Comparative Study Between the Development of the Call Center Industry in Romania's Macroregions

Adrian Pop
The Bucharest Academy of Economic Studies, Romania
pop_aditza@yahoo.com

Abstract

The purpose of this article is, through a comparative analysis between the development of the call-center industry in the four macroregions of Romania, to identify ways of attracting investors to areas with low attractiveness for this field of activity.

Knowledge of the activity sector is a condition for identifying ways to develop call-center services in areas not yet exploited. In chapter 4.1, an overview of the call-center industry in Romania was made.

The comparative study between the development of the call-center industry in Romania's macroregions was carried out by comparing the business environment of call-center companies and the evolution of these companies. The study is presented in chapter 4.2.

The conclusions of the study include the causes of the gap between macroregions, detected within the analyzes carried out and ways to increase the investment attractiveness of disadvantaged areas.

Key words: comparative study, diagnostic analysis, call-center, investments
J.E.L. classification: H 23, M14, M21, O11, P51

1. Introduction

At the center of the management strategy are the clients and an effective communication with them is essential for the success of the companies. All companies are interested in providing information and assistance to existing or potential customers. The fact that, in recent decades, the costs of telecommunications and information technology have decreased, they have made it more economical to consolidate the management functions of organizations to promote products, provide product information, and stabilize and perpetuate customer relationships (Verboncu, 2020). These considerations led to the emergence of groups specialized in managing telephone calls with customers, practically to the emergence of the call-center industry. These groups, which form the structure of the call center industry, serve as the primary channel of communication between companies and customers. Today, this new field of activity is an increasingly important part of the business world, employing a workforce of millions worldwide.

The increasing number of business areas in Romania, which outsource their customer relations service, transferring this activity to call center companies, proves that the call center industry has expanded its activity in an ever wider area of domains and constitutes an explanation of the growth of this industry in Romania. Through a summary analysis, it was found that territorially, the call center industry is unevenly distributed, there are areas where this economic activity is very poorly or not at all represented.

The purpose of this article is, through a comparative analysis between the development of the call center industry in the four macroregions of Romania, to identify ways of attracting investors (Nicolescu, 2021), to areas with low attractiveness for this field of activity.

2. Literature review

The origins of call-center activities date back to the mid-1960s,. The call center or contact center is a central point from which all customer contacts are managed, this being part of the company's customer relationship management (Gans, 2003).

Regional and local development is an economic concept that aims to increase economic activities, their diversification, by boosting local or zonal private investments (Florea-Saghin, 2021).

The analysis of regional development is realized in scientific works by researching the elements that form the economic-social environment, (Manciu, 2021). Also, in the specialized literature, the managerial strategies for zonal development by stimulating investments (De Felice, 2015) are based on the analysis of social, economic, demographic, local infrastructure, and administrative factors.

A particularly important factor in the analysis of regional development (Cârstea, 2003) is the research of the market in the respective region, with its main variables demand and supply. An equal measure, Cârstea (2003) considers the analysis of the competitive environment to be an element that must be taken into account in the zonal economic diagnosis.

The most important factor (Barry, 2021) that must be analyzed in the regional diagnosis regarding the development of the call center industry is the labor force (Chiripuci, 2020) the availability in the region, the level of education, communication skills.

Comparative regional development research methodologies (Poesche, 2019) were used for the call center industry in the Romanian macroregions.

3. Research methodology

The methods used for data collection. Data sources. The investigation of indirect and statistical information is the starting point in the documentation process:

- specialized literature: books, articles, studies, magazines, websites specific to the call center industry;
- the publications of national organization: National Institute of Statistics, Chamber of Commerce and Industry of Romania, the Ministry of Finance.

Analysis of statistical information - the following analyzes were carried out:

- Analysis of the economic situation of the call center industry;
- Comparative study between the conjunctural environments of the call center industry in Romania's macro-regions and counties.

Starting from the hypothesis that without knowledge of the activity sector, it is not possible to identify ways to develop call center services in areas not yet exploited, in chapter 4.1 an overview of the call center industry in Romania was made.

