

CONCENTRATION OF TOURIST ARRIVALS IN TOURIST AND AGRI-TOURIST GUESTHOUSES IN THE COVID-19 PANDEMIC 2020 VERSUS 2019 IN ROMANIA

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Abstract

The paper analyzed tourist arrivals in tourist and agri-tourist guesthouses of Romania in the year 2020 compared to 2019 in order to evaluate in what measure this tourism indicator was affected by the Covid-19 pandemic. The data provided by National Institute of Statistics allow to establish the dispersion of tourist arrivals in the territory of the country by the eight microregions of development and also to quantify the levels of the specific concentration indices: Herfindahl-Hirschman Index, Gini-Struck Index and Coefficient of Concentration. After the year 2019, which reached the top arrivals, overnight stays and receipts in Romania's tourism, the year 2020 brought the Covid-19 pandemic which has disturbed tourism performance. However, in Romania the effects on tourism industry were lower than in other countries. In the periods of relaxation measures, tourists chose safe destinations for combining both the visits to objectives of high interest with tourist services of accommodation and meals at a convenient tariff. From this point of view, tourist and agri-tourist guesthouses were among the best alternatives, and they recorded a higher growth rate of tourist arrivals than at the national level in tourism industry. In 2019, tourist arrivals were higher in the tourist pensions located in the Center, North West, North East and West parts of the country, and in agri-tourist pensions situated in Center, North East, and North West. In 2020, the guesthouses situated in Centre, North West and North East regions registered the highest tourist arrivals. A moderate concentration of the arrivals was confirmed by the values of Herfindahl-Hirschman index which varied between 0.15 and 0.25, by the values of Gini-Struck index which were higher than 0.3 in the year 2019, but a little lower than 0.3 in 2020, and the values of Concentration coefficient which were higher than 0.33. Due to the reduced arrivals in 2020, all the concentration indices had lower values than in the year 2019. As final conclusion, in Romania, it is a moderate concentration of tourist arrivals, and even though in 2020 there were problems caused by the Covid-19 pandemic, tourist and agri-tourist guesthouses were an alternative for accommodation and meals, harmoniously combining the need of safety with the desire to visit the tourist attractions of high interest.

Key words: concentration, tourist arrivals, tourist guesthouses, agri-tourist guesthouses., Romania

INTRODUCTION

The Covid-19 pandemic has disturbed the world economy and human life, affecting in various proportions the sectors of activity and also health status and demographic indicators. Tourism, which involves travels from home to a desired destination, has been deeply affected, as it is by its specificity a potential factor for spreading the virus. The expansion

of the virus worldwide has led to travel restrictions, flights and cruises cancellations, border closure, contact restrictions (wearing the mask, keeping the social distance), strict hygiene rules, fear to leave home to avoid the risk of infection, cancellation of the cultural and sport events, closure of the restaurants and bars, tourist accommodations units or restrictions to operate at a reduced capacity, low tourist flows, overnight stays, loss of

receipts, low contribution of tourism to GDP [22, 33].

In the periods of relaxation measures taken by the authorities, tourists adapted their options regarding their vacations looking for safe destinations and also for attractions of high interest for them. In this context, rural tourism became one of the alternatives which could fulfill the travelers' desires looking for attractions far away from the crowded places, in the middle of nature for enjoying fresh air, admiring the beauty of the landscapes, for participating in recreational activities on a farm and its surroundings. In this way, rural tourism in its variants mainly ecotourism and agro-tourism has grown its importance among the tourism types.

Tourists changed their preferences regarding accommodation, and after studying the market offer, they selected in general small units mainly situated in the rural areas. In this way, tourist guesthouses and agri-tourist guesthouses have been more and more included in the list of preferences and this has influenced tourist flows to these destinations where travelers to find a good and safe accommodation and food in guesthouses which usually have a small number of rooms, traditional food, hygiene rules could be easily ensured, and also facilities for recreational activities could be provided outdoors (terraces, gardens, swimming pools, fishing, hunting, walking, biking in the surroundings etc). However, even so, the business in rural tourism has also been affected by the pandemic, but in a smaller proportion than at the level of the whole tourism industry, [29].

