doi: 10.15678/ZP.2021.56.2.02

Zarządzanie Publiczne
Public Governance
No. 2(56)/2021
ISSN 1898-3529

Tomasz Geodecki

The Dimensions of Territorial Embeddedness of the Business Services Sector in Central and Eastern Europe

Abstract

Objective: The purpose of this article is, first, to propose a range of measures of territorial embeddedness in order to describe the phenomenon in question, and, second, to use these measures to determine the level and dynamics of the embeddedness of the Business Services Sector (BSS) in Central and Eastern European (CEE) economies.

Research design & Methods: In the debate about the future of the BSS in these low-cost economies, two challenges have been identified. The first one involves the threat of relocation. The other one is associated with linkages between service companies and local customers/suppliers weaker than that of in Western Europe. These two challenges can be addressed by tackling the third one, namely the increasing of process efficiency. In consequence, even an increased share of foreign contractors does not have to reduce the scale of cooperation with local entities. In the empirical part of this paper, changes in these three areas that make up territorial embeddedness are explored in depth. Eight divisions covering the BSS in the CEE-11 countries were compared with their Western European counterparts (the EU-17) at two points in time, i.e. in 2000 and in 2014. The study relies on basic statistical data and calculations with the use of the World Input-Output Tables.

Findings: It was found that due to productivity growth, the cost competitiveness of the BSS in CEE countries was maintained in the period of interest. Moreover, despite the growing internationalisation of the sector, the scale of cooperation of the BSS with local actors has increased. The rapidly improving skills of employees in the Central European BSS – as well as the growing importance of knowledge-intensive services (KIS) in the structure of value added – can further contribute to the importance of CEE as a location for business services in Europe.

Implications/Recommendations: The studied period saw an improvement in the structure of value added, as an increasing share of it was accounted for by knowledge-based services. This implies a high probability of further productivity growth of the BSS in CEE, and bodes well for the degree of territorial embeddedness both in terms of decreasing the likelihood of relocation and amplifying the capacity of local actors to act as the suppliers and the recipients of state-of-the-art services.

Contribution/Value Added: I have recognised that when service provision is subject to massive offshoring, it is not so much the intensity of service provision (exports) as the intensity of value added creation in the local economy that is of significance. Moreover, the relative gains in this respect should determine the scale of territorial embeddedness, the competitiveness of individual sectors, as well as their growth prospects.

Keywords: business services, territorial embeddedness, global value chains, wages, labour productivity, skills

Article classification: research article

JEL classification: D57, F21, J24, J31, O14

Tomasz Geodecki, PhD – Cracow University of Economics, Department of Public Policies; ul. Rakowicka 27, 31-510 Kraków, e-mail: tomasz.geodecki@uek.krakow.pl; ORCID: 0000-0002-7028-0162.

The publication was financed by the Ministry of Science and Higher Education of Poland within the "Regional Initiative of Excellence" Programme for 2019–2022. Project no.: 021/RID/2018/19. Total financing: 11 897 131,40 PLN.

Introduction

One of the characteristic features of globalisation is the spatial separation of management and production in search of cost savings, which increases the demand for coordination services (Jones & Kierzkowski, 1990). Advances in long-distance communication led to the realisation that savings can also participate in coordination processes by outsourcing them to specialised companies or relocating them to countries with lower labour costs (Baldwin, 2012; Wirtz et al., 2015; Radło, 2016). Once the barriers to production-factor flows between European countries had been removed, global players in the business services sector (BSS) started to invest in the low-cost economies of Central and Eastern Europe (CEE).

Therefore, is this sector the area where Eastern European economies will be able to gain competitive advantages and, in the long run, develop high skills as well as obtain high value added in knowledge-based services? Or, on the contrary, will the factors related to remote communication and labour costs that had originally contributed to the emergence of the BSS in CEE cause its closure in the future? After all, service provision can be relocated further east and south once wages in CEE have approached the levels similar to that of London and Frankfurt.

These questions – relevant from the perspective of public governance in emerging economies in terms of creating physical infrastructure and human capital for the BSS – address the extent to which this sector is territorially-embedded. The term "territorial embeddedness" describes how actors are anchored in a particular area (Hess, 2004) and to what extent they "interact and build relationships with local actors in order to exchange resources, knowledge and information" (Wright, 2010; Białynicki-Birula & Pacut, 2020). Embeddedness of the BSS in EU's Eastern economies is facing two main challenges.

The first challenge is to build long-term relationships between investors and local actors such as suppliers, institutions, schools, and communities in order to improve the perception of the benefits of investing in a given location. These elements make up territorial embeddedness, which in the CEE countries is considered from the perspective of the danger of relocation (Nölke & Vliegenthart, 2009; Domanski & Gwosdz, 2009; Micek et al., 2010). Alongside the invested capital, localised capabilities can play the role of sunk costs, because they cannot be recreated cheaply elsewhere.

The other challenge for territorial embeddedness arises from the fact that the benefits of networking do not necessarily spill over to the local economy. If a given economy is only engaged in the least profitable links in the value chain, the increase in value added is not necessarily proportional to the increase in trade in services. Moreover, subsidiaries of multinational companies can maintain very limited contacts with local suppliers and customers (Hardy, 1998, Milberg & Winkler, 2013).

The first aim of this paper is to propose measures of territorial embeddedness to describe this phenomenon and the two challenges that developing economies are facing in the era of globalisation. Nowadays, free-labour flows and factor price equalisation can rapidly erase the cost advantages enjoyed by developing economies, whereas the large scale of exports of a given sector does not necessarily mean that the value added generated by it remains predominantly in the local economy.

The other aim of the article is to use the proposed measures to determine the level and dynamics of the sector's embeddedness in CEE economies. I set out to test the hypothesis that the level of territorial embeddedness in the CEE economies increased between 2000 and 2014.

The novelty and originality of our approach lies in recognising that when service provision is subject to massive offshoring, it is not as much about the intensity of service provision (exports) as about the intensity of value-added creation in the local economy. The relative gains in this respect should determine the scale of territorial embeddedness, the competitiveness of individual sectors, as well as their growth prospects. In

order to capture this difference, I measure the position of the BSS in global value chains and its comparative advantages in generating value added using the World Input-Output Tables (Timmer et al., 2015) by comparing eight NACE Rev. 2 divisions covering the BSS in CEE with their counterparts in North-Western and Southern European countries (EU-17).