Call center companies in Romania were identified through CAEN code: 8220 "Activities of telephone intermediation centers (call centers)", which they were registered at the National Trade Registry Office, as well as from the Top Firme company website.

The comparative analysis between the development of the call center industry in Romania's macroregions (chapter 4.2) used the scheme of the territorial structure of Romania, established in accordance with the Law on establishing the nomenclature of statistical territorial units in Romania. The territorial scheme of Romania consists of four macroregions that each include two development regions made up of a different number of counties.

4. Findings

4.1. Shaping the overall image of the Romanian call center industry. Analysis of the economic situation

Ever since its appearance in the early 2000s, the call center industry in Romania has seen a permanent growth. After the economic boom, which it achieved in the second half of the first decade, followed the economic crisis that did not affect, on the contrary, it stimulated the growth of the local call center industry due to the expansion of the outsourcing actions of the public relations activities of the companies partners of the call center industry, as well as a result of the expansion of the geographical area in which Romanian call centers operate with services intended for clients from foreign markets.

In the second half of the second decade, the pace of development was slower, with the local call center industry registering lower growth compared to previous years, a trend that continued even in the pandemic year 2020, as can be seen in the table 1.

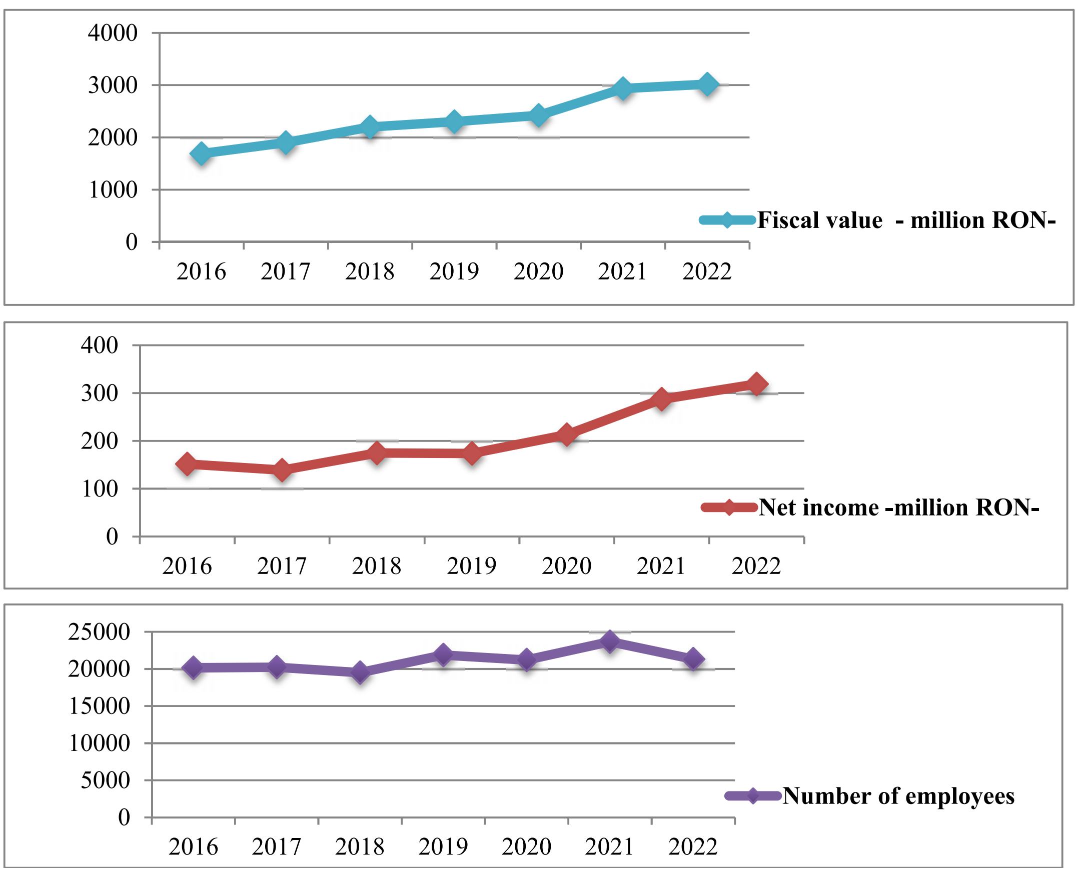
Table no. 1 Evolution of the call center industry

