

## AN ANALYSIS OF THE REGIONALIZED TOURISM SATELLITE ACCOUNT DATA IN ROMANIA FOR THE PERIOD 2011-2017

Cristi FRENȚ

National Institute of Research Development in Tourism, Bucharest, Romania  
cristi.frent@incdt.ro

### Abstract

*In Romania, Tourism Satellite Account (TSA) at national level is produced annually, starting with the reference year 2011, by the National Institute of Statistics. However, there are no TSA data at regional level (for regions); worldwide there are few countries having such data (in the period 2018-2019 only fourteen countries were identified).*

*The purpose of this paper is to present an analysis of the main results pertaining to regionalizing the TSA aggregates in Romania at the level of its eight development regions. These have shown for the first time the economic size of tourism in each region in Romania. Hence, the highest contribution to regional GDP in 2017 is found for South-East region (4.1%) over the national average (2.8%). At the opposite end, there is South-West Oltenia region with the lowest contribution to the regional GDP (1.6%). For the period 2011-2017, there are remarkable developments for Centre region that has increased its share to the national tourism direct GDP (from 10.9% to 15.3%); this is in contrast with Bucharest-Ilfov region that registered a decline of the same share, from 36.2% in 2011 to 28.9% in 2017. Still, Bucharest-Ilfov region accounts for over one third of internal tourism consumption in Romania.*

**Key words:** regionalization, Romania, tourism consumption, tourism direct GDP, Tourism Satellite Account.

**JEL Classification:** Z30

### I. INTRODUCTION

Briefly stated, Tourism Satellite Account (TSA) provides some key figures as a result of measuring the economic importance of tourism through its contribution to main macroeconomic aggregates (GDP, value added, employment).

Fully in line with international standards in the TSA (TSA:RMF, 2008), the following aggregates will be estimated at regional level (at the level of eight development regions) in Romania:

- Internal tourism consumption (ITC) ;
- Gross value added of tourism industries (GVATI);
- Tourism direct gross value added (TDGVA) ;
- Tourism direct gross domestic product (TDGDP) ;
- Employment in the tourism industries

(ETI).

Some terminological clarifications of these aggregates are presented below:

**Regional/regionalized internal tourism consumption** comprises both tourism consumption of residents (Romanian tourists) and tourism consumption of non-residents (foreign tourists) within the region of reference. It is the sum of tourism expenditure made by Romanian tourists, tourism expenditure made by foreign tourists and the category <Other components of tourism consumption>; the latter refers in this case to the imputed rent for accommodation in owned vacation homes and social transfers in kind – expenditure for treatment and rest incurred by social security. Due to the lack of data, no distinction has been made between the consumption of residents of the reference region within their reference region and the consumption within the reference region made by residents in other regions of Romania.

**Gross value added' of tourism industries** is

the sum of gross value added of all establishments belonging to tourism industries regardless if their production caters to tourists or not (TSA:RMF, 2008).

**Tourism direct gross value added** is part of the gross value added generated by tourism industries and other industries serving directly visitors (tourists and day visitors) in response to the internal tourism consumption (TSA:RMF, 2008).

**Tourism direct gross domestic product'** is defined as the sum of the parts of gross value added (at basic prices) generated by all industries in response to internal tourism consumption to which we add the net taxes on products and imports included in the value of consumption expenditure (at purchasers prices) (TSA:RMF, 2008).

• **Employment in the tourism industries** refers here to the number of jobs in the tourism industries. The tourism industries are defined at the level of CAEN classes (4 digits) which are grouped into six categories: Accommodation for visitors, Food and beverage serving industry, Passenger transportation, Travel agencies and other reservation services, Cultural industry and Sport and recreation. It is important to mention that this aggregate is not related strictly with tourism consumption, having a more extended coverage (for instance in the case of restaurants serving also local population, not only tourists).

Not the least, it must be said that the reference period for which data are presented, 2011-2017 is the period with the data available from TSA at national level in Romania. At the moment when this paper was drafted (October 2020), the last year with data available from the national TSA was 2017. Also, the experimental character of the data obtained (regionalized) has to be mentioned; these regionalized TSA data have been derived strictly from existing data in Romania, in the period 2018-2020.

