

Zoltán Gál, Robert Marciniak

The Human Factor in the Hungarian Business Services Sector Development in Comparison with Regional Competitors

Abstract

Objective: The Hungarian Business Services Sector (BSS) is an important part of the CEE business services market. As this market is not homogenous, Hungary is in several aspects different from the other regional countries. The study aims to examine the market position of the Hungarian Business Services Centres (BSC) in the Central and Eastern European region with special attention paid to the available human resources and the comparison of its advantages and disadvantages with that of Poland, the Czech Republic, Romania, and Bulgaria as the main competitors.

Research Design & Methods: The research is based on literature review and statistical comparison made using databases of international and national business services associations and national statistical organisations.

Findings: First, the study explores the literature on the development of the global, regional, and Hungarian BSS. Then, through a comparative statistical analysis, it presents the situation of the Hungarian market within the CEE region. The development of the region's business services sectors was unbroken between 2015 and 2020, but there was a downward trend as to growth in most countries in terms of the number of employees.

Implications/Recommendations: The study underlines the significance of intrinsic labour market and spatial distribution factors in the competition for business services investments, as well as it reveals how these factors influence the development paths of the countries under scrutiny.

Contribution/Value Added: Different growth trajectories can be explained by different quantitative, qualitative, and spatial distributions of human resources. However, the study not only sheds light on regional disparities, but also helps to overcome inequalities, thereby recommending more effective investment promotion and human resource development policies.

Keywords: regional development, business services sector, outsourcing, shared services, Hungary, Central and Eastern European region

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Zoltán Gál (*corresponding author*) – Full Professor, Centre for Economic and Regional Studies, Institute for Regional Studies – 22 Papnövelde, Pécs, 7621 Hungary; Centre for Economic and Regional Studies, Institute for Regional Studies; University of Pécs, Faculty of Economics & Business; 80 Rákóczi Pécs, 7621 Hungary; e-mail: galz@ktk.pte.hu; ORCID: 0000-0002-7274-9163. **Robert Marciniak** – Associate Professor, Department of Management Control, Institute of Management, Fővám tér 8., Budapest, 1093 Hungary; e-mail: robert.marciniak@uni-corvinus.hu; ORCID: 0000-0002-8902-3502.

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Introduction

The novelty of the topic

The service sector plays a more and more essential role in the transition economies of Central and Eastern Europe (CEE), and it has been an important host to inward foreign direct investments (FDIs) in Visegrad countries (the Czech Republic, Hungary, Poland, and Slovakia). The significance of the research is given by the fact that, as in many countries, the development of the business services sector (BSS) has played a prominent role also in Hungary since the late 1990s (Gál, 2014; Marciniak, 2014a). The growth in business services has been of utmost significance in a massive relocation of services functions of western multinational corporations (MNCs), the purpose of which is to meet the cost-efficiency and provide both captive and outsourcing services cross-border from lower-cost CEE destinations.

Over the past two decades, the sector has been able to grow steadily at a rate of more than 10% per year without receiving much attention from economic policymakers for a long time. It was the fastest-growing segment not only within the services sector, but also in the whole economy. The majority of FDIs took place here in the period between 2005 and 2010, competing with the highlighted and supported automotive industry, ensuring the first or second ranking place for the sector. As a result of this development, in 2020, more than 210 services centres operated with more than 75,000 employees in business services centres in Hungary, which makes up 1.6% of all employees and 4.4% of university graduated employees (Marciniak, Baksa, & Nagy, 2020). The wages of those working in services centres are significantly higher compared to the average income in Hungary. In 2019, the average gross monthly earnings of employees in the Hungarian BSS were more than one and a half times the national average; 4.4% of the net revenue of the national economy and 4.7% of the value-added were provided by

services centres and enterprises that had a services centre to support their main activity (Marciniak, Baksa, & Nagy, 2020).

The former Hungarian governments have also recognised the importance of the sector, and since the 2010s, under the relevant directives of the European Union, the subsequent governments have introduced and continuously developed a targeted investment promotion policy to attract as many investments as possible in the sector. These government subsidies have certainly contributed to the further sustainable growth of the sector, as several studies have shown that almost half of the larger business services centres in Hungary have benefited from such subsidies (Gál & Marciniak, 2021).

Based on the sectoral classification of the business services sector, operative business services were the first to appear in Hungary (e.g. administrative services, accounting services, temporary staffing services, facility management, cleaning services); they were mainly leveraged the cheap and abundantly available labour driven by the widespread of the outsourcing model. Later on, business services in the knowledge-intensive category were introduced, such as financial, legal services, software development, market research, and data analysis. The sector is now clearly dominated by these activities (Wood, 2020). The increase in the number of shared services centres with higher added value activities (compared to outsourcing) contributes to this significantly. This growth, in turn, has increased the demand for highly-skilled, graduated labour. The digitalisation and the COVID-19 pandemic have both highlighted the significance of the adequate labour factor in the CEE economies (Dudé et al., 2021; Kuzior & Sobotka, 2019). Among the CEE countries, there were different development trajectories; however, the literature on this is incomplete and fails to analyse them thoroughly, and so the real explanation remains in the background.

Contribution to the literature

Although the Hungarian business services market was one of the very first sectors in the region fifteen years ago, several regional countries came to overtake it. This study aimed to reveal the reasons for which these competitors could grow faster, and why Hungary stabilised its lagging position. The differences in progress cannot be explained simply by labour shortages, which are typical of the region as a whole, with unemployment typically fluctuating between 2% and 7% in these countries. The Czech and Polish figures are the lowest values in the European Union in 2021, with the Czech Republic at 2.4% and Poland at 3.1% (Eurostat, 2021c). This research paper intended to reveal the most significant reasons behind the different development paths of CEE countries, thus filling the gap in the literature.

