CHANGES IN SECTORAL EMPLOYMENT IN THE REGIONS OF SLOVAKIA UNDER THE IMPACT OF THE COVID-19 PANDEMIC

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Abstract:
The global economy was hit by the COVID-19 pandemic in 2020. Not only European but also world economies remained closed in the first half of 2020, resulting in increased uncertainty in the economic environment. These changes also significantly affected the Slovak economy. The purpose of the paper is to evaluate the impact of the COVID-19 pandemic on selected sectors of the Slovak economy from the point of view of regional sectoral employment. Localization analysis is used to evaluate changes. The analysis showed that there was a more significant regional decline in employment in the accommodation and catering services activities of the SK NACE category in all regions of Slovakia except the Trenčín and Banská Bystrica region, although the effect of the sector mix at the Slovak level was negative (the number of employees in this sector declined). The regional decline in employment was also recorded in the SK NACE Industry category, but in this case this development in all regions copied the negative effect of the industrial mix at the level of Slovakia.

Introduction

Employment is not only a source of income but also a means of identity, independence, participation, health, and social well-being for all individuals (Gupta et al., 2021). The level of employment in the region is determined not only by individual regions and specific factors, but the location of the region itself in space also plays a decisive role. Spatial interactions are therefore essential in the design of regional labour and employment policies (Furková & Chocholatá, 2021). The relationship between economic growth and low levels of unemployment (or high levels of employment) as partial goals of economic policy are defined relatively straightforwardly in economic theory. They are based on the assumption that an economy with high economic growth induces job creation, and thus growth in total employment. Empirically, this is the case in developed western countries, where the link between economic growth and employment is relatively strong (Hudcovský & Fifeková, 2016). Employment in the regions and associated productivity is according to Tvrdoň & Šuranová (2007), Holubek et al. (2014) the base of regional competitiveness. Both indicators are influenced not only by internal factors which are based on the company's position in the region, but also by external factors, which represent the state and the region. These are, for example, the sectoral structure of the economy, technological and technical innovations, infrastructure

(technical and intellectual), organization, management, interoperability between systems, etc. Provided that rational economic and monetary policies are coordinated, macroeconomic policy is linked, and microeconomic restructuring is interconnected, sectoral employment and associated labour productivity can create an environment that will ensure long-term economic growth and prosperity in the regions (Habánik, 2007, Mihályi et al., 2021). On the contrary, according to Lisý (2005), Dušek (2015) n addition to labour productivity (GDP per capita, amount of goods produced per employee per hour, economic level of the country), decisive factors influencing the economic growth of the regions include capital accumulation (investment, capital goods, human capital - education), technical and technological progress (better and quality production) and economic activity of people (freedom is a source of creativity, activities and initiatives of people, and so it is the driving force of the economy) (Tej et al., 2016, Romanova et al. (2016). In the context of people's economic activity, longer periods of unemployment can be considered an obstacle to employment; the more time people are unemployed, the more difficulties they can expect in getting a job (Devine et al., 2021). Kapsos (2005) estimated that the global employment elasticity is around 0.3, with significant differences between regions. As a result, the employment response rate to changes in economic growth is around 30% (Hudcovský et al., 2017). Crivelli et al. (2012) they were the first to test the role of economic structure on employment elasticity. Although their estimates point to a strong positive effect, they do not provide an in-depth analysis of the relationship. Structural decomposition analysis based on input-output models can provide more specific evidence on the determinants of employment elasticity. Among other benefits, these models capture the complex relationships between industries and between intermediate consumption and output and explicitly model the link between employment, economic structure, and final demand. Spatial interactions are also confirmed by Gašparíková et al. (2006), who note that regional differentiation is also affected by social mobility. In the conditions of the Slovak Republic, given the negatives of regional differentiation, they speak of an overall decline in demographic vitality in the Slovak Republic and an increase in regions with an insufficient demographic situation. These regions are also slowing down their social and economic development and dynamism. However, as regards the positives of regional differentiation, they state that there is great industrial differentiation and its great territorial and regional diffusion. Equally important is the sectoral structure of the economy whose impact on society is manifested in economic development, economic growth, or decline and has an impact on the development of social and other structures. For effective regulation of the sectoral structure, it is necessary to know the degree of concentration of individual sectors of the national economy (Gáll, 2019).

