

Selected Aspects of Internationalization in the Liberec Region and the Free State of Saxony

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Abstract: Internationalization is a widely discussed topic analysed from various points of view. In our paper, we have decided to measure this trend in two border regions in former Eastern Germany and in Czechia, namely in Saxony and the Liberec region in the time period 2013-2020. Both areas belonged to the Eastern bloc before 1990. Saxony experienced a rapid reunification process within the early 1990s and Czechia a transformation process completed in 2004 by the EU accession.

In our paper, we have decided to test three hypotheses. First, we tested if Saxony is more internationalized in terms of human resources (1) and secondly with regard to export output (2). Then, we conducted the same tests on the Liberec region. Our assumption was that, due to the rapid reunification and favourable geographic proximity of lucrative Western markets, the position of Saxony would be more advanced.

Finally, we tested the hypothesis (3) that the rising number of foreign workers contribute to the rising export volumes. We correlated the indicators of employed foreigners and exports per head in both regions from 2013 to 2020.

Keywords: EU, export, Czech Republic, human resources, internationalization, Saxony.

INTRODUCTION

Since the 1990s, Internationalization has been a widely discussed issue. In this paper, we have decided to focus on this trend in two border regions: former Eastern Germany and Czechia, namely in Saxony and the Liberec region. After 1990, both areas experienced rapid economic changes from centrally planned economies via reunification (Saxony) and transformation (the Liberec region). These changes had a strong impact on the newly established private sector (EBRD, 1996, WB, 2002). The areas are located on either side of the same German – Czech border. Border areas in general face more challenges compared to central areas characterized, e.g., by the lower economic output, less favourable educational structure and less developed infrastructure (e.g., Gerling, Schmidt, 1998, Topaloglou *et al.* 2011, Sohn, 2017).

Internationalization followed the rapid changes of the early 1990s due to the relative closeness of the centrally planned economies in the previous period. New links were made abroad by using the recently acquired opportunities to export to these new territories and both regions experienced a larger influx of foreign labour, which had previously been virtually unheard of.

In this paper, we have decided to test three hypotheses. First, we will test if the German region,

Saxony is more internationalized in terms of human resources (1) and secondly, with regard to export output (2). We will then conduct the same tests on the Czech region of Liberec. Our assumption is that, due to the more favourable geographic proximity of lucrative Western markets, the position of Saxony is more advanced.

Finally, we will test the hypothesis (3) that the rising number of foreign workers contribute to the rising export volumes of both regions. We will correlate the indicators of employed foreigners and exports per head in both regions for the time period 2013-2020. We presume that the rising internationalization of human resources has a significant bearing on the internationalization of product, measured by export output per head. The aim of this paper is to establish which area is more internationalized after 30 years of a free market economy resulting from the monitored period 2013 - 2020.

MATERIAL AND METHODS

Internationalization or the process of international expansion started to be researched more extensively after 1990, when the scope of international activities of many enterprises grew significantly. Internationalization is defined by various authors. For example, Beamish (1990) describes it as “a process in which companies enhance awareness of the impact of international transactions on their future”. According to Welch and Loustarinen (1993), internationalization is a process of growing a company’s participation in international operations. Internationalization could also be divided

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into the stages or paths that an enterprise undergoes (e.g. Andersen 1993; Contractor *et al.*, 2002; Curci *et al.*, 2013).

There are several models demonstrating the internationalization process. Early on, the models were anchored especially by the well-known Uppsala model (Johanson and Wiedersheim, 1975) or the Stopford internationalization model (Stopford and Wells, 1973). Both of these models were developed during the origins of the international expansion of Western companies, when the national markets became too small for the growing appetite of companies searching for new outlets abroad. They described internationalization as a gradual process of enhancing a company's presence on the foreign market(s).

