

ESTIMATING THE ECONOMIC CONTRIBUTION OF MEDICAL TOURISM IN ROMANIA BASED ON THE TOURISM SATELLITE ACCOUNT DATA

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Abstract

Medical tourism is a form of tourism with real development prospects in Romania being supported by phenomena such as the aging of the population or the high expenditure associated with medical treatments in other countries, as compared to ours. Consequently, this form of tourism has begun to be exploited more and more by various local companies operating on this market. Meanwhile, assessing the size of the medical tourism sector is important and it can support any public policy in both health and tourism sectors. The purpose of this paper is to present the economic dimension of medical tourism in Romania derived from the existing statistics of the Tourism Satellite Account as the main statistical tool at macroeconomic level implemented in Romania since the reference year 2011. The experimental calculations revealed quite a poor level of the size of medical tourism in Romania, with a contribution of only 0.05% to GDP in 2015. At the same time, it is necessary to extend the research in this field by adding other data sources that should capture all types of expenditures related to medical tourism, especially in the case of Romanian tourists who represent the dominant segment of tourism demand in Romania.

Key words: medical tourism, tourism statistics, Tourism Satellite Account, Romania.

JEL Classification: Z30, C13

I. INTRODUCTION

As a domain, health has connections with many other sectors or fields, including tourism. More specifically, in tourism we are dealing with the terminology of "health tourism and / or medical tourism", which is a form of tourism that has emerged and developed especially over the last decades.

Increased attention to the two notions was given in academic research, both in the field of tourism, as well as in studies on health and medical studies. Goodrich and Goodrich, quoted in Romanova et al (2015, p. 235), have contributed to the definition of health tourism, describing it as follows: "the attempt of a tourist facility (a hotel or a resort) to attract tourists by promoting health services, in addition to regular tourist services; these medical care services may include medical examinations by doctors and nurses in a hotel or a resort, special diets, acupuncture, the administration of energy boosting injections, of vitamin complexes, special medical treatments for various diseases, but also the use of medicinal plants".

Authors such as Carrera and Bridges, quoted by Lunt et al (2011, p. 7), pointed out that health tourism and medical tourism are phenomena that can be combined, defining the first notion as the "travel outside the home environment, with the view to

maintaining, improving or restoring the well-being of the mind and of the body of the individual". They also made it clear that medical tourism differs from health tourism through differences in types of intervention, organization framework, and procedures. According to Hall, quoted in Smith et al. (2013), medical tourism is usually undertaken for curative purposes, in contrast with the preventive goal of health tourism and of wellness tourism.

According to the team of authors of the Global Spa Summit Report of 2011, medical tourism involves the presence of people travelling in different places with the scope of being subject to a medical treatment for a disease or condition or to undergo cosmetic procedures and who are looking for high quality in exchange of lower prices than in their place of origin, but also for a better accessibility to these services.

Thus, we can conclude that the basis of medical tourism is the need of patients who want to have access to less costly treatments, the unavailability of treatments in their countries of residence, and the long waiting lists. In other words, patients are looking to cure their health problems in countries offering medical treatments at lower prices. This cost difference between the treatments offered in the country of origin and the costs registered in the country in which the treatment takes place had led to the emergence of a sort of medical tourism industry.

Nowadays, the expenditures incurred during trips related to health care are borne either by people out of their own pocket or by other entities (in particular, by social security schemes). To a great extent, these costs are related to tourism (as long as the medical treatment and / or the health issues represent the main purpose of a trip) and their quantification is important for any economy.

It is also important to define from the very beginning what qualifies as a medical trip (for medical treatment) in accordance with international standards in the field. Thus, it refers to: "receiving services from hospitals, clinics, nursing homes and, in general, from medical and social institutions, visiting health resorts and spa centres and other specialized places, with the view to receive medical treatment when they are based on medical recommendations, including for cosmetic treatments using medical facilities and services" (IRTS, 2008). It is also important to note that frequent travel (once or more often in a week) in such scopes as getting health services and medical care should not be considered as a form of tourism in accordance with the same standards.