The labour market is and will be crucial for young people moving to larger cities. For simple reasons, they do not want to stay in lagging regions; they will not find work opportunities and conditions there. All these negative side effects will continue to affect regional employment disparities in the future. According to Szekely (2008), Korenkova & Urbanikova (2014) spatial decisions of companies can thus be strongly influenced by the local presence of the workforce with special skills necessary for their activities. The right choice of location will allow them to save costs associated with training or retraining of staff. On the other hand, areas with a concentration of companies with a similar focus employing people with special skills are attractive to those who are looking for work and meet the required criteria for a potential employee. They find plenty of suitable job opportunities in a small territory. Another crucial determinant of employment changes in the V4 countries is research based on Hudcovský et al. (2017) labour productivity development. Pavlyuk (2011) also found a high degree of spatial dependence of the regional employment rate in Latvian regions, and also concluded that regional development research without spatial effects could yield inconsistent results. Li et al. (2009) pointed out that various socio-economic and spatial factors are associated with the

spatial employment process and demonstrated the presence of spatial dependence and spatial heterogeneity in the regional employment forecasts in the Southeast Queensland region. Changes in the sectoral structure are a natural feature of economic life that pose challenges for the future redistribution of factors of production (Boulding, 1993). In addition, the sectoral structure of the regions is an important factor in determining the vitality of the region for future business activities, as the founders of companies copy the sectoral structure of the region (Šebestová et al., 2016). They also confirm this from Bolcárová et al. (2013), who state that the concentration of the industry, resp. the specialization of regions will also determine the economic growth or development of regional disparities, both economic performance or social well-being, as well as the disparities of labour market participation. Rehák & Štofko (2011), Vavrek & Benkova (2018), however, they recall that, ultimately, the emergence of regional disparities is also largely the result of the sectoral configuration of individual regions. Changes in the sectoral structure of regions can contribute both to the reduction of disparities and to their increase. They can have a positive effect on employment according to Bin et al. (2020) and also agglomeration effects. For example, agglomeration effects may be related to the intensity of local competition, the level of industrial specialization, the availability of specific infrastructures, and the creation of a network of interacting companies.

2 Theoretical Background

Knowledge of the basic aspects of the functioning of the sectoral structure of the regions is an integral part of regional economic analyses. Without a thorough knowledge of the principles that affect the formation of the spatial economic structure of the regions and without a thorough identification of the region's development factors, it is not possible to make a good regional economic analysis and use its results to assess the existing situation, or assessment of the effects of the implemented development plan, or design of development policy.

2.1 Regional Economic Analysis

Although a wide range of literary sources deal with regional economic analyses, it has not yet been precisely defined. In general, we could say that regional economic analysis examines the changes that have occurred in the regional or local economy. Regional economic analysis focuses on the evaluation of certain types of behaviour of business entities, respectively. labour force, their motivation, and decisions in a certain relatively limited territorial unit (region). At the same time, exogenous variables are considered, which appear to be given (immutable). Part of the regional economic analysis according to Řezník (1997) can be an analysis of spatial immobility factors. Limited resource mobility leads to the formation of basic economic structures. One of America's leading regional experts in regional analysis, Wildawsky (1985), states that a good regional economic analysis is not based on identifying one option for addressing the region’s development, but offers and compares a number of diverse alternatives. It is not just about the goals or the resources themselves. In this context, the objective of the paper is to assess the impact of the COVID-19 pandemic on selected sectors of the Slovak economy in terms of regional sectoral employment through regional analysis.