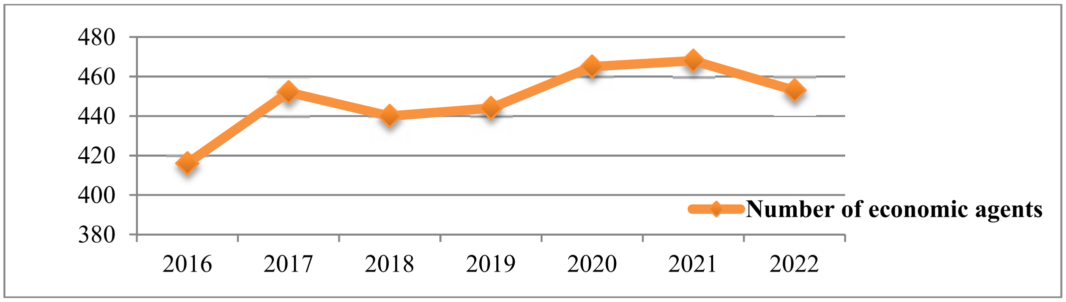
Indicator	2016	2017	2018	2019	2020	2021	2022
Fiscal value -million RON-	1690	1900	2200	2300	2422	2935	3018
Net income -million RON-	151,8	138,8	174,7	173,9	213,1	287,1	319
Number of economic agents	416	452	440	444	465	468	453
Number of employees	20.165	20.232	19.512	21.886	21.208	23.676	21.320

Source: Data from the annual balance sheets published on the website of the Ministry of Finance www.mfinante.ro

Graph no. 1 show the evolution in the analyzed years of the main economic indicators of the call center industry. The graphic representation of these indicators shows a linear upward evolution for the turnover, but a sinuous one for the net profit, the number of employees and the number of economic agents.

Graph no. 1 Evolution of call center industry indicators





Source: graphs based on data from table 1

The graphic image of the turnover and profit evolution curves are usually similar, but in the case of the call center industry in the analyzed period 2016-2022, it is found that the turnover has a slight but constant growth curve. Profit, on the other hand, shows a decrease of 8.6% in 2017, a year in which there is also an increase in the number of economic agents by 8.7%. These disruptions indicate a micro-crisis in profitability. As a result of this micro-crisis, in the following year 2018, the number of economic agents decreases by 1.7%, which also causes a 3.6% decrease in the number of employees. Profit is back on an upward slope, increasing compared to the previous year by 25.9%. For a more suggestive analysis of these developments, dynamic indexes of the economic indicators in the call center industry were calculated both with the fixed base and with the chain base, presented in table 2

Table no. 2 Evolution of dynamic indices of economic indicators in the call center industry (on a fixed basis and in the chain)

