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A COMPARATIVE ANALYSIS OF STRUCTURAL DIFFERENCES IN EMPLOYMENT FOR SOUTH-EAST EUROPEAN COUNTRIES

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ABSTRACT
At the present stage, the transfer of resources between sectors inevitably generates differences in the economic structure of regions and creates imbalances that have their social and economic consequences. EU enlargement poses a number of challenges related to global competition and economic growth. The countries of South-Eastern Europe are part of the European economic system and the uneven development of the regions is reflected in a widening of regional disparities. The aim of this study is to trace the changes in the employment structure for selected SEE countries, assessing the intensity and differences existing between them. The results of the study show significant differences in employment between SEE countries. In dynamic terms, some of these countries are reducing their divergence from the EU, but for others there are still significant differences that make economic convergence difficult in the short term.

Keywords: employment, regional disparities, structural change, sectoral structure, regional policy

INTRODUCTION

The study of regional disparities in their depth allows to identify socio-economic disparities between countries, and this is essential for the implementation of adequate regional policy aimed at reducing disparities in the development of individual regions. Regional disparities and imbalances in economic development have been addressed by a number of authors (1-5). Some researchers (6-9) present regional disparities in Europe as a complex and dynamic phenomenon that is influenced by growth and economic integration processes and suggest a more flexible and adaptive approach to regional policy making. According to other researchers (10-13), a detailed analysis of imbalances provides a deeper understanding of the processes taking place in large regions. In their work, they point towards a more local approach to addressing disparities and present key concepts related to spatial equity and territorial cohesion. In their works, some authors (14-18) highlight the need to rethink territorial cohesion. In their works, some authors (14-18) highlight the need to rethink cohesion policy. They argue that regional policy needs to become more flexible, adaptive and forward-looking in order to effectively deal with the dynamically changing regional and social disparities in the enlarging European Union. They also find it crucial to adapt policy to the new challenges arising from globalisation, with a focus on greater efficiency and better governance, in line with the EU's changing priorities. A number of studies (19-22) have underscored the significant impact of economic specialisation on regional development, requiring a rethinking of traditional approaches and the introduction of more strategic and targeted policies to support these processes. The concepts discussed emphasize the understanding that regional imbalances require a detailed analysis of macroeconomic processes that is closely linked to local specificities.

In line with these theoretical propositions, the aim of this study is to provide a comparative analysis of structural differences in employment between the countries of South-Eastern Europe,

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through identifying the sectoral specialisation of the region and assessing the dynamics of regional competitiveness over a certain time period.

In order to achieve the objective, the following tasks are set:

1. To assess the degree of localisation of the "Agricultural", "Industry" and "Services" sectors in selected SEE countries vis-à-vis the EU-27 over a given time period, identifying sectoral specialisation in individual countries and in the region as a whole.
2. To analyse changes in the number of employed people in the countries and regions under consideration, distinguishing between the effects related to changes in employment at EU-27 level, the sectoral structure of the economy and the specific competitive advantages of the countries observed.
3. To identify and summarize sectoral differences in employment and competitiveness, as well as the main regional features resulting from these differences in the selected countries of South-Eastern Europe.

The object of the study is sectoral employment in selected countries of South Eastern Europe, namely Bulgaria, Greece, Croatia, Romania, North Macedonia and Serbia. The subject of the analysis are the differences in sectoral specialization and regional competitiveness in some SEE countries, covering the time period - 2016 and 2024. Data on the number of employees by sector are extracted from the Eurostat statistical database.

The study seeks to answer the questions of which sectors have the highest and lowest degree of localisation in the individual countries of South-Eastern Europe compared to the EU-27 and whether there are common trends or specific features in the sectoral development of employment between the countries.

MATERIAL AND METHODS

In order to achieve the aim and objectives of this study, two widely used tools are chosen to identify regional differences and assess their dynamics, namely the localization coefficient and shift-share analysis.