Several modern theories focused on the internationalization process after the bipolar division taking into account the globalization influx, growing dynamics of international trade in goods and rising international competitiveness (e.g. Porter, 1990; Andersen, 1993; Dunning, 1993 or Kaplan and Norton, 1996). As Andersen (1997) states: "*companies start to internationalize in the moment when they are certain about creating long-term advantage from their possessed comparative advantages*".

When focusing on internationalization, there are, in general, four areas to consider. On the microeconomic level, it is necessary to determine the enterprise's performance and on the macroeconomic level the economic growth. These areas are: product, process, finances and human resources (e.g. Porter, 1990; Andersen, 1993, Sullivan, 1994, Kaplan and Norton, 1996).

The most accessible area is product, which is usually the first area to be internationalized, mainly via direct export (Sullivan, 1994, Cassiman, Golovko, 2011). It is followed by process, which includes the setting up of branches, securing a presence in a foreign market, and human resources (Hendry, 1996, Brush, 2002), when the companies hire foreign staff to access more convenience to a particular market. All the areas are accompanied by finances (Smolarski, Cut, 2011, Kraus *et al.*, 2017) with the new necessity to finance the foreign branch(es) and workers.

Later, the fifth area of innovation was added (e.g. Cassiman, Martinez, 2007, Kafourous *et al.* 2008, Cassiman, Golovko, 2011 or Altomonte, 2013). Innovation provides the production of high value-added

output. In these days with rising pressure on high value-added production, the patent protection of products on the foreign markets may secure the return of the financial means invested into research.

Internationalization occurs on various levels, on the country, regional or company level. We can say that the internationalization of a country or region depends on the internationalization of companies operating in the given area. However, there are two strong visible internationalization trends that influence the overall form of the region's internationalization. Bannó *et al.* (2015) point to the essential role of incoming FDI in increasing the competitiveness of regions and their internationalization. Due to the high level of internationalization of emerging companies, the region and especially its resources become part of intra-regional trade but, at the same time, they go beyond the borders of the region in the framework of cross-border sharing of production, i.e., international fragmentation of production. Involvement in international production and distribution networks is, thus, the key to accelerating the economic development of the region. This process shows that vertical input-output linkages between local firms and multinational corporations are the most effective channels for, e.g., speeding up technology transfer (Lim and Kimura, 2010).

Nevertheless, an irreplaceable role is also played by "domestic" enterprises, especially SMEs as regards their export performance and their ability to succeed on regional and global markets. Zucchella *et al.* (2013) refer in this sense to two possible geographical paths of internationalization for small and medium-sized companies. De Martino *et al.* (2007) emphasize that the successful expansion and internationalization of a company can reduce its activities within its region as the local relationship becomes less significant.

From the above, it can be deduced that the internationalization of a region is pushed by the activity of SMEs. Firstly, it can be observed in the results of the internationalization of the product, i.e., the export of the region. Further, in the event that the FDIs enter the region, they affect several areas of the region's internationalization. A strong influence is especially evident in the internationalization of the region's human resources (Banno *et al.*, 2015 or Iammarino, McCann, 2013).

Given the fact that private entrepreneurship did not exist in either of the countries analyzed for several

decades before 1990, the literature focusing on the internationalization of companies in the regions of East Germany and Czechia is relatively recent. In the 1990s, the private sector in both countries was (re)established and was, in general, not able to expand on foreign markets. International ties were mainly forged from abroad, especially via FDI flow targeting privatized state enterprises, mainly in the manufacturing industries (EBRD, 1996, WB, 2000). This trend was especially visible, e.g., in the automotive industry (e.g. Pavlínek, Ženka, 2011 or Pavlínek, 2012) and the research focused prevalingly on large companies.

The matters of domestic conditions and the institutional environment were discussed in relationship with foreign expansion of newly established SMEs, especially due to the new internal (institutional network) situations brought by the transformation process. Smallbone *et al.* (1998) compared the SME data from Poland, Bulgaria and the Baltic States with results from the UK and Greece. He concluded that the SMEs would improve their ability to increase foreign market sales given that assistance with export promotion and a reduction in the level of domestic taxation were provided.