2.2 Impact of the Covid-19 Pandemic on Sectoral Employment in Slovakia

According to the European Commission forecast, the coronavirus will cause the largest recession in the history of the European Union. In April 2020, industrial production in Slovakia reached an all-time low, recording a year-on-year decline of 42%. The average number of persons employed in industry showed negative tendencies within all size categories of firms,

legal entities. The increase in employment in industry was achieved only in the case of self-employed people (by 1.0%). In summary, the employment of SMEs operating in the industrial sector decreased by 2.1% year-on-year to 288.9 thousand employed persons. Large industrial firms (a decrease of 4.5%). The overall decrease in the employment in industry was 3.2%. Firms operating in the services and trade sector were forced to fully or partially reduce their activities (SBA, 2020). Svabova et al. (2021) adds that the overall registered unemployment rate in Slovakia increased by 2-3% during the COVID-19 pandemic compared to the period during which this pandemic did not yet exist in Slovakia. There are 15,660 companies directly threatened by the Covid-19 pandemic in Slovakia, while directly endangered companies amount to 8.7 billion euros sales annually (Finstat, 2022). The rapid onset of crisis management has brought a strict approach to the protection and safety of employees, as well as business protection on a local and global scale, which ultimately led to a slowdown or suspension of the main driver of the economy in Slovakia (automotive industry) in all its plants (Volkswagen Slovakia , Group PSA Slovakia, Kia Motors Slovakia, Jaguar Land Rover Slovakia) (Bečka, 2020). Kiner (2021) based on the analysis states that the loss of employment affected all groups of employees in Slovakia, but workers from third countries to a greater extent than foreigners from the EU / EEA and the domestic population. Their rate of decline was approximately 1% higher during the outbreak of the pandemic than in the previous groups, whose rate of decline reached similar values at 1.466 - 1.658%. Štalmachová & Strenitzerová (2021) they add that in order to mitigate the economic effects of the pandemic, employers in individual sectors of the national economy have been forced to reduce wages or reduce benefits for employees, and in some cases to lay off employees. Although employers in the various sectors used state aid to maintain employment, they assessed it as insufficient. This is also confirmed by Krásna (2021), according to which the measures taken to prevent the spread of the COVID-19 pandemic had a negative impact on the entire economy, consumption was limited, and there was an overall slowdown in the economy. The result was a growing number of insolvencies and bankruptcies, as well as a growing number of unemployed. One of the other measures was the introduction of reduced working hours and consequently reduced wages, the so-called kurzarbeit. It was introduced in Slovakia as a temporary measure, but the possibility of implementing it as a systematic measure was discussed in the future. Kurzarbeit was primarily intended to maintain the work habits of the employees and to preserve the jobs by saving the employees the costs associated with running the business. The systematic introduction of kurzarbeit in Slovakia would allow the Slovak economy to have a financial cushion in case of recession or emergency, but also to help the sector as needed (Salomonsová, 2020).

3 Materials and Methods

During the creation of a regional economic analysis, we can use several analysis techniques, e.g., modelling, transparent research, economic analysis, localization analysis, statistical analysis, and others. Localization analysis Isard (1960), Hamalová et al. (1996) point to the differences in the spatial arrangement of individual sectors or industries at a certain point in time, with the regions acting as separate economic units. Its partial methods most often include localization index, localization coefficient, and Lorenz curve.

To monitor changes in selected industries in Slovakia, we used the localization index and supplemented it with the Lorenz curve. The localization index measures the proportionality of the represented i-sector in the j-region to the number of inhabitants. The index measures the state of proportionality in the representation of the sector to the population. It is basically the proportionality of sectoral employment to the population in the context of assessing the social function of the sector in the region.

$$IL_{ij} = \frac{\frac{x_{ij}}{Y_i}}{\frac{Z_j}{Z}} \quad (1)$$

Xij - number of i-industries employed in the j-region
Yi - the number of employed i-industries in the country
Zj - number of employees in the j-region
Z - number of employees in the country

The results of the localization analysis illustrate the localization curves (so-called Lorenz curves), which are a graphical representation of the distribution of the monitored industries to the number of employees per industry and per region. The Lorenz curves for individual industries are compared with a diagonal that represents an even distribution of industries to the population. If the curve is not identical with the diagonal, but has a certain deviation from it, then there is an uneven distribution of the industry. The larger the deviation from the diagonal, the higher the degree of industry concentration in the region.

