

METHODS

Comparison of business environment in the chosen regions

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Sustainable development of the regions is presently an often discussed theme, mainly due to the worldwide situation. The goal of the contribution is therefore to find regions in Slovakia and Ukraine that have the possibility to have mutually advantageous ways of cooperation. The selection of the regions results from the comparison of European Union (EU) Member State's situations and not EU Member State situations. The situation in the regions is compared according to the regional gross domestic product per capita, the unemployment rate in the region and the average monthly wage of employees in the regions. The results of the contribution show possible cooperation of the analyzed regions in business, mainly in the area of industrial production, with unemployment decreasing. The use of the results is in the area of finding strategies for improvement and cooperation.

Keywords: business environment, industry, economy, benchmarking

Introduction

Sustainable of the regions is presently an often discussed theme, mainly due to the worldwide situation. Ukraine is regarded as an important economic partner (transit of energy sources, supply of raw materials to other economies, particularly Slovakia). In spite of Ukraine being the biggest neighbor of Slovakia; its total volume of business is four times lower in comparison with other neighbors (Poland, Austria) and 10 times lower in comparison with the Czechia. Natural wealth, cultural similarity, and geographical position present a large potential for cooperation between Slovakia and Ukraine (1, 2).

The goal of the contribution is therefore to find regions in the mentioned countries that have the possibility to have mutually advantageous ways of cooperation. All the existing problems of Slovak and Ukrainian cooperation lie in the fact that Slovakia is an European Union (EU) member state, and Ukraine is not a member state. Slovakia is an equal partner of the world's largest business powers, sharing common values such as freedom, democracy, and solidarity (2, 3). EU invested vast funds in new member states as part of the cohesion policy and, beginning in 2014, as part of

the Investment Plan for Europe—dubbed the Juncker Plan—so that they could grow and achieve average incomes in the EU. Such investments had in the practice extraordinary positive impact, not only due to the financial support of EU, but also due to the effort of the single member states. Structural financing from the EU accounts for 60% of all public investments in Slovakia. Slovakia, the most visible index could be: 29.5 million euro investment from European structural and investment funds in Slovakia between 2004 and 2020. 1.2 million euro additional investments for Slovakia from the Juncker plan (from 2014). Growth: GDP per inhabitant in Slovakia increased during 2003–2017 by 94 %, which means the living standards in this period doubled. The EU invests, in the framework of structural financing, 2,830 euros per inhabitant in Slovakia. From 2014 to 2016 in Slovakia, 25,988 small- and medium enterprises (SMEs) have been financed from European structural and investment funds and the Juncker plan (4–6).

Ukraine is not an EU member state, which complicates the cooperation with Slovakia. However, cooperation with Ukraine is very important for Slovakia due to the neighboring boundaries, which provide possibilities for relations' creation: the building of common infrastructure and industrial parks for markets and worker exchange.

However, Ukraine's policy is orientated toward the entrance to the EU, which could in the future open a limited new market with 42 million potential consumers (7, 8). At present, it is necessary to consider complexity and limitations. The contribution is thus oriented toward comparing two regions from both countries with the goal of limiting the structure of possible business, primarily in the areas of industrial production and unemployment reduction, and identifying strategies for improvement and cooperation.

Research elaborations

The chosen regions from the analyzed countries are the Košice region in Slovakia and the Poltava regions in Ukraine, with the aim of comparing the business environment and economic situation and, according to the results, to suggesting a strategy for improvement and cooperation.

The selection of the regions results from the following: Since 2014, the Ukrainian economy has continued to deteriorate due to the loss of the stable Russian market, which has been the biggest part of the economy. Cooperation with Slovakia, especially with the eastern region of Košice region, is one of the most promising paths, but it requires great reforms. The Košice region, which has stable economic growth, needs to be seen as a good example for improvement. In the article, we first described the business environment in both regions, which we then compared with each other on the basis of indicators, which we evaluated according to Stefan Samson (9). Subsequently, we performed benchmarking and strengths, weaknesses, opportunities, and threats (SWOT) analysis, using the Saaty matrix. We synthesized the results of the analysis into summary data. The results of the analysis served us in determining the strategy of improvement and cooperation.

