

FDI trends in the business services sector: the case of Poland

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1. Introduction

Business services play an important role in the economic growth of capitalist economies. In particular, knowledge-intensive activities are classified among the top target industries of investment-incentive policies worldwide (UNCTAD 2014), whereas knowledge-intensive business services are considered to be increasingly fundamental to the development of national and regional innovation systems (Hipp et al. 2013). Within the sector, transnational companies offer new and complex services and sell them worldwide.

Globally, foreign direct investment (FDI) in knowledge-intensive business services has been in decline during the recent crisis, but in central and eastern Europe, the sector has experienced significant growth since the late 2000s. This is related to the reconfiguration of services and their spatial dispersion, which has often been led by cost considerations. As a result, new locations have emerged in the past decade and knowledge-intensive business services have spread to more peripheral European regions. These processes have been documented by Gallego and Maroto (2013: 14), who argue that knowledge-intensive business services 'are more and more prone to localize in areas where decreasing agglomeration economies are taking place ... [and] in more hinterland European areas'.

What is the reason for such trends? Apart from the cost considerations mentioned above, 'nearshoring' and offshoring trends have been magnified by the decreasing need for knowledge-intensive business services to be located in close proximity to customers. As shown by the software companies discussed by Weterings (2006) and Weterings and Boschma (2009), learning and innovation have not been improved by locating in the vicinity of customers. Gallego and Maroto (2013), on the other hand, argue that the enhanced role of the nodes of transport

networks is a key determinant of attracting knowledge-intensive business services, while Capik and Drahekoupil (2011: 1628) point to the importance of passive policies of ‘targeted subsidies, often implemented separately from knowledge promotion policies’.

A different logic underpinning the offshore outsourcing of business services has also recently evolved in Western European economies. As argued by Gupta (2011), the initial driving rationality of achieving cost effectiveness through ‘labour arbitrage’ is not as important as it was before the crisis. For offshored business services improved agility and flexibility have become vital, besides pure labour-cost considerations. Consequently, service companies have transformed their operating models in the direction of componentisation (fragmentation of services) and global sourcing.

In this chapter we discuss the development of the business services sector in Poland, one of the leading countries in terms of knowledge-intensive business services FDI growth, and identify crisis and post-crisis changes that have taken place in knowledge-intensive business services in this semi-peripheral European country. The chapter challenges Gupta’s (2011) argument and asserts that cost-related factors have played the prime role in attracting FDI in business services to Poland. The abundance of skilled staff and university graduates has also contributed to the dynamic growth of the knowledge-intensive business services sector, but knowledge-intensive business services FDI in central and eastern Europe has generally not been strongly knowledge-seeking (Capik and Drahekoupil 2011). We also examine labour market trends and point to the mixed and uneven evidence of upgrading of the Polish knowledge-intensive business services sector. We also investigate spillover effects and assess the sustainability of knowledge-intensive business services in Poland.

The chapter is based on multiple data sources. In order to put Poland in the central and eastern European context, data on FDI stock have been taken from the Eurostat database. Data on exports and employment come from the WTO database. In addition, the chapter has benefitted greatly from the findings of the Association of Business Service Leaders, which publishes comprehensive annual reports on foreign-owned knowledge-intensive business services in Poland, based on systematic questionnaires. It also builds on the author’s research on the impact of the knowledge-intensive business services sector on the local economy in the Kraków region (Micek et al. 2011), which involved unstructured interviews in

foreign-owned knowledge-intensive business services centres (mainly in finance and accounting and software development centres).

The chapter is structured as follows. After providing background information concerning the development of the knowledge-intensive business services sector in central and eastern Europe in the Introduction it offers a snapshot of the size and the structure of foreign-owned business service centres operating in Poland (Section 2). Section 3 discusses the locational advantages of Poland with regard to knowledge-intensive business services FDI. Next, the emphasis shifts to upgrading processes and the focus is put on new functions acquired by knowledge-intensive business services centres and labour market trends (Section 4). The knowledge-intensive business services sector also influences the Polish economy in the form of spillover effects, which are analysed briefly in Section 5. Finally, the sustainability of FDI-based growth of knowledge-intensive business services and general post-crisis trends are discussed.

2. The size of the knowledge-intensive business services sector in central and eastern Europe

The differentiation of knowledge-intensive business services used in this chapter is consistent with the classification developed by Schnabl and Zenker (2013). The following business sectors are thus treated as the building blocks of knowledge-intensive business services (NACE Revision 2¹):

- IT services (NACE 62–63)
 - Computer programming, consultancy and related activities (NACE 62)
 - Information service activities (NACE 63)
- Legal and accounting services (NACE 69)
- Activities of head offices (NACE 70)
- Architectural and engineering activities (NACE 71)
- Scientific R&D (NACE 72)
- Advertising and market research (NACE 73)

1. Using NACE Revision 1.1. Gallego and Maroto (2013) and Hipp et al. (2013) argue KIBS should include: computer and related activities (NACE 72), research and development (73), and some other knowledge-based business activities (74.1–74.5). To a large extent these categories reflect those treated as knowledge-intensive business services in the chapter.