**II. REGIONALIZED TSA AGGREGATES**

The benchmarking data at national level, more precisely the TSA aggregates that will be regionalized are presented in table 1.

**Table 1. National TSA aggregates in Romania, 2011-2017**

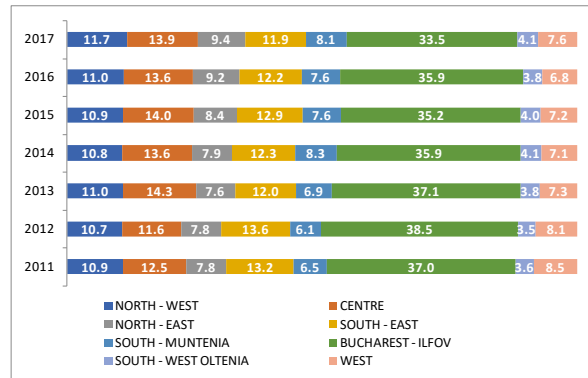
Year	ITC	mil. RON			ETI persons
		GVATI	TDGVA	TDGDP	
2011	21,469.4	25,194.8	9,525.8	10,170.3	378,359
2012	25,337.7	26,831.5	10,322.8	11,018.1	368,952
2013	27,123.5	32,599.9	11,606.5	12,295.7	388,871
2014	33,410.0	27,191.1	12,484.2	13,104.6	349,375
2015	37,481.3	33,426.3	18,264.8	19,088.1	342,755
2016	40,173.2	35,240.4	20,458.5	21,153.8	371,696
2017	49,555.5	41,651.3	23,196.5	23,909.0	373,074

Source: INS (2013; 2014; 2015; 2016; 2017; 2018; 2019a)

*Regionalized Internal tourism consumption*

As it follows the evolution of regions shares in

internal tourism consumption in Romania in the period 2011-2017 is presented (see figure 1). One can see the visible decline of the Bucharest-Ilfov region registering a decrease of more than 3 percentage points of its share from 37% in 2011 to 33.5% in 2017. All the other regions posted small oscillations of 1-2 percentage points in the analyzed period.

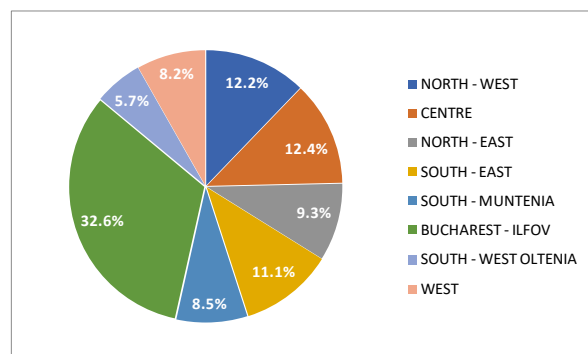


**Figure 1 – The evolution of regions shares in the internal tourism consumption in Romania, 2011-2017**

Source: INCDT (2020)

*Regionalized Gross value added of tourism industries*

In a similar way with internal tourism consumption, it is necessary to see also the distribution by development regions for the aggregate Gross value added of tourism industries. Also in this case, in 2017, strictly from the supply side, one can observe the leader status for the region Bucharest-Ilfov which accounts for almost one third of the gross value added of the tourism industries registered at national level. At a great distance, with relatively close values are Centre, North-West and South-East regions. Also in this case, the South-West Oltenia region ranks last among the eight development regions of Romania (see figure 2).



**Figure 2 – Distribution of gross value added of tourism industries in Romania by development regions, 2017**

Source: INCDT (2020)

*Regional/regionalized Tourism direct gross value added*

From the very beginning, it should be said that there is a need to clarify the differences between the two aggregates which are semantically close: ‘Gross value added of tourism industries’ and ‘Tourism direct gross value added’. In the first case, there is an aggregate which is exclusively from the supply-side (regardless of the customers in the tourism industries that can be both tourists and other types of persons) while in the second case there is an aggregate derived strictly from the reconciliation between supply and demand and it refers exclusively to tourists as customers.