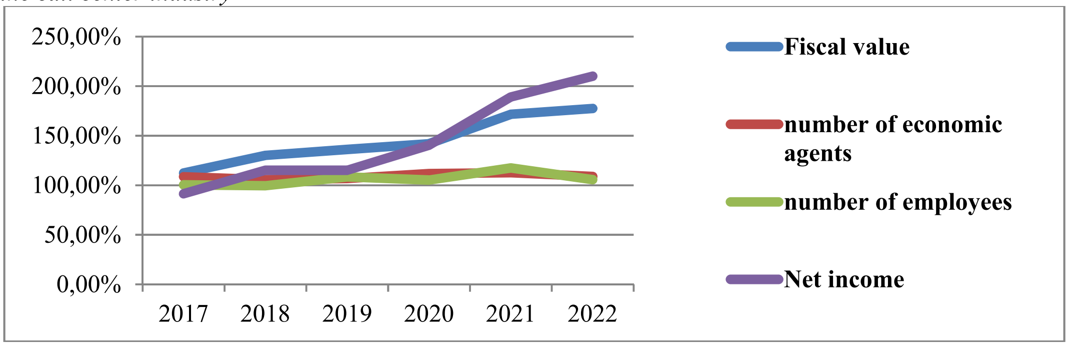
Indicator	Dynamic indices with a fixed base, using 2016 as the base year					
	2017	**2018**	**2019**	**2020**	**2021**	**2022**
Fiscal value	112,4	130,2	136,1	142	171,6	177,5
Net income	91.4	115,1	115,1	140,4	189,1	210,1
Number of companies	108,7	105,8	106,7	111,8	112,5	108,9
Number of employees	100,3	99.4	108,5	105,2	117,4	105,7
	Dynamic indices with a chain base					
	2017/16	2018/17	2019/18	2020/19	2021/20	2022/21
Fiscal value	112,4	115,8	104,5	104,3	120,8	103,5
Net income	91.4	125.9	100,5	122,5	134,7	111,1
Number of companies	108,7	98.3	100,9	104,7	100,6	96,8
Number of employees	100,3	96.4	112,2	96,9	111,6	90,1

Source: table made on the basis of data from table 1

The evolution of the turnover does not register any index of decreasing dynamics, even if the increase in 2020 compared to 2019 is lower, of only 104.5%. The dynamism index calculated with a fixed base indicates an increase over the entire analyzed period of 177.5%, which shows a permanent, slightly fluctuating growth.

On graph 2, the evolution curve of the dynamics indices calculated with a fixed base for the number of economic agents and for the number of employees are almost overlapping. The only exception is the year 2018 when the number of employees decreases in a greater proportion than the number of companies, reaching below the level of 2016 taken as a basis in this analysis. This fact shows that the decrease in the number of employees at the level of the entire activity sector is not only due to the dissolution of some companies, but also to the reduction of personnel in the remaining active companies.

Graph no. 2 The evolution of the dynamic indices with a fixed base in 2016, of the economic indicators in the call center industry



Source: graph made based on data from table 2

An immediate effect of the workforce reduction was the increase in profit in 2018 based on the reduction of salary expenses. But the lack of personnel was felt in 2018 at the operational management level of the companies, a fact that determined the increase in the number of employees in 2019, by 112,2% compared to 2018. Given that the number of economic agents remained almost constant 100,9%, means that the increase in the number of personnel was achieved within already existing companies.

The outbreak of the pandemic, led call center companies to widely adopt cloud communication systems in order to be able to continue their work from the homes of employees, so succeeding to maintain the same slight increase in turnover, with net profit increasing even by 22.5%, compared to 2019.

In the post-pandemic period, when the restrictions imposed during the pandemic were relaxed, the call center industry registered a much higher growth rate than in previous years. So, the turnover increases in 2021 by 120.8%, and the net profit by a third compared to the year of the health crisis, 134.7%, being the highest rates in the analyzed period.

Macroeconomic instability and political uncertainty influence the evolution of the field in 2022, which is going through a period of stagnation with more weighted increases in turnover 103.5%, the lowest increase in the analyzed period, and respectively 111.1% for profit. There are also decreases in the number of economic agents and employees.

4.2. Comparative analysis between the development of the call center industry in Romania's macroregions

Territorially, the 453 call-center companies registered in 2022 in Romania at the Trade Registry, CAEN code 8220 are dispersed in 36 counties. In 6 counties there are no companies with call-center activity, these are: Botoșani, Călărași, Giurgiu, Ialomița, Olt and Tulcea. The economic indicators for the year 2022 at the macroregion level are presented in table 3.