Using ISIC Revision 4 two general sections of business activities may be classified as knowledge-intensive business services: information and communication (J) and professional, scientific and technical activities (M).²

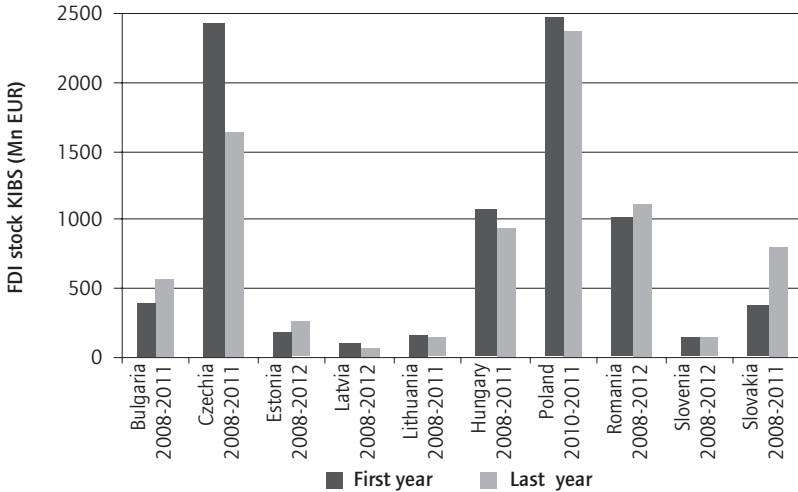
As seen from the above-listed types of business, knowledge-intensive business services may vary significantly in terms of the type of knowledge and skills used. On the other hand, most of these operations may be standardised to such an extent that they may be offshored easily (Burnete 2014; Gál 2014). Knowledge-intensive business services is not a uniform sector, either, in view of the wide variety of occupations represented.

Foreign-owned knowledge-intensive business services are most commonly offered by business service centres. Based on ownership they are usually divided into two categories: outsourcing (third party customer) and captive (shared service) centres. However, with the rise of companies offering not only internal services, but also outsourcing, a hybrid form has recently emerged. The chapter focuses on knowledge-intensive business services centres as examples of vertical FDI; this is because only a few large knowledge-intensive business services centres operating in central and eastern Europe might be treated as market-seeking, demand-driven horizontal FDI (Barba-Navaretti and Venables 2004), whereas the majority are classified as vertical FDI resulting from outsourcing and firms' disintegration.

The growth of knowledge-intensive business services FDI in central and eastern Europe was significant before 2008, which is illustrated by the growing number of centres, increasing employment and rising FDI stock. As mentioned in the introductory section, business services have been claimed to be one of the global losers during the recent financial crisis: in terms of the loss in FDI stock, they have been classified among the ten industries with the largest declines in greenfield FDI between 2011 and 2012 (UNCTAD 2013). This worldwide trend, however, has not been shared by the majority of CEE countries. According to the Eurostat data, only Czechia reported a significant decline in knowledge-intensive business services FDI in the early 2010s; other CEE states still managed to attract knowledge-intensive business services FDI in this period (see Figure 1).

2. ISIC sector N (administrative and support service activities) has been excluded from the analysis, because it includes a large number of numerous non-foreign entities.

Figure 1 FDI stock in the knowledge-intensive business services sector in ten CEE countries, 2008–2011/2012



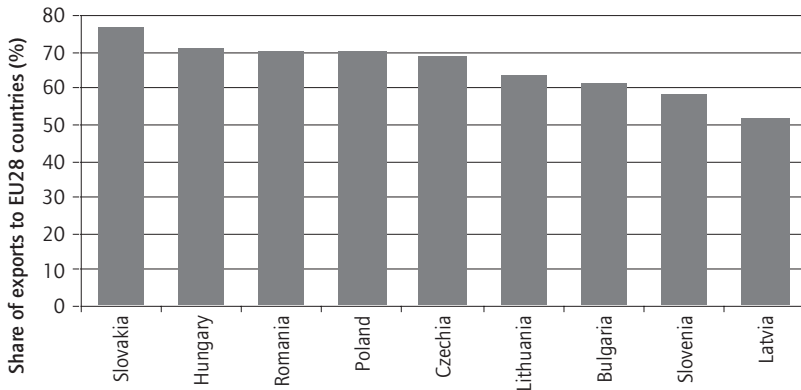
Note: FDI KIBS data include: IT services (J 58, 62-63), legal services and accounting (M 69), architectural and engineering activities (M 71), scientific R&D (M 72), advertising and market research (M 73).
Source: Eurostat (2014)