The research questions and method

The study focuses mainly on the examination of human resources as a primary deployment factor that influences the business services centre market in the region. The main research questions were also formed in this field. What are those factors that influence the growth differences of CEE countries and how can Hungary regain growth momentum again? The research is based on literature analysis and statistical comparison using databases of international and national business services associations as well as national statistical organisations.

The paper is structured as follows. The section on the theory and literature review is followed by the introduction of the main feature of the Hungarian global business sector when compared to its regional peers. The subsequent section presents the results of the human-resources characteristics of the sector. The last section summarises the main findings and concludes the paper with policy recommendations.

Literature review

A key feature of the second global shift is the relocation of a range of service functions from the USA and Europe to low-cost developing countries. The second global shift is part of a worldwide structural shift towards service-based foreign direct investments (FDIs), and also a new direction of managerial and localisation-related strategy of corporations (Blinder, 2006; Bryson, 2007; Hardy, 2006). Supporting this, “fragmentation” and “trade-in task” theorems developed by Jones and Kierzkowski (1990) and Grossman and Rossi-Hansberg (2008) examine the new role of services in international trade. Advances in this process have made it easier for companies to disaggregate their value chains around the globe – all the while maintaining management control over them – or to disperse service production among numerous supplier companies, even those based in distant locations.

The rapid surge in globalisation – and the opening up of formerly isolated regions such as Eastern Europe, Russia, and China to global trade – has substantially boosted task trade and service-related cross-border investments. Many Eastern European countries, invigorated by the EU enlargement, became important locations for offshoring services.

The relocation of services also reflects the types and impacts of FDIs on business services within the Global Production Network (Fernandez-stark et al., 2011). A bulk of research examines offshoring as a part of a worldwide structural shift towards services-based FDIs (Bevan & Estrin, 2004; Bryson, 2007; Fernandez-stark et al., 2011; Grote & Täube, 2006). Due to the problems with collecting data on business-services investments in recent studies, the statistics used herein have been supplemented with qualitative research (Capik & Drahokoupil, 2011; Fifekova & Hardy, 2010; Hardy, 2006; Hardy et al., 2011).

FDIs are of the outstanding importance for the Central and Eastern European (CEE) countries, and among them the Visegrad economies. FDIs

played an important role in the transition processes of these countries (Benacek & Holland, 2000; Kalotay, 2010; Meyer & Peng, 2005). Because of the significant inflow of FDIs, by the end of the 1990s, foreign ownership had become dominant not only in the key manufacturing, but also in service industries of the economies in transition, and among them in the Visegrad countries (Piazolo et al., 2001).

The impact of FDIs on the host economy is widely analysed. In theory, companies with foreign participation can affect the economic performance of the host country mostly in a positive way (Blomstrom & Kokko, 1997). However, for the time being, empirical evidence is inconclusive and the negative 'backwash effects' related to FDIs are increasing. For example, Görg and Greenway (2001) overviewed 30 empirical surveys on the growth effects of FDIs in various countries and they found that positive and negative impacts usually affect the host economies simultaneously. The interference of these two impacts can eliminate measurable positive effects. Majcen, Radosevic and Rojec (2003) drew a similar conclusion for transition economies. Iwasaki and Tokunaga's (2014) meta-analysis of the macroeconomic impacts of FDIs within transition economies found that its impact depends on study conditions (e.g. estimation period, data type, estimator, and the type of the FDI). Thus, one reason for not finding conclusive evidence on the positive impact of FDIs within the host transition economy at the aggregate level might be that studies usually do not distinguish between different types of FDIs (Beugelsdijk et al., 2008; Buckley et al., 2007).

An important distinction in the FDIs theory is between vertical and horizontal FDIs (Barba Navaretti & Venables, 2006; Helpman, 1984). Theoretical analyses show that these two types of FDIs differ not only in their motivations, but also in their impact on the host countries (Barba Navaretti & Venables, 2006; Blomstrom & Kokko, 1997). A horizontal FDI is usually more embedded in the host economy (Chen et al., 2004). Driffield and Love (2007) argue that spillover effects are

more substantial for horizontal FDIs. Beugelsdijk et al. (2008) showed the superior growth effect of horizontal FDIs over vertical FDIs in the host economy. Lankes and Venables (1996) found a useful distinction of vertical and horizontal FDIs within transition economies for identifying their most important motivating factors.

An important reason for the low number of studies separating the impact of horizontal and vertical FDIs on the host economies is that the distinction between these two types of FDIs is problematic (Markusen & Maskus, 2002); it is methodologically unresolved (Herger & McCorriston, 2016). Analyses keep distinguishing vertical and horizontal FDIs in cross-border acquisitions going down to the deal-level and the company-level (Herger & McCorriston, 2016). When the company-level data is not available, usually export per sales ratios are used as proxies¹. Gál (2014) uses services to export data adopted from the Balance of Payments statistics in order to support the assumption that an expanding export in other business and ICTs-related services have been associated with the relocation of services centres created by FDIs into the six new member states. This provides a good approximation to identify those sections of service trade which are considered to be offshorable. This analysis helps in determining the horizontal and vertical nature of the analysed industries.

The analysis of the impact of FDIs-related services on the host economy is relatively scarce in the case of the Visegrad countries. Fifekova and Hardy (2010) and Myszkowska (2014) documented export growth in business services and ICTs-related services, associating these with the significant amount of FDIs' inflow in the examined service industries. Melikhova, Bazó, Holubcova and

¹ Other approaches rely on industry-level characteristics – e.g. in Görg, Mühlén and Nunnenkamp (2009), the horizontal-vertical distinction is made on patterns of bilateral trade between Germany and the Czech Republic, using the Revealed Comparative Advantages (RCA) of the given industry. Where the destination country has a positive RCA, vertical FDI is assumed.

Camacho (2015) demonstrated the increasing role of business services in the foreign trade of Visegrad countries. Micek, Działek and Górecki (2011) analysed the local economic impact of foreign business services centres in Kraków. They found that the positive impacts are much more modest than those indicated by politicians, lobbying groups, and companies. According to the results of the research by Capik and Drahekoupil (2011), business-services FDI had a very limited impact on the development of the knowledge economy and on the increasing level of innovation in the four Visegrad countries.