Subsequent parts of this paper, which serve to testify the above-mentioned hypothesis, are organised as follows. Section 2 reviews the literature on its catching up in the context of knowledge intensity of a given sector and the benefits it generates for investors. The review also considers the most recent findings on local linkages in global value chains and industrial upgrading. Section 3 proposes a quantitative research model for measuring territorial embeddedness and industrial upgrading, which expands embeddedness in local economic structures by boosting the productivity of business actors. Section 4 presents the findings of a comparative analysis of BSS in the CEE-11 and the EU-17; it also discusses their implications. Last but not least, Section 5 discusses offers concluding remarks.

Literature review

Catching-up on productivity – the contribution of knowledge-intensive activities (KIA) to embeddedness

Classic works on economics and political economy tend to explain a large proportion of business actors' behaviour in terms of profit generation and capital accumulation (e.g. Schumpeter, 1983 [1912]; Wallerstein, 1974, 2004). Thus, the development of knowledge-based sectors characterised by relatively high productivity depends on a cost-benefit balance, which is being continually calculated by economic entities. The rate at which less developed economies advance can be explained by conditions which determine the propensity to invest in innovative projects. If these conditions are favourable, catching up occurs, i.e. the gap with the leading economy in terms of factor productivity begins to close (Fagerberg & Godinho, 2004).

As individual sectors of the economy differ in their capacity to catch up, three approaches to this issue have emerged (Stehrer & Wörz, 2001). In the first one, the relative productivity gap is larger in industries characterised by high-technology intensity. Assuming that gaps in all industries narrow at an equal pace, those characterised by a larger technology gap increase their productivity faster. In the second approach, sectors climb up the productivity ladder. Initially, developing countries have comparative advantages in low-tech sectors and it is only by closing the technology gaps in these sectors that they can compete in high-tech ones. By contrast, in the third approach, called 'leapfrogging' (Grodzicki, 2018), the skill-intensive sectors have the greatest opportunity to catch up, because this is where the difference between the (high) world price and the (low) local labour cost is the greatest, as is the potential for profit. These sectors are characterised by rapid productivity growth spurred by demand growth as well as a high capacity to learn. In services, such sectors are mainly considered to include several divisions of sections J and M (NACE Rev. 2) due to their knowledge-intensity and rapidly growing demand for their services. In services, investment in Research and Development (R&D) is smaller, while innovation is mostly associated with their core characteristics such as intangibility, heterogeneity, inseparability, and perishability (IHIP for short) (cf. Morrar, 2014; Wirtz et al., 2015; Geodecki & Głowacki, 2020). These features render the quality of an individual service difficult to standardise; to a considerable degree, it is also dependent on the interaction between the provider and the recipient. Besides, services cannot be stored, so their sale is limited by the human potential available to the provider. Consequently, service delivery centres tend to be located in places where human capital is abundant (Sirilli & Evangelista, 1998; Wirtz et al., 2015). For this reason, the knowledge-intensity

classification in this sector in based on the level of human capital (Miles et al., 2018). Micek et al. (2010) note that in such circumstances, human capital is to services what physical capital is to manufacturing industries. Investment in it and the ability to create competent human teams not only is a prerequisite for building a profitable subsidiary providing business services, but it also prevents the head office from easily relocating its service centre (see also Domański & Gwosdz, 2009; Stephan, 2013).

Therefore, the first dimension of embeddedness reflects concern about the willingness of investors in the BSS operating in CEE countries to relocate to other, cheaper locations. Hence our research question: *Does the CEE's BSS see productivity growth faster than the rest of the EU while at the same time maintaining its high cost competitiveness?*

Domestic value added in global value chains

An important aspect of embeddedness is the spillover of the benefits of global networking to the local economy. The tension between being embedded in a global network and being embedded in a given territory becomes perceptible due to the fact that more intense relationships with network participants entail less intense relationships with local actors (Coe & Yeung, 2015). The inability of local economies to establish lasting relationships with investors can result in the benefits of investment location being limited to the employment of local workforce only, leading to the construction of the so-called "cathedrals in the desert" (Hardy, 1998). For this reason, while global production sharing helps developing countries to increase their exports, value added does not always increase proportionally (Milberg & Winkler, 2013). Several reasons for this have been proposed, but the most important one derives from the intrinsic feature of global value chains (GVCs). If "ICT made it possible and price differences made it profitable" (Baldwin, 2012, p. 4), then low-cost labour would be the main motive for investment. Therefore, labour-intensive stages are relocated to low-labour-cost locations and thus create less and less value added along the value chain (OECD, 2013). As a result, subsidiaries in low-cost countries acquire intermediate inputs (headquarter services) relatively expensively and, because of low wages, add little value by reselling finished products back to their headquarters relatively cheaply. Even the industrial upgrading of local subsidiaries in services sectors reported by some analysts (see Hardy et al., 2011; Stephan, 2013; Münich et al., 2014) did not bridge the gap between value added per worker in the BSS in the eastern and the western parts of the European Union. Moreover, expensive headquarter services and inexpensive subsidiary services mean that with similar export volumes from both locations, relatively less local value added is embodied in subsidiary exports than in headquarter exports. Owing to advances in intercountry input-output databases, it has become possible to compare domestic value added in both locations embodied in the provided services. This way, the presupposition contained in the expression 'cathedrals in the desert' – one denoting the scant level of cooperation of multinational enterprises' (MNEs) affiliates with local economic environment – can be quantitatively verified.

Research question no. 2 refers to the relationships between the BSS in CEE and their local business actors – national suppliers and customers – or the extent to which added value created in this sector feeds into local economies.

Industrial upgrading in the business services sector

Industrial upgrading (IU) is a concept associated with the global value chains framework, devised, among others, by G. Gereffi (cited in Bair, 2005). Ernst defines IU as "significant changes in national specialization and knowledge base that increase the ability to create value" (2000, p. 1). In this context, it is important to state that the creation of added value (at the macro level) or the generation of profit (at the company level) are the primary goals,

whereas increasing skills and capabilities is a means to achieve them. Participation in global value chains has become an opportunity for developing economies to gain competence in knowledge-intensive activities, because improving the quality of products and the efficiency of processes to meet the requirements of the chain is a precondition for joining it (Baldwin & Lopez-Gonzalez, 2015; Pietrobelli & Rabellotti, 2011; Milberg & Winkler, 2013). On the other hand, in the services sector, large customers prefer to deal with well-established companies with reputable track records, making it difficult for local players to reach the most lucrative markets (Fernandez-Stark et al., 2011; Dicken, 2015). Thus, local actors provide services to recipients in developed countries through global players who reap the highest profits. By reconciling these perspectives, Markusen (2005) explains why developing economies can specialise in knowledge-intensive services, although the traditional trade theory implies that more productive and technologically-advanced Western European economies should maintain a large advantage in exports. However, when a third factor is added to low skills and high skills – namely the knowledge-based assets available to global lead companies – the specialisation of catching-up economies in exporting white-collar services can be explained more convincingly. The growing demand for skills in the developing world, in turn, leads to higher wages and, consequently, an increased supply of skills. Thus, upgrading the capabilities in the supply base can take place under the dominance of global companies with resources such as managerial sophistication, marketing channels, and access to markets or brands and trademarks (Fernandez-Stark et al., 2011; Markusen, 2005).