Table no. 3 The economic situation in 2022 of the call-center industry by macroregions

Macroregion/ development regions	Number of companies	Fiscal value million RON	Average number of employees	Labor productivity - thousands RON/employee
Macroregion I / north-west and cente	142	909	5914	153,7
Macroregion II / north-east and south-east	63	205,1	1865	109,9
Macroregion III / south-Muntenia and Bucharest-Ilfov	180	1620,9	10.967	147,8

Macroregion IV / south-west Oltenia and west	68	283,4	2574	110,1
National level	453	3018,4	21.320	141,6

Source: data calculated based on the financial indicators from the annual balance sheets published on the website of the Ministry of Finance www.mfinante.ro

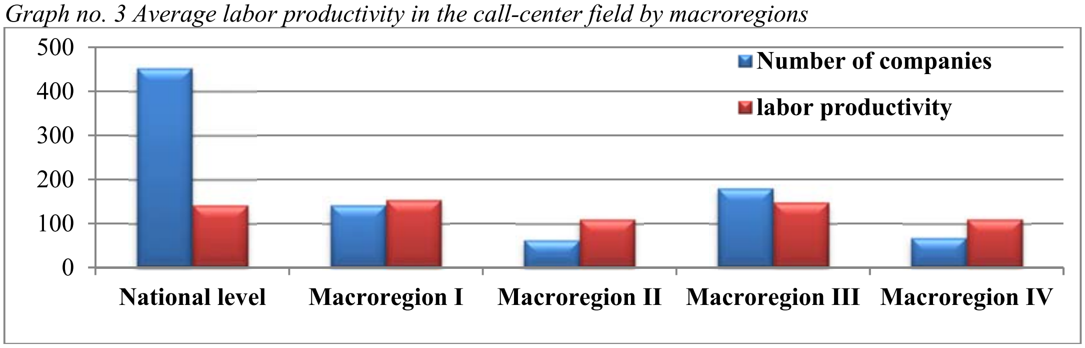
The highest density of call center companies is in macroregion III, which naturally also has the most employees and the highest turnover. The fact that macroregion III is in first place is due to the presence of the Municipality of Bucharest in this macroregion. Bucharest has the largest number of call-center companies, 143.

In second place is Macroregion I with 142 call-center companies. On the third and fourth places, there is Macroregion IV, followed at a short distance by Macroregion II. This ranking is also maintained in terms of turnover and average number of employees and net profit.

Table 3 highlights large differences between macroregions not only in the number of economic agents, but also in the number of employees, turnover and profit.

The differences appear in the average annual labor productivity in the call-center field in each macroregion. This indicator is the ratio between the sum of the turnover of all companies with activity in this field in the respective macroregion and the average annual number of employees of these companies, reported in 2022. Graph 3 was made to represent these differences.

Graph no. 3 Average labor productivity in the call-center field by macroregions



Source: graph made based on data from table 3

Macroregion I, in second place in the ranking according to the number of companies, records an average labor productivity above the national level (141.6 thousand RON/employee), but also above the labor productivity of macroregion III, reversing the positions in the previous ranking.

Macroregion III, although it has the largest number of economic agents, a turnover and a much higher number of employees than macroregion I, is outclassed by it in average labor productivity per sector. The average number of employees per company, presented in table 4, explains this reversal of the ranking.

Table no. 4 Average number of employees per macroregion

Macroregion / development region	Number of companies	Average annual number of employees	Average number of employees per company
Macroregion I / north-west and center	142	5914	41,65
Macroregion II / north-east and south-east	63	1865	29,6
Macroregion III / south-Muntenia and Bucharest-Ilfov	180	10.967	60,9
Macroregion IV / south-west Oltenia and west	68	2574	37,85

National level	453	21.320	47,06

Source: data calculated based on the financial indicators from the annual balance sheets published on the website of the Ministry of Finance www.mfinante.ro

Macroregion III has the highest average number of employees per company, at the national level, far exceeding macroregion I, but which it is outranked in terms of labor productivity. It follows that companies with a small number of employees manage to better coordinate the activity of human resources, obtaining a higher labor productivity.