Not the least, it is essential to see the distribution by development regions of tourism direct gross value added in Romania in 2017 (see figure 3). One can note that by far the Bucharest-Ilfov region ranks first accounting for almost 29% of tourism direct gross value added in Romania. In the next positions are the Centre (15.3%), South-East (14.9%) and North-West regions (11.4%). At the bottom end there is South-West Oltenia and West regions with small shares of just 4.3% respectively 7.3% from the total tourism direct gross value added in Romania.

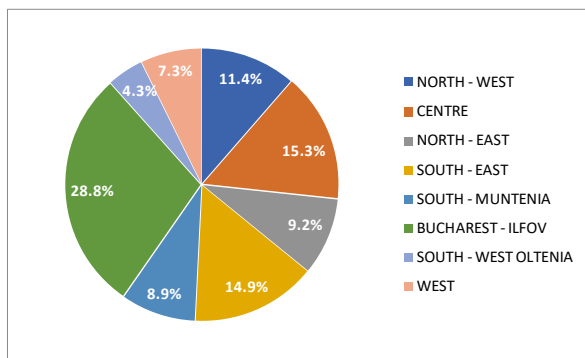


Figure 3 – Distribution of tourism direct gross value added in Romania by development regions, 2017

Source: INCDT (2020)

As long as, by definition, the Tourism direct gross value added represents part of the Gross value added generated by tourism industries and other industries serving directly visitors (tourists and day visitors) in response to internal tourism consumption, it is significant to analyse also the dynamics of the two aggregates: ‘Tourism direct gross value added’ and ‘Internal tourism consumption’ in the period 2011-2017 using the nominal growth rate (see figure 4). The situation is quite heterogeneous in this case: thus 4 development regions (Centre, South-East, South-Muntenia and South-West Oltenia) are in line with the national level where the growth rate of tourism direct gross value added is higher than the growth rate of internal tourism consumption. It should be noted that among these four regions, one can see the more significant gap for Centre and South-East regions and this shows to some extent the tourism performance of these regions in the analysed period. In other words, in

this case, the tourism sector manages to contribute to the regional gross value added at a higher rate than the growth of tourism consumption at regional level.

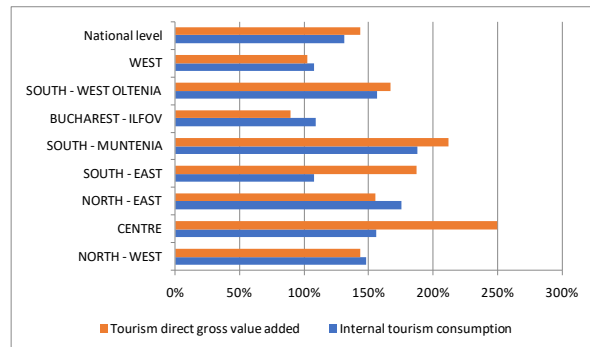


Figure 4 – Nominal growth rate (2017/2011): Tourism direct gross value added vs. Internal tourism consumption by development regions

Source: INCDT (2020)

*Regional/regionalized Tourism direct gross domestic product*

The regional structure of the tourism direct gross domestic product in the period 2011-2017 is also important to be analysed. By far, also in this case, the Bucharest-Ilfov region ranks first with its share exceeding 30%, excepting for 2017. At the bottom end, there is again the South-West Oltenia region which has the lowest contribution to the TDGDP in Romania (in general over 4%). One can see also the slow decline for the share of the Bucharest-Ilfov region, registering a loss of more than 7 percentage points in the period 2011-2017; instead there is the Centre region with an increase of its share with over 4 percentage points (see figure 5).