The crucial role of the domestic institutional environment is also confirmed by Shirokova and Tsukanova (2013) who emphasize that the foreign expansion of companies from transition countries is influenced by the impact of tax rates, tax administration and corruption in the internationalization process. Furthermore, the instability of the domestic environment, especially the constantly changing institutional framework as a factor in reducing international expansion, is pointed out by Stoian *et al.* (2016).

An enhancing factor of the internationalization after 2000 may be return migration. The migrant workers with experience from Western countries come back to domestic states and with their know-how aid in the success on Western markets (Marwuez, 2010, Gittins, Fink, 2015). According to Sekliuckiene (2017), the most essential factors for internationalization, which are driven by domestic market specifics, are entrepreneurial.

When contemplating the internationalization of the new federal states of Germany (East), there were massive changes to consider in the previous thirty years that strongly influenced domestic businesses. The 1990s were, similarly to other states of the former Eastern bloc, a period of transition and changes

enhanced by the reunification process. As Best (2005) explains: “*nowhere else was the transfer of institutions of market economy, the elimination of the old regime, and the inclusion into the frameworks of supra national markets so sudden and so radical than in the former GDR*”. As he further concludes, it was a time when cadres changed into managers, especially in the manufacturing industry.

As Martens (2008) further concluded, about a third of the industrial companies in the East are still owned or controlled by West Germans or foreigners. According to Pistrui *et al.* (2004), former East German regions must rely on entrepreneurship and new venture creation to rebuild this region of Germany, in contrast to the West with established family-led firms. Based on these facts, there are differences between East and West export patterns. The export from the old federal states (West) is technologically driven targeting high quality markets. The new federal states (East) export mainly to price-sensitive markets (Kirchbach, Smiedeberg, 2006).

On the other hand, there was a positive impact of reunification in the form of a stable legal environment, institutions and West German know-how, which gave the East German regions a competitive advantage over their post-communist counterparts (EBRD, 1998, WB, 2000).

The scope of the research pertaining to the internationalization of East German companies is relatively limited and focuses mainly on differences between the East and West German private sector (e.g. Fritsch, 2004, Welter, Kautonen, 2005 or Krkoska, Robeck, 2008).

In her effort to focus on the internationalization of East Germany more closely, Leprajs (2009) analysed the differences between industrial and service SMEs in former Eastern Germany. She studied 3900 firms and discovered that the manufacturing firms tend to export more than service companies. Further, she concluded that size, having major competitors located abroad, and introducing a novel product are all significantly positively related to the internationalization of the private sector, regardless of industry affiliation. In her further research, Leprajs (2010) concluded that size and innovative capacity have a significant influence on international involvement, as measured by exports and relocating production or other operations abroad.

In the case of Czechia, the modern development of the private sector was analysed by Bohatá, Mládek

(1999) who pointed out that the roots of Czech internationalization lie in the pre-war Czechoslovak industrial sector. These roots were completely liquidated during the communist era, especially during the 1950s through nationalization and the confiscation of property. After the 1990s, the private sector was revived via restitution and small privatization programs. As they concluded, the largest obstacle for the newly established entrepreneurs in the 1990s was the poorly functioning state. In this turbulent decade, internationalization was not, therefore, an issue for the private enterprises.

Other authors focusing on internationalization analysed the limits of the Uppsala model application (Kubičková, 2013), the risk factors of internationalizing the SMEs (Koubíckova, Toulová, 2013), or the barriers and entry strategies (Toulova *et al.*, 2015). Unlike Eastern Germany, which underwent so called “*invisible enlargement*”, Czech businesses experienced further change in the business environment after the EU accession in 2004. The importance of EU accession for internationalization is further substantiated by Pollard, Jemnitz (2006) or Hunya, Richter (2011).