The reasons for the development of the call center industry, especially in macroregions I and III, are obvious: four of the first five counties in the rankings based on the analyzed indicators are part of these macroregions: Bucharest, Cluj, Brașov and Sibiu. It also draws attention to the fact that counties with large cities are the most attractive for investors, especially university centers, because students and recent graduates represent a significant supply of labor for call centers (Roșca, 2018), being the most sought-after human resource by these companies. Table 5 shows the top five counties with the largest number of call center companies, turnover and number of employees.

Table no. 5 Top counties by number of call-center companies, turnover, number of employees

Nr. crt.	County	Number of companies	County	Turnover - million RON-	Number of employees
1.	**Buckarest**	143	**Buckarest**	1603	10867
2.	**Cluj**	67	**Cluj**	394,5	2942
3.	**Timiș**	42	**Brașov**	391,4	2216
4.	**Iași**	30	**Iași**	158,2	1246
5.	**Sibiu**	20	**Dolj**	125,3	1417
	Total	302	**Total**	2672,4	18688

Source: data calculated based on the financial indicators from the annual balance sheets published on the website of the Ministry of Finance www.mfinante.ro

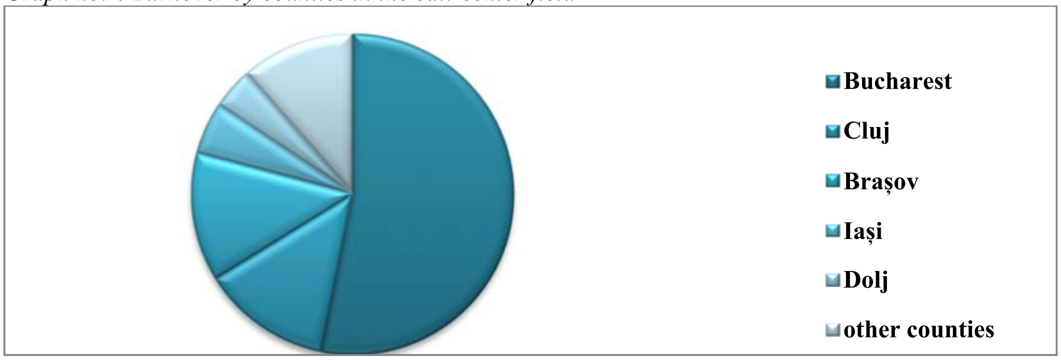
The attraction exerted by the Municipality of Bucharest, apart from the fact that it is a strong university center with a huge pool of labor force, is also given by the intense economic activity, which, in itself, represents a market for call center, with a large number of potential partners or customers, the infrastructure much better developed and more access routes.

In terms of attractiveness, Transylvania follows with Cluj, Brașov and Sibiu, all of which are part of macroregion I, also with important university centers and, in addition, in these areas there are many native speakers of different languages, Hungarian, German, Serbian, Croatian, etc. In particular, German companies have invested in the area in search of native German speakers.

Timiș, Iași and Dolj counties successively appear at the top of the analyzed hierarchies. Timiș ranks third, according to the number of companies. Dolj County ranks fifth in terms of turnover and number of employees. The common characteristic with the other counties in the top five, being that they have large university centers in the county seat.

Iasi, from macroregion II, ranks fourth in the county hierarchy, is attractive for call-center investors, being an important university center, targeted in recent years by specialized companies. Graph 4 represents the share with which the counties participate in the turnover of the field and the place they occupy in the hierarchy of the sector from the point of view of this indicator.

Graph no. 4 Turnover by counties in the call-center field



Source: graph made based on data from table 5

This analysis also highlights the fact that the first five counties in the ranking by turnover Buckarest, Cluj, Brașov, Iași and Dolj together hold 88.5% of the turnover of the entire sector at the national level. There is a great polarity, the monopoly of attractiveness being held by a small number of counties and companies.

Another factor that influences the geographical distribution of call center services is the coverage of Romania's territory with public fixed internet networks. Although Romania is a world leader in terms of high Internet speed, the Communications Regulatory Authority (ANCOM) published a statement on March 15, 2023, taken over by HotNews.ro, according to which there are 1476 localities in Romania where end users do not have access to any network fixed public broadband electronic communications. Increasing the degree of connectivity of localities not served by fixed networks, but in which there is latent demand, is one among the objectives assumed by Romania in the National Recovery and Resilience Plan (PNRR).

