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CAPIK, Paweł and DRAHOKOUPIL, Jan

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Foreign Direct Investments in Business Services: Transforming the Visegrád Four Region into a Knowledge-Based Economy?

Paweł Capik, *Sheffield Hallam University*
Jan Drahokoupil, *University of Mannheim (MZES)*

Paweł Capik
Sheffield Business School
Sheffield Hallam University
Howard Street, Sheffield, S1 1WB
United Kingdom
Email: p.capik@shu.ac.uk
Tel.: +44 114 225 5885

Jan Drahokoupil
Mannheim Centre for European Social Research (MZES)
Universität Mannheim
D-68131 Mannheim
Germany
Email: jan.drahokoupil@gmail.com

Abstract[1]

Foreign direct investments (FDI) in the service sector are widely attributed an important role in bringing more skill-intensive activities into the Visegrád Four (V4). This region – comprising Poland, the Czech Republic, Hungary and Slovakia – relied heavily on FDI in manufacturing, which was often found to generate activities with limited skill content. This contribution deconstructs the chaotic concept of 'business services' by analyzing the actual nature of service sector activities outsourced and offshored to the V4. Using the knowledge-based economy as a benchmark, the paper assesses the potential of service sector outsourcing in contributing to regional competitiveness by increasing the innovative capacity. It also discusses the role of state policies towards service sector FDI. The analysis combines data obtained through 35 in-depth case studies of service sector outsourcing projects in V4 countries. Moreover, it draws on interviews with senior employees of investment promotion agencies and publicly available data and statistics on activities within the service sector in the region. It argues that the recent inward investments in business services in the V4 mainly utilise existing local human-capital resources, and their contribution to the development of the knowledge-based economy is limited to employment creation and demand for skilled labour.

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Introduction

Over the past two decades, the Visegrád Four (V4) countries (Poland, the Czech Republic, Hungary and Slovakia) have become a popular destination for multinational enterprises (MNEs) seeking initially to expand their market base, and subsequently gain access to resources and benefit from increased efficiency of operations (Bradshaw 2005; Myant and Drahokoupil 2010). This development in investment focus has been paralleled in more recent years by a change in the sectoral pattern of foreign direct investments (FDI): during the early transition years, various manufacturing sectors were the key recipients of inward investments; at the beginning of the new millennium, the service sector started to become an important FDI beneficiary.

This increase in service sector investments in the V4 was in line with trends in global FDI flows, which were increasingly dominated by this sector. This was related to the transformation of global value chains by the increasing importance of offshoring and the outsourcing of service functions. Multinational enterprises grew increasingly more aware of the trend towards global disaggregation of services, and learned to take advantage of the opportunities (and also face the challenges) associated with this trend. Whereas the opportunities included the potential for cost reduction, access to pools of skilled labour, faster cycle time for new products and processes design and development, and access to growing markets, the challenges comprised communication and coordination difficulties, compromised intellectual property, lack of control over quality and project timetables, and political and economic risks (Apte and Mason

1995). Choosing an adequate location serves as one of the means to mitigate some of these disadvantages.

The increased popularity of outsourcing and offshoring contributed to, and simultaneously reflected, the attractiveness of the V4 as a destination for service sector investments. As in manufacturing, the bulk of the initial service investments flows in Central and Eastern Europe were received by the V4 economies. Within this sector, investments by companies that organized offshore outsourcing of specific service functions had a prominent role from about the year 2000. Growing interest from service sector investors contributed to the emergence of competition between these countries, and subsequently led to the reinvention of their investment support policies and measures. The Czech Republic was the frontrunner in changing the emphasis of the country promotion efforts, redesigning investment incentive schemes and directing subsidies towards service sector investments. Convinced of their benefits, the other countries soon followed suit.

The attractiveness of business services to the V4 economies stems from the general assumption of the higher knowledge content and growth potential of service-sector activities (Piech and Radosevic 2006). In a broader policy context, the prioritization and targeting of the service sector resulted from a universal perception of service sector FDI (SFDI) as the driver of change, and the means to speed up the modernization and structural transformation of regional economies historically heavily dominated by industry. After the initial euphoria caused by the growing inflows of service sector investments, questions about their quality, actual contribution to the economy and future prospects started to emerge in public and academic debates. It is

the aim of this contribution to address some of these issues, particularly those concerned with the quality of the investments in terms of the knowledge content and their contribution to the transformation of the Visegrád region into knowledge-based economies (KBEs). It is argued that the FDI in business services mainly utilise local human-capital resources, and their contribution to the development of the knowledge-based economy is limited to employment creation and demand for skilled labour.

This article draws broadly on a study conducted by the authors in the Czech Republic, Hungary, Poland and Slovakia. This included interviews with regional development agencies and managers of 35 firms. In addition, representatives of national and regional investment promotion agencies were interviewed at the beginning and the end of the project. The gap between the nominal and real skill intensity characterizing the V4 demands a qualitative assessment to comprehend the actual knowledge content of SFDI activities (e.g. Srholec 2006). The data presented in this article is not representative of the population of the service sector in the V4, since detailed and representative data on the population of companies was not available. Instead, the researchers selected companies that appeared representative of major trends in individual countries. The point of case selection was thus to get in-depth insights into the nature of activities conducted in this segment of SFDI – the type of information which cannot be obtained from the available statistics. The company interview findings have been reported in detail elsewhere (see Sass and Fifeková 2011, in this journal) - we focus on the key aspects of the findings, and analyse their contribution to the debate on KBE. Given the nature of case selection, this article does not attempt to draw inferences about the differences between the countries themselves.

