most important figure within the TSA framework, reflecting a simple ratio of the sum of all the demand side data components to the total obtained from the supply side data components:

$$DS \text{ (ratio)}_i = \frac{TotInbExp_i + TotDomNightExp_i + TotDomDayVis_i + TotOutDomExp_i}{TOT - SP_i^{SUT}}$$

where DS = demand supply ratio; TotInbExp = Total Inbound Expenditure; TotDomNightExp = Total Domestic Night Expenditure; TotDomDayVis = Total Domestic Expenditure by Day Visitors; TotOutDomExp = Total Outbound Domestic Expenditure.

The Tourism Direct Gross Value Added (TDGVA) is calculated as:

$$TDGVA_i^{SUT} = GVA_i^{SUT} \times DS \text{ (Ratio)}_i$$

Conclusion

By comparing the outputs of the Tourism Satellite Account and the Satellite Account on Culture, it can be stated that it is possible to refine the data in the field of cultural services within the TSA, from which the socio-economic benefits of cultural tourism for the area would be even more evident. For calculations on a national level, the input-output model can be used based on the supply and use tables arising from the national accounts. The input-output model can be used at the regional or local level, however with large limits, as mentioned above. The advantage of the cultural sector is the fact that NICCC tracks both visitor numbers and expenditure at the regional level. A suitable method can be inspired, for example, by the above method derived from the statistical office of the United Kingdom.

The Czech Republic and the whole of Europe are cultural tourist destinations. To support both sectors, tourism and culture, it is more than necessary to pay attention to their significant contribution to the economic and social development of an area. A common problem is the lack of regional data. Cooperation between the TSA and SAC could lead to more accurate data and a more accurate calculation of the impact of cultural tourism in the defined area.

The cultural sector needs tourism to decrease its strong dependence on public finance sources, and tourism needs culture as a significant part of its product portfolio.

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