Furthermore, also the distinction between horizontal and vertical FDI in services is quite rare in the empirical analyses (Sass & Fifekova, 2011). Based on in-company interviews, Hardy et al. (2011) compared the impact of horizontal and vertical business services in three Visegrad countries: the Czech Republic, Hungary, and Slovakia. The most salient static impacts of these FDI are on the labour market, where horizontal investments provide fewer but more skilled jobs than vertical investments. Dynamic effects (such as forward and backward linkages, knowledge-human capital) were contradictory in that although learning and spillover effects were modest, vertical investments demonstrated the propensity to move up the value chain. Strategic coupling with local actors involved the institution's bending, enhancement, or harnessing in changing the spaces of production. Thus, the various impacts of vertical and horizontal FDI-related services in the case of former transition economies have not been analysed yet through the econometric analysis of the available data.

Sass, Gál and Juhász (2018) examine four service industries that have a significant share in the FDI's stock of the Visegrad countries, and categorise these four service industries as vertical, horizontal, and "confluent" (i.e. containing both vertical and horizontal elements). Besides looking into export, the authors examined the impact of vertical and horizontal FDI on employment in the four Visegrad countries. They showed that the impacts on exporting and on creating

employment are different for vertical and horizontal service-industries FDI. As far as the impact on employment is concerned, in terms of the number of jobs created, we expect that vertical FDI have the most significant effect, because they most intensively use the factor which is abundantly – and relatively cheaply – available in the host economy, namely skilled and semi-skilled labour (Hardy et al., 2011; Micek et al., 2011). This pattern is followed in magnitude by confluent FDI's impact on employment (because of their vertical elements), and then by horizontal FDI's impact. The export-generating impact and the employment impact were both evident in the vertical industries. However, the employment impacts tend to be less intense or significant in confluent FDI, and hardly perceptible in the horizontal financial service industries. The analysis of employment was problematic due to the availability of data at a higher level of aggregation. In the real-estate and (the predominantly vertical) business services industry, a significant positive correlation was detected, similarly to the horizontal financial and insurance services, while stronger impacts were found in the vertical case rather than horizontally. However, the crisis terminated the significance of the employment impact (Berczyńska et al., 2021). The confluent (horizontal and vertical) nature of computer activities could not have been proven.

Gál and Marciniak's (2020) recent study discusses the evolution of the Budapest-centred Hungarian business services industry. Their paper analyses the major location-related factors of the Budapest-centred Global Business Services (GBS) sector in Hungary, as well as the motives for the belated decentralisation. New trends – generated by the upgrading towards higher value-added services and digitalisation – were also discussed.

Despite the automation and robotisation trends present due to the digitalisation of service processes, the business services sector is still a highly labour-intensive segment of the separate economies. In the last two decades, a continuous replacement has taken place in the service portfolio of business

services centres, resulting in a more complex and diverse knowledge-based profile. It transformed the role and judgement of these services centres in the internal value-chain of organisations. This quality change in the services needs more trained and higher-skilled employees, which raised the significance of talent attraction, engagement, and retention at all levels of these organisations. In addition to this upgrading of services provision, in the Visegrad countries, a young, trained workforce is employed in those services centres that are in short supply. Moreover, this generation constantly seeks new challenges and frequently experiences changes in jobs, thereby raising the attrition rates and challenging the internal or external recruiters. All these factors influence a riskier operation and increase the importance of human resources in the sector development (Fries & Noldus, 2016; Marciniak, Baksa, & Nagy, 2020; Marciniak, Moricz, & Baksa, 2020; Rothwell & Herber, 2011).

Responding to the sector's trends and HR challenges, managers and human-resources experts are striving to find proper solutions such as quicker and more conscious recruitment and selection, well-communicated employer branding actions to maintain the commitment, identifying more transparent and attractive career paths in the organisation, upskilling the employees to work with new digital technologies, or finding and integrating new segments of the human-resources market with retraining. Despite the complexity of these several motives, our hypothesis is as follows: *because of the high human intensity of the business services sector, the key competitive factor influencing FDI and the growth paths in this sector continues to be human resources.*

Research methodology

The study first explores the literature on the formation and development of the regional and Hungarian business services sector, and identifies the most important factors that have led to the fastest economic growth in the region's business services sector in the last two decades. Among

the analysed factors, the characteristics of human resources exceed the other investment factors and determine the differences within the region. These factors are the following: the different sizes of the countries' population and the proportion of capitals in the total population, the number of advanced cities in the countryside, the number of trained workforces (especially in some fields of the economy), the foreign-language proficiency of the workforce. As there is no database based on a unified method for examining the region's business services sector, this study uses statistics from various professional organisations for the purpose of presenting the regional position of the Hungarian market by simple statistical analysis. In addition to business databases, the European Union's data, as well as national databases (Poland, Romania, the Czech Republic, Bulgaria, and Hungary), were used in order to examine the business services market in the region and to explore regional differences in human resources.

Results and discussion

The size of the Hungarian Business Services Centre Market in the CEE region

The development of a given market alone is difficult to measure objectively, which is why in order to realistically evaluate the growth and opportunities of the Hungarian business services centre market, it is important to examine it taking into account other markets in the region.

There is a lack of a sufficient and comprehensive picture of the real size and growth of the business services sector in the Central and Eastern European region. Typically, market research conducted by professional organisations in each country provides an insight into a country's market. According to the Corvinus University of Budapest and the Hungarian Service and Outsourcing Association's (HOA) 2020 autumn research, the five most important markets in the region include Poland, Romania, the Czech Republic, Hungary, and Bulgaria (Marciniak, Baksa, & Nagy,

Table 1. The number and employment of Business Services Centres in some CEE countries

	Poland	Romania	Hungary	the Czech Republic	Bulgaria
Number of BSCs (2020)	1500	280	205	310	510
Employment of BSCs (in thousands) (2020)	330	131	74	112	72

Source: developed by the authors based on Marciniak, Baksa, & Nagy, 2020.