Concurrently, however, IU provides opportunities for developing economies to move away from low-cost competition. The paradox noticed by Kaldor (1978) and confirmed by Fagerberg (1996) is that some countries are able to increase their share of world exports despite losing their cost competitiveness. It is technology – which translates into the uniqueness and complexity of the sold goods – that renders competitors unable to provide substitutes. Thus, technological leaders gain a monopolistic position and reap high profits.

Our research question no. 3 refers to the ability of CEE countries to build skills in the knowledge-intensive BSS (KIBS) and to create value added in them, which would lead to the industrial upgrading of the latter and, consequently, to the improvement of the sectoral structures of their economies.

Materials and methods

The hypothesis and research questions

In the empirical part of this article, I test the research hypothesis stating that the level of territorial embeddedness of the BSS in the CEE economies increased between 2000 and 2014. By referring to a range of dimensions of embeddedness, I shall answer the following three research questions:

- Is the Central European BSS experiencing faster productivity growth in relation to wages than what is the case in the EU, i.e. does the cost competitiveness of the sector increase?
- To what extent does the Central European BSS rely on local suppliers and customers for added value?
- Does skill-building in the BSS and the structure of value creation in CEE improve over time?

The Central European business services sector – defining the research subject

In order to answer the above-mentioned research questions, I divided the European economies into two groups:

- Central and Eastern European economies which joined the EU in 2004 or later (the CEE-11): Bulgaria, Croatia, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia, and Slovenia;
- North-Western as well as Southern European economies or European Union member states

before 2004 (the EU-17):[1] Austria, Belgium, Cyprus, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Malta, the Netherlands, Portugal, Spain, Sweden, and the United Kingdom.

For the sake of simplicity, I shall treat the first group as low-cost economies characterised by a negative investment position, whereas the second group as headquarter economies whose companies invest in low-cost CEE-11 locations in order to build up cost savings.

According to the Eurostat methodology[2], business services include the following activities:
- *technical services* (such as engineering, architecture, and technical studies);
- *computer services* (such as software design and database management);
- *other professional services* (such as legal, accounting, consultancy, and management services).

They comprise the following NACE Rev. 2 divisions: 62, 69, 71, 73, and 78; groups 58.2, 63.1, and 70.2; and the enterprises or parts of enterprises that carry out those activities.

Using the World Input-Output Database (Timmer et al., 2015), in which the collected data cover 56 sectors, I performed an analysis at the level of two-digit NACE codes (divisions), and sometimes at the level of single-digit ones (sections). With certain simplifications, the business services sector (BSS) shall comprise six WIOD sectors, to which eight NACE Rev. 2 divisions have been assigned:
- *IT business services (ITBS)*:
  - 58 (J58) – Publishing activities;
  - 62 and 63 (J62_J63) – Computer programming, consultancy and related activities; information service activities;
- *Professional business services (PBS)*:
  - 69 and 70 (M69_M70) – Legal and accounting activities and activities of head offices; management consultancy activities;
  - 71 (M71) – Architectural and engineering activities; technical testing and analysis;
  - 72 (M72) – Scientific research and development;
  - 73 (M73) – Advertising and market research.

In NACE Rev. 1.1, the economic activity groups of interest to this research include divisions 64 and 71–74.

When considering the division of services by knowledge intensity for the purposes of the qualitative analysis of the services sector structure, I shall also refer to the Eurostat classification. It recognises knowledge-intensive activities (KIA) in the services sector on the basis of their share in employment of persons with a specific level of education. This category includes mainly the following sections (NACE Rev. 2):
- J – (Information and communication);
- K – (Financial and insurance activities);
- M – (Professional, scientific, and technical activities).

Since sectors (sections) J and M comprise services that tend to be offshored most readily, I shall focus on these two sections combined, i.e. as knowledge-intensive services (see Miles et al., 2018) and the offshore services industry (Fernandez-Stark et al., 2011). I will discuss them against the background of the entire commercial services sector (NACE Rev. 2, sections G–N).

The selection of the studied period (2000–2014) was dictated by the availability of the WIOD data compatible with NACE Rev. 2, and by the fact that its first part (2000–2004) comes just before the CEE-11's accession to the European Union, whereas 2004–2014 covers the decade after the accession, i.e. when certain trends related to the functional separation of these two groups had already become evident.

[1] Cyprus and Malta joined the EU in 2004, but on account of their strong links with the Southern European economies, I decided to consider them along with the EU-15 (hence EU-17).

[2] See: https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Glossary:Business_services (accessed: 06.08.2021).

Methods of estimating unit labour costs, position in global value chains, and revealed comparative advantages

Unit labour costs

The unit labour cost (ULC) shall be defined as the relationship between labour compensation and global output of a sector. The ULC will, therefore, reveal how much a business pays its workers to produce one unit of output. I obtained the data from SEA WIOT (Rel. 2016) and used it to calculate the labour productivity of the sector (LP_i), workers' wages in this sector (W_i), and the unit labour cost, which is the ratio of W_i to LP_i.

$$LP_i = X_i/HEMPE_i \quad (1)$$

$$W_i = LAB_i/HEMPE_i \quad (2)$$

$$ULC_i = W_i/LP_i = (LAB_i/HEMPE_i)/(X_i/HEMPE_i) = LAB_i/X_i \quad (3)$$

where X_i is the global output of sector i in dollars; LAB_i is the labour compensation in that sector in the same unit; and $HEMPE_i$ is the number of hours (H) worked by all employees ($EMPE$) in sector i in a given year. ULC_i is, therefore, the ratio of wages and salaries to the sector's global output.

Positions in global value chains

The factors and circumstances mentioned in the aforementioned literature review suggest that international trade data can be inadequate to capture the benefits that accrue to local economies. In the past, a large volume of exports used to mean a large flow of locally-created value added. However, as economies are becoming more interconnected and developing countries more involved in GVCs, this relationship tends to become looser.

Question no. 2 refers to the relationship of the BSS with domestic suppliers and customers of services in the CEE countries when compared to the Western European BSS. Therefore, it is subdivided into two questions:

- *The supplier side*: What is the share of the domestic value added (DVA) embodied in final goods sold by the BSS?
- *The consumer side*: What share of the value added in the BSS is created by supplying domestic final goods' (DFG) producers and by foreign final goods' (FFG) producers, respectively?