Still, Figure 1 needs to be treated with caution. According to Fifekova and Sass (2011), data on FDI in business services are unreliable because they vary greatly depending on source. As a result, it does not provide a good basis for international comparisons; instead, data on trade flows – export and import statistics – are suggested both by Fifekova and Sass (2011) and Gál (2014) as a more accurate measure of the size of the knowledge-intensive business services sector. Even though both foreign-owned and domestic companies contribute to the export data, the share of exports from foreign-owned companies constitutes the vast majority of total exports.

High rates of exports are evident in computer services, in particular in the case of Lithuania, Romania, Poland and Estonia. Among the new EU member states, Hungary is a rare exception: between 2011 and 2013, it recorded a 10 per cent decline in exports of other business services. As shown by Gál (2014), CEE exports growth rate was higher before the crisis than the global or EU15 average. However, it must be emphasised that in absolute terms, knowledge-intensive business services export levels in central and eastern Europe are still relatively low. For the sake

of comparison, the volume of German exports of computer services are twice as big as those from CEE, while its exports in other business services are three times as big. CEE exports are highly dependent on EU economies, as it is reported for computer services (Figure 2): in this subcategory, CEE countries export between 50 and 75 per cent of their total exports to other EU member states.

Figure 2 The share of exports to EU28 countries in total computer services exports, 2012 (%)

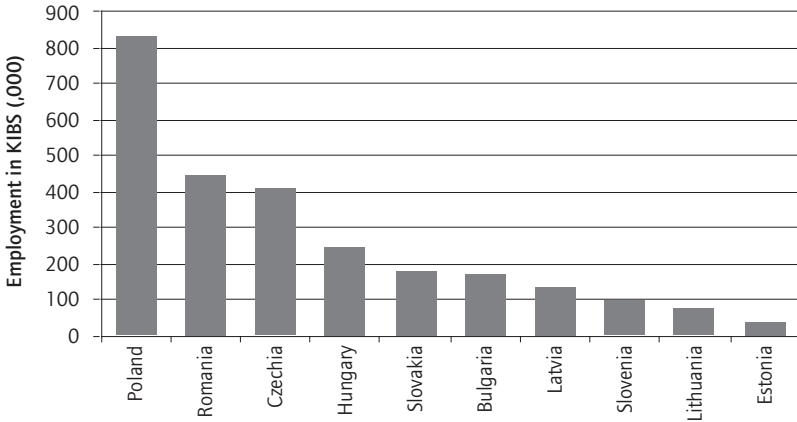


Source: WTO (2014)

On the other hand, data on trade flows in knowledge-intensive business services may be also biased due to the non-reporting or double reporting of re-exports (Fifekova and Sass 2011). For this reason, it could be argued that with knowledge-intensive business services becoming more labour-intensive, it is employment, rather than FDI or the trade flow data, that should be considered as a good proxy of knowledge-intensive business service size. The three largest economies in this respect in central and eastern Europe – also the most populated countries – Poland, Romania and Czechia, accounted for 64 per cent of total knowledge-intensive business services employment in the region in 2012 (Figure 3).

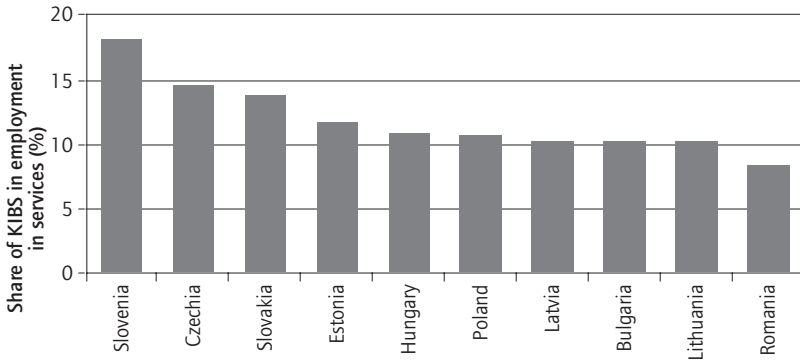
Between 2010 and 2012 significant growth in knowledge-intensive business services employment was observed. This is particularly true for the information and communication sectors in Estonia and Lithuania. The only instance of declining employment was reported for Bulgaria and Romania in relation to professional, scientific and technical activities.