The analysed investments played different functions within the diverse phenomenon of business-process outsourcing (BPO). For example, shared service centres (SSC) usually provide back- (and middle-corporate) office functions. They can also support subsidiaries of the company in the host country, in a wider region or globally. Contact centres deal with front-office activities. They typically serve customers within a particular region, but may also serve global networks. The service functions provided in these centres include administration, finance, human resources, payroll services, logistics, customer care and content development (knowledge services and R&D). The cases chosen included both independent business services firms and the regional, European or global service centres of companies that relocated some regional or global service functions to the region in 2007-2009.

Examples of major independent business services firms active in the region included: Accenture in Slovakia, in the Czech Republic and Poland; EDS (Hewlett-Packard) in Hungary; Cap Gemini in Poland; and SAP in the Czech Republic and Hungary. Major service centres in the region included: Lufthansa, Bayer, Philips, Electrolux, Volvo, Fiat, HP and Shell in Poland; Alcoa, Vodafone, Exxon Mobil, Avis, Cemex, GE, InBev and Morgan Stanley in Hungary; DHL, HP, Philips, Lufthansa, Exxon Mobil, InBev and Microsoft in the Czech Republic; and IBM, DELL, Lenovo in Slovakia.

This paper begins by discussing key concepts relating to the knowledge-based economy (KBE) and the transformation of global value chains in the context of the research on the KBE in Central and Eastern Europe. The KBE as a social system of innovation is then set as a benchmark for assessing the potential of SFDI in

contributing to regional competitiveness by increasing the innovative potential. Against this benchmark, the V4 region is found lacking in real (as opposed to nominal) skill intensity, linkages allowing innovation and the exchange of knowledge, and effective innovation policy. The paper also shows that attracting SFDI became a cornerstone of policies promoting competitiveness in the region, with countries converging on a passive policy of targeted subsidies.

The paper then situates the V4 in the context of global service sector investment flows, indicating an apparent shift to more value-added and knowledge-intensive investments. The analysis includes a discussion on the actual and potential knowledge content of business services FDI, and the nature of linkages in this sector. There is a focus on the motives of investors, content of activities, and linkages and regional linkages. The conclusion then relates the findings to the KBE benchmark to assess the developmental potential of FDI in business services.

The knowledge-based economy and the Visegrád Four

The notion of the knowledge-based economy (KBE) reflects the increasing importance of knowledge as a source of economic growth. KBEs can be defined as 'economies which are directly based on the production, distribution and the use of knowledge and information' (OECD 1996, p.7). However, the qualitative novelty of a growth regime enabled by the spread of information and communication technologies in terms of productivity growth and the nature of business cycle is questionable. Nevertheless, technological change has been associated with a changing role of innovation and knowledge in contributing to economic growth, altering also the

structure of opportunities and constraints for regional development strategies. Advanced economies increase research and development and information technology intensity. Knowledge, along with other intangible assets such as human creativity or even personal warmth, is thus a crucial factor contributing to growth and competitiveness (UNIDO 2005). The ability to learn and continuously innovate products and processes is also widely considered crucial for a firm to be able to compete (Amin and Cohendet 1998). Increasing the innovation capability has therefore become an underlying concern in policy-making circles (Sapir et al. 2004; Harrington and Daniels 2006; Sapir 2006).

Technological innovations have also been associated with a trend towards an increased separation of technology from production activities, and a growing reliance on network-type organizations. The expansion of Knowledge Intensive Business Services (KIBS) increased the importance of the service component in manufacturing, escalating the number of production sites and increasing the opportunity to source technology from different regional clusters (Radosevic 2006). The emergence of the KBE is therefore closely linked with the transformation of global value chains through offshore outsourcing of service functions (Gereffi and Kaplinski 2001). Information and communication technologies have allowed a dramatic expansion of outsourcing and offshoring options, both in manufacturing and services. This real-time connectivity has transformed many segmented national labour markets into integrated global production systems (Harrington and Daniels 2006; Huggins and Izushi 2007).

The new opportunities provided by offshore outsourcing have led companies in the developing world to explore opportunities for efficiency improvement, particularly

by lowering labour costs (Roach 2003). At the same time, while the search for lower costs remains the salient motive for outsourcing and offshoring, companies also pursue these options in order to increase the quality of operations and efficiency gains in a broader knowledge-management perspective (Yang et al. 2007). Outsourcing allows firms to focus on the development of their core competencies - the intellectually based activities and values which the company performs and delivers better than its competitors in the market.

In this context, failing to outsource support functions that the company performs at lower than world-class standard compromises its competitive edge, by not utilising the skills from the world's best sources (Hamel and Prahalad 1994; Quinn 1999). From this perspective, outsourcing means a quest for knowledge not present internally within the company, rather than the spreading of it. The specialised knowledge is the key strategic asset of the company, hence staying within it, while other types of knowledge are sought to be delivered from outside. Both kinds, however, are expected to contribute to the company's competitive advantage. Such knowledge-sourcing practices, in the case of BPO, may support the development of service and/or knowledge suppliers in provider regions and countries, but offer little in terms of direct knowledge transfers. In the case of shared-service centre activities, the possibility for knowledge transfers is potentially higher (Harrington and Daniels 2006).

The notion of the KBE is used here as a benchmark for adjudicating the potential of economic activities in contributing to regional competitiveness by increasing innovative potential. Characterized by high skill content and therefore the demand for highly skilled workers, a KBE should be understood as a social system,

with specific social relations and institutional forms underpinning the innovation potential on the level of the firm, the region, and the wider production network (OECD 1996; Amin and Cohendet 1998; Bell and Albu 1999; UNIDO 2005). Continuous learning and innovation in the KBE takes place through the interaction of producers and users in the exchange of tacit and codified knowledge. Thus, while research and development (R&D) and human capital may be the most important factors in generating knowledge, innovation comes indirectly from knowledge spillovers, with tacit knowledge playing a major role.