2020). Other important markets in terms of size are Ukraine, Lithuania, Slovakia, Estonia, Latvia, Serbia, Bosnia and Herzegovina, and Belarus. Poland stands out in the region, which is by far the most important market in terms of both the number of service organisations and the number of people employed in the sector (Table 1).

A comparison of the individual countries in the region is interesting, because although the investment benefits of the countries – such as the availability of a well-trained and relatively cheap workforce, advanced service culture and infrastructure, or linguistic diversity – are more or less uniform, there is already competition for new investments between the countries of the region. Other countries can learn and develop from the individual countries' incentives and actions, or their environmental conditions.

The regional position of the Hungarian Business Services Centre Market

A relatively objective picture can be provided by examining the service indices of international investment companies; it will also reveal where Hungary is competing with the countries of the region (see Table 2).

In one of the most internationally-known service investment rankings prepared by Kearney, Hungary is ranked as the 31st, down from 2019, and it ranked 37th in 2021, with an increasing emphasis on digitalisation. Ranked as 12th, Hungary is ahead of this ranking when it comes to the CEE region, followed by Latvia (20th), and Lithuania (30th), in addition to the examined countries. Another international consulting company, Tholons, also ranked the regional countries in 2021. After a drop

Table 2. Regional positions of some CEE countries based on International Rankings

	Poland	Romania	Hungary	the Czech Republic	Bulgaria
Kearney's GLSI (2021)	14th	32th	37th	34th	17th
Tholons Global Innovation Index (2021)	14th	34th	37th	24th	41st
Ernst&Young's (EY) Europe Attractiveness Survey (2021)	6th	18th	20th	n/a	n/a
IBM Global Location Trends Report (2019) -Top-ranking destination countries by estimated jobs, per million inhabitants	19th	n/a	5th	14th	7th

Source: developed by the authors based on the following references: Dencik & Spee, 2019; Sethi et al., 2021; Teigland et al., 2021; Vashistha et al., 2021.

by 13 places, Hungary was 37th in its investment rankings, with Poland (14th), the Czech Republic (24th), Romania (34th), and Bulgaria (41st) also appeared in this ranking. In the Tholons index of large cities, Budapest ranked as the 31st with a significant rise, overtaken by Kraków (20th) and Prague (22nd), but followed by Warsaw (35th), Bucharest (64th), and Sofia (74th). The Ernst&Young's (EY) international investment company's European investment ranking lists the top 20 European countries based on international investment projects, with Hungary falling from the 13th place in 2020 to 20th place in 2021. In 2021, the Czech Republic and Bulgaria did not make it to this ranking. However, Serbia, being 17th in the ranking, is ahead of Hungary. In the list of jobs created by the IBM in the Global Location Trends Report 2019, Hungary ranked 5th, Lithuania was 4th, Bosnia and Herzegovina was placed 6th, Estonia ranked 9th, and Slovakia ranked 15th (Dencik & Spee, 2019; Sethi et al., 2021; Teigland et al., 2021; Vashistha et al., 2021).

The progress of the Hungarian Business Services Centre market in the CEE region

It is worth examining how much growth dynamics business services markets have had. However, comparing individual markets is problematic, because, for example, when determining the size of markets, the terminology and methodology behind each market research are not uniform, i.e. each country considers different organisations as business service organisations. This is particularly interesting given that when countries compete to attract new capital investment, it does not matter what the size and growth dynamics of each market points to (see Figure 1).

It is worth looking at how the growth of the market in some of the countries under scrutiny has developed in recent years based on the number of people working in business services centres. In this light, Poland's steady and sustainable growth is striking; other countries in the region lag far behind. Slow-paced growth is typical

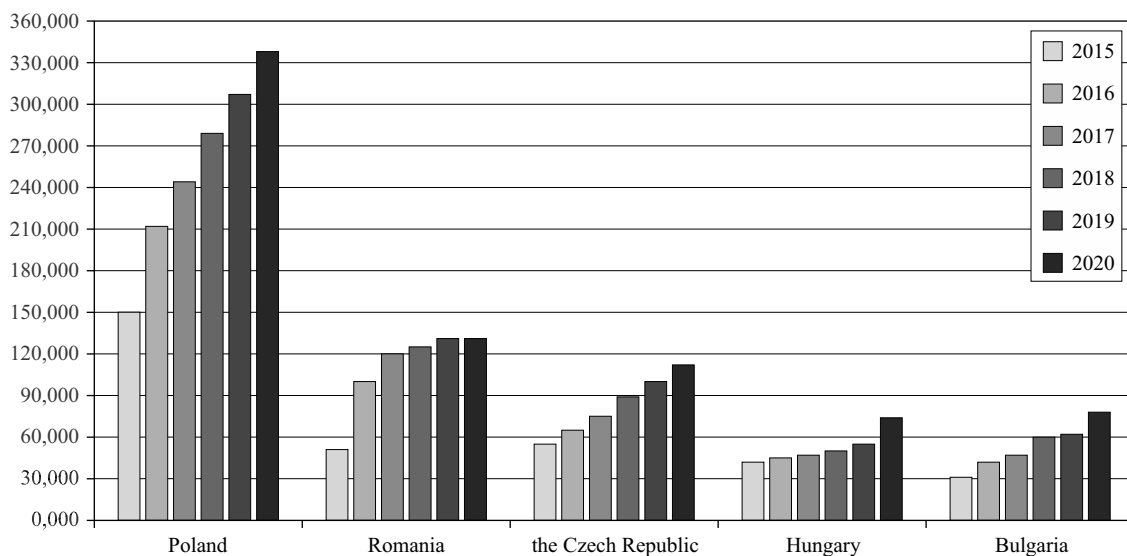


Figure 1. Progress of Business Services markets by employment in some CEE countries

Source: developed by the authors based on the following references: AIBEST, 2019, 2020; Appleton et al., 2015, 2016, 2017, 2018, 2019, 2020; BAO, 2018, 2015, 2017; Brodzicki et al., 2020; Dan et al., 2020; Górecki, 2017, 2018; Górecki et al., 2015, 2016; Marciniak, Baksa, & Nagy, 2020; Panczyj et al., 2020; Pelinescu et al., 2018; Perrin et al., 2015, 2016, 2017; Ştefan et al., 2019).