Figure 3 Employment in knowledge-intensive business services in central and eastern Europe by country, 2012



Note: Knowledge-intensive business services: professional, scientific and technical activities, information and communication. For Romania data for 2011.
Source: WTO (2014)

Figure 4 Share of knowledge-intensive business services in total service employment by CEE country, 2011



Note: Knowledge-intensive business services: professional, scientific and technical activities, information and communication.
Source: WTO (2014)

In terms of the share of knowledge-intensive business services in countries' total employment in services, smaller states seem to perform better. As illustrated by Figure 4, in Slovenia the share of such services

exceeds 15 per cent of total employment in services; the strength of the knowledge-intensive business services sector is also evident in Czechia and Slovakia. The lower knowledge-intensive business services shares in Hungary, Poland, Romania and Bulgaria in comparison with Western European countries – for example, in Germany it is 13.4 per cent – reveal a higher significance of more traditional service sectors. The latter might also reflect a more deferred pattern of economic transition, in particular in the last two countries.

3. Poland as the emerging regional core of knowledge-intensive business services

In terms of FDI, trade and employment data, some central and eastern European countries seem to have performed better than others during the recent crisis. This is especially true in the case of Poland, which has played a leading role in the region with regard to knowledge-intensive business services employment, both before and since the crisis. According to the WTO, Poland's wider knowledge-intensive business services sector, consisting of professional, scientific and technical activities, as well as information and communication, currently employs 800,000 people. This includes both domestic and foreign companies. According to the calculations of the Association of Business Service Leaders (ABSL 2014), 128,000 people were employed in larger foreign-owned knowledge-intensive business services centres in Poland in 2014. The discrepancy between the two estimates stems from the fact that the latter classifies some business service centres under the category 'financial and insurance activities' (NACE K).

Between 2005 and 2014, the annual employment growth rate in Polish knowledge-intensive business services centres was estimated at 15 per cent and did not vary significantly year by year. Crisis trends were visible between 2009 and 2010, when fewer new centres were established in the country. As claimed by the ABSL, however, the post-2010 period has witnessed the emergence of new centres: 105 new units were created in 2012 and 2013, whereas in 2009 and 2010 the corresponding number was half that. Moreover, organic growth of the existing centres has been observed: almost 90 per cent of centres have widened the scope of services offered in recent years (ABSL 2014).

Knowledge-intensive business services FDI in Poland has also undergone operational and labour-related changes. According to ABSL, 87 per cent of centres have recently expanded the scope of their activities and 90 per cent of centres have declared employment growth until the end of 2015 (ABSL 2014). The shift is observed in the form of new operations acquired by knowledge-intensive business services centres, which is visible particularly in the field of banking, insurance and financial services and knowledge process outsourcing. For some knowledge-intensive business services centres, the search for new customers has resulted in a shift towards more a hybrid model, in which not only shared services, but also outsourcing services are offered.

With regard to ownership changes, during the global crisis Poland attracted numerous American business service centres. Between 2009 and 2012, 40 new American units were established; as a consequence, there were almost 160 US centres out of 470 centres operating in the country in 2014 (Table 1). The inflow of American FDI is not only driven by cost-based considerations, but also for family-related reasons (observed also in the case of software development centres; see Micek 2009). The share of EU-based centres, by contrast, decreased from 57 per cent of total employment in 2010 to 51 per cent in 2014 (ABSL 2014). At the same time, knowledge-intensive business services companies from emerging economies, such as Wipro and Infosys, have entered Poland, treating it as a gateway to the EU market. The mature knowledge-intensive business services sector in Poland has also become attractive to Middle Eastern and African investors, interested not only in greenfield investment, but also in mergers and acquisitions enabling them to enter the EU economic space.

Table 1 Breakdown of employment in foreign business service centres in Poland in terms of the investor's country of origin, 2010 and 2014 (%)

Country of origin	2010	2014
United States	32	38
EU	57	51
France	18	18
UK	11	8
Germany	9	9

Source: ABSL (2011, 2014)

As for the internal distribution of knowledge-intensive business services centres, it seems that a new round of location competition is currently taking place in Poland. Following similar processes observed over a decade ago in western Europe and documented by Richardson and Gillespie (2003), there is a growing tendency towards spatial deconcentration. The latter is manifested by two processes. First, the capital city of Warsaw does not play a dominant role in the spatial pattern of knowledge-intensive business services centre distribution;³ it has been outperformed by Krakow, which concentrates over 30,000 employees in foreign-owned knowledge-intensive business services centres (Sektor 2014). Second, smaller locations are increasingly gaining in importance. Poland has 11 cities with over 300,000 inhabitants; these mid-sized units, such as Bydgoszcz, Lublin, Radom and Szczecin, have started to attract finance and accounting centres and, to a smaller extent, those performing IT outsourcing functions. This spatial trend seems to support a well-known argument of Harvey (2003), according to which capitalist economies have an intrinsic drive to incorporate new spaces. Referred to by Harvey as a 'spatial fix', this constitutes the capitalist system's attempt to resolve oncoming crises through geographical expansion. The evidence presented in this chapter shows that in different spatial dimensions central and eastern Europe, Poland and mid-sized cities are taking advantage of this development.