For the localization analysis, we selected two sectors within SK NACE - industry and accommodation and catering services at the level of individual regions of Slovakia. We have divided the regions into three basic groups: 1) the group is represented by the Bratislava region, 2) the group is the western and northern regions (TT, TN, NR, ZA), and 3) the group represents the lagging regions (BB, KE, AFTER). Such a division of Slovakia captures regional disparities. The Bratislava region has long been one of the 10 most developed regions of the EU according to the Eurostat methodology, whose main and decisive indicator is GDP per capita in purchasing power parity. The GDP of the Bratislava region is well above 90% of the EU average, which is a condition for inclusion in the group of so-called more developed regions. Other regions are among the economically weaker, although the group of regions (TT, TN, NR, ZA) has been growing economically in the recent period, also thanks to the allocation of the automotive industry. BB, KE, and PO are among the lagging regions. However, in terms of the current programming period, all regions except BA achieve a GDP of less than 75% of the EU average.

The Covid-19 pandemic affected all sectors of the national economy in Slovakia, but the most significant sector was the sector of accommodation and catering services. Slovakia has a monostructured economic base focused on the automotive industry. For this reason, we also analysed the impact of Covid-19 on this industry. We analyse the years 2009-2020. The reason for choosing this period is the fact that since 2009 the data have been processed by a sample survey for firms and organizations with 20 or more employees according to the new NACE Rev.2 classification. The analysed time period also captures the prepandemic period as well as the first year of the Covid-19 pandemic. The data are from the Statistical Office of the Slovak Republic.

4. The results

Economic activities are among the basic factors that influence the socioeconomic level of regions. The production profile of the territory is usually determined by the main industries for which the territory meets the requirement of securing raw materials and labour and has other suitable territorial and technical preconditions. Production activities are extremely important for the development of the region. Firms affect the economic and social level in the region in the most significant way. Industry provides more scope for diversification of goods production

and labour supply and brings a higher economic effect. Therefore, it is no coincidence that in every region, industry has a decisive influence on the economic development of the region. According to a concept of the sector base, industry is the driving force behind development. Under the conditions of Slovakia, the driving force is the automotive industry. The development of employment in industry in individual groups of regions has a different trend. In the Bratislava region, we observe an annual increase in the number of employees in industry, except for 2010, 2018 and 2020. We observe a different trend in employment in the other two groups of regions. In the lagging regions (PO + KE + BB), there was an increase in the number of employees in 2012, 2014 and in the period 2016-2018. In recent years, we have seen a decrease in the number of people employed in industry. In the group of regions (NR + TT + TN + ZA), on the other hand, the decrease occurred only in 2010, 2012 and 2020. The decrease in the number of employees in 2010 in all regions was caused by the financial crisis that Slovakia hit in this period. The impact of the crisis on firms was reflected in a drop in demand, orders, and a deterioration in sales, which resulted in lower sales and a decrease in return on investment, and, on the other hand, in a more difficult access to credit as banks tightened lending. As a result of the double pressure on firms, solvency problems arose, as well as bankruptcies. This development is also confirmed by Laurová (2012), who states that the global economic crisis erupted at a time when the Slovak economy was at the peak of the economic cycle, which had a major impact on GDP growth. At that time, the domestic banking sector also showed stability. It was this stability that allowed Slovakia to survive the pressure of the first phase. The decline in which the economies of the main trading partners of Slovak companies were located due to the outbreak of the financial crisis caused an external demand shock, which hit the economy in the second phase. A significant decline in foreign demand for Slovak production had an impact on GDP growth, public finances, and employment. This crisis has manifested itself most clearly in industry, as Slovakia's industry shows a significant degree of dependence on the development of world markets and on sales in these markets. This is also confirmed by Workie Tiruneh et al. (2009), who adds that the decline in GDP growth was mainly due to the industrial production, retail, insurance, and financial industries, and at the same time there was a decline in total domestic demand. In 2020, the Covid-19 pandemic stopped automotive production around the world. However, after the slow start of production, further problems also arise in connection with the conflict in Ukraine, when the automotive industry is economically weakened by insufficient stocks and the related supplier - customer relations. This is also confirmed by Nemečkay (2022), who states that the Covid-19 pandemic has hit the automotive industry in Slovakia significantly. All four carmakers' firms shut down production in March 2020, which in turn caused most suppliers in Slovakia to significantly reduce or close down.