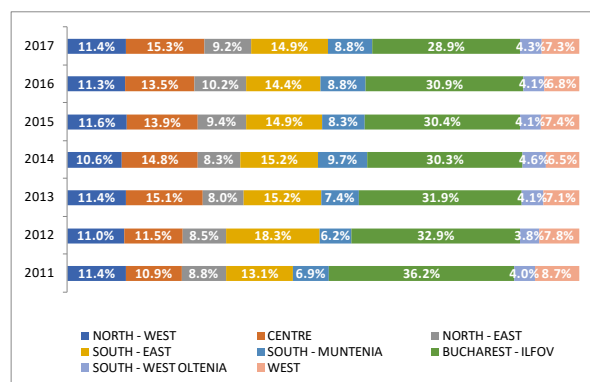


Figure 5 – Distribution of tourism direct gross domestic product in Romania by development regions, 2011-2017

Source: INCDT (2020)

Meanwhile it is important to illustrate tourism direct contribution to regional GDP (as percentage

from regional GDP) and a comparison with the national level (tourism direct contribution to GDP in Romania) (see table 2).

**Table 2. The tourism direct contribution to regional/national GDP in Romania, 2011 and 2017 (%) (%)**

Development region	2011	2017	Growth rate (2017/2011)
North-West	1.9	2.6	37.2%
Centre	1.8	3.8	112.3%
North-East	1.6	2.5	56.5%
South-East	2.2	4.1	88.0%
South-Muntenia	1.0	2.1	114.6%
Bucharest-Ilfov	2.5	3.0	18.2%
South-West Oltenia	1.0	1.6	65.6%
West	1.6	2.2	34.2%
<b>Total Romania (national)</b>	<b>1.8</b>	<b>2.8</b>	<b>53.2%</b>

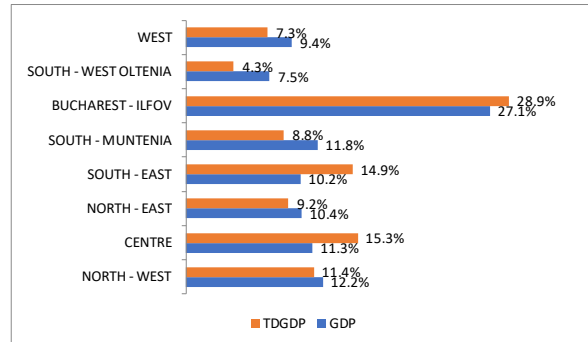
Source: INCDT (2020)

One can see there are regions where the tourism contribution to the regional GDP is higher than the national level (2.8 in 2017); this is the case for three regions: Bucharest-Ilfov, South-East and Centre. At the bottom end, there are three regions much below the national level in 2017: South-West Oltenia, South-Muntenia and West. Consequently, one can conclude that there is a gap in the tourism development among the regions in Romania, a situation demonstrated by the differences that exist in comparison to the national level in terms of the direct contribution to regional GDP.

Also one can notice the evolution of this contribution to the regional GDP in 2017 compared with 2011: two regions (Centre and South-Muntenia) practically doubled their contribution of tourism to their regional GDP while three other regions (West, North-West and Bucharest-Ilfov) registered a lower dynamics, below the national level (+ 53.2%).

From a different perspective, it is meaningful to analyse a comparison between the contribution of regions to the general GDP (total GDP in Romania) and the contribution of regions to the tourism direct gross domestic product in Romania (see figure 6). By contribution of regions we understand herein the share that the region has in the GDP of Romania and respectively the share the region has in the GDP generated by tourism (at national level) – ‘Tourism direct gross domestic product’. One can see there are two categories of regions: on the one hand regions where the tourism direct contribution (contribution to Tourism direct GDP) is higher than the contribution to total GDP in Romania - Bucharest-Ilfov, Centre and South-East (here are the regions where tourism is well represented); and on the other hand, there are regions where their tourism direct contribution is lower compared to their contribution to the national GDP in Romania - Nord-West, West, South-Muntenia, South-West Oltenia, North-East. In this last category, one

can conclude that tourism has a lower influence on the generation of value added either because tourism is not well developed or because there are other economic activities better represented in the regional economic structure, or a combination of these two.