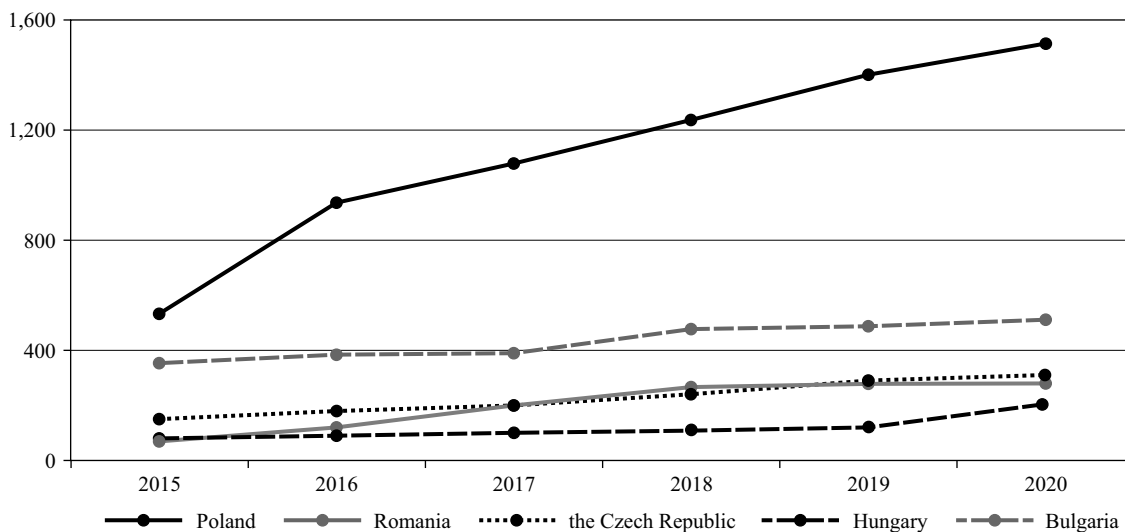


Figure 2. Progress of Business Services markets by the number of Services Centres in some CEE countries

Source: developed by the authors based on the following references: AIBEST, 2019, 2020; Appleton et al., 2015, 2016, 2017, 2018, 2019, 2020; BAO, 2018, 2015, 2017; Brodzicki et al., 2020; Dan et al., 2020; Górecki, 2017, 2018, 2019; Górecki et al., 2015, 2016; Marciniak, Baksa, & Nagy, 2020; Panczyj et al., 2020; Pelinescu et al., 2018; Perrin et al., 2015, 2016, 2017; Ștefan et al., 2019.

of the rest of the region, with Romania alone showing stabilisation after a big jump. If one looks at the number of centres in these countries, similar trends can be discovered. While the Czech Republic and Hungary were already on a consolidated growth trajectory around the period 2015–2016, Poland was the absolute winner of that period, while the growth of Romania and Bulgaria, which joined the European Union later, was outstanding around the period 2017–2018 (see Figure 2).

The compound annual growth rate (CAGR) of the number of centres varies greatly, ranging from 8% to 35% in the countries under scrutiny during the discussed period. However, if one looks at the annual growth of employment in the sector, it appears that the average annual growth rate in the countries of the region has fluctuated between 13%–25% in recent years (see Table 3).

Although there were outstanding values in this, such as that the number of employees in the sector

Table 3. The Compound Annual Growth Rate (CAGR) in the sector's employment, and the number of Centres (%)

	Poland	Romania	Hungary	the Czech Republic	Bulgaria
CAGR in employment	18	25	13	15	21
CAGR in the number of centres	25	35	23	16	8

Source: developed by the authors based on the following references: AIBEST, 2019, 2020; Appleton et al., 2015, 2016, 2017, 2018, 2019, 2020; BAO, 2018, 2015, 2017; Brodzicki et al., 2020; Dan et al., 2020; Górecki, 2017, 2018, 2019; Górecki et al., 2015, 2016; Marciniak, Baksa, & Nagy, 2020; Panczyj et al., 2020; Pelinescu et al., 2018; Perrin et al., 2015, 2016, 2017; Ștefan et al., 2019.

almost doubled in Romania from 2015 to 2016 (96% increase), or that the annual growth value was over 30% in Bulgaria and Hungary, these are more methodological changes resulting from market research. Romania has reached the highest growth among the analysed countries. Unfortunately, among the examined countries, Hungary shows the lowest average growth value of those employed in the sector in the discussed period. In order to understand the growth benefits of the countries under scrutiny, it is worth examining the factors that influence this the most.

Challenges in the international context

Although ABSL research provides the most comprehensive market image in the analysed countries, the examined organisations do not exactly overlap. In most countries, these include BPO, SSC/GBS, IT, and R&D centres, but e.g. in Romania, start-ups also appear in some ABSL's reports from 2017. In Hungary, R&D centres are not examined in the HOA's reports. In Bulgaria, AIBEST's and BOA's reports identify two different outsourcing organisations (ITO and BPO) to differentiate between service providers, where the HRO, VBPO, KPO, FAO, other BPOs, and SSC are interpreted within the BPO. However, the methodology also differs from country to country according to the size of centres included in the survey or as to whether a company's headquarters at different locations appear as a company or as different centres in the reports.