Internet and smart phones have become the main tools for choosing the best alternative for accommodation in tourist and agri-tourist guesthouse checking the offer on their websites, booking the period of stay, the type of the number of rooms, and even paying tourist services. Own cars have become the most preferred transportation mean especially for small distances [6]. In addition, the choice of tourist and agri-tourist guesthouses was a good alternative especially for the tourists with reduced income, due to the closure for a period of time of the enterprises where they worked, passing to online work or due to the

loss of their job, which diminished the budget allotted for spending the vacations and, of course, a cheaper accommodation has become more attractive. This has led to the decline in the number of arrivals, overnight stays, to the reduction of the personnel and turnover in tourism industry [1]. In Romania, rural tourism plays a more and more important role in tourism and travel industry and the sustainable development of various regions and settlements [2, 4].

Rural tourism development has been sustained by the increased demand to which offer has been obliged to give a feed-back in terms of the number of tourist and agri-tourist guesthouses, number of rooms and beds, comfort conditions, alternatives for recreational activities, traditional architectural style, natural decorations, traditional food, special offers for various feasts (Easter, Christmas and New Year's Eve etc) [16, 17].

The number of places increased, and the variety of facilities as well, as it is proved by the existence of a positive and strong correlation between tourist arrivals and accommodation capacity and also between the number of overnight stays and tourism receipts, and tourism contribution to GDP [14, 18, 25, 26]. In this context, the purpose of the paper was to study the number of arrivals in tourist and agri-tourist guesthouses at national level and by the eight micro regions of development and assess the concentration degree using the specific indicators: Herfindahl-Hirschman Index, Gini-Struck Index and Concentration Coefficient in the Covid-19 pandemic of the year 2020 in comparison with tourist arrivals in 2019.

In this way, it is possible to quantify the impact of the pandemic on tourist flows and in what measure tourists preferred tourist and agri-tourists guesthouses exiting on the territory in various regions of development of Romania.

MATERIALS AND METHODS

The study is based on the available data on the website of the National Institute of Statistics, Tempo Online data base for the years 2019 and 2020. The number of arrivals was studied

both at the national level and by type of guesthouse: tourist and, respectively, agri-tourist pension, and also in the territory by the eight microregions of development: North West, Center, North East, South East, South Muntenia, Bucharest Ilfov, South West Oltenia and West.

The data were processed using the following procedures:

-*Fixed index*, $I_{FB(\%)} = (X_{2020}/X_{2019}) \times 100$, where: X is the variable representing tourist arrivals.

-*Structural index*, $S_{\%}$, was used for showing the dispersion of tourist arrivals by microregion.

-*Comparison method* allowed a spatial evaluation in the two years and the changes in time, from a year to another.

-*Herfindahl-Hirschman Index*, HHI_j , was determined using its known formula:

$$HHI_j = \sum_{i=1}^n g_{ij}^2 \quad (1)$$

where: g_{ij}^2 is the square share of the arrivals in each microregion in the total number of tourist arrivals in Romania, and n is the number of microregions.

-*Gini-Struck Index*, GS , was calculated according to the formula:

$$GSC_j = \sqrt{\frac{n \sum_{i=1}^n g_{ij}^2 - 1}{n-1}} \quad (2)$$

-*Concentration Coefficient*, CC_j , was established using the formula:

$$CC_j = \frac{n}{n-1} GSC_j \quad (3)$$

The results were tabled and interpreted, and finally the main conclusions were drawn.

RESULTS AND DISCUSSIONS

General overview of tourist arrivals in Romania and tourist and agri-tourist guesthouses

In Romania, during the Covid-19 pandemic of the year 2020, tourist traffic was disturbed

registering a decline in tourist arrivals, which represented about 47% of the 13,374,943 tourist arrivals in 2019 [22].