Table 1: *Development of the Number of Employees in Industry and in Accommodation and Catering Services in Individual Groups of Regions of Slovakia in the Period 2009-2020*

Indicators	*Regions*	*2009*	*2010*	*2011*	*2012*	*2013*	*2014*	*2015*	*2016*	*2017*	*2018*	*2019*	*2020*
Number of Inhabitants	BA	622 706	628 686	606 537	612 682	618 380	625 167	633 288	641 892	650 838	659 598	669 592	677 024
	PO+KE+BB	2 238 317	2 241 661	2 268 925	2 269 897	2 270 485	2 270 901	2 270 371	2 271 922	2 272 831	2 273 310	2 272 980	2 272 222
	NR+TT+TN+ ZA	2 563 902	2 564 926	2 528 860	2 528 257	2 527 084	2 525 281	2 522 593	2 521 529	2 519 451	2 517 513	2 515 301	2 510 535
Number Employed in Industry	BA	36 515	35 550	36 968	40 171	42 604	45 830	47 672	51 750	55 635	54 818	56 928	54 199
	PO+KE+BB	123 643	121 088	118 444	118 961	118 598	123 238	123 158	131 027	134 194	134 428	133 585	130 576
	NR+TT+TN+ ZA	217 651	209 154	211 051	207 603	209 127	220 691	223 027	228 082	245 536	248 125	254 476	237 424
Number Employed in Accommodation and Catering services	BA	3 946	5 001	6 268	6 864	7 118	6 820	7 075	8 861	11 259	8 432	11 175	7 872
	PO+KE+BB	5768	6497	8537	6997	6647	6603	6811	6716	8240	10003	11 821	11 481
	NR+TT+TN+ ZA	5392	4970	6670	6631	7535	8790	8448	9066	9612	12820	13 201	11 370

Source: Own processing based on data from the Slovak Republic Statistical Office, 2022

Table 2: *Development of the Localization Index in Industry and in Accommodation and Catering Services in Individual Groups of Regions of Slovakia in the period 2009-2020*

Indicators	*Regions*	*2009*	*2010*	*2011*	*2012*	*2013*	*2014*	*2015*	*2016*	*2017*	*2018*	*2019*	*2020*
Localization Index of Industry	BA	0,84	0,84	0,90	0,97	1,01	1,02	1,04	1,07	1,07	1,04	1,04	1,04
	PO+KE+BB	0,79	0,80	0,77	0,77	0,76	0,75	0,75	0,76	0,74	0,74	0,72	0,74
	NR+TT+TN+ZA	1,22	1,21	1,23	1,21	1,21	1,22	1,22	1,20	1,22	1,23	1,24	1,22
Index of Localization of Accommodation and Catering services	BA	2,28	2,63	2,60	2,96	2,93	2,66	2,71	3,04	3,23	2,23	2,52	2,07
	PO+KE+BB	0,93	0,96	0,95	0,81	0,74	0,71	0,73	0,65	0,68	0,77	0,78	0,90
	NR+TT+TN+ZA	0,76	0,64	0,66	0,69	0,76	0,85	0,81	0,79	0,71	0,89	0,79	0,80

Source: Own processing based on data from the Slovak Republic Statistical Office, 2022