Based on the methodology developed by Timmer et al. (2013), I used the World Input-Output Database (Release, 2016; Timmer et al., 2015) in order to estimate DVA and DFG, applying the approach proposed by Geodecki and Grodzicki (2015).

In order to determine the indicators of position in value chains, the following notation was adopted:

- $X_i(s)$ – gross product of sector i in country s;
- $y_i(s, t)$ – final demand for products of sector i in country s reported by final buyers from country t;
- $x_{ij}(s,t)$ – intermediate goods from sector i in country s used for production by sector j in country t;
- S – the number of sectors;
- N – the number of countries.

In order to calculate the indicators of position in global value chains, I estimated matrix V, which is the product of multiplying the following three matrices:

$$V = HLg^{-1}Y \quad (4)$$

where:

V is the matrix in which $v_{ij}(s,t)$ represents the total value added contribution of sector i in country s to final output in sector j in country t;

H is a diagonal 2464 × 2464 matrix (44 countries × 56 sectors = 2464 country-sectors), where $h_i(s)$ is the ratio of value added to global output in sector i and in country s;

Lg^{-1} is a Leontief inverse matrix estimated from the World Input-Output Tables;

Y is a diagonal SN x SN matrix, whose diagonal elements $y_i(s)$ represent final demand for products of sector i in country s.

The product matrix $V=HLg^{-1}Y$ (see also Grodzicki & Geodecki, 2016) makes it possible to track international value-added flows and determine the extent to which:

– a given sector relies on foreign value added when sourcing intermediate inputs (backward linkages) to produce the final product (foreign value added – FVA):

$$FVA_j(t) = \left[\sum_{s\neq t}^{N}\sum_{i}^{S} v_{i,j}(s,t)\right] \Big/ X_j(t); \quad (5)$$

$$DVA_j(t) = 1 - FVA_j(t) \quad (6)$$

– a given sector relies on foreign final goods (FFG) producers as forward linkages of its value added:

$$FFG_i(s) = \left[\sum_{j}^{S}\sum_{t\neq s}^{N} v_{i,j}(s,t)\right] \Big/ \left[\sum_{j}^{S}\sum_{t}^{N} v_{i,j}(s,t)\right]; \quad (7)$$

$$DFG_i(s) = 1 - FFG_i(s) \quad (8)$$

Measuring industrial upgrading – skills and revealed comparative advantages based on value added

The level of skills in a given sector corresponds to the share of staff with a specific level of educational attainment to total employment. Relevant data was obtained from SEA WIOT (Release 2013) and EU-KLEMS. Considering that it was impossible to obtain data for both time points (i.e. for 2000 and for 2014) for sectors as per NACE Rev. 2:

a) for 2000–2008, aggregated data according to NACE Rev. 1.1 was used;
b) for 2008–2014, EU-KLEMS data was used for NACE Rev. 2.

In the first case, the BSS was represented by NACE Rev. 1.1 sectors 64 and 71–74, which cover professional and IT services together. In the second case, NACE Rev. 2 data was aggregated for the entire section J as well as sections M and N together (also covering divisions not classified by Eurostat as the BSS).

Given that in the era of globalised value chains, even large comparative advantages in foreign trade do not always translate into comparable advantages in income from the sale of traded products, Timmer et al. (2013) proposed modified indicators of revealed comparative advantages (RCAs). Instead of export advantages, it is possible to estimate in which sectors of a given economy the revenues from participation in GVCs are proportionally larger than in the group of countries used for comparison. Since these revenues represent the sum of the value added of a given sector embodied in the value of final sold goods estimated on the basis of inter-country input-output flows, they came to be called the global value chain income (GVCI) (see Timmer et al., 2013). It includes the value added obtained by selling final goods to domestic and foreign customers.

The RCA in GVCI is presented in a similar way to RCAs in exports, i.e. by means of analysing whether the GVCI share of a given sector in the total GVCI for all the services sectors in a given country is greater than the same share calculated for the whole world. An RCA GVCI above one represents an advantage in obtaining added value. RCAs were estimated on the basis of the GVCI share of individual services sectors in the total GVCI of commercial services (sections G to N) compared to all the 28 European Union member states.

$$RCA\_GVCI_i(s) = \frac{GVCI\ of\ country\ s\ in\ sector\ /\ GVCI\ of\ country\ s}{GVCI\ of\ sector\ i\ /\ GVCI\ of\ the\ EU28} \quad (9)$$

Findings

Territorial embeddedness in terms of benefits for investors in the BSS

The continuous presence of favourable conditions that enable investors to benefit from the BSS at the macro level creates opportunities for catching-up economies. At the micro level, the prospects for profit and its margins affect the propensity to do business in a given location or

to relocate to places that offer better conditions. Such calculations invariably involve the most important cost component in services, namely the unit labour cost (ULC).

Table 1 presents the components of a basic calculation of the ULC in the BSS, as well as data on exports of this sector.

In the EU-28, the growth rate of the BSS's global output was higher than that of the entire services sector, reflecting the growing importance of the former. Moreover, the growth rate of exports in the BSS significantly exceeded the growth rate of global output, which reveals that international trade in business services is gaining in importance for companies operating in this sector.

Productivity in the CEE-11 BSS grew at a fast pace – faster than in the EU-17 – leading to a convergence of productivity levels in the European BSS. Comparing productivity growth with wage growth in the sector under scrutiny reveals that in the CEE-11, although it was fast, it was nevertheless slower than wage growth, which contributed to the decrease in the cost competitiveness (the ULC) of the BSS. The ULC has increased significantly particularly in IT, although it has not surpassed 90% of the UE-17. By contrast unit labour cost in the PBS remained relatively low due to a fast increase of wages in the Western countries of this sector. As a result, in 2014, an investor's comparison of the ULC

Table 1. Selected economic categories of the BSS in the western and the eastern parts of the EU in 2004 and 2014

		ITBS		PBS		Commercial services (sections G-N)	
		EU-17	CEE-11	EU-17	CEE-11	EU-17	CEE-11
Global output (bn USD2000)	2000	356	10	736	27	6039	290
	2014	608	40	1191	80	9208	741
	Change	71%	290%	62%	200%	52%	156%
Exports (bn USD2000)	2000	38	2	75	3	535	28
	2014	145	13	191	14	1233	137
	Change	282%	482%	153%	313%	131%	382%
Productivity (USD2000/hour)	2000	80	19	80	18	76	15
	2014	107	40	97	43	105	34
	Change	33%	113%	22%	142%	38%	122%
Wages (USD2000/hour)	2000	30	5	30	5	22	3
	2014	41	13	41	12	30	7
	Change	35%	145%	36%	168%	37%	120%
ULC (wages/productivity)	2000	0.38	0.29	0.38	0.26	0.29	0.22
	2014	0.38	0.33	0.42	0.29	0.29	0.22
	ULCChg (p.p.)	0.01	0.04	0.04	0.03	0.00	0.00
Relative ULC (to EU-17)	2000	1.00	0.76	1.00	0.70	1.00	0.74
	2014	1.00	0.87	1.00	0.69	1.00	0.75
	ULCrelChg (p.p.)	0.00	0.11	0.00	–0.01	0.00	0.01

Source: Own calculations based on SEA WIOT and WIOT (Release 2016; Timmer et al., 2015).

levels between the CEE-11 and the EU-17 would have been more favourable to Eastern Europe.