Starting from these conceptual clarifications, the first important observation is that medical units (hospitals, clinics, sanatoriums) participate in the realization of the health / medical tourism product, as long as they provide not only services in the field, but also accommodation and catering services. However, tourism statistics (from a supply-side perspective) do not include / refer to the services provided by these units, and this is not only restricted to Romania but to the rest of the world as well. Alternatively, in terms of the supply, tourism in spa resorts is the only form of tourism that stands out separately in tourism statistics in our country.

The scope of this paper is to present some of the results obtained upon calculations that capture the economic importance of medical tourism in Romania, starting from a different approach, this time mainly resulting from a demand-side perspective, namely the number of trips and the related expenditures, which of course also contribute to generating value added in the economy.

II. METHODOLOGY

The model is strictly experimental, and it is related to the aim, in the case of medical tourism, of establishing a series of estimates of macroeconomic aggregates derived from the data provided by the Tourism Satellite Account (TSA), respectively the tourism contribution to Gross Domestic Product (GDP) and to the Gross Value Added (GVA), and the related tourism consumption.

Meanwhile, it is important to briefly explain what TSA is about. Ahlert (2007) states that "TSA

concept provides a systematic and consistent description of the direct economic relevance of tourism activities" (p. 276) while Backer (2013) stressed that TSA is a unique tool now available to policymakers in many countries to document the direct Gross Domestic Product (GDP) and employment contributions of tourism to national economies. Also, Dweyer et al (2004) clearly pointed out that TSA is about measuring the "contribution" of tourism to the economy, in a manner which is consistent with the National System of Statistical Accounts. All in all, it should be emphasized that TSA is capturing only the direct economic contributions of tourism, leaving the other effects (indirect and induced) to other macroeconomic assessment tools, and this is very clearly stated by international standards, TSA:RMF (2008).

In Romania, trips for medical treatments (regarding the main purpose of the trip) are included separately in two demand-side tourism surveys - ACTR (ro. Ancheta Cererii Turistice a Rezentilor - Survey on Tourism Demand of Residents) and ACNER (ro. Ancheta privind cheltuielile turistice ale nerezidenților cazați în structurile de cazare - Survey on the Tourism Expenditures incurred by Non-Residents in accommodation establishments) - surveys on which the TSA is based and which are regularly carried out by the National Institute of Statistics (ro. Institutul National de Statistică – INS) in Romania. Therefore, the "medical treatment", as the main purpose of the trip of non-residents and residents travelling to Romania, can be distinguished separately.

This is done starting with 2009 for non-residents staying in accommodation units of Romania (ACNER survey); in this survey there is a separate structure of expenditures that took place in Romania and that were incurred by non-residents travelling here for medical purposes - as the main purpose of trip; this breakdown of expenditures is an essential reference issue for any TSA. In the case of residents, the ACTR survey is conducted quarterly by the INS and starting 2013 it features the total expenditure of tourists travelling for medical purposes, but there is no detailed structure of this expenditure in the ACTR survey, as is the case with ACNER survey.

Therefore, the first data used in the analysis are the tourism expenditure related to travelling for medical treatment (as the main purpose of trip) for both non-residents and residents. Definitely, to them can be added the so-called "social transfers in kind" represented in Romania by the social security system offering subsidies for rest and treatment (rest and treatment tickets) addressed mainly to pensioners.

The baseline period for which the data were calculated is 2013-2015, 2015 being the final year corresponding to TSA data published by INS (at the time when the current study has been carried out – November 2018). Even though data on TSA existed in Romania since the reference year 2011, the existence of

data related to the expenditures incurred by Romanian tourists travelling for medical purposes as a main purpose with the reference year 2013, has led to the fact that 2013 to be considered the first year for which the analysis was carried out.

The methodology applied was basically a recalculation of the data found in the TSA Table 4 *Internal Tourism Consumption by products*, and in the TSA Table 6 *Domestic supply and Internal Tourism Consumption by products (at purchasers prices)* within the Tourism Satellite Account system, while the data in TSA Table 5 *Production accounts of the tourism industries and other industries (at basic prices)* (from supply side) remained practically unchanged. For more details on the methodology applied by the INS for the compilation of the Tourism Satellite Account in Romania, the persons interested can consult the INS publications (INS, 2017; 2016: 2015).