5. Conclusions

The conclusions that emerge from the analysis of the economic evolution of the call center industry between 2016 and 2022 are the following:

• The call center industry in 2017 recorded the appearance of a micro-crisis of reduced profitability in terms of size, level of financial losses, and duration of the manifestation;

• The pandemic year 2020 brings, contrary to expectations, the stabilization of the situation, the profit remaining at the level of the previous year, the turnover has a small increase, the number of economic agents is stable;

• In 2021, when the restrictions imposed during the pandemic were relaxed, the call center industry recorded, in the conditions of the decrease in the number of economic agents, important increases in turnover 120.8% and profit 134.7%;

• Macroeconomic instability and political uncertainty, driven by the war in Ukraine, the energy crisis and high inflation in European countries, led to a stagnation of the call center industry in 2022 with more weighted increases in turnover 103.5%, the lowest growth from the analyzed period, and respectively 111.1% for profit. There are also decreases in the number of economic agents and employees.

The comparative analysis carried out between the call center industry in Romania's macroregions highlights large differences between macroregions in terms of the number of economic agents, average number of employees, turnover, net profit, especially differences between the average annual average labor productivity in the call-center field from each macroregion.

• The highest density of call center companies is in Macroregion III, which naturally also has the most employees, the highest turnover and the highest net profit.

• In second place is Macroregion I. In third and fourth places, Macroregion IV, followed by Macroregion II. The ranking is also maintained in terms of turnover, average number of employees and net profit.

• Regarding the average annual labor productivity in the call-center field, the ranking changes, Macroregion I, moving to first place. This ranking change is justified because Macroregion III has an average number of employees per company, one third higher than that recorded in Macroregion I. It is found that companies with a small number of employees manage to better coordinate human resources activity, obtaining higher labor productivity.

The comparative study was also continued on the counties of the macroregions. Combining the two analyses, the following aspects were concluded that define the characteristics for which some counties have a more developed call center industry and a higher degree of attractiveness for investments:

• The counties with the most developed call center activity are the Municipality of Bucharest, Cluj, Brașov, Iași, Dolj and Timiș;

• Counties with large cities are the most attractive for investors;

• Large university centers provide a significant supply of labor for call centers. Students and recent graduates being the human resource (Kinnie, 2012) most sought after by these companies;

• The intense economic activity which, in itself, represents a market for call centers, with a large number of potential partners or customers;

• Macroregion I and West Development Region have an extra degree of attractiveness for investors, due to the fact that in these areas there are many native speakers of different languages, Hungarian, German, Serbian, Croatian, etc. In particular, German companies have invested in the area, looking for native German speakers;

• Counties with the most developed call center services benefit from access to fixed ultrafast broadband internet networks;

• The infrastructure and access roads are strong points of the attractiveness of counties that have a developed call center industry.

The expansion of the call center industry in areas with low investment attractiveness for this field, requires the creation, in these areas, of a conjunctural environment as close as possible to the characteristics highlighted in this paper of the existing external environment in the counties where a developed call center industry operates. Among the identified characteristics of the external environment in the top counties, not all can be implemented in areas with poor development of call center services. For example, the existence in the area of ethnic groups natively speaking different languages, of a university center, or a large city as a county seat.

However, there are ways to increase the degree of attractiveness of these counties, the responsibility of carrying out the necessary remedies is in the duty of the government and local authorities:

• Improving the infrastructure and diversifying the access routes;

• Increasing the degree of connectivity of localities covered by Internet access networks that allow download speeds lower than 100 Mbps;

• Coverage with high-speed internet access services of localities not served by fixed networks;

• Fiscal incentives granted by the state in the form of a profit tax exemption, for a period or a partial profit tax reduction;

• Subsidies for job creation, training and retraining of personnel in disadvantaged areas;

• Development of policies and strategies to promote foreign investments in Romania and programs to attract foreign capital into the economy;

• Management of an online database of companies suggested as business partners for the call center industry.