Tourist flows were focused in general to mountain and seaside destinations [23], but also to the regions well known for their tourist attractions like Central and South Transylvania [12] for example: Cluj [28], Mures [11], Brasov [7, 10], Sibiu [31], Maramures [27] and Bucovina [13].etc.

As usual, the Romanian tourists were dominant in the tourist flow, in 2020 having a share of 92.9% in total arrivals, by +16.22 pp higher than in the year 2019.

In the year 2020, a number of 654,397 tourists applied for accommodation in tourist guesthouses, representing 52.16% of the 2019 level, while 755,435 tourists preferred accommodation in agri-tourist guesthouses, accounting for 59.34% of the level registered in the previous year.

In 2020 versus 2019, the arrivals of the Romanian tourists increased by +7.02 pp in tourist pensions and by + 6.6 pp in agri-tourist pensions.

The share of the tourists preferring accommodation in tourist pensions increased from 9.37% in 2019 to 10.22% in 2020, while the weight of tourists applying for accommodation in the agri-tourist guesthouses increased from 9.51% to 11.80% (Table 1).

The results presented in Table 1 showed that the decline in tourist arrivals was stronger at the national level, but in case of guesthouses, tourist traffic was relatively less affected by the pandemic. This is a sign which emphasizes a change in tourists' preference to a safe places where to rest, eat and benefit of leisure during holidays, as guesthouses are located in general outside of the large cities, in smaller localities or in the middle of nature, have a smaller number of rooms than a hotel, tourist traffic is lower, they could be hired by a family or a group of friends, and the tariff is lower than in a hotel.

Table 1. Number of tourist arrivals in Romania and in tourist and agri-tourist guesthouses in the year 2020 versus 2019

	Tourist arrivals (1,000)			of which Romanians (1,000)			% of Romanians in total arrivals	
	2019	2020	2020/2019 %	2019	2020	2020/2019 %	2019	2020
Arrivals in Romania	13,375	26,399	47.8	10,691	5,9445	55.6	79.93	92.90
-In Tourist pensions	1,254	654	52.16	1,134	637	56.18	90.30	97.32
-In Agri-tourist pensions	1,273	755	59.34	1,172	745	63.62	92.0	98.6
Share of arrivals in tourist pensions %	9.37	10.22	-	10.60	10.71	-	-	-
Share of arrivals in agri-tourist pensions	9.51	11.80	-	10.96	12.54	-	-	-

Source: Own calculation based on the data from NIS, 2021 [9].

Therefore, tourists' criteria to choose a place for accommodation during their vacation in the pandemic were to be far away from the crowded cities, to offer a safe vacation, to offer traditional food, and also the ensure the joy of being a longer time outdoors in the middle of nature.

These criteria are justified by the high number of tourist and agri-tourist guesthouses which have appeared on the map of Romania in various regions during the last decades, as small family business in tourism was encouraged to valorize the local natural, material, human, cultural and historical resources in order to contribute to the economic and social development of the localities and regions and to bring additional income for the rural population and farmers and improve their living standard. The EU funds offered an important financial support for the implementation of the programmes destined to sustain the development of the rural tourism [8, 24].

The accommodation capacity in guesthouses has increased with a higher growth rate regarding both the number of units and beds, compared to the growth rate at the national level in tourism industry. As the rural population represents a high share of about 44% in Romania's population, the development of rural tourism has been encouraged by the small and family business valorizing the initiatives of local population to provide high quality products and services [4, 5, 19].

In addition, the local traditions (folklore music, dance, suits, handicrafts, gastronomy etc) specific in various regions and mainly in the rural areas of Romania are other key points of attraction for tourists and contribute to the increase of the importance of rural tourism and especially of agri-tourism [3].

Tourist arrivals in tourist and agri-tourist guesthouses by microregions of Romania
Tourist arrivals in tourist pensions

In 2019, the distribution of tourist arrivals in tourist pensions by microregion, in the decreasing order was: Center, North West, North East and West, regions which absorbed 79.13% of the total arrivals in tourist pensions. Lower percentages were recorded by South Muntenia, South West Oltenia, South East and Bucharest Ilfov microregions. In 2020, the decreasing order of the weights of arrivals in microregions in total tourist arrivals in tourist pensions was: Centre, North East, North West, West, and finally South Muntenia, South West Oltenia, South East and Bucharest Ilfov.