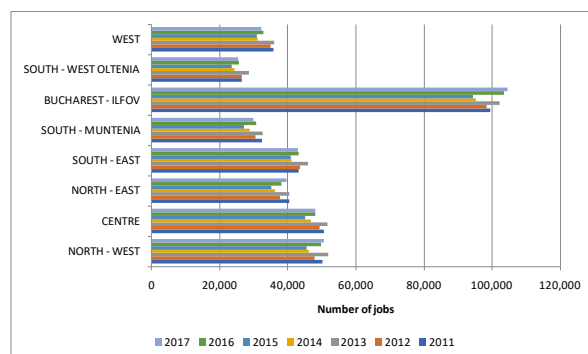


**Figure 6 – The contribution of regions to the Tourism direct GDP vs. the contribution of regions to GDP in Romania, 2017**

Source: INCDT (2020)

#### *Regional employment in the tourism industries*

In this section, employment (expressed as number of jobs) in the tourism industries is presented, for each development region in the period 2011-2017 (see figure 7). In general, the number of jobs in the tourism industries registered an oscillating trend in each development region in the same period. Most of the jobs in the tourism industries are in the Bucharest-Ilfov region (over 100 thousands in the two last years). This is followed by North-West and Centre regions (each of these having around 50 thousand jobs in the tourism industries). At the bottom end there is the South-West Oltenia region (over 25 thousand jobs in 2017) and the South-Muntenia region (almost 30 thousands jobs in the tourism industries).



**Figure 7 – Employment in the tourism industries by development regions, 2011-2017**

Source: INCDT (2020)

Also it is essential to analyse the evolution of the regional structure of the total number of jobs in the tourism industries in Romania, using the market share of each region (see figure 8).

However, there are not very large fluctuations of market shares in the period 2011-2017, but it is still more obvious to notice the increase of the market share of the Bucharest-Ilfov region by almost 2 percentage points (from 26.3% in 2011 to 28.1% in 2017). The rest of the regions posted minor fluctuations of their market shares (within a maximum one percentage point). The North-East region stands with the most stable market share with fluctuations below 0.5% in the analysed period.

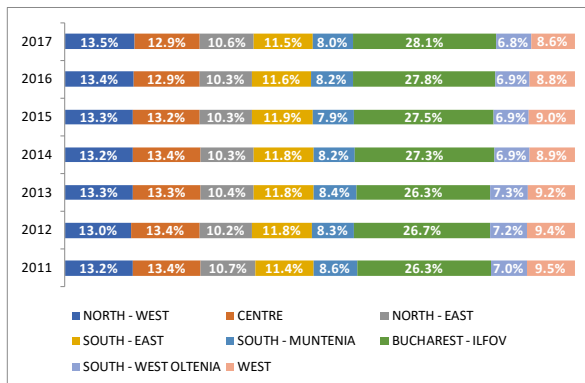


Figure 8 – Distribution of employment in the tourism industries in Romania by development regions, 2011-2017

Source: INCDT (2020)

### III. DERIVED INDICATORS

By combining some of the aggregates presented above or by using them together with non-monetary indicators (e.g. population), some derived indicators can be calculated. In this section two such derived indicators will be presented: ‘Labour productivity in the tourism industries’ and ‘Regionalized Tourism direct GDP per capita’.

#### Labour productivity in the tourism industries at regional level

Labour productivity in the tourism industries can be calculated as a ratio between the gross value added and the number of jobs (assimilated by convention with the number of employed persons). Both aggregates have been calculated and presented above for each development region. One can see, as expected, that labour productivity at the level of tourism industries is far below national level – the level of total productivity in the economy (see figure 9). This situation is quite normal and is characteristic to the tourism sector where there is much more labour to serve the tourists needs. However, there are regions with a level of productivity in the tourism industries that is superior to the national level for tourism industries: this is the case of the Bucharest-Ilfov region but also to some extent of the South-Muntenia and Centre regions. The lowest labour productivity in the tourism industries is registered in the South-West

Oltenia region.

Not the least, it should be reminded that the compilation of labour productivity is influenced both by the level of gross value added and the variable that characterises employment, in other words, strictly mathematical between numerator and denominator. This is the reason why through a low level of employment, the South-Muntenia region managed to register a productivity level above the national average.