To consider only the tourism expenditures related to the health tourism, in Table 4 TSA, the total internal tourism consumption in Romania is replaced by the tourism expenditure related to trips whose main purpose is medical treatment. In the case of foreign tourists, the breakdown by type of expenditure is taken directly from the ACNER survey, while for Romanian tourists, the breakdown was estimated based on types of expenditures at the general level (an approach that is not strictly correct but necessary in lack of any data in this respect).

In the TSA Table 6, the principle of direct proportionality was used for the estimation of the components related to medical treatment by calculating coefficients / proportions. They finally allowed the replacement of the internal tourism consumption vector at the level of Romania with the new vector of the internal tourism consumption given by trips whose main purpose is medical treatment. Furthermore, in full analogy with the TSA system at the general level, Tourism Direct Gross Value Added (TDGVA) and Direct Tourism Gross Domestic Product (TDGDP) aggregates were calculated.

III. RESULTS

We present below the main macroeconomic aggregates related to trips whose main purpose was medical treatment during 2013-2015 (years for which data were available for making specific calculations based on TSA data). In absolute terms, there is an oscillatory trend of these aggregates between 2013 and 2015, after a slight decrease in 2014, 2015 showing a significant increase in nominal terms compared to the previous years.

Thus, internal tourism consumption related to trips for medical treatment reaches the value of 888 million RON in 2015 (about 200 million euros). In the same year, 2015, the Tourism direct tourism gross

value added related to trips for medical treatment reaches 370 million RON (83 million euros); similarly, in the case of the Tourism direct gross domestic product for trips for medical treatment, the value of the indicator is close to 390 million RON (exceeding 87 million euros).

Table 1. The main TSA aggregates related to trips for medical treatment in Romania, 2013-2015

TSA aggregates	2013	2014	2015
Internal tourism consumption (mil. RON)	759.4	722.9	888.1
% of total tourism	2.8%	2.2%	2.4%
Tourism Direct Gross Value Added (TDGVA) (mil. RON)	224.9	224.7	370.6
% of total tourism in Romania (TDGVA)	1.94%	1.80%	2.28%
% of total GVA in Romania	0.04%	0.04%	0.06%
Direct Tourism Gross Domestic Product (TDGDP)	245.5	238.8	389.4
% in total tourism in Romania (TDGDP)	2.00%	1.82%	2.28%
% of total GDP in Romania	0.04%	0.04%	0.05%

Source: own calculations based on INS data (INCDT, 2018)

In contrast, comparability between years is better emphasized in relative terms. One can see there is a very modest contribution to the GDP generation in Romania, of only 0.04-0.05%, given by trips whose main purpose is medical treatment, considering that, globally the direct contribution of tourism to GDP in Romania is 1.9-2.3% in the analysed period according to INS (2017; 2016; 2015). Moreover, at the formation of GDP generated directly by tourism (Tourism direct gross domestic product - TDGDP), medical trips also make a very small contribution of 1.8-2.2%. Values are slightly higher (2.2-2.8%) in terms of contribution to internal tourism consumption in Romania.

It is important to stress that both GDP and GVA calculated here are aggregates generated by internal tourism consumption, in our specific case by trips whose main purpose are medical treatment. In accordance with TSA methodology, there are three major components of the internal tourism consumption: Tourism expenditure of foreign tourists (inbound tourism expenditure), Tourism expenditure of residents (Romanian tourists) in Romania and expenditure incurred by social security represented by subsidies for rest and treatment (rest and treatment tickets), mainly for pensioners. One can see that more than a half of internal tourism expenditure is made by residents while an important share (33-43%) is made by expenditures incurred by social security for treatment tickets. On the opposite, there are the expenditure of foreign tourists which represent below 10% from the total internal tourism consumption related to trips for medical treatment in the period 2013-2015.