With regard to the question no. 1, it can be noted that despite some increase in the ULC in the BSS, Central European BSSs' locations provided investors with an advantage over Western Europe in terms of cost competitiveness. This implies that the level of the BSS's embeddedness in CEE remained high.

Local and foreign added value in the BSS

To illustrate the degree of co-operation between the BSS and local economies in the CEE-11, the results of estimates of domestic value added in the EU-17 and the CEE-11 services sectors are shown in Table 2.

First, in the BSS, sales to the customers of services sectors (DFG) are characterised by clearly lower values of local co-operation than purchases of intermediate inputs (DVA). This can be due to the relatively high demand for the latter in the services sectors, where the human capital remains a more important production factor than what is the case in the manufacturing of goods. A comparison with the manufacturing sector makes it clear that in the case of physical movement of goods, domestic value added embodied in intermediate inputs can be much lower.

Second, European economies are becoming increasingly interconnected. In 2000–2014, they saw a decrease in domestic value added embodied in the acquisition of intermediate inputs to meet final demand in commercial services, sectors G-N, the ITBS, and the PBS. The exception was the ITBS sector in the CEE-11, which can reflect increased self-reliance of the CEE-11 actors following initially intensive purchases of equipment, technology, and services from abroad.

Third, in services, the IT sectors recorded the lowest DVA, which can illustrate the declining importance of localisation, with companies sourcing relatively more codified processes (for an elaboration on the ability of India-based IT companies to enter global markets as major players, see Fernandez-Stark et al., 2011). By contrast, on downstream markets, the smallest share of value added purchased by domestic buyers (DFG) was recorded in the PBS, which illustrates the readiness of companies in developed countries to outsource professional services by (e.g. HR, legal services, accounting) to specialised companies using international skills and wages arbitrage (Wirtz et al., 2015; Baldwin, 2019).

Fourth, this conjecture is supported by the differences between the EU-17 and the CEE-11 in terms of DFG. In the CEE-11, DFG values are significantly lower, suggesting that in these

Table 2. The positions in global value chains and value added in the European BSS in 2000 and 2014

		ITBS		PBS		Commercial services (Sections G-N)		Manufacturing (Section C)	
		EU-17	CEE-11	EU-17	CEE-11	EU-17	CEE-11	EU-17	CEE-11
DVA	2000	89%	82%	91%	86%	91%	86%	74%	66%
	2014	84%	84%	88%	85%	89%	84%	67%	56%
DFG	2000	87%	78%	79%	79%	87%	86%	72%	73%
	2014	78%	69%	74%	69%	83%	77%	65%	60%
VA (bn USD2000)	2000	189	5	419	13	3,682	158	1,411	73
	2014	324	22	654	41	5,620	404	1,647	188
	Change	71%	359%	56%	216%	53%	157%	17%	157%

Source: Own estimations based on WIOT (Timmer et al., 2015).

low-cost locations more resources are engaged in providing international coordination services. This can also be due to the lower purchasing power of local service users in the CEE-11.

Overall, both the small change in DVA in the CEE-11 and the decreasing DFG imply a non-decreasing embeddedness in local economies, with rising levels of embeddedness of the CEE-11 suppliers in global production networks. Cooperation with local suppliers becomes more intensive if it is analysed not only from the perspective of the share of local value added, but also by its volume. A large nominal increase in locally-created and delivered value added (see Table 2) implies an increasing scale of cooperation of the BSS with its local co-operators. After all, for example, 69% of value added in final demand obtained from the PBS's providers by domestic buyers in the CEE-11 in 2014 was more than 79% of value added in 2000, which was three times smaller.

Thus, declining territorial embeddedness understood as a decreasing share of local value-added flows is reconcilable with a rapid increase in local value added corresponding to an increase in the scale of both foreign and local economic exchange. The weakening interdependence with local actors seems to be compensated for with surplus by the growing scale of cooperation with them.

In conclusion, it can be said that business services are less territorially-embedded than commercial services in general, but they are more embedded than manufacturing is. The BSS in the EU-17 tends to be more local in nature; by contrast, in the CEE-11, the share of local customers gradually decreased, but the share of local suppliers of intermediate inputs remained stable.

Knowledge base in the BSS and industrial upgrading

In order to assess the prospects for further BSS's productivity growth in the CEE-11, I tracked one of its most important factors, namely the skills involved in providing services in this sector.

Table 3 shows the share of highly-skilled personnel in total employment in sectors corresponding to the BSS.

The proportion of highly-skilled personnel in the CEE-11's BSS increased rapidly – faster than in the EU-17. As a result, the corresponding

Table 3. Share of highly-skilled personnel in total employment in selected services sectors in 2000, 2008, and 2014 (% of total hours worked)

NACE Rev. 1.1	**ITBS&PBS (divisions: 64+71–74*)**		**Commercial services (divisions 50–52, 60–64, 70–74, sections H and J)***	
	EU-17	**CEE-10****	**EU-17**	**CEE-10****
2000	31.8	23.9	20.5	13.0
2008	35.4	32.7	24.8	20.4
Change (p.p.)	3.6	8.9	4.3	7.3

NACE Rev. 2	**J (ITBS+)**		**M-N (PBS+)**		**Commercial services (sections G-N)***	
	EU-17	**CEE-11**	**EU-17**	**CEE-11**	**EU-17**	**CEE-11**
2008	48.0	54.4	36.9	37.7	24.3	22.8
2014	57.7	65.9	42.0	44.8	29.8	30.5
Change (p.p.)	9.7	11.5	5.1	7.1	5.5	7.7

* Weighted average by sector's shares in hours worked by the engaged persons.
** CEE-11 excluding Croatia.