The change in the shares of tourist arrivals by microregion reflected tourists' desire to choose accommodation in tourist pensions situated in the regions where the degree of infection with Covid-19 was lower and among the lowest, where the restrictions were more relaxed, the stay during the vacation to be safe and the tourist pensions to be closer to the main attractions which deserve to be visited (Table 2 and Fig. 1).

Table 2. Tourist arrivals in tourist guesthouses by microregion in 2020 versus 2019

	Tourist arrivals (1,000)			Share by microregion (%)		Difference 2020-2019 pp
	2019	2020	2020/2019 %	2019	2020	
North West	186	87	46.98	14.82	13.35	-1.47
Center	470	235	50.00	37.46	35.91	-1.55
North East	182	103	56.95	14.47	15.80	+1.33
South East	45	25	57.00	3.57	3.90	+0.33
South Muntenia	109	59	54.30	8.70	9.05	+0.35
Bucharest Ilfov	21	10	45.69	1.69	1.48	-0.29
South West Oltenia	87	52	60.28	6.91	7.99	+1.08
West	155	82	52.75	12.38	12.52	+0.14

Source: Own calculation based on the date from NIS, 2021 [9].

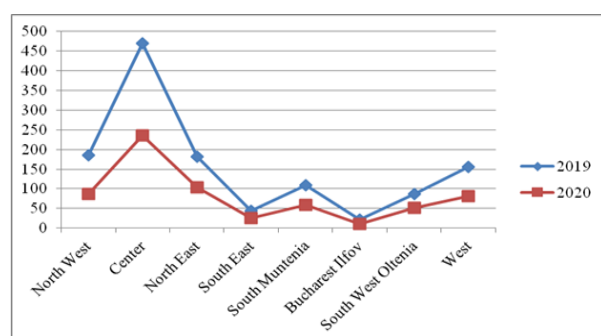


Fig. 1. Tourist arrivals in tourist guesthouses by microregion in 2020 versus 2019 (Thousands)

Source: Own design based on NIS data, 2021 [9].

Tourist arrivals in agri-tourist pensions

In 2019, the distribution of tourist arrivals in agri-tourist guesthouses by microregion, in the descending order was the following one: Center, North West, North East, all these three microregions summing 71.89% of the total arrivals in this type of accommodation units. The other microregions had lower percentages and in the descending order they

were: South Muntenia, South East, South West Oltenia, West, South East and Bucharest Ilfov.

In 2020, the weight of tourist arrivals in agri-tourist pensions by microregion was, in the decreasing order: Center, North West and North East, summing 70.17%, while the order of the other microregions was South West Oltenia, South East, West, South Muntenia and Bucharest Ilfov (Table 3 and Fig. 2).

Therefore, there were noticed important changes in the distribution of tourist arrivals in the South part of Romania including the last microregions mentioned in Table 3.

In the pandemic year 2020 versus 2019, the share of arrivals in agri-tourist guesthouses by microregion registered the highest increase of +2.43 pp in South West Oltenia, a moderate increase of +0.76 pp in South East, of +0.65 pp in North East, and the smallest growth of +0.03 pp in the West microregion.

Table 3. Tourist arrivals in agri-tourist guesthouses by microregion in 2020 versus 2019

	Tourist arrivals (1,000)			Share by microregion (%)		Difference 2020-2019 pp
	2019	2020	2020/2019 %	2019	2020	
North West	260	144	55.29	20.43	19.03	-1.40
Center	432	249	57.64	33.95	32.98	-0.97
North East	223	137	61.55	17.51	18.16	+0.65
South East	83	55	66.29	6.52	7.28	+0.76
South Muntenia	96	46	48.23	7.52	6.11	-1.41
Bucharest Ilfov	4	2	44.16	0.35	0.26	-0.09
South West Oltenia	93	73	79.13	7.29	9.72	+2.43
West	81	49	59.57	6.43	6.46	+0.03

Source: Own calculation based on the date from NIS, 2021 [9].