Klimek (2020) analysed the Visegrád Group countries (the Czech Republic, Hungary, Poland, Slovakia) and recognised the high level of competition for new investment projects among these countries. The author identified Bulgaria and Romania as important destinations that have a great potential for further expansion.

Different human factors behind the Regional Advantages

The results of the research suggest that in the five countries with the most significant business services sector in the region (Poland, Romania, the Czech Republic, Hungary, Bulgaria), the different dynamics of the sector's growth are the result of many different but interrelated factors (Marciniak, Baksa, & Nagy, 2020). To be able to draw usable conclusions, it is worth examining more closely the factors that may represent the most important differences. Deployment factors include financial incentives, available human capabilities, the evolution of the business environment, and, increasingly, the degree of digitisation. Out of these, the analysis now focuses primarily on the human factor, as the sector is still highly labour-intensive, with labour arbitrage being the most determinant with regard to the financial incentives specific to the region, but progress on digitisation is also driven by human versus technology costs as well as digital technology dominated by human abilities (Marciniak, 2019). Thus, overall, the differences in each country can be largely explained by the characteristics of human resources. Each of the analysed factors is related to the skilled workforce available in a given country, based on its quantitative, qualitative, and territorial dimensions. Each of these factors often plays a decisive role in the final site selection of an investment in the case of new capital investments.

One such factor stems from the different sizes of countries and their differences in the labour market. While Hungary and the Czech Republic have roughly similar populations and the same employment rate, the population in Romania is about twice as large, and in Poland four times as large as Hungary, and the employment rate is much lower in both Poland and Romania. This can be a crucial consideration when making an investment decision when a new service organisation needs to be set up. Although a different employment rate can be an advantage in the assessment of the labour market, as it is a reserve for employers, it does

not say anything about the structure of the labour market, such as the proportion of the unskilled. This is not necessarily a real advantage in sectors such as the business services sector, as this sector is dominated by a multilingual workforce (see Table 4).

If one looks at the employment rates among graduates, an even more diverse picture of these countries emerges. Considering that the graduate workforce is likely to speak at least one foreign language, thus better meeting the expectations of the sector, it seems much more so that this segment of the labour market has larger reserves in Hungary and the Czech Republic than in Poland or Romania. At the same time, one must not forget about the differences in size, as in the case of Romania and Poland one can still talk about two- and four-times bigger labour market.

Another factor is the territorial distribution of the labour market, as shown by the urbanisation and residence concentration of the population. With the continued advancement of urbanisation, the UN 2018 report states that 55% of the world's total population inhabits cities. This rate is expected to increase to 68% by 2050. Cities, especially

capitals, are of particular importance to the business services sector, as a significant part of the foreign-language-speaking labour market is concentrated there. Considerable differences in the size and number of these can also be found between countries (see Table 5).

Klimek (2020) also considered that the different sizes of economies and populations should be underlined when analysing the impact and potential of business services markets. The author highlighted that the maturity of different business services markets could be compared by the number of persons employed and the intensity of employment measured as several employees to the size of the population. Klimek stated that Hungary, with its 9% in the total V4 employment, has only the 3rd position, right ahead of Slovakia (8%).

While the capitals of the four studied countries are roughly the same size (only Prague deviates downwards to a greater extent), the proportion of the capital in the total population and the number of cities with at least 200,000 inhabitants, excluding the capital, already show a much larger variance. The concentration of the population is indicated by the ratio of the capital to the total population,

Table 4. Total population and the employment rate in some CEE countries

	Poland	Romania	Hungary	the Czech Republic	Bulgaria
Total population (in millions) (2019)	37.9	19.4	9.8	10.6	6.9
Employment rate (2019)	71%	70%	75%	75%	76%
Employment rate among tertiary graduates (2020)	88.1%	88.8%	85.3%	83.9%	87.6%

Source: Eurostat, 2021a; KSH, 2019b, 2020.

Table 5. The population of the capitals and their proportions within the total population, and the number of medium-sized cities in some CEE countries

	Poland	Romania	Hungary	the Czech Republic	Bulgaria
The population of the capital (in millions) (2017)	1.7	1.8	1.7	1.3	1.2
Proportion of capital within the total population (2019)	4.5%	9.2%	17.5%	12.2%	17.4%
Number of cities with more than 150,000 inhabitants (excl. the capital)	23	12	4	3	5

Source: Eurostat, 2021b.

in which the value of 17.5% in Hungary and 17.4% in Bulgaria is outstandingly high among the five countries under scrutiny, and almost four times higher than in Poland at the bottom of the list. Romania represents twice the value of Polish figures, and the Czech Republic is three times the size.

It is also interesting to examine how the number of large cities outside the capital develops in the countries of the discussed region. The study included cities with more than 150,000 inhabitants, because when examining the business service sectors of the countries in the region, this is typically the size that already includes at least one higher-education institution, vibrant economic and cultural life, and international workforce. These, in turn, are important cornerstones of the business services sector, which builds on foreign language skills. Of course, cities with less than 150,000 inhabitants (or even less than 100,000 inhabitants) can operate a business services market, but for this to develop substantially, this population can be described as a kind of minimum; in fact, these are cities with 200,000–300,000 inhabitants. They represent a real growth market, considering, of course, that not only the population but also the geopolitical location and the historical and cultural characteristics, as well as the economic structure of a given city all have a major impact. At the same time, for a city with an industrial past, a real development alternative could be, for example, the establishment of business services centres serving the background services of the production companies operating there, i.e. if there is a sufficient number of suitably-qualified workforce. While there are 23 cities in Poland with at least 150,000 inhabitants, there are 12 such cities in Romania and only 4 in Hungary. There are even fewer such cities in the Czech Republic (3). In Bulgaria, there are 5, but in the Czech Republic and Bulgaria, the population of two out of these cities exceeds 300,000 inhabitants, while in Hungary only 1 city out of 4 reaches a population of 200,000. This disadvantage is difficult to overcome, although the development of the labour market and population retention

of individual rural cities is already something that can be influenced at the governmental level. It is necessary to pay more and more attention to this, because smaller centres have been established in the countryside in Hungary in recent years. In many cases, they have already been established as satellite centres of services centres operating in Budapest in response to the labour shortage. This trend is exacerbated by the accelerated digitalisation and the strengthened home-office following the COVID-19 pandemic, which makes it possible even for workers living further away from the services centre's headquarters to join the sector. Consciously supporting this and thus encouraging more flexible forms of employment would be in the interest of not only the sector, but also the economy and society as a whole.