Sources: SEA WIOD (Release 2013), EU-KLEMS.

proportions in both groups became nearly equal in 2008. In the other period under scrutiny, particularly high proportions of highly-skilled personnel in the CEE-11 BSS were noted in sectors J and M–N (NACE Rev. 2). Not only were they higher than in the EU-17 in 2008, but they had been growing much faster until 2014. As a result, in 2014, the CEE-11 had a significantly higher proportion of highly skilled persons in employment in sections J and M-N than what was the case in the EU-17, although these shares were equal in total services.

Therefore, a change in skills should trigger changes in export specialisation as well as in income advantages in global value chains (GVCI). The observations made in the theoretical and methodological sections above explain why the specialisation of an economy in exports does not necessarily entail its corresponding specialisation in income generation. The impact of RCAs on

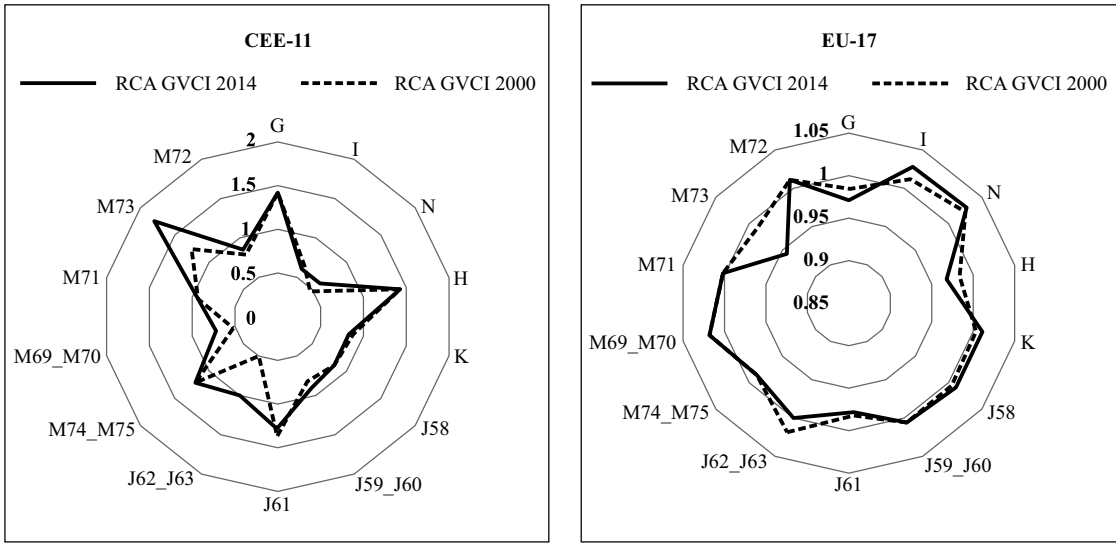

Figure 1. Revealed comparative advantages (RCAs) in the global value chain income in commercial services: CEE-11 versus EU-17 in 2000 and 2014

The service sectors are ranked clockwise from the least knowledge-intensive ones:
G – Wholesale and retail trade, repair of motor vehicles and motorcycles
I – Accommodation and food service activities
N – Administrative and support service activities
H – Transportation and storage
K – Financial and insurance activities
J58 – Publishing activities
J59_J60 – Motion picture, video, television programme production; programming and broadcasting activities
J61 – Telecommunications
J62_J63 – Computer programming, consultancy and related activities; information service activities
M74_M75 – Other professional, scientific and technical activities; veterinary activities
M69_M70 – Legal and accounting activities; activities of head offices; management consultancy activities
M71 – Architectural and engineering activities; technical testing and analysis
M73 – Advertising and market research
M72 – Scientific research and development

Source: Own compilation based on WIOT (Timmer et al., 2015).

generating the GVCI got modified after Timmer et al. (2013) had captured the altered distribution of advantages which emerged with globalisation and the inclusion of underdeveloped economies in export exchange.

Figure 1 shows the revealed comparative advantages (RCAs) in the global value chain income (GVCI) in 2000 and 2014 with regard to the two groups of the studied countries.

From the perspective of individual sectors, the advantages of the CEE-11 in service provision can be seen in M73, M74–M75, and J61. Besides M73, the largest increases in RCA GVCI (of up to 1.8) were found in M69–M70 and J62–J63, i.e. professional and IT services, although they still remained below 1. Moreover, as anticipated, high RCA values but small increases were also found in trade and transport. The RCA patterns in the EU-17 mirrored those in the CEE-11[3], with clear declines having been recorded in trade and transport as well as in some professional and information services (J62_J63 and M73).

From the perspective of changes in the economic structure of the services sector in the CEE-11, both charts reveal that increases in RCA GVCI occurred mainly in IT and professional services. As was argued above, they represent more knowledge-intensive sectors (KIS), which is illustrated by their respective clockwise rankings on the chart from least (sections G and I) to the most knowledge-intensive ones (sections J and M). This illustrates that with a growing interconnectedness it was not only labour-intensive activities but also skill-intensive ones that were being moved to low-cost locations in Central Europe.

In summary and in response to the question no. 3, it can be argued that between 2000 and 2014 the creation of knowledge base in the CEE-11 BSS improved markedly, as is evidenced by the increasing skill levels of the ITBS's and the PBS's personnel. The structure of value creation also improved in line with knowledge-based services steadily gaining an increasing share.

Discussion of the findings

Assuming that the human capital in services performs a similar function to the physical capital in manufacturing industries (Micek et al., 2010), I can interpret the trends outlined in the response to the research question no. 1 in the Gerschenkronian spirit. The so-called "backwardness advantage" (Gerschenkron, 1962) is supposed to reward less-developed countries that invest in manufacturing; since they have had little machinery and equipment so far, what they buy is usually newer and more efficient. The same can be true of services – it is easier to employ educated young people in emerging business service centres than to replace incumbent staff in the existing centres. However, this can mean that relatively backward sectors have more potential to catch up in terms of productivity. By contrast, the "leapfrogging" pattern of catching up (Stehrer & Wörz, 2001; Grodzicki, 2018) also seems more appropriate to describe productivity gains of catching-up countries, as the analysed knowledge-intensive PBS sector caught up with the Western European BSS slightly faster than other sectors did. According to the theory of international exchange, intensive trade leads to factor price equalisation, which is reflected by the convergence of wages in the most internationalised services sectors. Over time, this trend should reduce the cost competitiveness of the CEE-11. Nevertheless, wages in the economy remain fairly homogenous in terms of both their level and their growth rate. By contrast, productivity is more heterogeneous in nature, especially when rapid technological progress and susceptibility to learning enhances a given sector's growth prospects. Therefore, investors benefit from rapid productivity gains in the sector with slower wage growth, which generates savings on the ULC. These observations led Stehrer and Wörz (2001) to conclude that knowledge-based industries provide less-developed countries with greater catching-up potential.