The development of employment in the accommodation and catering services sector developed differently in individual groups of regions compared to industry. In the Bratislava region, the number of employees in this sector decreased in 2014, 2018 and 2020 (Table 1). Despite the fact that in 2010 there was a financial crisis in Slovakia on employment in these services, this did not manifest itself; the number of employees in this sector even increased compared to the previous year. Similarly, the group of lagging regions was similar in this time period. A group of regions recorded a decrease in the number of people employed in accommodation and catering services in 2010 was recorded by a group of regions (NR + TT + TN + ZA). However, Covid-19 caused a decrease in the number of employees in these services in 2020 in all counties. This is related to the fact that this year in Slovakia, as in other countries, the introduction of lockdown was one of the anti-pandemic measures. At that time, all the firms that provided accommodation and food services were closed. Catering firms tried to solve this situation by starting to provide food delivery, respectively. allowed food to be taken directly by customers but without the possibility of direct consumption in the company. This is also confirmed by Tajtáková (2021), who states that in March 2020, under the influence of the coronavirus pandemic, most tourism performance indicators in Slovakia decreased, but at the same time the share of domestic tourism in the total number of visitors increased, although they only partially replaced the drop in foreign visitors. The west of the country suffered the most from the drop in attendance in 2020, where only the Trnava region managed to encourage domestic tourism. On the contrary, the Bratislava, Trenčín and Nitra regions were unable to attract more domestic visitors, even though most Slovaks people spent their holidays in Slovakia in 2020. The negative impact of the pandemic was generally most visible in the Bratislava region due to its high dependence on foreign tourism.

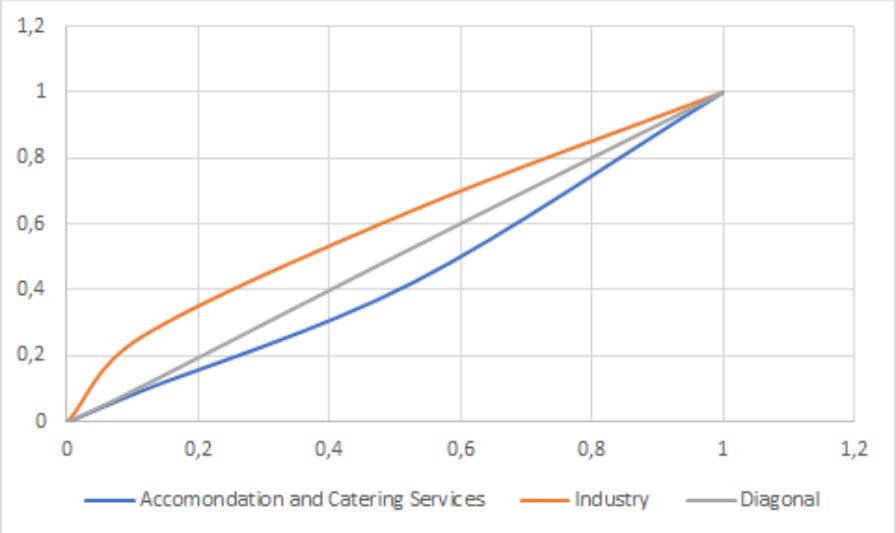
The values achieved of the localization index clearly confirmed the highest concentration of industry in the group of regions (NR + TT + TN + ZA), the localization index ranged from 1.22-1.24. This is a consequence of the location of automotive firms in the Trnava, Nitra, and Žilina region. On the contrary, the lowest concentration of the industry is in the lagging regions, the localization index is in the range of 0.72 - 0.80. The Bratislava region recorded a slight increase in the analysed period, respectively stagnation of the localization index, while the index only got above the level of 1 in 2013. However, in other groups, the values of the localization index decreased slightly, which was caused by a decline in employment in industry. The importance of industry as an employer is significant in the group of regions where automotive firms are located, because the index reached a value greater than 1. In developed regions, the localization index was below 1 during the entire period reviewed (Table 2).

The highest concentration of accommodation and catering services is in the Bratislava region (IL is in the range of 2.07-3.04). This relatively high localization index confirms the high concentration of accommodation and catering services. In the other two groups, the localization index is almost the same and is below level 1, which means their disproportionate distribution in the economy not only to the number of inhabitants but also to the number of employees. In this sector, too, the values of the localization index decreased slightly due to a decrease in employment in the sector.