The regional embeddedness of firms and the nature of production networks are therefore likely to have a key role in promoting knowledge creation (Harrington and Daniels 2006). Collaborative knowledge networks or clusters in the regions enable knowledge diffusion and innovation through inter-firm interactive learning and collaborative relationships with public research institutions or other actors (Nadvi and Halder 2002). Learning and knowledge transfer can also take place through production networks organizing (global) value chains (Gereffi 1999; Humphrey and Schmitz 2000, 2002; Schmitz 2004). Network-based chains are particularly favourable to an open-ended upgrading through knowledge transfer, as they are characterized by intense knowledge-based interaction between firms. In contrast to quasi-hierarchical producer-driven chains, market-based chains do not entail hindrances to functional upgrading by increasing the overall skill content of activities (Humphrey and Schmitz 2004). While quasi-hierarchical change characterizes manufacturing sectors such as the automotive industry (e.g. Pavlínek and Ženka 2010), non-hierarchical chains (based on market or network relations) are likely to prevail in the business services outsourcing sector.

Local, regional and national states can play an important role in promoting the development of a KBE. It can enhance knowledge diffusion and promote knowledge networks in a region by promoting linkages among actors. It can also help to attract mobile KIBS by offering a unique set of spatially fixed competitive advantages (OECD 1996). Some of the most successful FDI-assisted developmental strategies have actively combined the upgrading of locational advantages with encouraging MNEs to deepen and broader their activities. Arguments have been made for a proactive and selective approach to FDI promotion, focusing on matching domestic capacities with the dynamics of global value chains, and fostering linkages and creating clusters of local firms around the multinational enterprises (Lall 2004; Velde 2001; Narula and Guimón 2010).

Studies of KBE in Central and Eastern European countries have found the region lags behind in terms of both skills intensity and the nature of innovation systems (Piech and Radosevic 2006; Hardy 2007). These countries are characterized by a low share of knowledge-intensive services relative to other EU member states. Moreover, an economy-wide gap between nominal and real skill intensity has been noticed (Srholec 2006). Nominally high-tech capacities have been thus often associated with low-level-of-education jobs, involving tasks with low knowledge content (Radosevic 2006). At the same time, a comparative advantage in human capital, and a highly educated workforce in particular, have often been emphasized (Kamiński and Smarzyńska 2001; Ederer et al. 2006; Strietska-Ilina 2007; Roland Berger 2010). However, both micro- and macro-level studies have suggested that an educated

workforce is not a sufficient condition for a high skill intensity of actual activities (Kadeřábková 2006; Hardy 2007).

The level of R&D spending in Central Eastern Europe (CEE) has traditionally been low relative to West European countries, with R&D spending in the private sector unevenly distributed (Myant and Drahokoupil 2010, pp. 169-171). In particular, knowledge-intensive activities were predominantly under-represented among domestic firms, while foreign companies contributed a considerable share to national research and development activities in the V4 (ranging from 17 per cent in Poland to over 62 per cent in Hungary in 2004). However, this contribution was far more significant in manufacturing industries, and less visible in the service sector (Dunning and Lundan 2008). In the Czech Republic, for example, which recorded the highest R&D spending among the V4 countries, the exceptional growth from 0.95 to 1.41 per cent of GDP in the 1995-2005 period was linked to the activities of the MNEs in the motor vehicle sector (Pavlínek et al. 2009).

Linkages between companies remained weak, particularly as far as knowledge-intensive activities were concerned, and high and medium technology manufacturing in the region was often detached from R&D (Szalavetz 2006). While foreign-owned companies tended to invest more in R&D and technology than domestic firms, the spillovers from FDI were often restricted to vertical linkages, with horizontal spillovers often found to be absent or negative (Radosevic 2006).

FDI in knowledge-intensive services, however, were considered to have an important potential as an independent source of growth and catch-up (Radosevic

2006). Some studies of multinational enterprises' activities in the service sector in Central and Eastern Europe (Kolstad and Villanger 2008; Riedl 2010) concluded that services were mostly non-tradable, and stressed that service sector investments were mainly market seeking. The bulk of SFDI flows from 2000 were linked to offshore-outsourcing, seeking to exploit local labour market resources for export-oriented service provision.

Studies of the role of the state in knowledge promotion in CEE have observed a shift towards a more active role in promoting innovation. In some countries, such as Estonia, EU accession brought the innovation policy onto the agenda. In other countries, for example Slovenia and Hungary, changes in policy focus occurred even earlier. Attempting to imitate advanced industrial countries, innovation policies in CEE focused on R&D-related activities, such as the commercialization of public research and the development of technology parks for start-ups. However, such policies were often accompanied by relatively little increase in actual funding and largely omitted consideration of the local industrial base, leaving only a limited impact on the target regions (Tiits et al. 2008). While in practice the FDI attraction policies put little emphasis on the quality of FDI, the innovation policy was domestically oriented with an exclusive focus on R&D and high technology. However, innovation in domestic companies was in fact linked to the predominantly imported equipment, and had only a limited R&D content (Radosevic and Reid 2006).

Assessing the potential of the region to develop a KBE, Radosevic (2006) identified three main challenges: weak linkages among actors; low innovation and skill content; and the lack of an effective innovation policy to address weak innovation

systems. Accordingly, linkages needed to be created in the fragmented national systems of innovation characterizing the Central and Eastern European countries (CEECs). The success of the service sector FDI was thus likely to depend on coordinating and complementing fragmented FDI inflows with other capabilities in localities, including both industrial and service activities. Linkages also needed to be created with local universities, technology parks and cooperative centres. Moreover, innovation policy needed to address weak agents, in particular domestic companies with low innovation and skill content. Such policy needed to recognize that the success of domestic firms was conditional upon their insertion into global value chains through subcontracting.