[3] Owing to the design of RCA GVCI, advantages for CEE-11 (RCA>1) represent disadvantages for EU-17 (RCA<1).

Data on the BSS in CEE does not provide a clear-cut answer as to which catching-up pattern is closer to the reality, since neither the more productive ITBS and the PBS developed visibly faster than it is usually the case with other service sectors. Certainly, however, productivity convergence seems to be fostered by these sectors' offshorability.

As the BSS involves mainly knowledge-intensive activities, it seems to be a fairly valuable sector from the perspective of capacity development of local economies. The BSS in the CEE-11 proved capable of rapid productivity growth due to the improving skills of its local employees. The increase in knowledge in the supply base (the services sectors in the CEE-11 became such a supply base for Western European GVCs) can explain the narrowing gap between the East and the West with regard to the generation of this sector's value added. Gereffi et al. (2005) identify skills convergence as one of the main factors that contribute to reducing power asymmetry in GVCs between lead firms and their suppliers. At the macro level, the ability to transform the economic structure towards knowledge-intensive activities is identified with economic development (Amsden, 2001). Therefore, skills play a much more important role in embedding the offshore services industry than what is the case with manufacturing. No costly industrial infrastructure is needed to provide services, whereas technological advantages are embodied in human skills rather than in machinery and equipment. Hence, localised capabilities can play the same role that capital invested in a factory plays in manufacturing (Domański & Gwosdz, 2009; Micek et al., 2010; Geodecki, 2020). This can also mean that the human capital will be rewarded with a higher share in value added than what will be the case in industry, since it is more important for competitive advantage.

Our observations confirm the theoretical considerations made by Markusen (2005), who analysed the case of offshoring white-collar services. If there is no demand for white-collar services, multinational companies (MNCs) can hire even scarce high skills in host-countries at a fraction of the wage in a high-income country. Traditional trade theories tend to suggest that demand for unskilled labour should increase in backward economies, but the specificity of services combined with mobile knowledge-based assets result in the demand for high skills increasing faster in less-developed economies. The findings of empirical studies conducted among foreign investors in CEE (Stephan, 2013; Münich et al., 2014) confirm that low cost was gradually becoming a less important consideration in the decisions taken by investors, who increasingly sought highly-skilled individuals, especially in the services sectors.

Concluding remarks

The presented research findings imply that the research hypothesis about the increasing level of territorial embeddedness of the BSS in CEE economies in 2000–2014 is correct. The study provides satisfactory answers to the research questions concerning the three dimensions of embeddedness:

1. Due to lower unit labour costs in the BSS in CEE, or even their relative decrease in some specialties, the region remains a cost-competitive location for investment in this sector. This determines its fairly high degree of territorial embeddedness in terms of investment attractiveness.
2. With regard to cooperation with local suppliers and customers, the level of embeddedness of the BSS sector in CEE economies remains relatively high when compared to other industries. This can be due to the important role of the human capital in services. The high rate of added-value growth in this sector means that although the share of the local suppliers of intermediate inputs as well as the recipients of services slightly decreased, the scale of cooperation increased significantly.
3. Between 2000 and 2014, the knowledge base in the BSS in CEE improved markedly, as evidenced by the increasing skill levels of personnel employed in the ITBS and

in the PBS, and by the fact that it outpaced the services sector in the EU-17 in this respect. The studied period also saw an improvement in the structure of value added, as an increasing share of it was accounted for by knowledge-based services. This implies a high probability of further productivity growth of the BSS in CEE and bodes well for the degree of territorial embeddedness both in terms of the decreasing likelihood of relocation and the amplification of the capacity of local actors to act as suppliers and recipients of state-of-the-art services.

During research and at the stage of formulating conclusions, important issues emerged that reveal the limitations of this research and suggest potential areas for further study. Firstly, it is worth noting that intra-corporate prices may not fully reflect market prices. In fact, head offices can charge their foreign affiliates higher than what global rates for services suggest, forcing them to charge less for their services and skills (Chang, 2012; Váryová & Košovská, 2016). This allows productivity and value added to be kept at higher levels than would be the case if these services were simply outsourced, which suggests that the actual differences in productivity can be smaller than the official statistics lead one to believe.

Secondly, the *distribution* of value added between domestic and foreign actors should constitute an important research area along with its mere *creation*. Locally-generated value added is not necessarily involved in local economic processes, given that part of it can be repatriated to headquarter economies as dividends. This raises the question of how to measure not only the *shares* in the value added of profits and wages, but also the *proportion* of profits paid out to foreign parent companies when compared with what remains in the local economy as reinvestment or taxes. After all, it is the latter that largely funds the development of the human capital.

References

Amsden, A. H. (2001). *The rise of "the rest": Challenges to the west from late-industrializing economies*. Oxford University Press USA.

Bair, J. (2005). Global capitalism and commodity chains: Looking back, going forward. *Competition & Change*, *9*(2), 153–180.

Baldwin, R. (2012). Global supply chains: Why they emerged, why they matter, and where they are going CEPR Discussion Papers 9103. *Discussion Papers: CEPR*.

Baldwin, R. (2019). *The globotics upheaval: Globalization, robotics, and the future of work*. Oxford University Press.

Baldwin, R., & Lopez-Gonzalez, J. (2015). Supply-chain trade: A portrait of global patterns and several testable hypotheses. *The World Economy*, *38*(11), 1682–1721.

Białynicki-Birula, P., & Pacut, A. (2020). The determinants of territorial embeddedness of offshoring and outsourcing firms: A conceptualisation of the problem. In Ł. Mamica (Ed.), *Outsourcing in European Emerging Economies* (pp. 28–37). Routledge.

Chang, H.-J. (2012). *23 things they don't tell you about capitalism*. Bloomsbury Publishing USA.

Coe, N. M., & Yeung, H. W.-C. (2015). *Global production networks: Theorizing economic development in an interconnected world*. Oxford University Press.

Dicken, P. (2015). *Global shift*. Guilford Press.

Domański, B., & Gwosdz, K. (2009). Toward a more embedded production system? Automotive supply networks and localized capabilities in Poland. *Growth and Change*, *40*(3), 452–482.

Ernst, D. (2000). Catching-Up and Post-Crisis Industrial Upgrading: Seatching for New Sources of Growth in Korea's Electronic Industry. *East-West Center Working Paper*, *2*, May, 1–29.

Fagerberg, J. (1996). Technology and competitiveness. *Oxford Review of Economic Policy*, *12*(3), 39–51.