Differences in the educational structure of the studied countries are of significance as well. Of course, the activities of business services centres can be extremely varied, but it is generally true that the proportion of jobs requiring a degree in economics and technology is the largest, as these dominate the sector. As the vast majority of companies operating in the sector work with international clients, a high level of knowledge of at least one foreign language is required. As a result, many language graduates have previously been employed in the sector, most often as graduates of economics or technology. The number of students in higher education, especially when examined in proportion to the population, shows where there is a lot of labour market potential in students in higher education (see Figure 3).

Klimek (2020) also confirmed that the quality of human capital as skilled labour is the main input for this sector. These skills could be developed by education, which is one component of the Human Development Index (HDI), i.e. an important unit of measure of investment decisions. The education potential could be identified by the number of university students and their proportion in the total population. In this ranking, unfortunately, Hungary has got only the 3rd position and so is

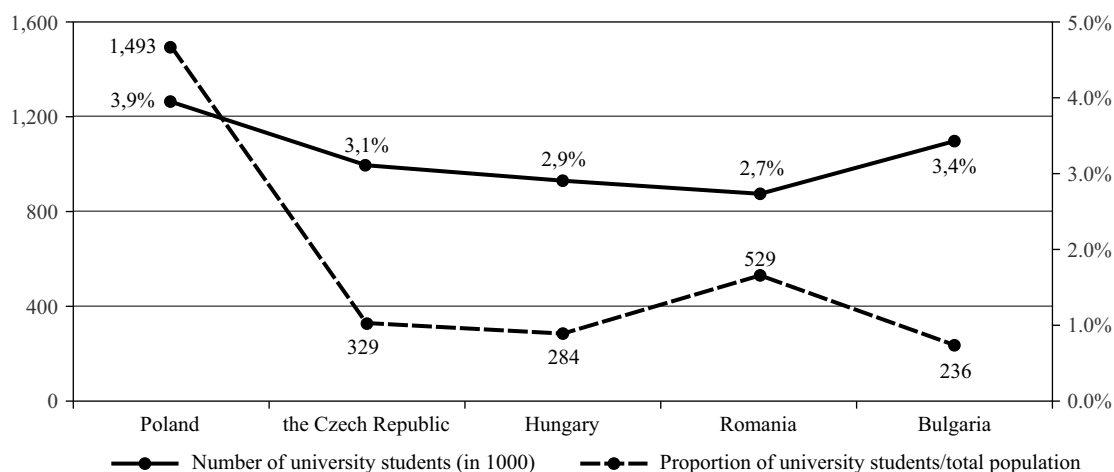


Figure 3. The number of university students and the proportion of university students/total population in some CEE countries in 2019

Source: KSH, 2019a.

placed behind the Czech Republic and Poland (among the V4 countries), respectively.

The number of students in higher education depends on the size of the country, its place in international value chains, demographic trends, educational infrastructure, and much more, but it also shows a country's approach to human resource development. After all, it is known that a highly-skilled workforce can produce more added value for a given country. In terms of GDP as a share of GDP for total education, according to e) data, Poland led the countries with 5%, followed by the Czech Republic with 4.9%, Hungary with 4.7%, Bulgaria with 3.9%, and, finally, Romania with 3.6%. In

Hungary, the share of tertiary education among those aged 30–34 was 33.7% in 2018, which is lower than the 40.7% in the European Union. The decline in the number of students in higher education has been steady in Hungary since the mid-2000s, mainly for demographic reasons, but the decline has become more significant particularly since 2012, when the government reduced the number of state-funded places and tightened entry conditions (European Commission, 2019).

Of course, one can further add to this picture by looking at the proportion of students in IT, business, or mathematics and statistics in the studied countries (see Table 6).

Table 6. Total number of graduates, including in some specific fields of education in some CEE countries

	Number of graduates in HE (2018) (in thousands)	% in Business administration and law	% in Natural sciences, mathematics, and statistics	% in Information and Communication Technologies
Poland	470	23%	3%	4%
Romania	126	27%	5%	6%
the Czech Republic	76	20%	6%	5%
Hungary	65	25%	4%	5%
Bulgaria	54	32%	3%	4%

Source: Eurostat, 2018.

Based on the Eurostat data for 2018, one can see that there is no significant difference between the countries under scrutiny. Perhaps Bulgaria alone has a higher proportion of students in business, especially when compared to the Czech Republic. Moreover, if one looks at these three areas together, not all graduates present in the sector are included; on the other hand, the data even includes lawyers, which is not a typical degree among those working in the sector, but it is also the lowest combined ratio (30%). This can be experienced in Poland, while the highest (39%) in the case of Bulgaria, the others are scattered between the two.

Another such an installation factor is the degree of foreign language proficiency. It is very difficult to get a realistic picture of this, because there is little comprehensive data on the foreign language skills of the workforce in each country. The only international comparative database is provided by the Eurostat (2016) survey (the data on this is compiled every five years) (see Table 7).

It can be noticed that Hungary is only surpassed by Romania in foreign language skills in the European Union. Language skills are, of course, both historically- and culturally-defined, as minorities in some countries speak more languages almost naturally, and people in some countries find it easier to learn related languages (e.g. Slovaks speak Czech) if these differ only slightly from the mother tongue.