In 2009, none of the sectors analysed had the same diagonal curve, which means that both industry and accommodation and catering services are unevenly distributed in relation to the population. In this case, industry had a greater deviation from the diagonal than accommodation and food services, indicating a higher degree of sectoral concentration (Chart 1). This trend is also confirmed by Atikian (2013), who states that a healthy economy requires the long-term development of industry, while the structure of employment must adapt to these changes. In

this case, there is a consensus where, on the one hand, an appropriate sectoral structure of the country can support benign employment development and, on the other hand, the employment structure is a solid basis for the creation and modernization of the sectoral structure.

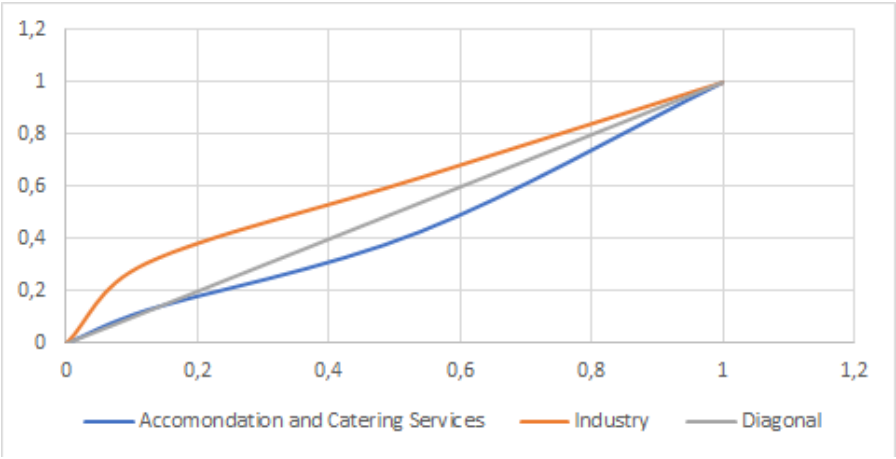
Figure 1: *Lorenz Curve for Selected Sectors of the National Economy in Slovakia in 2009*



Source: Own processing

The Slovak economy grew by 2.3% in 2019. The unfavourable development of foreign demand was reflected mainly in the Slovak export-oriented industry. However, the labour market withstands the pressure and with historically low unemployment, wages have improved the most since 2008 (Slovak Republic Ministry of Finance, 2019).

Figure 2: *Lorenz Curve for Selected Sectors of the National Economy in Slovakia in 2019*

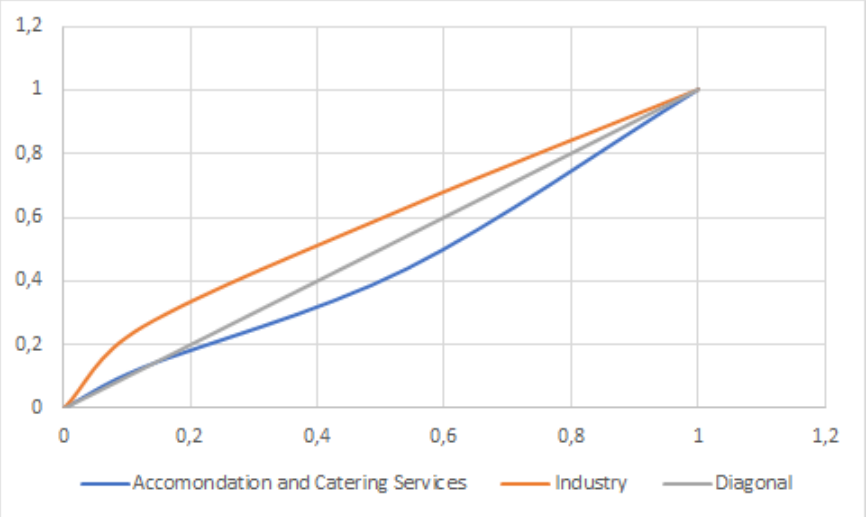


Source: Own processing

In 2019, none of the sectors analysed had the same curve as the diagonal, which means that both industry and accommodation and catering services continued to be unevenly distributed in relation to population (Chart 2). In this case, industry had a higher deviation from the diagonal than accommodation and food services, indicating a higher degree of sectoral concentration. However, accommodation and catering services came closer to the diagonal

compared to 2009. This trend is also confirmed by the fact that in 2019, from a sectoral perspective, the value added in these services contributed the most to the real GDP growth.