It is also possible to highlight the positive aspects of the areas/counties where the call center industry is poorly or not at all represented:

- Lower labor force turnover;
- Lower salaries;
- The low level of real estate costs for offices and utilities;

In conclusion, due to the demographic, administrative, territorial conditions, which cannot be changed, the gaps between macroregions, counties cannot be totally eliminated, but there are ways to mitigate the distances between the top performances of the call center industry and the counties where it has a poor development.

6. References

- Barry, M., & Wilkinson, A., 2021. Employee voice, psychologisation and human resource management (HRM). *Human Resource Management Journal*, published: 19 October 2021. https://doi.org/10.1111/1748-8583.12415
- Cârstea, G. et al., 2003. Analiza strategică a mediului ambiant al organizației în condițiile economiei de piață [Strategic analysis of the organization's environment under the conditions of the market economy]. In: Plumb, I., 2003. *Abordări moderne în managementul și economia organizației [Modern approaches in management and organization economics]*. Bucharest: Economic Publishing House, chapter 3.
- Chiripuci, B.C. et al., 2020. The Socio-Economic Impact of Migration on the Labor Market in the Romanian Danube Region. *Journal Sustainability* 2020, 12 (20), 8654, 19 October 2020. pp. 1-26. https://doi.org/10.3390/su12208654
- De Felice, F. & Petrillo, A. & Autorino, C., 2015. Development of a Framework for Sustainable Outsourcing: Analytic Balanced Scorecard Method (A-BSC). *Sustainability* 2015, Published: 30 June 2015. Available at: https://doi.org/10.3390/su7078399
- Florea-Saghin, I. & Sîrodoev, I. & Secăreanu, G, 2021. *Dezvoltarea regională și locală [Regional and local development]*. Bucharest: University Publishing House. https://doi.org/10.5682/9786062812904
- Gans, N. & Koole, G. & Mandelbaum, A., 2003. Telephone Call Centers: Tutorial, Review, and Research Prospects. *Manufacturing & Service Operations Management* 5(2), pp. 79-141. https://doi.org/10.1287/msom.5.2.79.16071
- Kinnie, N. & Swart, J., 2011. Committed to Whom? Professional Knowledge Worker Commitment in Cross-Boundary Organizations. *Human Resource Management Review,* 16 June 2011 22, pp. 21-38. https://doi.org/10.1111/j.1748-8583.2011.00172.x
- Manciu, M. & Berar, F.A. & Dobrea C.R. 2021. The Challenges of the VUCA World in the Development of Sustainable Investment Projects. *Management and Economics Review* Vol. 6 Issue 2, 12 Dec 2021, pp. 193-204. https://doi.org/10.24818/mer/2021.12-04
- Nicolescu, O. & Nicolescu, C. 2021. *Stakeholder Management and social responsibility* [e-book] New York: Routledge. pp. 58-73. https://doi.org/10.4324/9781003217701
- Poesche, J., 2019. Cognition in comparative and strategic management research. *International Journal of Comparative Management* Vol. 2 Issue 3/4, pp. 229-246. https://doi.org/10.1504/ijcm.2019.10027571
- Roșca, V.I. & Țeposu, O.L., 2018. The Influence of Education on Subjective Underemployment: Research on Multinational Corporations in Romania. *Review of International Comparative Management* Vol. 19, Issue 4, October 2018, pp. 328-340. https://doi.org/10.24818/RMCI.2018.4.328
- Verboncu, I., 2020. *Solutii manageriale de criza. Restructurarea organizationala sau reproiectarea manageriala [Crisis management solutions. Organizational restructuring or managerial redesign]*. Bucharest: Universitara Publishing House. Available at: https://doi.org/10.5682/978606281176
- Top firme. 2023. *Activitati ale centrelor de intermediere telefonica (call center) [Activities of telephone intermediation centers (call center)]*. [online] Available at: https://www.topfirme.com/caen/8220/ [Accessed 10.06.2023].