To summarize, we can see that the former Eastern bloc experienced very turbulent development in the 1990s, followed by a period of stabilization after 2000, with a growing appetite to expand and export. The domestic condition played an important role in entering foreign markets as well. After 2004, this step became smoother for Czech companies due to the EU accession.

When considering the link between the internationalization of human resources and product (export volumes), only some authors analysed the nexus. However, they mainly focused on the managerial level of human resources (e.g., Cieslik *et al.* 2010, D’Angelo, 2013 or Couto, Ferreira, 2017). Further, Brush *et al.* (2002) concluded that financial and social resources are more important than human resources; especially in the case of small companies.

Nevertheless, only a few papers researched this link in the European environment. First, Mitaritonna *et al.* (2016) explicitly confirmed the link between foreign workers, productivity and exports. Further, Marcall and Nedoncelle (2010) demonstrated that the presence of foreign workers has a positive impact on export volumes. They analysed French companies in the period 1998-2008 and concluded that a firm employing foreign-born workers exports 30% more in value than a

control firm. Currently, there is not any further research focusing on this particular relationship in the Czech or German environment.

In our paper, we focus on the area of the Free State of Saxony, one of the 16 federal states of Germany and the Liberec region, one of the 14 regions of Czechia. Both regions are located along the same state border and belonged to the Eastern bloc before 1990. Further, they share a relatively strong focus on industrial, particularly automotive production (especially the Chemnitz district in Saxony and the Liberec district in Czechia). However, the development in the 1990s differed (EBRD, 1996), as described above, which may have shaped the later development as well. The period observed: 2013 – 2020 started 20 years after the most turbulent changes.

The data were retrieved from the databases of the Czech Statistical Office (CZSO), German Statistical Office (DeStatis) and Eurostat. The internationalization was analysed in two areas, human resources (measured by employed foreigners/total workers) and internationalization of product (measured by export ratio per head to GDP per head). We applied labour market and international trade indicators.

We have decided to test the following hypotheses. First, we test the hypothesis that Saxony is more internationalized in terms of human resources, measured by the fraction of the foreign workforce to the total workforce ratio. This process is then repeated for the Liberec region. Similarly, the second hypothesis is that Saxony is more internationalized with regard to export output than the Liberec region.

We postulate that reunification combined with favourable geographic proximity of lucrative Western markets gave Saxony the advantage in the internationalization process.

Finally, we will focus on the hypothesis that the rising number of foreign workers contribute to the rising export volumes in both regions. We will correlate the indicators of employed foreigners and exports per head in both regions for the time period 2013-2020 with a time lag of 0 and 1 year in both regions. We assume that the rising internationalization of human resources has a significant bearing on the internationalization of product measured by export output per head.

Because these (Pearson) correlations will be calculated on a time series basis, the residuals will be examined in the following two essential procedures.

The Durbin-Watson D statistic and the serial correlation (correlation of adjacent residuals). The Durbin-Watson statistic is useful for evaluating the presence or absence of a serial correlation of residuals (i.e., whether or not residuals for adjacent cases are correlated, indicating that the observations or cases in the data file are not independent).

RESULTS AND DISCUSSION

First, we compare the selected regions – Saxony and the Liberec region. The data for the period from 2013 to 2020 are summarized in Table 1. First, we will compare the population data of the two regions. We should emphasize that the population of Germany as a whole is almost 84 million, while the Czech Republic has less than 11 million, i.e., about 13% of the population of Germany (DeStatis, 2022). Further, Saxony is the seventh largest federal state of Germany, whereas, the Liberec region is the second smallest region of Czechia.

We can see that the employment ratio developed in a relatively similar manner in both regions between 2013 and 2020. During the period observed, the employment rate grew by 7 percentage points. In 2020, about 46% of the Liberec region population was employed, compared to 40% of Saxons. This also explains the slightly higher unemployment rate in Saxony (6.1% in 2020) compared to the Liberec region (4.2% on 2020).