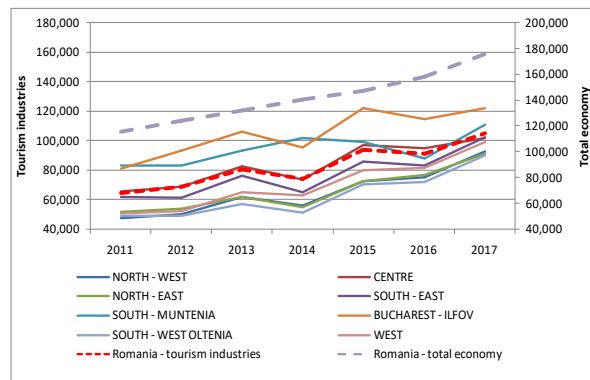


Figure 9 – Labour productivity of the tourism industries in the development regions and at national level, 2011-2017

Source: INCDT (2020)

#### Indices of regional disparity

The analysis at regional level can be done also by using indices of regional disparity. Fully in line with the National Accounts practice, these indices are calculated as a ratio between the regional GDP per capita and the national GDP per capita (INS, 2019b). The national index has a value of 100 and represents practically the national average. The GDP per capita is one of the most used indicators for comparing the level of economic development. In this endeavour, both GDP per total economy and Tourism direct GDP were included (see figure 10).

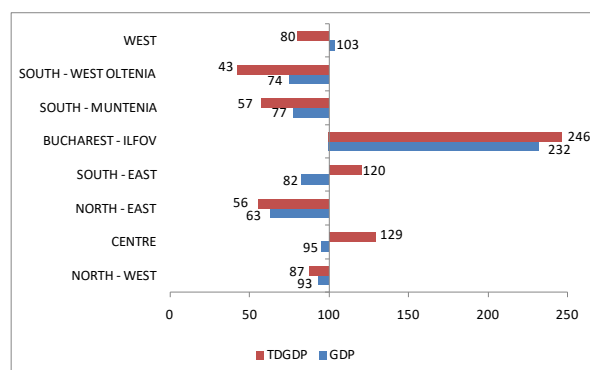


Figure 10 – Indices for regional disparity for tourism (TDGDP) and for the whole economy (GDP) (national level = 100), 2017

Source: INCDT (2020)

In 2017, in Romania there were only two development regions more developed compared with

the national average: Bucharest-Ilfov and West – these had a GDP per capita with 132 and respectively 3 percentage points above the national level. Conversely, the least developed regions (from the perspective of GDP per capita) were North-East, South-West Oltenia and South-Muntenia, all these having a level of economic development below 80% of the national average.

If one analyses these rankings in relation with the economic development of the tourism sector reflected through the TDGDP per capita, there is a heterogeneous situation in our country. It cannot be said that the level of economic development of a region (measured as GDP per capita) is automatically reflected in the level of tourism development of a certain region (in this regard there is the West region where although the general level of economic development is slightly above the national average, the level of economic importance of tourism (TDGDP per capita) is 20 percentage points lower than the national level). A special case is the Bucharest-Ilfov region where the level of tourism development is slightly above the level of general economic development (disparity index is 246 for the TDGDP and 232 for GDP). The poorer regions South-West Oltenia, North-East and South-Muntenia register a higher disparity if one looks at the TDGDP per capita. From the other perspective, the regions where tourism is more developed (TDGDP above national level) such as Centre and South-East regions register a level of economic development slightly below the national average (by 5 percentage points less for the Centre region and by 18 percentage points less in the case of South-East region).

#### IV. CONCLUSION

Regionalising the five TSA aggregates at the level of the eight development regions in Romania for the period 2011-2017 has illustrated that tourism has an uneven economic contribution distributed through the national territory. By far, the region that makes the greatest contribution to the national tourism aggregates ('Tourism direct gross domestic product', 'Tourism direct gross value added', 'Employment in the tourism industries' and 'Internal tourism consumption') is the capital region (Bucharest-Ilfov region) with a market share in the range of 28-33%. At a great distance, on the top are the Centre and South-East regions with relatively close shares in the range of 12-15%. Therefore, one can say that, overall, almost 60% of the economic contribution of tourism in Romania is located in 3 of the 8 development regions of Romania.