Our assessment of the service sector focuses on these challenges by analyzing the real skill intensity of the SFDI activities, their actual and potential knowledge content, and the nature of linkages with other actors – both in the region and in the value chain - and the role of state policies towards the SFDI in addressing the structural weaknesses of national innovation systems.

Policy measures

Attempts to attract FDI have constituted the main form of industrial policy in CEE countries since the late 1990s (Myant and Drahokoupil 2010). From 2000, the governments of the V4 countries redesigned their investment incentive schemes in order to target service sector investments. The region thus followed developments in other parts of the world, reflecting the growth of SFDI and the recognition of the

developmental potential of business-service offshoring and outsourcing (Bunyaratavej et al. 2007).

Having found themselves competing in the same niche of the market for FDI, all states in the V4 region developed similar policies towards foreign investors by the end of the 1990s (Capik 2007; Drahokoupil 2008). In the context of the EU accession in 2004, the CEECs had to make their investment schemes compatible with EU regulations on state support, leading to further narrowing of differences in investment promotion policies. Competition among structurally similar countries led the V4 to focus on a similar model of competitiveness promotion, centred around investment subsidies. This in turn, across the region, led to the retargeting of promotion towards service sector investments, and business services in particular. Policies aimed at SFDI were embedded in the existing paradigm of passive investment support, through subsidies with relatively broad targeting and low selectivity. Corporate income tax waivers, income tax exceptions, cash grants for training the workforce, the acquisition of equipment, and transfer of real estate at a subsidized cost were common forms of investment incentives. Policies to attract investors also included a range of place promotion measures, such as pre-investment and after-care services for investors.

Table 1 provides an overview of investment schemes for SFDI in the V4. In all cases, as stipulated by EU regulations, the generosity of government support reflected the level of development of the respective region. Moreover, the size of the investment, number of jobs created, and value added were among the criteria used for deciding the level of investment support. The policies were also targeted at specific priority sectors. While the degree to which qualitative and sectoral criteria mattered in the actual

investment-support decisions is uncertain, there was a clear shift in terms of the sectoral priorities of investment support policies, as well as in the sectoral composition of the investment projects mediated and supported by the respective investment promotion agencies. Such a shift reflected the changing composition of FDI flows into the region since 2000. In the 1990s, when the bulk of FDI flows constituted investments into manufacturing, the priority sectors included automotive, precision engineering and electronics. From 2000, the policy focus, as reflected in the priorities set by individual investment promotion agencies, started to shift from quantity to quality.

The new priorities were defined relatively broadly, typically including high-tech and research and development branches. In all cases, they were translated into concrete policy measures - all countries developed regional innovation promotion strategies, including incubators for start-ups. The activities promoted within these policies, however, had only limited links with SFDI.

In the Czech Republic, the new strategy was articulated in the 2000-2004 mission statement, which set high-tech, strategic services, research and development, customer contact centres and software development as new targeted sectors. In 2004, it introduced a new investment incentive programme for services and research development. The new investment promotion framework aimed to support shared services, ICT expert solution centres, high-tech repairs, software and development, and customer contact centres. These new priorities reflected the new FDI trends as identified by CzechInvest: increasing investment in strategic service centres and technology centres, and rising numbers of capital-intensive projects requiring a highly

qualified labour force. The structure of FDI projects mediated by the agency underwent a significant transformation: while the manufacturing sector constituted 99 per cent of projects in 1999, this dropped to 70 per cent in 2003, leaving 19 per cent for 'strategic services' and 11 per cent for technology centres. The structure then remained similar in successive years.

A similar sectoral change was recorded by the Hungarian Investment and Trade Development Agency (ITDH) in 2001-2002. The agency identified the comparative advantage of the country in financial services, other business services and call centres. These were also set as target activities for investment promotion in Hungary. Moreover, ITDH developed a special strategy, the 'Pearl project', which identified regional towns in Hungary with the aim of promoting them as locations for shared service centres. A special fund within the FDI incentive scheme was created to support 'the Pearl'. ITDH's after-care programme was also retargeted to encourage the expansion of shared service centres in Hungarian regions. In addition, conferences and workshops were organized to promote the regional towns, often with their own universities, as investment locations for shared service centres.

In Slovakia, the 2003 strategy put emphasis on creating a business environment which would be conducive to value-added upgrading, in manufacturing sectors that competed mainly on labour costs with low and medium value added. At the same time, it aimed to increase the volume of FDI with higher value added, and promote investments in high-tech industries such as ICT, biotechnologies and strategic business processes. The aims included a more even regional distribution of investment inflows.

Table 1: Overview of investment incentive packages for SFDI

Czech Republic
Policy framework
Technology Centres and Business Support Services Centres, introduced on 17th February 2004. This information applies to the programme valid from 18th April 2007 to 9th July 2008 (later replaced by another framework focusing on ICT and business support services).

Basic support
-Subsidy for business activity: wage costs reimbursement [previously also investment costs eligible] up to the EU ceiling for state aid: Prague 0% / 10%, other regions 36% / 30% / 40%.
-Subsidy for training and retraining: 35% of three-year training costs for projects creating fewer than 100 new jobs; 35% of five-year training costs for projects creating more than 100 new jobs (150 for customer contact centres) [previously up to 60% of costs].

Basic conditions
-Minimum investment: CZK 10 mln (EUR 0.36 mln / USD 0.48 mln).
-Minimum number of newly created job positions: software development centres, ICT expert and solution centres - 20; technology centres - 30; high-tech repair centres, shared services centres - 50; customer contact centres - 100.

Slovakia
Policy framework
Key policies introduced by Act No. 561/2007 Coll. on Investment Aid.