Based on the data in Table 2, we can see that the percentage of foreigners per capita in both regions stabilized at the same number in 2020 - five percent. When we focus on the development of the foreign

workforce, we can see that its role grew in both regions.

The data shows a seemingly sharp increase in the number of employed foreigners in Saxony between 2013 and 2020; the figures more than tripled. However, in terms of ratio indicators, it is a similar development in both regions. Nevertheless, the proportion of employed foreigners to the total number of foreigners are different; the gap between total foreigners and employed foreigners is substantially larger in Saxony.

We consider the rapid growth of the foreign population in Saxony to be a compensation effect for the outflow of population in the 1990s and 2000s. This outflow occurred mainly among the younger (productive) cohorts. It was an accompanying effect of the unification process. The outflow from the new federal states to the old federal states was caused by the wage gaps and rising unemployment in the East. To demonstrate the intensity, we point out that in 1990 Saxony had 4.7 million inhabitants, compared to 4.0 million in 2020, including the above mentioned 220 thousand foreigners (Statistik Sachsen, 2022). Currently, Poles and Czech workers play a huge role on the Saxonian labour market, about 23% of foreign workers come from Poland and 13% from Czechia (IFO, 2020).

In the Liberec region, the number of working foreigners nearly matched the total number of foreigners in 2020. A large group of commuters coming from Poland brought about the closeness of these figures. These commuters are employed especially in the automotive sector of the Liberec district. In 2020, more than 3700 Polish workers, about 18% of the total

Table 1: Population and Employment in Saxony and Liberec Region

Population	2013	2014	2015	2016	2017	2018	2019	2020
Total population of Liberec region	438 609	438 851	439 639	440 636	441 300	442 356	443 690	442 476
Total population of Saxony	4046385	4055274	4084851	4081783	4081308	4077937	4071971	4063778
Ratio between regions	11%	11%	11%	11%	11%	11%	11%	11%
Total employment in Liberec region	187 600	195 200	197 400	201 000	195 700	198 800	199 900	203 500
Total employment in Saxony	1496004	1515163	1542648	1568849	1600538	1621493	1629804	1628886
Ratio employment/population in region Liberec	43%	44%	45%	46%	44%	45%	45%	46%
Ratio employment/population in Saxony	37%	37%	38%	38%	39%	40%	40%	40%

In: own elaboration based on Destatis (2022), CZSO (2022).

Table 2: Internationalization of Human Resources in Saxony and Liberec Region

Foreign workforce	2013	2014	2015	2016	2017	2018	2019	2020
Foreigners in Liberec region in total	16819	17048	17894	18705	19790	21 364	22 601	22 716
Ratio foreigners/ total population in Liberec region	4%	4%	4%	4%	4%	5%	5%	5%
Foreigners in Saxony in total	106663	123648	164230	183200	195375	207515	215715	222780
Ratio foreigners/ total population in Saxony	3%	3%	4%	4%	5%	5%	5%	5%
Employed foreigners in Liberec region	NA	NA	11 165	12 556	15 278	17 495	19 059	20 853
Employed foreigners in Saxony	28 010	34 654	43 930	53 816	66 614	79 094	88 954	96 553
Ratio employed foreigners/all foreigners in Liberec region	NA	NA	62%	67%	77%	82%	84%	92%
Ratio employed foreigners/all foreigners in Saxony	26%	28%	27%	29%	34%	38%	41%	43%
Ratio employed foreigners / total employment Liberec, %	NA	NA	5.7%	6.2%	7.8%	8.8%	9.5%	10.2%
Ratio employed foreigners / total employment Saxony, %	1.9%	2.3%	2.8%	3.4%	4.2%	4.9%	5.5%	5.9%

In: own elaboration based on Destatis (2022), CZSO (2022).

foreign workforce, were employed in the Liberec region. Due to the geographic proximity, these workers can commute on daily basis. Poles represent the third largest community of foreign workers in the Liberec region following Ukrainians (6700) and Slovaks (4000). The two latter nationalities are settled in the Czech Republic (CZSO, 2021).