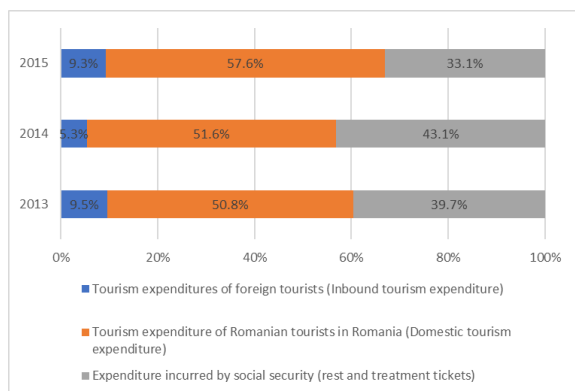


Figure 1 - Distribution of internal tourism consumption related to trips for medical treatment in Romania, by major components, 2013-2015

Source: own calculations based on INS data (INCDT, 2018)

From another perspective, it is important to see how the share of tourism expenditures for medical treatment from the total tourism expenditures is broken down by the major components of internal tourism consumption. Thus, in the case of foreign tourists accommodated in Romania, it fluctuates between 0.7% and 1.5% between 2013 and 2015, while in that of domestic tourists (Romanian tourists travelling in Romania) the share is somewhat higher (1.6-1.8%). By adding the costs incurred by the health insurance system (rest and treatment subsidies) - which are considered entirely as belonging to the tourism expenditures with medical treatments, the share becomes higher (2.2-2.8%).

Finally, it is important to compare the results obtained in Romania with those estimated for the European Union at the level of the 28 countries. However, this comparability must be regarded with a little caution given the different methodologies for obtaining data for Romania (where the data was provided mainly by the Tourism Satellite Account) and for the European Union (in case of which data are taken from a study published in 2017 by the European Parliament's Committee on Transport and Tourism - these calculations are not based on the Tourism Satellite Account methodology but on some estimates based on different data sources - see Mainil et al., 2017).

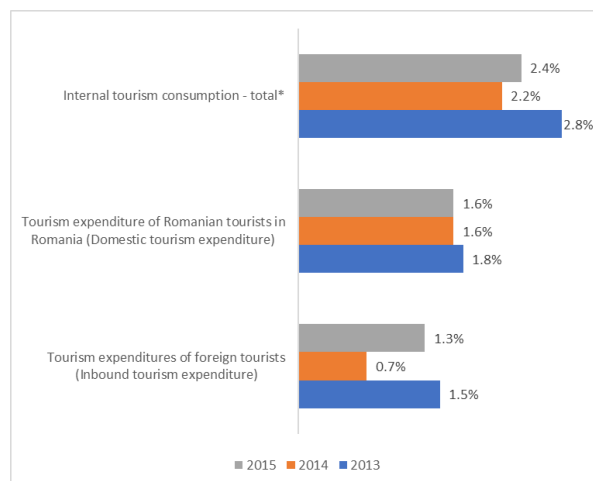


Figure 2 - The share of tourism consumption related to trips for medical treatment in all of components of internal tourism consumption in Romania, 2013-2015

Source: own calculations based on INS data (INCDT, 2018)

* involves the summing of the expenditure of the foreign and Romanian tourists, plus the expenditures incurred by the social security system (for rest and treatment subsidies).

It is noted that in Romania the contribution of tourism to GDP given by the expenditures generated by medical treatment trips is more than eight times lower than the gross share of health tourism revenues in the GDP at EU 28 level. Comparing the share of total internal tourism consumption (in Romania) with the share of health tourism revenues in total tourism revenues, we can see that Romania is situated at half of the EU 28 average level (2.2% compared with 4.6%).

In the case of non-monetary indicators, the discrepancies are slightly fading in the sense that Romania's share (2.9%) in terms of the number of trips whose purpose is medical treatment is not very far from the European Union average (4.3%). The same is true for the incoming tourism (foreign tourists) 0.7% and 1.1%, respectively.

Under no circumstances can we claim that the different values of the indicators found in the table below reflect an underestimation of the health tourism sector in Romania, but they are the sole result of the methodological and conceptual differences of the indicators. For example, revenues (which are usually estimated in terms of supply) are always higher than expenditures (which are often evaluated in terms of the demand, information that is usually provided by tourists).

Table 2. The importance of medical tourism in Romania compared to the general level in the European Union, 2014

Indicators	Romania	EU 28
Share in total internal tourism consumption (RO) / tourism revenues (EU 28)	2.2%	4.6%
Contribution to GDP (RO) / Share of revenues in total GDP (EU 28)	0.04%	0.33%
Share of trips related to health tourism in total trips	2.9%	4.3%
Share of total non-resident accommodated (RO) / international arrivals (EU 28)	0.7%	1.1%

Source: for Romania own calculations based on INS data (INCDT, 2018) while for EU 28 data from Manhil et al (2017)

Note: Based on different calculation methodologies that can significantly influence the comparability of the data!!!