Basic support
-Eligible costs: costs of land acquisition, costs of buildings acquisition, costs of technological equipment and machinery acquisition, intangible fixed assets, licenses, know-how, labour costs.
-EU ceiling for state aid: Bratislava 10% [0% after 2009], West 40%, Central/Eastern regions 50%.
-Incentives: Income tax relief, contributions to newly created jobs, cash grant for the acquisition of tangible and intangible fixed assets, transfer of the state/municipality property at discounted price.

Basic conditions
- Minimum investment: technological centres EUR 1.32 mln, shared services centres EUR 1.16 mln.
-The company must employ at least 60% (technological centres) / 30% (shared services centres) of employees having university education.
-At least 50% of the minimum investment must be covered by own equity.

Hungary
Policy framework
Government Decree 85/2004 (V. 19.) on the Procedures of Granting State Aid outlines a system of direct cash subsidies by a discretionary government decision.

Basic support
-Cash subsidy decided individually by the Hungarian government or tenders co-financed by the European Union: between 10-25% total eligible costs. 10% base subsidy plus bonuses for cooperation with an external small-medium enterprise, sustaining or increasing workforce, and cooperation with a state-funded research institute, a non-profit research institute or a university.
-Development tax allowance: 80% of the corporate tax payable for 10 years following the completion of the project.
-Training subsidy: 25-90% of eligible training costs, depending on the type of training and the level of training, and the size of the applicant company.
- R&D projects: job creation subsidy for investments in underdeveloped regions and projects employing underprivileged (Roma) workers: maximum HUF 1500000 (EUR 5700)/created job.

Basic conditions
- Investment volume: at least EUR 10 mln (personal related costs, material costs, general costs, depreciation)
- Number of newly created jobs: R&D projects - at least 10 (50 to apply for training subsidy); SSC - at least 100 jobs (50 in preferred regions).

Poland
Policy framework

Key document, 'Scheme for the promotion of investments of priority interest for the Polish economy' adopted by the Council of Ministers on 23rd September 2008. The scheme's main objective is to boost innovation and the productivity of the Polish economy by increasing the inflow of technologically advanced investments and the creation of knowledge-intensive jobs. Basic support -Public aid includes grants subsidising investment costs and employment creation costs (up to two years), and income tax and real estate tax exemptions. -Possibility to combine different forms of public aid provided the total support does not exceed regionally differentiated amounts (from 30% in the most developed regions to 50% in the least developed ones). -Beneficiary sectors include 'modern services sector' and 'research and development' activities. Basic conditions -General level of support conditional on four factors: location of investment, level of capital input, costs of job creation, the size of the business. Additional conditions apply in all countries.

Source: Based on information provided by the national investment promotion agencies.

These relatively abstract strategic priorities were translated into a new incentives scheme in 2006, making four types of activities eligible for public support: industrial production, technology centres, strategic service centres and tourism centres. Projects in information and communication technologies (ICT), biotechnology and nanotechnology, customer centres, technical assistance centres, call centres, and research and development centres were allocated greater support. As in other countries, the eligibility thresholds in terms of the investment value were set relatively low for technology and strategic service centres (40 and 35 mln. SKK respectively), reflecting not only the priority to attract these activities, but also the low capital intensity of this sector. The eligibility criteria were lower in regions with higher unemployment. The actual value of the subsidy was negotiated individually with each investor.

Finally, in Poland, there was no clearly defined national strategy for attracting SSC, BPO or other types of service investments until the mid-2000s. More recently the Polish Information and Foreign Investment Agency (PAIiIZ) also started to put

emphasis on service sector FDI, differentiating according to value added. Its development programmes, introduced in 2007 under the umbrella of the 'Innovative Economy' strategy, provided general guidelines and a set of measures aimed at encouraging investments in what were regarded as strategic sectors, including aviation, the automotive industry, electronics, biotechnology and BPO. PAIiIZ was primarily interested in attracting high process services which created high value added, including IT laboratories and R&D centres in various sectors which could develop links with Polish universities and contribute to technology transfer. The strategic sectors were eligible for various forms of public support including investment grants and contributions to employees' development. The programme put emphasis on creating favourable conditions for the attraction and operation of SFDI, particularly in the R&D sector. The service sector was also made eligible for investment subsidies via a special economic zone scheme in 2005. The programme put emphasis on the development of R&D activities and technology transfers within the Polish economy. Using EU funding for the years 2007-2013, it promised financial support for such activities performed either by indigenous or foreign companies in Poland (Ministerstwo Rozwoju 2007). The policy measures also aimed to promote SFDI outside the main cities.

All investment promotion agencies thus boosted the structural change in FDI inflows, pointing to an apparent shift to more value-added and knowledge-intensive activities. The statistics presented in the next section provide some support to these claims. The remainder of the paper uses primary data on SFDI investments to understand the actual knowledge content of these activities.

The Visegrád Four and the knowledge-based economy

The global context

The growing importance of SFDI in the V4 countries reflects the general increase in service sector mobility and investments. Such growth in global SFDI flows can be attributed to a range of interrelated developments in technology, managerial practice, corporate strategy developments (including efficiency-seeking, performance and quality improvements) and trade policy – all of which contribute to increasing disintegration of services. Outsourcing occurs when one or more components of the value chain of service activities, which traditionally were completed within the company, are disaggregated in a way that exceeds organisational and national boundaries. The first wave of global outsourcing involved routine service work, like credit-card receipt processing, airline reservations and the writing of basic software code. The computerization of work, widespread access to the internet, and high-speed private data networks then allowed a wide range of knowledge-intensive jobs to be outsourced, often offshore, i.e. to distant locations (Gereffi and Kaplinski 2001).