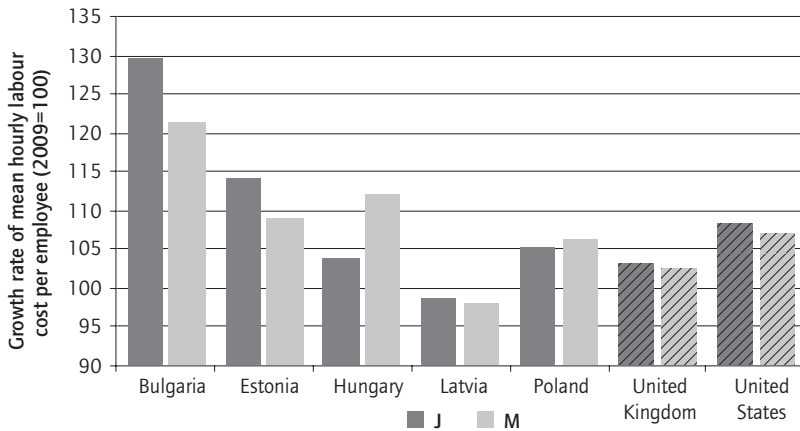
4. Attracting knowledge-intensive business services FDI to central and eastern Europe and Poland – location factors

There is contradictory evidence concerning the role of various location factors in attracting business services FDI. Their significance depends largely on the size of the company and the scope of its activities. For instance, Gál (2014) claims that in central and eastern Europe cost-based considerations are the domain of larger, more labour-intensive service centres, whereas smaller companies rarely list low labour costs as the most important location factor. However, it must be kept in mind that labour costs constitute about 65 per cent of total costs in knowledge-

3. In other CEE countries the urban hierarchy is more skewed and the capital city economically and demographically dominates other urban agglomerations. In Hungary, for instance, Budapest is dominant in terms of knowledge-intensive business services employment (HOA 2013).

intensive business services centres in Poland (ABSL 2014). Mean hourly labour costs grow faster in central and eastern Europe than in developed Western economies (Figure 5), which results in a steadily decreasing comparative advantage for central and eastern Europe in terms of wages. On the other hand, remuneration is still much lower than in western Europe, and the labour cost gap between old and new EU member states remains considerable, despite the higher growth dynamics in the latter region (Figure 6).

Figure 5 Growth rates of mean hourly labour cost per employee in knowledge-intensive business services in central and eastern Europe, 2009–2012



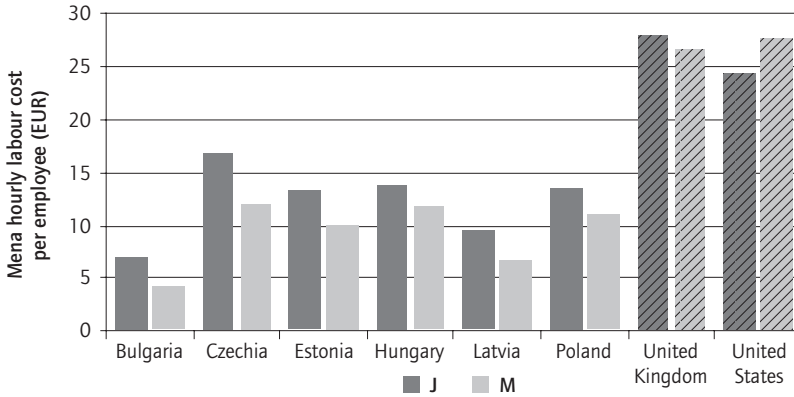
Note: J: information and communications; M: professional, scientific and technical activities.

Data for Estonia 2011–2013.

Source: ILO (2014)

The crisis has accelerated the inflow of knowledge-intensive business services to Poland because many companies recognise offshoring as an opportunity to reduce internal costs by externalising non-core business activities (Chilimoniuk-Przeździecka 2011). In this respect, the crisis has affected the corporate strategies of western European enterprises and has ‘enabled various large companies to reduce their operating costs and look for new outsourcing opportunities’ (interview with the manager of a large foreign-owned outsourcing centre in Poland, 2011). It can thus be argued that (lower) labour costs have played a significant role in the growth of the Polish knowledge-intensive business services sector, especially during the crisis period.