Further, it is visible that Liberec is a target region for individual workers, while Saxony lures more foreigners with families. This explains the difference between the total foreign population and employed foreigners. Finally, we can conclude that the internationalization of

human resources on the labor market is twice as strong in Liberec region. The foreign workforce made up about 10% of the total employed in 2020, in Saxony it was only 6%.

The internationalization of the product is monitored mainly via the exports of a particular geographic area. In aggregated form, the share of exports in GDP is one of the quantitative indicators of economic openness (e.g. Krugman *et al.*, 2015).

Further, we will monitor the openness of the economy of both monitored regions. Unfortunately, in

Table 3: GDP Development in Saxony and Liberec Region, 2013-2020

GDP	2013	2014	2015	2016	2017	2018	2019	2020
Gross domestic product per head in EUR Czechia	15160	15480	16290	16670	17490	17990	18460	17400
Gross domestic product per head in EUR Germany	33330	33920	34130	34610	35410	35650	35950	35480
Ratio Czechia/Germany	45%	46%	48%	48%	49%	50%	51%	49%
Gross domestic product per head in EUR Liberec region	11623	11581	12329	12826	14031	15098	16062	15333
Gross domestic product per head in EUR Saxony	25724	26989	27908	28711	29852	30711	32029	31363
Ratio Liberec region/Saxony	45%	43%	44%	45%	47%	49%	50%	49%
Ratio Saxony versus Germany	77%	80%	82%	83%	84%	86%	89%	88%
Ratio Liberec region versus Czechia	77%	75%	76%	77%	80%	84%	87%	88%

In: own elaboration based on DeStatis (2022), CZSO (2022), Eurostat (2022).

Table 4: Export Performance Per Head in Saxony and Liberec Region

Year	2013	2014	2015	2016	2017	2018	2019	2020
Exports per head in millions of EUR Saxony	7767	8854	9388	8982	10109	9928	9885	9075
Ratio Export Saxony per head /GDP Saxony per head	30%	33%	34%	31%	34%	32%	31%	29%
Exports per head in millions of EUR Liberec region	5883	6832	7127	6885	7952	7935	7845	7212
Ratio Export Liberec region per head/GDP Liberec region per head	51%	59%	58%	54%	57%	53%	49%	47%

In: own elaboration based on DeStatis (2022), CZSO (2022).

the Liberec region, statistical monitoring of the region's exports stopped in 2011. We have, therefore, decided to substitute it with the GDP ratio indicator (GDP per capita, which is a more suitable indicator for monitoring internationalization). Table 3 shows the GDP ratio of the Czech Republic and Germany.

The ratio of regional GDP per head versus the country proportion are unusually similar in both regions. The differences between the regions and the countries follows the same trend during the period observed. Both regions in 2013 - 2020 improved their GDP per head from 77% to 88% of the country level. This indicates the rising economic level of both regions within their economies. However, the openness of the Saxony region is still not very high. As Table 4 shows, the export ratio per head accounted for only 29% of the GDP per head in Saxony in 2020.

Further, the ratio slightly declined after 2015. In the case of the Liberec region, the trend was declining as well. Nevertheless, the ratio was still about 18 percentage points higher than in the case of Saxony. From this point of view, the Liberec region is more open than Saxony, but less open than the Czech economy as a whole. Further, we can state that the internationalization of the product is more substantial in the Liberec region than in Saxony.

Both conclusions are relatively surprising and indicate that Saxony did not use the competitive advantage of reunification accompanied by its easier access to Western markets. We presume that the development of unemployment in the 1990s still impacts the current economic performance of Saxony. Unemployment was up to 15% in the 1990s and declined below 10% for the first time in 2013 (BUGA, 2022). This factor evidently influences the export performance of this federal state, and deserves more rigorous research.