These developments contributed to the increased mobility of services and service companies, which resulted in a fast growth of investment flows in the sector and subsequently contributed to its dominance of global FDI inflows. The ascendancy of the service sector in global FDI flows can be traced back to the late 1980s. Since late 1980, the value of SFDI has risen considerably from 94 million USD recorded between 1989 and 1991, to over 435 million USD between 2003 and 2005 (Table 2).

While in relative terms it actually has been the primary sector which has witnessed the highest increase, services strengthened their dominating position in global inward investment flows, with their share approaching 59 per cent in 2005. In the second half of the decade the pace of growth further intensified, with values of service investments doubling over the two-year period between 2005 and 2007. This was paralleled by a comparable increase in manufacturing investments and the relatively slow pace of cross-border capital flows within the primary sector.

Table 2: Global FDI inflows by sector (mln USD)

	1989-91	**2003-05**	**2005-07**	**index 1989-91 / 2003-05**	**index 2003-05 / 2005-07**
Primary	12855	90949	170891	707.5	187.9
Manufacturing	63634	173841	353183	273.2	203.2
Services	94131	435500	867349	462.7	199.2
Of which Business	*18614*	*124986*	*225539*	*671.5*	*180.5*
Unclassified	12366	43487	70073	351.7	161.1
Total	182986	743777	1471264	406.5	197.8
Services % of	*51.4*	*58.6*	*58.9*	*na*	*na*
Business Services % of total services	*29.3*	*28.7*	*26.0*	*na*	*na*

Source: UNCTAD (2007, 2008).

The rapidly increasing popularity of offshoring and outsourcing of certain business functions during the 1990s contributed to a sharp increase in investment flows within the business services sector, from less than 19 million USD in the period

between 1989 and 1991 to 125 million USD during 2003-2005. Despite a slight drop of the branch in the share of the total investment inflows in the service sector (from 29 per cent during 1989-1991 to 26 per cent between 2005-2007), the amount of greenfield projects completed annually kept increasing. According to UNCTAD data in 2005, over 570 greenfield projects in the business services branch were completed. In line with the rising volumes of FDI inflows, this number increased in subsequent years to exceed 800 in 2007 and reached nearly 1160 in 2008 (UNCTAD 2008, 2009). Additionally, according to UNCTAD (2005), in first half of the 2000s the total export of business services steadily increased at an average annual rate of 8 per cent. Despite this, the agency argued that the processes of outsourcing and offshoring were still only in their initial stages.

With less than 1 per cent of the global market (estimated to be worth 30 billion USD) for BPO in information technology (IT), Central Eastern Europe lags far behind more prominent and traditional locations such as India, Ireland, Malaysia and the Philippines (A.T. Kearney 2007). Nevertheless, there was a marked increase in service sector FDI, including the IT BPO, in this region after 2000 when services-related FDI reached almost 60 per cent of total FDI in the region. Since 2000, the share of SFDI in total FDI flows has fluctuated around 70 per cent in the Czech Republic, 60 per cent in Poland, 55 per cent in Hungary, and 40 per cent in Slovakia (calculated from Eurostat data).

The first business service FDI projects in the V4 region involved mainly back-office functions, which are less complicated and do not involve direct contact with the client. Front-office activities were transferred to the region in the next step. The

process continued with more added value and skill-intensive activities. While Poland, Hungary and Slovakia now attract a wide range of service activities, Czech Republic investments are focused mainly in IT-related activities (Sass and Fifeková 2011).

By 2006, the investment promotion agencies estimated the number of BPO centres at 59 in Poland, 47 in the Czech Republic, 34 in Hungary, and 10 in Slovakia – in comparison to 23 in Romania and 10 in Bulgaria. In 2008, the Hungarian investment promotion agency estimated the number of people employed by shared service centres at 13,000-14,000, of whom 9,000 worked in the capital, Budapest.

Motives for service sector investment in CEE

Analysing companies' motivation for outsourcing or offshoring services provides insights into the knowledge potential and content of the activities concerned. Some firms might search for efficiency gains, for example, while others seek strategic resources, including particular knowledge and skills. The evidence gathered during this research allowed the identification of a broad range of location motives. The companies studied indicated a diverse set of reasons which drove their decision to outsource and offshore some of their activities to the Visegrád countries. These included: cost effectiveness; availability of qualified labour force; access to new (domestic) markets; strategic location; stability of business environment; quality of infrastructure; cultural affinity; and earlier experience of operations within the country and investment incentives. While the firms clearly assigned varying levels of significance to these factors, those indicated as the most important fell within three

generic categories of motivation: market access, efficiency gains and resource-seeking (see Sass and Fifeková 2011).

The motives behind the investments in business services evolved, according to the companies studied. The service investment projects which began coming to V4 countries towards the end of 1990s were mostly market-seeking, as observed also in previous research (Kolstad and Villanger 2008; Riedl 2010). They were often associated with following manufacturing investments, where there was a history of business cooperation between the service provider and the manufacturing client. Hence, arguably, the SFDI were following the customers, rather than looking for market expansion in its original sense. The prospects of tapping into V4 native companies' markets played a secondary role.

Subsequently, as indicated by the companies studied, this situation changed and other reasons came to the fore. With the increasing popularity of offshoring and outsourcing, driven by companies' restructuring and search for efficiency gains, cost factors became vitally important. Equally, liberalisation in trade of services contributed to the increased mobility of BPO companies, which started looking for new, cost-effective locations. Within this wide category, as evidenced by the data collected, the cost of labour seems to be the dominant motive behind companies' choice of one of the V4 countries. Aside from labour costs, a third of the companies studied pointed towards the costs of operations as another area considered during the location decision-making process. The cost of office space, infrastructure and taxes all seemed to be considered as areas where further efficiencies could be found. The costs, however, vary between and within the countries, as does the dynamics of their change (see Table 3).