Not the least, also the figures regarding employment in the tourism industries confirm the

leader status of the three regions: Bucharest-Ilfov, Centre and South-East. Also one should note the region North-West which posted an important level of employment in the tourism industries. Also by calculating the labour productivity as a derived indicator, it has been reconfirmed that tourism industries have a lower productivity as compared with the general level, the level of the regional economy. However, the Centre and Bucharest-Ilfov stand out with a higher productivity of their tourism industries compared with the same indicator (labour productivity in the tourism industries) at national level.

There is a complex relation between the level of economic development of a region (illustrated by GDP per capita and derived by the related disparity index compared with the national level) and the tourism contribution at the regional economy (by using Tourism direct gross domestic product per capita and derived by the related disparity index compared with the national level).

In the poorer regions of Romania (South-West Oltenia, North-East and South-Muntenia), the tourism sector fails to make a major contribution to the regional economy (the disparity index for Tourism direct gross domestic product per capita being below 60% of the national level). On the other hand, in the West region where the level of economic development is slightly higher than the national average, the tourism sector does not manage to establish itself as a significant economic activity (the disparity index for the Tourism direct gross domestic product per capita standing at 80% of the national level). Simultaneously, the regions where tourism is well developed (South-East and Centre) have disparity indices of TDGDP per capita above the national level (120 and respectively 129) but also have a level of economic development below the national average (disparity indices for GDP per capita of 82 and 98).

Finally, it can be concluded that the level of economic development of a region is not a determining factor in the level of tourism development in that region; on the other hand, the existence of a tourism sector better represented in the regional economy is far from automatically ensuring a level of economic development superior to the national average (as reflected by GDP per capita indicator). However, one thing is clear: the regional disparities at the general economic level in the poor regions are also maintained at the level of regional tourism economy.

#### V. ACKNOWLEDGMENT

This work was supported by a grant of Romania's Ministry of Research and Innovation. CNCS - UEFISCDI project number PN-III-P1-1.1-TE2016-0238, within PNCDI III.

**VI. REFERENCES**

1. Institutul Național de Cercetare Dezvoltare în Turism (en. the National Institute of Research Development in Tourism), INCDT (2020) *Compilarea pilot a unui CST la nivel regional în România* (en. Pilot compilation of a TSA at regional level in Romania), Bucharest, October 2020
2. Institutul Național de Statistică (en. the National Institute of Statistics), INS (2013) *Contul Satelit de Turism. Anul 2011* (en. Tourism Satellite Account. Year 211), December 2013
3. Institutul Național de Statistică (en. National Institute of Statistics), INS (2014) *Contul Satelit de Turism. Anul 2012* (en. Tourism Satellite Account. Year 211), December 2014
4. Institutul Național de Statistică (en. National Institute of Statistics), INS (2015) *Contul Satelit de Turism. Anul 2013* (en. Tourism Satellite Account. Year 211), December 2015
5. Institutul Național de Statistică (en. National Institute of Statistics), INS (2016) *Contul Satelit de Turism. Anul 2014* (en. Tourism Satellite Account. Year 211), December 2016
6. Institutul Național de Statistică (en. National Institute of Statistics), INS (2017) *Contul Satelit de Turism. Anul 2015* (en. Tourism Satellite Account. Year 211), December 2017
7. Institutul Național de Statistică (en. National Institute of Statistics), INS (2018) *Contul Satelit de Turism. Anul 2016* (en. Tourism Satellite Account. Year 211), December 2018
8. Institutul Național de Statistică (en. National Institute of Statistics), INS (2019a) *Contul Satelit de Turism. Anul 2017* (en. Tourism Satellite Account. Year 211), December 2019
9. Institutul Național de Statistică (en. National Institute of Statistics), INS (2019b) *Conturi naționale regionale. 2012-2016* (en. Regional national accounts. 2012-2016), December 2019
10. TSA:RMF (2008) *Tourism Satellite Account: Recommended Methodological Framework* by United Nations, Statistical Office of the European Communities Eurostat, World Tourism Organization, Organization for Economic Co-operation and Development, United Nations, Luxembourg, Madrid, New York, Paris, available at [http://unstats.un.org/unsd/publication/Seriesm/SeriesM\\_83rev1e.pdf](http://unstats.un.org/unsd/publication/Seriesm/SeriesM_83rev1e.pdf)