Figure 6 Mean hourly labour cost per employee in knowledge-intensive business services in central and eastern Europe, 2012



Note: J: information and communications; M: professional, scientific and technical activities.
 Data for Romania and Czechia 2011.
 Source: ILO (2014)

Apart from lower wages, the comparative advantage of central and eastern Europe and Poland stems from two types of locational advantage. First, Gál (2014) argues central and eastern Europe attracts FDI in offshorable services due to its talented, highly educated labour, rather than simply because of low wages. In this regard, it can be argued that the local capabilities of the new EU member states, and of Poland in particular, rely heavily on the well-trained and motivated workforce. For employees, knowledge-intensive business service centres provide an opportunity to acquire experience in an international environment and to master foreign languages, as their work usually involves telephone or e-mail contacts with native speakers; moreover, the majority of centres co-finance language courses (Micek et al. 2011). A substantial number of centres offer services for the whole of Europe and hence the command of rarer languages seems to be an important factor in attracting knowledge-intensive business services to university cities with large linguistic departments. The ABSL survey reveals that for selected job offers over 10 per cent of Polish centres require a knowledge of Arabic, Ukrainian and Romanian, and over 20 per cent Hungarian, Portuguese, Finnish and Danish (ABSL 2014). Second, not only Poland, but also other central and eastern European countries are characterised by close geographical, political and cultural proximity to the western part of the continent. This may not only reduce costs, but also facilitates control, increases efficiency and reduces risks (Gál 2014).

Public policies and subsidies are often considered important determinants of foreign firms' location decisions (Drahokoupil 2008). On the other hand, it seems that even though foreign-owned knowledge-intensive business services companies use investment incentives, they do not rank them as the main investment factor. This can be illustrated by the words of one of managers: 'If we had not used the subsidy, we would probably have come to Poland anyway, maybe a bit later'. Hence, it might be argued that Poland and the central and eastern European region offer huge cost advantages even without investment incentives, and the latter may matter only for the final selection of the investment site.

Finally, global factors may affect the scale of outsourcing. Sass and Kalotay (2012), for example, argue that the crisis has opened up opportunities for multinational companies from emerging markets to enter or expand their activities in Hungary. As shown in the previous section, the same logic holds in the case of Poland, where new subsidiaries of Asian-owned knowledge-intensive business service centres have been opened in order to penetrate the EU market.

5. Labour market effects of knowledge-intensive business services in Poland

From the Polish labour market perspective, foreign-owned knowledge-intensive business services are important in a number of respects. To start with, such services provide job opportunities and reduce unemployment among graduates. It can therefore be argued that the dynamic growth of knowledge-intensive business services centres has slowed down the process of emigration of educated graduates to other EU countries (Micek et al. 2011). The centres also give their employees the possibility to pursue employment in line with their university specialisation, especially in the case of economics and IT, the majority of technical and scientific studies, and some humanities and linguistic studies.

Even if offshoring centres are often blamed for employing highly educated workers in low-skilled jobs, Beerepoot and Hendriks (2013: 823) demonstrate that offshore service sector work is 'part of the longer-term career planning of workers and an opportunity for strengthening their employability on the global labour market'. Similar trends can be observed in Poland, where the relatively early stage of development of the offshore service sector provides workers with opportunities for local

upward labour mobility. Based on interviews it can be argued that, thanks to frequent training sessions (often taking place abroad), knowledge-intensive business service centres' employees acquire new skills that are often not available in their local environments. The exchange of codified information frequently takes place not only in the form of training sessions, but also through the inflow of employees educated outside the city (and educated at other universities), including foreigners. Foreign employees, who frequently have more extensive experience, are an important factor in the development of Polish knowledge-intensive business service centres, given that the number of languages used in the centres has already reached 40 and is constantly growing.

Except from finance and accounting centres, there is generally a positive societal attitude towards work in the knowledge-intensive business services sector. The image of such employment has been improved in recent years by various promotional campaigns. One example is the campaign by industry leaders and local authorities in Kraków, launched shortly before the crisis under the slogan 'An Expert, Not a Machine'. The main idea of the initiative was to change the negative picture of knowledge-intensive business services employees as merely 'punching in financial data', and to show that outsourcing creates opportunities for professional development. On the other hand, research conducted by Micek et al. (2011) demonstrated that only two-thirds of knowledge-intensive business services employees agree that the statement 'An Expert, Not a Machine' reflects the reality of work at knowledge-intensive business service centres.

Changes in the Polish labour market induced by foreign-owned knowledge-intensive business services entail growing attrition rates in some indigenous companies related to the growth of foreign centres. Managers of Polish-owned firms argue that each entry of a foreign-owned company forces them to improve working conditions in order not to lose the most experienced staff: 'The explosion of new foreign companies entering the market and new employment opportunities has prompted salary increases at our company' (interview with a manager of a business process outsourcing centre, 2011).