The localisation quotient identifies a region's unique economic characteristics, strengths and potential development opportunities. It is used to compare the sectoral structure between different regions and identify their specific specialisation profiles**.**

The concentration of an industry in the region under study relative to the employment structure of the EU-27 is established by the following formula:

$$LQ_i = \frac{E_{ir} : E_r}{E_{in} : E_n} \qquad (1)$$

Where

LQ_i is the location quotient for industry i

E_{ir} is the number of persons employed in industry *i* in the region under consideration r

E_r is the total number of employees in all industries in the monitored region *r*

E_{in} is the number of employees in industry *i* at national level *n*

E_n is the total number of employees in all industries at the national level *n*

If $LQ_{(i)} > 1$, the industry is located in the region, if $LQ_i \approx 1$, the industry is represented in the region approximately as in the EU-27, and if $LQ_{(i)} < 1$, the industry is under-represented in the region.

The shift-share analysis answers the question to what extent regional problems are the result of an unfavourable sectoral structure or stem from a lack of local competitiveness. Shift-share analysis decomposes the sources of change in an economy over a given period by comparing it with a reference economy at EU-27 level and represents this change through three additive components, namely:

1. **National growth effect (NE)**, showing the change that would occur if the region followed the trend of the reference economy and changed at the same average rate.
2. **The industrial mix effect, a structural effect (MIX)**, shows how much of the overall regional change is due to the combination of the country's economic activities and the overall national trend in the development of these sectors for the EU-27 economy.
3. **Differential effect (DIF)** - also called regional effect, competitive effect and indicates how much of the overall change for the country is due to the development of unique local factors compared to the same sector at European level.

The summation of the three equations allows to determine the real employment growth, distinguishing the impact of each effect in the study area.

$$SS = NE + MIX + DIF \quad (2)$$

The combined application of the localisation quotient and the shift-share analysis makes it possible initially to identify regional specificities and sectoral differences and subsequently to analyse their determinants, on this basis formulating some guidelines for future development.

RESULTS AND DISCUSSION

The localisation quotient is a key tool for determining the relative share of industries in the economic structure of a region, compared to the share of the same industries in the EU-27 economy. It serves as a key indicator of a region's potential competitive advantages arising from its specific economic structure. A high value of the indicator reflects a pronounced specialisation of the region in a specific sector and significant competitive advantages. Regions with a high concentration in a particular sector have significant growth potential, successfully attract investment and stimulate the development of related industries. On the other hand, a low quotient value usually indicates that a given sector is not a driver of the regional economy compared to the EU-27 average, and the region does not have a high concentration in it. In order to assess the sectoral structure and its dynamics, **Table 1** presents the magnitude of the location quotient calculated on the basis of primary, secondary and tertiary sector employees for selected SEE countries in 2016 and 2024.

Table 1. *Location quotient of SEE countries relative to the EU-27 employment structure by industry in 2016 and 2024.*

Countries of South Eastern Europe	LQ 2016			LQ 2024		
	Agrarian	Industry	Services	Agrarian	Industry	Services
Bulgaria	3,62	1,13	0,78	3,51	1,11	0,83
Greece	2,24	0,6	1,04	2,5	0,62	1,03
Croatia	1,55	1,19	0,9	1,04	1,25	0,92
Romania	4,79	1,33	0,64	5,06	1,34	0,68
North Macedonia	4,56	1,22	0,69	4,15	1,27	0,75
Serbia	7,02	0,88	0,62	6,38	1,06	0,69

Source: Eurostat and own calculations

The localisation quotient in the agricultural sector for Bulgaria, Greece, Romania, North Macedonia and Serbia significantly exceeds 1, indicating a high degree of specialisation in the primary sector in these countries compared to the sectoral structure of the EU-27. Despite the reported slight downward trend in dynamic terms, the share of employment in the agricultural sector for Serbia, Romania and North Macedonia remains higher compared to the EU-27 sectoral employment structure. The location quotient for Croatia is close to 1 and this distinguishes it as the only country with a similar sectoral structure compared to the EU-27. In contrast, the economies of the other observed countries have a significantly higher share of employees in the agricultural sector, and the comparison shows a significant deviation with respect to the EU-27 sectoral structure.

The industrial sector shows a higher degree of similarity with the EU-27 sectoral structure, as the share of employees in industry is slightly higher than 1 in the years considered. In dynamic terms, the industrial sector's localisation quotient remains roughly constant, with a slight decrease for Bulgaria and a slight increase for Greece, Romania and North Macedonia. In Serbia, the increase is more drastic compared to 2016, with the quotient changing from 0.88 to 1.06, i.e. an increase of 20.5% is recorded. In 2024, in the same country the share of employees in industry is closest to the share of the same indicator in the EU-27.