Nevertheless, when examining the proportion of those who speak one foreign language and those

who speak only their mother tongue, the advantage of Poland and the Czech Republic in the region can be established. Of particular concern for Hungary are the statistics comparing the proportion of learners of at least two foreign languages in secondary school. In this comparison, Hungary (49%) was outperformed by the European Union's average (59%). Romania took the lead in this matter, followed closely by Poland, and the Czech Republic performed equally well. In terms of foreign language skills, people living in the capital are likely to have an advantage over the population in smaller cities and in the countryside, which further worsens the opportunities for expansion in the market for business services centres (European Commission, 2019).

The ABSL's EMEA report (2020) analysed the numbers of language students in tertiary education and found the following figures: the Czech Republic – 13,300; Hungary – 7,400; Bulgaria – 6,800; Romania – 22,000; Poland – 64,500. This data also reveals the advantage of Poland and the Czech Republic against Hungary, Bulgaria, and Romania.

Concluding remarks

Summary of the results and findings

The examination of human factors is of key importance in assessing Hungary's regional competitiveness. On the one hand, the region is

Table 7. Foreign language proficiency in some CEE countries

	Poland	Romania	Hungary	the Czech Republic	Bulgaria
Ranking about knowing one or more foreign languages among people aged 25–64 (2016)	19 th	27 th	26 th	14 th	25 th
Ratio of those who do not speak any foreign language among people aged 25–64 (2016)	32.9%	64.2%	57.6%	21%	50.5%
Ratio of those who speak one foreign language among people aged 25–64 (2016)	45%	24.7%	28.6%	44.7%	32.5%
Ratio of secondary school students who learn at least two foreign languages (2016)	93.9%	95.1%	6.2%	65.2%	15.6%

Source: Eurostat, 2016.

an offshore area for North America and a nearshore area for Western Europe, mainly due to the low cost of the skilled and foreign-speaking workforce (Marciniak, 2014b; Sass & Fifekova, 2011). This is compounded by the fact that while the rise of digitalisation and automation in the sector is unstoppable – and more and more advanced technology is aiding or triggering the use of human resources in the business services sector as well – the services centres operating here remain highly labour-intensive (Marciniak, 2019; Marciniak, Moricz, & Baksa, 2020). This is still due to lower labour costs when compared to Western European and North American countries, which also determines the adaptation of digital technologies in the sector. On the one hand, it can slow down the spread of technologies on the cost side, and on the other hand – the capability side. This is because low labour costs worsen the return on technology investment, and digital capabilities related to the introduction and application of new technologies can also limit the implementation of investment projects. The latest ABSL's (2021) report also analysed the critical changes to the business services sector; it is expected to strengthen the skill market and intensify the struggle for talents that will underline the significance of the HR-oriented focus among the BSC leaders.

Although Hungary cannot change the country's population significantly, it can already have an impact on improving the population-retaining effect of rural cities through certain economic development measures. This is especially possible in the case of rural university towns, where the graduated workforce typically moves to Budapest or Western Hungary for better living conditions. Rural cities with declining populations cannot provide a real alternative to the capital-centric business services sector, thus curbing its growth prospects.

In the business services sector in Hungary, 85% of the workforce include university graduates and speak several foreign languages. The quantity and quality of the graduate workforce are particularly important for the sector to continue to grow and for an uninterrupted supply of labour.

For this reason, it would be especially important to provide more resources for education in Hungary. There is a need to increase spending on education, improve educational infrastructure, encourage pedagogical careers, and increase the number of students in higher education.

One of the most important tasks is to develop foreign language skills. In this respect, Hungary is also lagging behind other countries in the region. Unfortunately, this position is reinforced by government measures that have in recent years made it easier to graduate without a language exam. Improving foreign language skills is not possible without greater government support and regulation, since, for example, a higher number of foreign language lessons in education is not possible without increasing the number of foreign languages teachers, but could have a positive impact not only on the sector, but also on the economy as a whole.

Despite the above-mentioned deficiencies, Hungary has competitive edges with which it stands out among its CEE competitors. It has an advanced office and transport infrastructure, excellent educational institutions with a colourful programme portfolio, a diverse human resource market with a lot of talents, a safe legal and financial environment, and attractive incentives from the local and national governmental institutions.

Practical implications and recommendations

Although in recent years there has been a convergence in the methodology of professional organisations in the region to cover companies in the sector as accurately as possible, there are still large differences and often inaccurate data for making international comparisons. This also explains the larger jumps in data from each country and the significant differences between countries of similar size. A shift in this could be the establishment by national statistical offices in the countries of the region of targeted data services that can more reliably show changes in the size of the sector. This is made more complicated

by the fact that the sector is cross-functional, which makes it difficult to identify actors based on activity. In Hungary, the Central Statistical Office has started investigating this direction in recent years. A separate data sheet examines organisations providing business services, but it is expected that it will take years for the research methodology to get refined and for the data to show market trends credibly.

Research limitations

The limitation of the research is that the data on the size of the business services sector comes from the reports of professional organisations operating in each country, which due to different methodologies and insufficiently accurate data collection can potentially amplify differences between countries and sometimes distort the growth trend in that country.

The study analysed the situation in Hungary primarily through human factors, but it did not address several financial incentives or important deployment factors in the business environment, such as tax and regulatory issues, service infrastructure, or the regulation of intellectual property management.

The study also did not cover government incentives used by individual countries for two reasons. On the one hand, these subsidies are regulated externally by the European Union, so the room for manoeuvre is narrow, and, on the other hand, several studies have confirmed that less than half of the Hungarian business services centres used such self-sufficiency packages for their investments. Nevertheless, some of the findings are suitable for government decision-makers to consider and, where possible, could be incorporated into the investment incentive system for further growth in the sector.

Future research directions

Although the human factor remains the most important deployment factor for the region's

business services sectors, it would be worth examining differences within the country in regulatory environments such as taxation, labour standards, intellectual property management, etc., or office infrastructure environments, with a particular focus on rural cities which carry future growth opportunities.

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