Regional gross domestic product per capita

The created regional gross domestic product (GDP) per capita is used to compare the economic level of individual regions. This indicator is the most credible for comparing the economic level and economic performance of regions. We do not see any reservations about this indicator as justified. Legitimate reservations could not be directed at the indicator, but rather at the inadequate conclusions that could be drawn from his data. The regional GDP per capita does not directly express the related economic phenomena and processes associated with the economic activity of the population, employment, unemployment, labor income, household income, and the like. In essence, the higher the economic activity of the population and the employment, the lower the unemployment and its rate. Also, the higher

the regional GDP per capita, the higher the earnings and the income per household. In the case of regional GDP per capita, the absolute basic height, whether in permanent or current market prices, is, of course, decisive. When comparing regions, their development over a longer period of time is also important (9).

Unemployment rate in the region

Unemployment and its rate are an indicator that speaks about the use, or failure to use one of the sources of economic growth. The unemployment rate indicator correlates closely with the GDP growth indicator. The higher the number of people working in the economy, the lower the unemployment rate, and the higher the GDP. Okun's law, which expresses the causal link between the goods (services and services) market and the labor market, says that if the real GDP falls by 2% of potential output, employment falls by 1% (9).

Indicators that measure the ability of an economy to create sufficient employment opportunities can provide useful information on the results of economic development as a whole. These indicators include the level of unemployment, the share of people employed in the total population, the level of economic activity of the population, and the intensity of growth or its elasticity in connection with redundancies; this second indicator measures the growth rate of the 1% rate. The inclusion of employment and decent work aspects of economic growth policy and poverty reduction contributes to a maximal distribution of the results of population growth, thus ensuring its sustainable and inclusive character (9).

The average monthly wage of employees in the regions

The economic level of the regions affects both the process of distribution and, now, the wages of workers employed in the region. In reality, the average monthly wage in the region, as well as the creation of GDP, are determined by several factors. One of the decisive ones is, e.g., structure of sectoral economic activity (industry and its individual branches, agriculture, tourism, financial markets, state administration, informatics, achieved labor productivity, new value added, etc.).

Results

Regional GDP per inhabitant

The importance of GDP lies in the fact that it reflects the value of goods and services sold in a given territory.

Large differences in relative GDP (GDP per capita) usually reflect technological and organizational benefits. Countries with high GDP buy cheap goods with low technological intensity from other countries and sell expensive products with high technology.

From **Figure 1**, it is obvious that every region records an increase in GDP of approximately 30% during the last 10 years. It does not present the strongest results, but both regions are in the period of development.

Measure of unemployment in the region

Economic growth alone does not necessarily mean an increase in the number and quality of jobs, especially for the poor, an unprotected category of the population. It is rather a prerequisite for productive employment growth, a combined result of improved labor productivity and increased employment. The rate of economic growth is therefore assessed by an absolute limit, within which employment and productivity can increase. At the same time, the structure of growth is also of great importance. The impact of economic growth on productive employment depends not only on its trend but also on how effectively it transforms the creation of productive jobs. This in turn depends on many factors, such as the sectoral structure of growth and the intensity of capital (labor intensity) of growth in individual sectors. Usually, there is a need not only to increase the number of jobs but also to improve the productivity of work and the level of income from employment. In terms of employment, the subject of the economic development analysis should thus be an assessment of the extent to which economic growth meets the need to increase the number of jobs and improve labor productivity (incomes). For such an assessment, it is important that it must be done according to the sectors. At the same time, the main issue for the sustainability of economic development in the medium and long term is the extent to which economic growth is associated with productive transformation.

The following trend shows a comparison of the measure of unemployment in the analyzed regions during the last 6 years (**Figure 2**).

The inhabitants of the Košice region work mainly in the following sectors: industrial production, trade, education, public administration, transport and telecommunications, information technology (IT), health care, transport and storage, construction, information and communication activities. In the region, commuting to work is common. Most of the workers come to Košice, or to other larger cities. Almost 15% of the total number of short-term Slovak citizens in the countryside is from the Košice region. As for the European countries, Slovak citizens worked mainly in Austria and the Czechia. The economically active population in the region consists of 385,335 people. In total, there are 28,055 legal entities and 29,718 self-employed persons

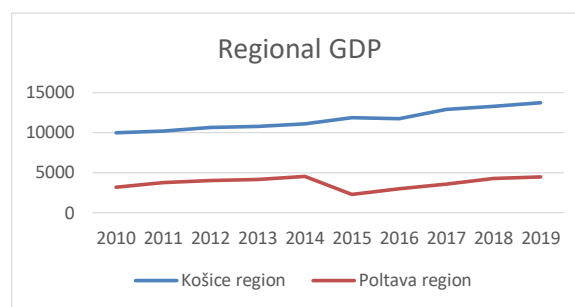


FIGURE 1 | Regional GDP per capita in €. Own processing according to Refs. (10, 11).