Slovakia remains the most attractive amongst the V4 economies, but is more expensive than Bulgaria and Romania, both of which have recently started to emerge as new service investment hotspots (cf. McKinsey & Company 2006).

Table 3: Labour costs

	Hourly labour costs: industry and services*			Real unit labour cost growth (%)		
	2006	2007	2008	2007	2008	2009
Czech Republic	7.14	7.88	nd	-0.5	3.2	1
Poland	6.03	6.78	nd	-1.3	3.8	-1.2f
Hungary	6.34	7.13	nd	-0.5	0.7	-2.1f
Slovakia	5.33	6.41	nd	-1	-0.3	8.5
Estonia	5.50	6.60	7.51	6.4	6.9	2.3
Lithuania	4.21	5.09	nd	-1.8	-0.3	3.9
Latvia	3.41	4.41	5.42	5.8	6.6	-5.7
Romania	2.68	3.41	nd	1.5	0.2f	4f
Bulgaria	1.65	1.89	nd	5.9	4.3	6.2f
Germany	27.60	27.80	nd	-1.7	0.7	3.5
EU-27	19.85	nd	nd	-0.7	0.5	2.7
EU-15	25.79	nd	nd	-0.6	0.7	2.9

Source: Eurostat online database
f = forecast, nd = no data
* Except public administration and community services, activities of households and extra-territorial organizations.

Apart from the price of labour, the majority of companies seemed to be particularly concerned about its availability and quality. Clearly, then, some of the service sector investments coming to the V4 countries are resource-driven, where the main resource the companies are seeking is an adequately qualified labour force. This reflects the ongoing upgrading of labour force quality taking place in the V4. One measure which sheds some light on this process is the human capital index (HCI).

Between 1995 and 2001, all four countries improved their HCI scores, some more significantly than others. For example while Hungary's HCI value improved from 0.713 to 0.758, Slovakia's increase was less substantial, from 0.657 to 0.664. During this six-year period, all four countries maintained or improved their standings in the ratings, with Poland moving from 28th to 15th place (UNCTAD 2005).

Corresponding to their key activities, the incoming companies are looking to exploit the often large pool of graduates in economics, accounting, finance and human resources management. Another group in high demand comprises IT specialists and graduates of technical faculties. Regardless of the branch of operations, almost unanimously the companies point to language skills as an important location factor.

From the perspective of the motives driving the investments, SFDI have the potential to contribute to the development of the KBE, as discussed earlier, in two ways. Firstly, by locating knowledge-intensive activities and functions, they stimulate the demand for qualified labour and bridge the aforementioned gap between V4 and EU-15 in share of KIBS. Secondly, they contribute by fostering innovation within the newly created subsidiaries. The following section offers further perspectives, particularly on the former.

Knowledge and skill content of activities

The recognised sets of service activities performed by the companies studied reflect the motivation behind their expansions. The set of disaggregated services is extensive, and includes activities traditionally classified as services (e.g. financial and professional services) and those which constitute the service components of the

manufacturing process (e.g. product and process design, research and development, information systems, accounting, marketing) (Apte and Mason 1995), all of which are characterized by different levels of knowledge and skill content.

Figure 1 provides an overview of activities conducted in the companies studied, using a typology based on the complexity of tasks and the level of knowledge intensity. Accordingly, back-office functions such as data entry and document management are the least knowledge intensive and rely mostly on low paid labour, which carries out repetitive tasks sometimes as mundane as the scanning of invoices. They neither require direct knowledge input, nor do they generate new knowledge. Customer contact services comprise a set of more complex activities including in- and out-bound call centres and telemarketing. Such activities result from some inputs of knowledge, and usually produce limited knowledge outputs. The activities performed range from helpdesk services to market research surveys and public opinion polling. The activities often demand the acquisition of new, peculiar skills by staff, some of which are transferable, including knowledge of specific software packages and familiarisation with customer handling techniques.

Knowledge services and decision analysis (including research services, risk management and customer and portfolio analysis), are the second most knowledge-intensive activities, requiring highly skilled labour capable of offering significant knowledge inputs and producing innovative solutions in a form of original knowledge. A range of activities including new products and process design constitute the most knowledge-intensive set of services, namely research and development.

Whilst such classification of activities is useful, is should not be treated as final or static. Within the broad categories and the relevant subcategories, as illustrated by the collected data, the skill content of one broadly defined activity may vary. For example, a call centre may be offering sales services in one language, or corporate IT support in a range of languages. Equally, due to the diversity of tasks performed and a wide range of services offered, it is difficult and often impossible to assign each centre to only one category. Hence when looking to assess the knowledge intensity of SFDI recently located in the Visegrád countries, there is a need to look at the least aggregated activity level.

As shown in Figure 1, the activities performed within the companies studied in the Visegrád countries fell within each of the identified categories. While a country specialisation was not observed, some of the indicated tasks were performed by a company in one country only (e.g. only one company in Hungary claimed to be offering programme and project management functions). Their intensity, however, is biased towards the less complex and averagely knowledge-intensive types, with the majority in 'Customer contact' and 'Common corporate functions' (highlighted in grey). Whereas the former is dominated by call centre services (both incoming, and outgoing), the latter involves a full range of corporate functions, either relocated or outsourced to vendors in the V4. The services offered by incoming call centres include provision of product information, dealing with customer requests for assistance and addressing customer complaints. In contrast, the outgoing call centres are occupied with marketing and selling of products and services to identified potential customers, undertaking market research and public opinion polling.