In the services sector, most countries have a localisation quotient below one. This sector is still not highly localised in the countries monitored and in some cases is even extremely under-represented relative to the reference economy. Dynamically, all countries except Greece show a marginal increase in the indicator. Despite the increase, the quotient remains relatively low and indicates that there is untapped potential for future development in

the services sector in the region. This potential can be realised through investment and a targeted reallocation of resources from traditional to more promising high value-added activities in services. In Romania and Serbia, the localisation quotient is the lowest, while in Greece it is around one for both observed periods. Only in Greece the share of employees in the services sector is represented in roughly the same proportion as the share of employees in the same sector for the reference economy.

In addition to the localisation quotient, which identifies the region's industry specialization, the study uses shift-share analysis to assess the sources of growth in this specialization. The structural approach answers the question of how the existing sectoral structure of a region affects employment growth. Shift-share analysis is used to diagnose the sources of regional differences by determining to what extent a region follows the economic growth of the reference economy and to what extent changes can be attributed to structural and regional factors **(Table 2).**

Table 2.*Shift-share analysis based on employees by sources of change in an economy relative to an EU-27 reference economy in 2024 compared to 2016.*

Countries of South Eastern Europe	**Employment growth rate in the sector - %**	**Changes in 2024 compared to 2016 (thousands of employees) for SEE countries compared to the EU-27 average employment for the sector**			
		NE	**MIX**	**DIF**	**Total change**
Agrarian Sector					
Bulgaria	78,2	56,53	-139,74	-52,86	-136,07
Greece	101,1	45,21	-111,76	72,16	5,61
Croatia	61,3	10,94	-27,03	-30,69	-46,79
Romania	86,1	181,75	-449,31	-12,14	-279,70
Macedonia	71,2	16,20	-40,05	-27,68	-51,53
Serbia	75,3	103,70	-256,36	-130,92	-283,57
Industry Sector					
Bulgaria	97,7	79,20	-19,60	-79,40	-19,80
Greece	115,4	54,78	-13,56	52,08	93,30
Croatia	118,2	37,97	-9,40	48,00	76,57
Romania	101,0	226,80	-56,13	-145,26	25,40
Macedonia	100,8	19,50	-4,83	-12,90	1,78
Serbia	123,2	58,49	-14,48	106,28	150,29
Services Sector					
Bulgaria	110,8	177,52	43,71	-10,04	211,19
Greece	116,0	304,27	74,91	158,09	537,27
Croatia	120,7	92,69	22,82	96,09	211,60
Romania	111,6	353,89	87,13	10,99	452,00
Macedonia	109,3	35,65	8,78	-7,72	36,71
Serbia	118,1	134,23	33,05	101,93	269,21

Source: Eurostat and own calculations

The results of the analysis show a general downward trend in employment in the agricultural sector for most of the SEE countries studied. This is due to a combination of factors including general EU trends, unfavourable sector structure in some countries and low competitiveness compared to other EU-27 countries. The growth rate records the largest decrease in employment in the agricultural sector for Croatia, North Macedonia and Bulgaria. Greece is the only country that shows a slight increase of 1.1% in 2024 compared to 2016. The shift-share analysis shows a positive national effect for the agricultural sector in all

selected countries, implying that if the agricultural sector follows the trend of the reference economy, employment in it would increase. Romania has the highest magnitude of national effect, followed by Serbia and Bulgaria. The agricultural sector of these countries has a significant potential to increase employment if it follows the average growth rate for the EU-27. In these countries, the relative share of employment still remains high compared to other EU Member States. North Macedonia and Croatia show the lowest national effect, suggesting a more limited potential for employment growth in the agricultural sector. Most SEE countries report negative structural and differential effects. This is the result of both the interaction between national economic activities and the general trend, and the influence of country-specific factors. In contrast, Greece has a positive differential effect. This is due to a marginal increase in employment in the agricultural sector, influenced by unique local factors.