As for remuneration patterns, salaries in knowledge-intensive business service centres are relatively high. For senior posts they even significantly exceed average wage levels in Poland's service sector (Table 2). Micek et al. (2010) demonstrated that in 80 per cent of Kraków's knowledge-

intensive business service centres gross remuneration in 2007 exceeded the average wages in the Kraków enterprise sector. There is certainly wide diversity in this respect, as wages of employees of R&D centres were twice as high as those in business outsourcing centres (Micek et al. 2011).

Table 2 Average (optimal) gross monthly salary in knowledge-intensive business service centres where knowledge of English is required (euros)

Post	Poland	Czechia	Hungary	Romania
Customer service, specialist (1+ year of experience)	900	875	1,100	625
Customer service, team leader (team: 5-15 FTE)	1,675	1,525	1,650	1,000
General ledger, junior accountant (1-2 years of experience)	850	925	1,000	550
General ledger, senior accountant (over 3 years of experience)	1,475	1,625	1,500	900
IT/technical support, 1st line support (up to one year of experience)	800	875	925	550
IT/technical support, 2nd line support	1,275	1,075	1,150	775

Source: ABSL (2014) based on Hays Poland data (2014)

With the exception of trade unions active in a few captive centres operating within large industrial holdings – for example, in banking and the energy industry – the knowledge-intensive business services sector is largely non-unionised. As a result, there is no organised employee response to legislative changes. Some of the recent regulatory modifications, however, have had a considerable effect on working conditions in the sector. Since the beginning of 2014, for instance, companies providing cross-border services from Poland for other time zones have been allowed to carry out their tasks on Sundays and public holidays, so that they can stay in constant contact with the customer.

6. Upgrading and spillover effects in the knowledge-intensive business services sector

Upgrading and modernisation in the knowledge-intensive business services sector may involve a shift to more advanced operations and certain changes in the labour market, such as the acquisition of new skills and salary increases. In Poland, the evidence of upgrading is mixed and uneven; it also depends strongly on the source and the profile of

knowledge-intensive business service centres (see Hardy et al. 2011). Even though there are cases of centres moving up to outsourcing of knowledge processes (KPO), the most advanced business processes are still rare. For instance, knowledge management services are offered by only 8 per cent and legal processes by 11 per cent of foreign-owned knowledge-intensive business service centres (ABSL 2014). In IT services, there have also been cases in which new processes have been moved to Poland, whereas less advanced processes have been offshored to Asian countries; as argued by one of the managers, it is common that Polish software development centres conduct 'more and more important and critical projects'. On the other hand, it is still difficult to make generalisable conclusions on the basis of the few available examples of upgrading.

As for the impact of knowledge-intensive business services FDI on economic development in a broader sense, at least three types of spillover can be identified. The first, most obvious effect is direct employment in foreign-owned knowledge-intensive business service centres. With its over 100,000 employees, steady 20 per cent compound annual employment growth rate and 50 per cent increase in employment since 2012 (ABSL 2014), knowledge-intensive business services FDI is among the most job-generating sectors in the Polish economy. In terms of level of employment, in 2013 knowledge-intensive business service centres outperformed coal mining, and by 2017 they are expected to overtake the automotive industry. Second, spillover with regard to indirect employment in companies supplying knowledge-intensive business service centres (indirect effects) and their employees (induced effects) should also be taken into account. Such spillover could be measured in terms of multiplier effects.⁴ It turns out, however, that in the case of the knowledge-intensive business service sector, indirect multiplier effects do not play a significant role in job creation. For instance, Micek et al. (2011) showed that in Kraków, every 100 workplaces in the knowledge-intensive business services sector had generated 27 new jobs in cooperating companies and firms supplying consumer services for employees. Employment generated from the suppliers' side was limited and the multiplier effects were very low in comparison with industry (passenger transportation, for instance, generated 46 new jobs per 100 workplaces;

4. Micek (2011) provides an insight into the methodology of estimating indirect and induced multiplier effects.

see also Micek 2010). The main type of multiplier effect in the knowledge-intensive business services sector are therefore induced effects in the form of spending of wages by knowledge-intensive business services employees (two-thirds of total amount of multiplier effects).