In the other microregions, the changes of the share had a negative sign as follows: -1.41 pp in South Muntenia, -1.40 in North West, -0.97 pp in the Center, and -0.09 pp in Bucharest Ilfov. A first conclusion, comparing the shares of tourist arrivals by microregion and by type of guesthouse is that most of the arrivals were concentrated both in tourist and agri-tourist guesthouses situated in the following microregions: Center, North West and North East.

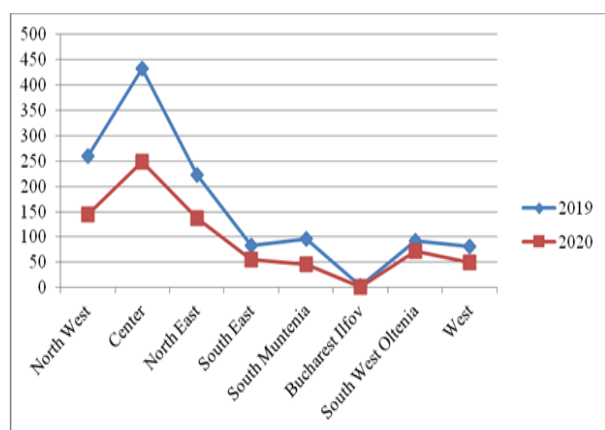


Fig. 2. Tourist arrivals in agri-tourist guesthouses by microregion in 2020 versus 2019 (Thousands)

Source: Own design based on NIS data, 2021 [9].

The shares of the arrivals in tourist pensions cumulated in these three regions accounted for 66.75% in 2019 and 65.06% in 2020, while in case of agri-tourist pensions, they summed 71.89% in 2019 and 70.17% in 2020. This unequal dispersion of arrivals among microregions was determined by many factors, among which we specify: the safety of the destination, tourist attractions and the preference for having accommodation and food in the same place.

Therefore, the pandemic determined a new orientation of the tourists to the rural areas of various regions which have become of high attraction in Romania.

A similar trend was noticed in other countries, like in Portugal and Czechia [30, 32].

Concentration of tourist arrivals in guesthouses in terms of the specific indicators

In general, in Romania, tourist arrivals had a moderate concentration in the territory by microregion of development, closely related to the distribution of tourist attractions on the map of the country [15]. A few studies, made in the previous years, proved that there is a moderate concentration in agri-tourism and also in the Central part of Romania, represented by Transilvania region which is well-known for its medieval cities, castles, fortified churches and other objectives of high interest for tourists [20, 21]. In our study, the obtained results are presented below.

Herfindahl-Hirschman Index registered the value 0.212 in the year 2019 and 0.2033 in 2020, that is a decline by -0.0087 for arrivals in tourist guesthouses. The values varying between 0.15 and 0.25 reflected a moderate concentration of tourist arrivals. In case of the arrivals in agri-tourist pensions, Herfindahl-Hirschman Index had lower values as follows: 0.2067 in the year 2019 and 0.2002 in 2020, which means a decline of -0.0065, and also reflected a moderate concentration.

Gini Struck Index had a higher value than 0.3 in the year 2019, both in case of arrivals in tourist and agri-tourist pensions.

This reflected a relative concentration of tourist arrivals. In the year 2020, the value of Gini Struck Index was smaller than in the year 2019, $GS = 0.2991$ for tourist arrivals in tourist pensions and $GS = 0.2931$ for agri-tourist pensions. As long as the values are lower than 0.3, this means that it is a low concentration of arrivals in the two types of pensions.

Coefficient of Concentration had higher values than 0.3 which reflected a relative concentration of the arrivals both in 2019 and 2020 in the two types of guesthouses. However, in 2019, the Concentration Coefficient registered higher values than in 2020 in the both cases (Table 4, Fig. 3 and Fig. 4).