As we can see in Table 4, export per head in Saxony was about 9 000 euros in 2020, compared to 7 200 euros in the Liberec region, which signifies the larger role of export in the Liberec region. Nevertheless, the GDP per head in the Liberec region is about 50% of the amount in Saxony. This gap also explains the appeal of the Saxon labour market among the Czech or Polish workers mentioned above.

Finally, we will focus on the hypothesis that the rising number of foreign workers contribute to the rising export volumes. We will correlate the indicators of employed foreigners and exports per head in both regions for the time period 2013-2020 with a 0- and 1-year time lag.

Table 5: Correlation Results

Indicator	Time lag	
Foreign workers - export volumes	0 Y	1 Y
Saxony	0,764495675	0,49265601
Liberec region	0,439890208	0,16026564
Model	Durbin-Watson D	
Saxony	1,807284	
Liberec region	1,703490	
	Serial	
Saxony	-0,266183	
Liberec region	-0,032818	

Table 5 shows the significant correlation for Saxony export volumes and Saxony foreign workers (indicated in red as 0.05 significance). This correlation is quite strong and positive demonstrating that foreign employees positively contribute to the export volumes of the neighbouring German region. The revision of residuals proved that there is no serial autocorrelation

because the Durbin-Watson D statistic in all models is in the safe zone (1.5 – 2.5) and the serial autocorrelation coefficient is close to zero. Also, the one-year time lag results in less significant outcomes than the zero-year time lag. These values comply with the basic idea; however, they are not significant, probably due to the lower sample size.

CONCLUSION

Internationalization is a widely discussed topic that is analysed from various points of view. In our paper, we have decided to focus on the internationalization of two border regions in former Eastern Germany and Czechia, namely Saxony and the Liberec region from 2013 to 2020. Both areas belonged to the Eastern bloc before 1990. However, Saxony experienced a rapid reunification process within the early 1990s and Czechia a transformation process completed in 2004 by the EU accession.

In our paper, we have decided to test two hypotheses. First, we tested if Saxony is more internationalized in terms of human resources (1) and secondly, with regard to export output (2) then we conducted the same tests on the Liberec region. Our assumption was that, due to the rapid reunification and favourable geographic proximity of lucrative Western markets, the position of Saxony would be more advanced. Surprisingly, neither of the hypotheses were verified. In the Liberec region, about 10% of the workforce were foreigners, compared to about 6% in Saxony in 2020. Further, about 47% of GDP per head was made by export in the Liberec region, compared to 29% in Saxony in 2020.

From our analysis, it is evident that the competitive advantage of Saxony in the form of a stable institutional environment, a functioning legal frame and easy access to the German market did not compensate for the problems of the labour market, especially outflow of labour force in the 1990s and rising unemployment. We presume that having lost almost 20% of its population after 1990 plays a crucial role in Saxony's current lower level of internationalization. Nevertheless, this assumption deserves further research.

Finally, we have tested the hypothesis that the rising number of foreign workers contribute to the rising export volumes. We correlated the indicators of employed foreigners and exports per head in both regions from 2013 to 2020. In both regions, the nexus between the number of foreign workers and export

volumes per head correlated. In Saxony, the correlation was verified in terms of the 0-year time lag; in Liberec the correlation was not as strong. We can, therefore, verify the hypothesis for Saxony and confirm the importance of foreign human resources and for internationalization in this region.

FUNDING

The work described in this document has been conducted as part of a project "ProsperAMnet", which is supported by the Interreg CENTRAL EUROPE Programme funded under the European Regional Development Fund

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Received on 20-04-2022

Accepted on 19-05-2023

Published on 14-07-2023

<https://doi.org/10.6000/1929-7092.2023.12.02>

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