Figure 3: *Lorenz Curve for Selected Sectors of the National Economy in Slovakia in 2020*



Source: Own processing

The Slovak economy contracted by 5.2% in 2020 due to the COVID-19 pandemic. The pandemic affected all components of GDP, with investment, exports, and imports declining the most. The impact on household consumption has been dampened by a more stable labour market and job retention measures. Employment decreased; wage growth slowed, as well as price level growth. After the first wave of the pandemic, there was a relatively rapid recovery in the second half of the year, especially in the industrial sector (Slovak Republic Ministry of Finance, 2020). However, in the pandemic year 2020, there were no significant changes in the sectoral concentration of industry and accommodation and catering services compared to 2019 (Figure 3). This is also confirmed by the industry localization in the analysed groups of regions. Compared to the previous year, there was no change in the Bratislava region, it increased slightly in the lagging regions, and it decreased slightly in the group of regions (TT + TN + NR + ZA). The index of localization of accommodation and catering services in the Bratislava region decreased slightly in 2020; in others it increased slightly. It can be assumed that more significant changes in the sectoral structure of the country occurred in 2021, but these data are not yet available.

Conclusions

The location analysis showed that the economic crisis had the greatest impact on industry and, conversely, the Covid-19 pandemic had a more significant impact on accommodation and catering services. Industry, as well as accommodation and catering services, were unevenly distributed in relation to population in 2009, 2019 and 2020. Trends in the development of sectoral employment in the national economy have a differentiated effect on sectoral employment in individual regions. This is also confirmed by the results of the analysis of employment in industry and in accommodation and catering services. Industry had a greater deviation from the diagonal than accommodation and catering services, indicating a higher degree of sectoral concentration in the area. This was also reflected in the comparison of 2009 and 2020 in relation to the number of people employed in industry in individual groups of regions to the total number of people employed in industry. It was most pronounced in the BA

region (in 2009 the share of employees in industry in a region was at the level of 9.7%, in 2020 at the level of 12%). In the other two groups, this increase was only minimal. The analysis also showed that while the number of industry employees decreased in 2010 compared to the previous year, the number of employees in this sector decreased in accommodation and catering services only in the group of regions NR + TT + TN + ZA. The main reason for the decrease in the number of employees in the industry in 2010 was the paralysis of the industry due to the development on the international markets and the associated significant disruption of supplier - customer relations. Slovakia is an open economy with a strong dependence mainly on the German markets in relation to the automotive industry, and any change in these international markets significantly affects industrial production in Slovakia. A different situation occurred in the pandemic year 2020. While in 2010 the number of employees in industry in individual groups of regions decreased, in 2020 the number of employees decreased not only in industry but also in accommodation and catering services. The most significant decrease in the number of employees in these services compared to 2019 was recorded in the BA region, where the number of employees decreased by 29.6%. In the group of regions NR + TT + TN + ZA, the decrease was 13.9% and the lowest decrease of only 2.9% was recorded in the group of regions PO + KE + BB. The main reason was the antipandemic measures taken not only by Slovakia but all countries around the world to prevent the spread of Covid-19, while the most significant measure was the lockdown and the associated social distance.

Until now, the research of sectoral employment has been based only from an economic point of view at the national level. However, the different structure of the economic base of the analysed regions is also conditioned by the internal potential of each region and the characteristic intraregional ties that influence and modify its socio-economic development. The region is not an identical copy of the national economy but has its own internal structure. At present, employment in Slovakia is significantly affected by the war in Ukraine and the associated rising inflation and significantly rising costs related to energy and material inputs for individual businesses and households themselves. As Slovakia is significantly dependent on Russian oil, it is possible to expect a further reduction in the number of employees in individual sectors and the associated decline in the quality of life of the population.

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