Table 4. The values of Herfindahl-Hirschman Index, Gini-Struck Index and Concentration Coefficient of the arrivals in the tourist and agri-tourist guesthouses in Romania in 2020 versus 2019

	Tourist arrivals in tourist guesthouses		Tourist arrivals in agri-tourist guesthouses	
	2019	2020	2019	2020
Herfindahl-Hirschman Index	0.2120	0.2033	0.2067	0.2002
Gini-Struck Index	0.3153	0.2991	0.3055	0.2931
Concentration Coefficient	0.3603	0.3418	0.3491	0.3349

Source: Own calculation.

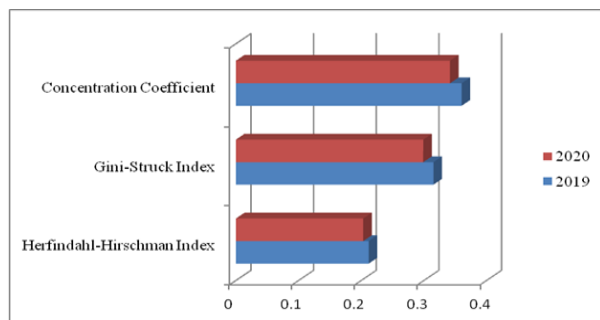


Fig. 3. Concentration indices of tourist arrivals in tourist guesthouses in 2019 and 2020

Source: Own design and calculation.

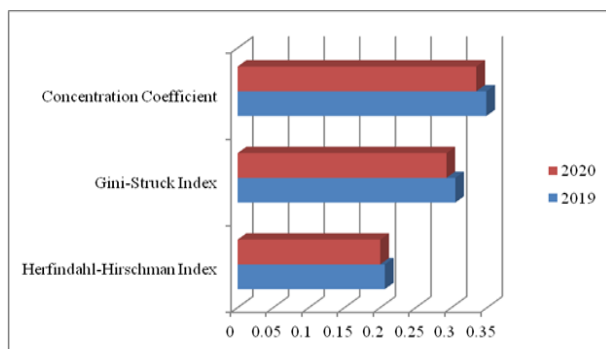


Fig. 4. Concentration indices of tourist arrivals in agri-tourist guesthouses in 2019 and 2020

Source: Own design and calculation.

CONCLUSIONS

In 2020, the Covid-19 pandemic affected tourism both at the national and local level, the number of arrivals being lower than in the year 2019, which was the year with the top performance in terms of arrivals and receipts.

However, in Romania the effects on tourism industry were lower than in other countries.

Tourist and agri-tourist guesthouses were alternatives chosen by tourists for accommodation, food and leisure, due to the advantage of being a safer place, with low infection risk, situated in the proximity of the attractions of interest for tourists, offering good quality services connected to a more convenient price.

The number of tourists arrivals in guesthouses registered a higher growth rate than at the national level. Also, it was noticed that the number of arrivals was higher in agri-tourist guesthouses than in tourist pensions.

In 2019, by microregion, the highest tourist flows to tourist pensions was registered in the Center of Romania, in the North West, North East and the West part of the country, while in the agri-tourist guesthouses the most numerous arrivals were oriented to the Center, North East, and North West.

In 2020, most of the tourists stayed in the tourist guesthouses located in the Centre, North West and North East regions, and in the agri-tourist guesthouses situated in the Center, North West, North East and in a smaller proportion in South West Oltenia.

The concentration indicators: Herfindahl-Hirschman index, Gini-Struck Index and Concentration coefficient have pointed out a moderate concentration. The values of Herfindahl-Hirschman index varied between 0.15 and 0.25, the values of Gini-Struck index was over 0.3 in the year 2019 and in 2020 registered a slight decline, and the coefficient of concentration recorded values which ranged between 0.3418 and 0.3349 in the pandemic of 2020.

As a remark, in 2019, all the concentration indicators had higher values than in the year 2020.

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