In the industrial sector, the growth rate in 2024 relative to 2016 reflects an increase in employment for all countries monitored, except Bulgaria. Serbia has the highest growth rate, followed by Croatia and Greece. The higher percentage of employees compared to 2016 amounts to 23.2%, 18.2% and 15.4% for Serbia, Croatia and Greece, respectively. In the industry sector, all countries have a positive national effect, meaning that employment in this sector is growing and following the general trend of employment growth in the EU-27. Most countries, however, have a negative structural effect and report a decrease in employment in the sector. Consequently, the economies of these countries are not targeting high-growth industrial sectors at EU-27 level, regardless of regional progress in the sector. In contrast, the positive differential effect in Greece, Croatia and Serbia shows that their industrial sectors are growing above the EU-27 average and are competitive. In these countries there are favourable conditions for the development of specific sub-sectors. The industrial sectors of Bulgaria, Romania and North Macedonia show a negative differential effect, which means that they grow more slowly than the EU-27 average. This suggests that there are reserves to increase their competitiveness Croatia, Serbia and Greece are characterised by the highest growth rates in the services sector. The relative share of employment growth over 2016 for these countries amounts to 20.7%, 18.1% and 16.0% respectively. Employment in the services sector increased in all countries, recording a positive national and structural effect, in line with EU-27 trends. There has been an increase in employment in all countries surveyed, which is also due to the specific structure of the sector in each country. The estimated differential effect shows that most countries have a positive effect in the services sector. This means that the sector is developing dynamically compared to the EU-27 average, thanks to local factors contributing to its competitiveness. Only Bulgaria and North Macedonia have a negative differential effect, which leads to the conclusion that in these countries the services sector is growing at a slightly slower rate than the EU-27 average due to specific local factors.

The total employment change in the countries considered, as the sum of the National Effect (NE), the Industry Mix Effect (MIX) and the Differential Effect (DIF), reflects the actual change in the number of employees (in thousands) in a given sector over the period 2016-2024. In terms of the agricultural sector, most SEE countries experienced a significant decline in employment, with only Greece reporting a slight increase. This shows that by 2024 these countries have a more favourable economic structure compared to 2016, which increases their competitiveness.

In the industry sector, employment in most of the monitored SEE countries is growing, with the most significant growth in Serbia. Only in Bulgaria is there a slight decrease in employment in the industrial sector at the expense of an increase in employment in the services sector.

In the services sector, a substantial increase in employment was recorded in all countries monitored. In particular, Greece, Romania and Serbia show significant increases in employment, underlining the growing importance and potential of this sector for their economies. The large increase in employment is an indicator of a possible economic transformation in the region, characterised by a decrease in employment in the agricultural sector and an increase in employment in the industrial sector and especially in the service sector.

As a result of the analysis, it can be summarised that the sectoral differences in employment and competitiveness of the observed countries in SEE are significant. There is a general trend of declining employment in the agricultural sector for most of the countries. This is indicative of the increased opportunities to implement more modern farming and to redeploy labour. In contrast to the agricultural sector, the service sector has seen a substantial increase in employment in all countries, and this is indicative of its growing importance in them.

In the industrial sector, the picture is more heterogeneous, as some countries show faster growth and competitiveness compared to the EU-27 average, while others report an effect signalling a slower pace of development and a need to increase competitiveness.

These sectoral disparities are the result of both general economic trends and country-specific local factors affecting the development of individual sectors. Understanding these disparities is key to formulating effective regional development policies aimed at overcoming inequalities and promoting balanced economic growth.

CONCLUSION

Balancing the economic structure, especially in terms of employment in different sectors, is an important factor in increasing the competitiveness of an economy. The development of individual sectors in national and regional economies is closely linked to changes that occur in the structure of employment. The high magnitude of the localisation rate in the primary sector reveals existing opportunities and significant potential for the continuation of structural transformation processes in the economies of the observed SEE countries, linked to a reallocation of resources to higher value-added sectors. In this way, it is possible to achieve a greater convergence of the economic structure of these countries with the structure of the reference economy at EU-27 level. This transformation could lead to an increase in competitiveness, productivity and overall living standards.

One of the main objectives of a country's spatial development policy should be to overcome regional inequalities. In order to ensure success, it is essential that the specialisation of regions is assessed not only at an absolute level, but also in terms of the sustainability of that specialisation. This approach would contribute to a better justification of the long-term potential of each region and allow for the design of more adequate support and development measures. Although some of the countries included in the study are not members of the EU-27, they are part of a common region and are closely linked in a single economic system. This interaction highlights the need for coordinated approaches and common policies for balanced development across the region.

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