IV. LIMITATIONS

However, this approach is not free from limitations mainly because of the lack of data. For example, there was no detailed data on the distribution of tourism expenditures of residents whose main purpose of trip is medical treatment. At the same time, there was also no data on the domestic component of the outbound tourism expenditure for medical treatment (although this can be assumed to be low).

Most importantly, however, it is the fact that the assessment addressed exclusively the purpose of medical treatment of a trip (considering all travel-related expenditures for the purpose of medical treatment). Trips whose main purpose is other than medical treatment but which involve the cost of services and / or medical products was not considered here, of course, due to the lack of data. This may inevitably result in some underestimation of the importance of medical / health tourism.

Another limitation is given by the statistical system associated with the Tourism Satellite Account, which includes in the calculations only the direct effects of tourism consumption. Frechtling (2010) clearly points out that TSA "limits measurement to the direct economic contributions of tourism only, excluding indirect, induced and multiplier effects" (p. 150). Moreover, Smeral (2006) warns "the TSA can measure the size of an industry defined by its final demand... but if no adjustment is made for indirect effects, it fails to capture properly the value added by the tourism industry in terms of GDP" (p. 94). By including indirect effects, the economic contribution of medical tourism would obviously increase.

Finally, another major limitation is caused by the fact that health service providers / branches of the health service sector that are not part of the tourism industry (private clinics, private hospitals, and other similar establishments) were not considered. In the case of medical tourism, such entities should have been

included and analysed separately.

Beyond data availability issues, there are also several conceptual and terminological issues that concern the two domains of health and tourism. It is known that in the tourism field, the demand is characterized by the word "tourists", while in the field of health there are patients, thus dealing with two different concepts "tourists" versus "patients". In many cases, in hospitals, patients are not considered to be tourists from the perspective of the healthcare providers, assuming that there are no centralized data records on the places of domicile of patients and on the frequency of visits to a doctor. Consequently, becoming aware of the conceptual differences and similarities must be the first step in any common approach aimed at the two domains.

V. CONCLUSIONS

This paper has aimed at applying an experimental model in order to perform the assessment of the size of medical tourism in Romania. In this respect, the existing data provided by the National Institute of Statistics - INS, based on which a series of specific calculations were made using data provided by the Tourism Satellite Account, were used.

From the point of view of the economic importance of health tourism in our country, perhaps the most relevant indicator in the field is the contribution to GDP. To use a euphemism, the modest figure of this indicator calculated in the present study (0.04-0.05% in the period 2013-2015) shows the very small size of this form of tourism in Romania, given that the direct contribution to GDP of the whole tourism sector in Romania equalled approximately 2% and a little over this figure. It should be noted that, with a completely different methodology, the study commissioned by the European Parliament's Committee on Transport and Tourism in 2016 (see Mainil et al., 2017) revealed that EU-28 revenues from health tourism had a contribution of 0.3% to the Union's GDP. Even if the figures cannot be compared, they show that health tourism in our country is by far inferior to that of other EU countries.

However, these figures should not be interpreted in a simplistic way. Although it reached a low level (in terms of the percentage of GDP), the health tourism sector adds value to Romania's economy (estimated at over 370 million RON in 2015 - more than 83 million euros). Moreover, it should be considered that the estimates under this study only refer to the direct effects of tourism expenditure for the main purpose of medical treatment, excluding indirect effects and other tourism health services for tourists whose main purpose of visit is not medical treatment, which constitutes the main limitation of the calculations made.

Therefore, it is necessary to refine the research

in this field by obtaining and including data sources capable of covering all the types of tourism-related expenditures, especially incurred by the Romanian tourists that represent the dominant segment of the demand for Romanian health tourism. More specifically, the statistical survey conducted by INS (ACTR) needs to provide detailed data on the in-depth structure of the expenditures incurred by the tourists whose main purpose of visit was medical treatment. The same survey should separately cover all travel

expenditures for health services received during trips. Also, the research from supply side should be expanded, for example by conducting surveys among travel agencies selling medical tourism products on the Romanian market, or among providers of medical services who have as customers tourists as well. Only by having new and/or complete data sources can medical tourism be more accurately estimated in Romania.

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