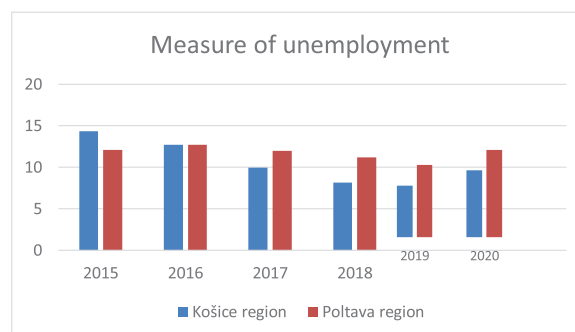


FIGURE 2 | Development of unemployment and measure of unemployment. Own processing according to Refs. (10, 12).

registered in the Košice Region (13). At the end of March 2020, there was a registered unemployment rate of 9.77 in the Košice Region, which represents 29,393 available jobseekers. It is the second highest unemployment rate in Slovakia.

The majority of the unemployed are people with secondary education or people who have completed basic education, who are hired for occasional, auxiliary, or seasonal work. In general, employers require from their future employees the appropriate education, experience, professional skills, language competences, computer literacy, or professional competence as they require for a given type of job position (job development). Employers demand from employees soft skills, more responsibility, communication skills, and independence.

As for the Poltava region, employment growth has occurred among citizens of all ages, with the exception of people aged 40–49, for whom this number has decreased from 79.4 to 78.7%. The highest employment rate is recorded for people aged 35–50 years (almost 80%) and the lowest for people aged 60–70 years (14%) and 15–24 years (31%). The low employment rate of young people is due to the fact that a significant number of people at this age study and are not part of the working population (14). In cities, the number of employed people aged 15–70 years increased by 143 thousand people (to 11.4 million people), and the employment rate increased from 58.1 to 59.1%. In the villages, the number of employed inhabitants has increased by 74 thousand people

(to 5.2 million people); the employment rate has increased from 55.0 to 56.2%.

There are significant gender differences in the labor market in Ukraine. The number of employed men aged 15–70 increased by 205 thousand people, while the number of employed women increased by 12 thousand. At the same time, the employment rate for men is 64.0% for women, and only 52.9%. The number of citizens aged 15–70 employed in the informal sector of the economy decreased by 81 thousand in 2019 compared to 2018, reaching 3.5 million (15). Fifth working-age citizen was unemployed. Among economic activities, there was most common informal employment in agriculture, forestry and fishing (42%), wholesale and retail trade, motor vehicle repairs (17%), and construction (17%). The number of unemployed people aged 15–70 in 2019 compared to 2018 decreased by 91 thousand people and reached 1.5 million people. The unemployment rate fell from 8.8 to 8.2%.

As a whole, the measure of unemployment in both regions increased during the coronavirus pandemic situation (16).

Average monthly wage of the employees in the analyzed regions

Data in **Figure 3** show differences in the wages in the analyzed regions (9).

The average nominal wage in the Košice region increased every year by 3.5 %. The dynamics of growth have slowed down, as in the first quarter of last year the growth of average gross earnings reached 6.2%. After taking into account the inflation rate, the real wage in January to March rose by 2.5%. The seasonally adjusted average wage increased by 0.2% compared to the fourth quarter. Of the 19 monitored sectors of the economy, 13 recorded a year-on-year increase in the average wage, but six sectors showed a year-on-year decline in wages. Earnings in health care and social assistance increased rapidly (by 14.5%) and in real estate activities increased rapidly (by 10.4%) (12). Higher wage growth, when compared with the national average, was also recorded in construction, industrial production, water supply, as well as

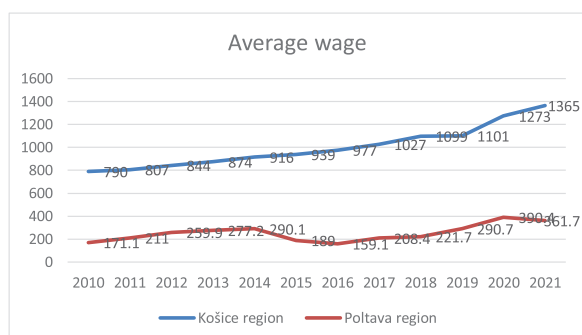


FIGURE 3 | Development of average monthly wage in €. Own processing according to Refs. (10, 12).

in information and communication. Of course, the largest decreases were in the supply of electricity and gas (by 4.3%) and in accommodation and catering services (by 3.2%).