Third, from the knowledge spillover perspective (Martin and Moodysson 2013) information might be transferred via three types of sourcing: monitoring, mobility and collaboration. With regard to monitoring the search for knowledge outside the organisational boundaries of companies, without direct interaction with other firms, definitely occurs in the knowledge-intensive business services sector. Intermediaries such as the Association of Business Service Leaders, the Polish Information and Foreign Investment Agency and Pro Progressio play an important role in this respect; they organise or support various knowledge-intensive business services-oriented events and produce reports outlining trends and developments in the sector based on company questionnaires. As for employee mobility and the creation of new companies, in contrast to manufacturing the knowledge-intensive business services sector is not largely driven by spin-off companies. In terms of labour mobility, even if official turnover rates are relatively moderate, the readiness to relocate expressed by Polish employees seems to be one of the factors that attract knowledge-intensive business services companies to Poland. The research conducted by Hays Poland (10 Lat 2015) demonstrate that 85 per cent of knowledge-intensive business service employees declare their readiness to relocate due to job-seeking reasons. Polish workers are willing to commute or even move from a remote part of the country to the location of a business service centre. The high potential for labour mobility in Poland is attractive to knowledge-intensive business services, but at the same time generates a high turnover problem: as one manager of a business process outsourcing centre stated, '[a]mong employees there is a belief that they must to change job from time to time. It is difficult to retain loyalty between the company and employee'. Last but not least, knowledge sourcing through bilateral collaboration seems to be relatively undeveloped. Collaboration is supported mainly by intermediaries – not only national associations, but also local chambers of foreign investors – that organise informal business events. However, cases of business collaboration between companies remain scarce.

7. Conclusion: sustainability of FDI-based growth of knowledge-intensive business services in Poland

This chapter has showed that central and eastern European countries have not been affected by the recent crisis in knowledge-intensive business services FDI to the same extent as the rest of the global economy. It has focused on Poland, the regional leader in terms of knowledge-intensive business services employment, where steady growth in the number of foreign-owned centres has been reported over the past decade. The analysis has demonstrated that the crisis period has opened opportunities to outsource non-core functions and build new knowledge-intensive business service capacities in peripheral European countries. These processes have been driven mainly by cost considerations (in particular, the labour-cost gap), but they have also been facilitated by the skilled workforce and, to a lesser extent, by the favourable regulatory environment.

The issue of the sustainability of knowledge-intensive business services FDI in comparison with, for instance, foreign investment in manufacturing, is rarely brought up in Polish academic and public discussions. Gál (2014) argues that in the short term, foreign-owned knowledge-intensive business services are here to stay. This judgement is also reflected in the strongly optimistic growth forecasts for the foreign knowledge-intensive business services sector in Poland: the most cautious expectations report 150,000 employees at the end of 2015 (Sektor 2014). The positive trends that made the knowledge-intensive business services sector more resilient include the diversification of business services offered and the presence of new investors from emerging markets. As a consequence, Poland is now more widely recognised as an attractive location for knowledge-intensive business services than a decade or so ago.

On the other hand, there are potential dangers to the long-term resilience of FDI-based growth of knowledge-intensive business services in Poland, and in central and eastern Europe more generally. In view of rising wages and labour costs, the biggest threat is related to the (re)emergence of new locations outside Europe, especially in India and the Philippines, and the relocation of knowledge-intensive business services capacities to these regions. The hypothetical closure of large companies (>1,000 employees each) that employ almost 50,000 workers in Poland would result in a substantial increase in unemployment and generate a need for retraining.

In view of the dependence of the real estate market on knowledge-intensive business services tenants, relocations would also lead to a significant increase in office vacancy rates.

Last but not least, the danger of being locked into less advanced knowledge-intensive business services must be taken into account. The possible shift towards more value added services cannot be taken for granted, especially given that the evidence on functional upgrading of knowledge-intensive business services is so far scarce and very uneven (see Section 5 of this chapter and Capik and Drahekoupil 2011). Such upgrading would require a change of institutional and regulatory frameworks, making them capable of attracting and maintaining more value added services, as well as the introduction of tax exemptions for advanced business services.

In order to maintain the current level of knowledge-intensive business services FDI inflows, the following factors seem to play an important role. First, agglomeration economies and cluster building matter. It is thus essential to build local coalitions among knowledge-intensive business service centres to enhance tertiary education. Moreover, in order to maintain FDI, upgrading within supply chains plays a significant role. However, case-based and mixed evidence on these trends in Poland and in central and eastern Europe more generally is scarce, even though one of the largest knowledge-intensive business service centres has recently moved some business processes to the Philippines and simultaneously has acquired advanced financial processes from its western European counterpart. Established and mature local linkages may also limit foreign-owned knowledge-intensive business services' relocation options. So far, however, the role of local suppliers and knowledge spillovers has been limited to less advanced producer services (Micek at al. 2011).

Companies cannot retain skilled staff when personnel turnover rates are high. Reported voluntary annual attrition rates do not exceed 20 per cent and are smaller in R&D centres (ABSL 2014). On the other hand, the pool of skilled and experienced labour in foreign-owned knowledge-intensive business services is definitely an asset, although it is diminishing. The decreasing availability of skilled workers has generated a need to seek employees abroad. This points to the increasing need to train potential and current knowledge-intensive business services employees so that the competitive advantage of foreign-owned centres in Poland is maintained.

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