Fagerberg, J., & Godinho, M. (2004). Innovation and Catching Up. In J. Fagerberg, D. Mowery, & R. R. Nelson (Eds.), *The Oxford Handbook of Innovation* (pp. 514–544). Oxford University Press.

Fernandez-Stark, K., Bamber, P., & Gereffi, G. (2011). The offshore services value chain: Upgrading trajectories in developing countries. *International Journal of Technological Learning, Innovation and Development*, *4*(1–3), 206–234.

Geodecki, T. (2020). The development of European business services value chains: The perspective of emerging economies. In Ł. Mamica (Ed.), *Outsourcing in European Emerging Economies* (pp. 66–84). Routledge.

Geodecki, T., & Głowacki, J. (2020). The importance of new technologies for business development: Automation and robotisation in the services industry. In Ł. Mamica (Ed.), *Outsourcing in European Emerging Economies* (pp. 38–51). Routledge.

Geodecki, T., & Grodzicki, M. J. (2015). Jak awansować w światowej lidze gospodarczej? Kraje Europy Środkowo-Wschodniej w globalnych łańcuchach wartości. *Public Governance/Zarządzanie Publiczne*, *33(3)*, 16–40. https://doi.org/10.15678/ZP.2015.33.3.02

Gereffi, G., Humphrey, J., & Sturgeon, T. (2005). The governance of global value chains. *Review of International Political Economy*, *12*(1), 78–104. https://doi.org/10.1080/09692290500049805

Gerschenkron, A. (1962). *Economic Backwardness in Historical Perspective: A Book of Essays*. Belknap Press of Harvard University Press.

Grodzicki, M. (2018). *Konwergencja w warunkach integracji gospodarczej: Grupa Wyszehradzka w globalnych łańcuchach wartości*. Wydawnictwo Uniwersytetu Jagiellońskiego.

Grodzicki, M. J., & Geodecki, T. (2016). New dimensions of core-periphery relations in an economically integrated Europe: The role of global value chains. *Eastern European Economics*, *54*(5), 377–404.

Hardy, J. (1998). Cathedrals in the Desert? Transnationals, Corporate Strategy and Locality in Wrocław. *Regional Studies*, *32*(7), 639–652.

Hardy, J., Micek, G., & Capik, P. (2011). *Upgrading local economies in Central and Eastern Europe? The role of business service foreign direct investment in the knowledge economy*. Taylor & Francis.

Hess, M. (2004). 'Spatial' relationships? Towards a reconceptualization of embedded ness. *Progress in Human Geography*, *28*(2), 165–186.

Jones, R. W., & Kierzkowski, H. (1990). The Role of Services in Production and International Trade: A Theoretical Framework. In R. Jones & A. Kruger (Eds.), *The Political Economy of International Trade: Festschrift in Honor of Robert Baldwin* (pp. 31–48). Blackwell.

Kaldor, N. (1978). The effect of devaluation on trade in manufacturers. In N. Kaldor, *Future Essays in Applied Economics* (pp. 99–116). Duckworth.

Markusen, J. R. (2005). *Modeling the offshoring of white-collar services: From comparative advantage to the new theories of trade and FDI*. National Bureau of Economic Research in Cambridge, MA., USA.

Micek, G., Działek, J., & Górecki, J. (2010). *Centra usług w Krakowie i ich relacje z otoczeniem lokalnym*. Wydawnictwo Uniwersytetu Jagiellońskiego.

Milberg, W., & Winkler, D. (2013). *Outsourcing economics: Global value chains in capitalist development*. Cambridge University Press.

Miles, I., Belousova, V., & Chichkanov, N. (2018). Knowledge intensive business services: Ambiguities and continuities. *Foresight*, *20*(1), 1–26.

Morrar, R. (2014). Innovation in services: A literature review. *Technology Innovation Management Review*, *4*(4), 6–14.

Münich, D., Srholec, M., Moritz, M., Schäffler, J. (2014). Mothers and Daughters: Heterogeneity of German Direct Investments in the Czech Republic. *Prague Economic Papers*, *1*, 42–62.

Nölke, A., & Vliegenthart, A. (2009). Enlarging the varieties of capitalism: The emergence of dependent market economies in East Central Europe. *World Politics*, *61*(4), 670–702.

OECD (2013). *Interconnected economies: Benefiting from global value chains – Synthesis Report*. OECD Publishing.

Pietrobelli, C., & Rabellotti, R. (2011). Global value chains meet innovation systems: Are there learning opportunities for developing countries? *World Development*, *39*(7), 1261–1269.

Radło, M.-J. (2016). *Offshoring, Outsourcing and Production Fragmentation: Linking Macroeconomic and Micro-/Business Perspectives*. Springer.

Schumpeter, J. A. (1983 [1912]). *The theory of economic development*. Transaction Publishers.

Sirilli, G., & Evangelista, R. (1998). Technological innovation in services and manufacturing: Results from Italian surveys. *Research Policy*, *27*(9), 881–899.

Stehrer, R., & Wörz, J. (2001). *Technological Convergence and Trade Patterns*. The Vienna Institute for International Economic Studies (WIIW) – WIIW Working Papers, No. 9 (October 2001).

Stephan, J. (2013). *The technological role of inward foreign direct investment in Central East Europe*. Springer.

Timmer, M. P., Dietzenbacher, E., Los, B., Stehrer, R., & De Vries, G. J. (2015). An illustrated user guide to the world input–output database: The case of global

automotive production. *Review of International Economics*, *23*(3), 575–605.

Timmer, M. P., Los, B., Stehrer, R., & De Vries, G. J. (2013). Fragmentation, incomes and jobs: An analysis of European competitiveness. *Economic Policy*, *28*(76), 613–661.

Váryová, I., & Košovská, I. (2016). Transfer pricing of transactions between related parties in the Slovak Republic. In E. Horská, Z. Kapsdorferová, & M. Hallová (Eds.), *International Scientific Days 2016. The Agri-Food Value Chain: Challenges for Natural Resources Management and Society. Conference Proceedings* (pp. 429–437). Slovak University of Agriculture in Nitra.

Wallerstein, I. (1974). *The Modern World-System I Capitalist Agriculture and the Origins of the European World-Economy in the Sixteenth Century, With a New Prologue*.

Wallerstein, I. (2004). *World-systems analysis*. Duke University Press.

Wirtz, J., Tuzovic, S., & Ehret, M. (2015). Global business services: Increasing specialization and integration of the world economy as drivers of economic growth. *Journal of Service Management*.

Wright, R. (2010). Competitiveness and changing patterns of embeddedness in Romania. *Competitiveness Review: An International Business Journal*.