The average salary in the Poltava region in February 2021 was 12,549 UAH, exceeding the value in January of this year by 1.7%. Compared to February 2020, it increased by 15.7%. In terms of euros, wages were 361.7 euros and in February 2020 they did not reach the same value (390.4 euros) due to the devaluation of the national currency. In February 2021, the average wage increased in most economic and industrial activities. During this period, wages increased, especially in the areas of temporary accommodation and boarding (by 18.7%), arts, sports, entertainment, recreation (by 13.9%), etc. (17). At the same time, wages in the areas of air transport (–8.8%), storage and ancillary activities in the area of transport (–1.8%) did not restore the level of February 2020. Wages of employees in certain sectors of the budget sector remain lower than the average in the economy:

in education—11,026 UAH (€ 324.29) (or 87.9% of the average in the economy) and

In the field of health care and social assistance—10,960 UAH (€322.35) (or 87.3% economic average).

The index of real wages in February in comparison with January 2021 was 100.7% and in comparison with February 2020 was 107.6%.

As for mutual cooperation, an example of cooperation for these regions could be the opening of an industrial park or a Slovak company in the territory of the Poltava region. The Poltava region has a huge raw material base for the production of iron metallurgy products. Because the ore is exported from the Poltava region and then back to Ukraine to buy products from this ore (metals, shovels for excavators and tractors, machines, and spare parts for them), some of these products could be immediately sold locally and exported to Europe and Asia. **Figure 4** illustrates mutual cooperation from the view of goods turnover between Slovakia and Ukraine, where we can see the stagnant trend in recent years.

Currently, due to the long-term coronavirus disease-19 (COVID-19) situation, the demand for digitization is increasing. A great advantage for the regions would be the creation of cooperation in the given segment as well. Ten companies from the top 100 outsourcing companies in the world are located in Ukraine, but not one of those companies

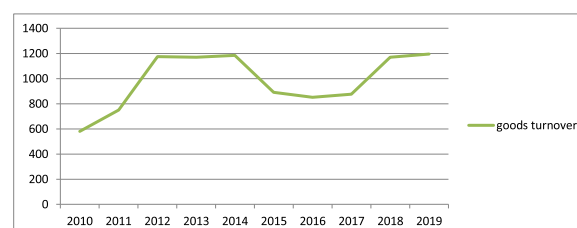


FIGURE 4 | Goods turnover between Ukraine and Slovakia (in millions of Euros).

is in the territory of the Poltava region. The Košice region could simply invest money in opening a similar center in the Poltava region, where people from similar businesses, which are concentrated in Kyiv and Lviv in most cases, will return. It would be advantageous for Košice, as the region would have solved all digital problems and at the same time receive constant income from the fulfillment of tasks on the global market.

Conclusion

The aim of the work was to find out the economic environment of the Košice region and the Poltava region, to find methods of cooperation and ways to improve. According to the results of the analysis, two different strategies should be used for the Košice region and the Poltava region. For the development of the Košice region an offensive strategy in the region can be used, overcoming the weaknesses of the weak. Reaching economic performance and increasing international competitiveness requires systemic conditions for steady growth in labor productivity, supported by qualitative changes and improving business performance (18). The goal should be to seek the greatest possible support for the good functioning of the regional market, respect for the principle of economic freedom and personal responsibility, clear ownership relations, etc. Access to education is an essential precondition. One of the important assumptions is that there is a stable financial market, especially the construction of the capital market. To ensure long-term competitiveness, it is also necessary to create conditions for the development of tourism and other new services, support changes in the sectoral structure, support greater diversification of economic activities, especially long-lagging regions, and more intensive use of internal potential. An important assumption is the improvement of the accessibility of transport within subregions and microregions. We've looked at it for 10 to 20 years to better understand trends. We found that the Košice region has a low export performance, but the Poltava region also depends on exports. We also found that young people are leaving every region, which is one of the biggest risks—brain drain.

Author contributions

ĽG: conceptualization, formal analysis, and supervision. AS: methodology. KČ: validation, resources, writing—original draft preparation, visualization, and project administration. ĽG and AS: investigation. KČ and ĽG: data curation. All authors contributed to the article and approved the submitted version.

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Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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