Figure 1: Activities performed by service centres in the Visegrád countries

Back Office Functions	Customer Contact	Common Corporate Functions	Knowledge Services and Decision Analysis	Research and Development
INCREASINGLY COMPLEX TRANSACTION				
* Data entry * Data processing * Transaction and order processing * Document management * Inventory management	* Customer relationship management services * Call centre * IT support * Telemarketing * After sales services	* Accounting and financial services * Marketing and sales * IT helpdesk and call centre * Application and infrastructure outsourcing * HR management * Procurement and supply chain management * Audit and tax services * Quality management * Cost planning	* System integration * IT consulting * Business performance analysis * Risk assessment * Programme and project management	* Software development * Software customisation * Testing * Mathematical modelling * System design

Source: Own research, classification based on McKinsey & Company (2003)

The activities performed by the companies studied included comprehensive HR services (ranging from recruitment to payroll, finance and accounting services) and quality management. A number of companies also performed IT support and helpdesk functions. Such sets of activities correspond to the investment motivations identified earlier, stressing the importance of language skills and availability of graduates of particular management and economics programmes.

The study revealed that the activities within the other three categories were less common. The least complex services offered by the companies studied most commonly involved data entry, data processing, and documentation filing and management. Activities within the 'Knowledge services and decision analysis' category are equally less frequent, and focus around IT and business processes consulting. The former include writing, modifying, testing and supporting of software, and more specifically the planning and design of computer systems that integrate computer hardware, software and communication technologies. Business process consulting comprises the provision of advice and assistance to businesses on management issues, such as strategic and organizational planning, financial planning and budgeting, marketing objectives and policies, HR policies and practices.

In terms of 'Research and development' the most popular set of services comprised applied research associated with the development of original and customised software including operating and management systems.

The majority of the activities performed fall into the less knowledge-intensive categories, hence the potential of the companies' contribution to the creation of KBE in the V4 is not fully realized. As has been discussed earlier, the other ways these firms can contribute to local knowledge, such as the exchange of tacit and codified knowledge and the continuous interaction between providers and customers, are key to the development of the KBE. Such contributions were rare among the studied companies. The next section examines the circumstances conditioning this potential contribution.

Linkages and regional embeddedness

As discussed earlier, the regional embeddedness of firms, as well as the nature of production networks, has a key role in promoting or hindering skill upgrading, learning, and knowledge creation. To contribute fully to the regional economy, and particularly to the development of its knowledge base, foreign investors need to develop a range of connections, relationships and linkages with diverse regional and local stakeholders, including other firms in the value chain. It is the nature and quality of these linkages which determine investors' long term embeddedness, and the wider impacts of their operations in the areas of productivity, employment, technology and knowhow transfers. The aforementioned two types of linkages particularly foster the development of a knowledge-based economy. Production networks and collaborative networks provide channels and mechanisms for promoting knowledge production and its subsequent diffusion (Nadvi and Halder 2002; Schmitz 2004).

Most of the companies under consideration developed progressively stronger links with other actors in the regions, but generally the majority of the service investments are rather poorly linked into the local economies. In terms of production networks, only a limited number of backward linkages have been identified, and these are mainly concerned with the sourcing of office maintenance services (e.g. security, cleaning services), entertainment providers (amusement parks, theatres, fitness clubs), and the procurement of consumable office equipment. For higher value-added services and supplies, the subsidiaries often utilise global supply chains developed by the mother company. Forward linkages are equally underdeveloped as the companies tend to offer their services to other MNEs present in the country or to their customers

globally. As far as the integration into the regional and international value chains was concerned, most of the companies developed forward linkages that can be characterized as a market type of vertical integration. Only companies involved in the most complex activities, as outlined in Figure 1, could be characterized as integrating through networks, involving an intense knowledge exchange.

Finally, in terms of collaborative networks, the service investors show little involvement with national and regional business networks and organisations, hence offering only limited direct contributions to the development of business culture and infrastructure. Cooperation with higher education institutions serves as an exception. Through their links with universities, the companies have indirect influence on the curriculum, and the means to ensure the educational offer matches the needs and requirements of the labour market. Also the companies offer extensive training for their employees, allowing them to upgrade their skills and develop new capacities, and potentially improve their competitive position within the firm. This seems to constitute the only significant regional linkage and broadly defined knowledge-related contribution the service companies under consideration offered. Overall, little is being contributed in terms of innovation and new knowledge creation, which reflects the structure of activities performed at V4 locations, with a clear dominance of low and medium-skilled functions.

Conclusion: knowledge creation or knowledge utilization?

Our analysis indicated the extent to which SFDI – those in the business-services sector in particular – contributed to the ability of the economies in the V4

region to catch up in terms of skill and knowledge intensity and in the strength of their innovation systems. The nature and skill intensity of activities varied widely, with knowledge using, knowledge sharing and knowledge creation all happening to varying degrees. Some of the activities, such as software development, clearly contribute to increasing innovation potential, while the contribution of others, such as invoicing, is very limited.

The overall picture seems to be that the majority of SFDI companies contribute to the development of the knowledge-based economy only if understood in a narrow sense. By employing skilled labour in technology-intensive processes, they increase significantly the skill and technology intensity of the respective economies. But rather than transforming the local knowledge/skill base, these companies tap into existing human capital resources, typically by employing university graduates. Many of these activities also involve considerable prospects for developing individual employee's skills and thus the overall stock of human capital. Activities on the lower tiers of knowledge complexity, however, seem rather a waste of existing skills.

The potential of SFDI inflows in terms of increasing the capacity of knowledge creation seem, typically, to be limited. Most of the analyzed investments were not likely to contribute to the development of a knowledge-based economy understood in its wider sense – that is, as a social system of innovation rather than as a stock of human capital. Social and institutional embedding which could strengthen, or provide a base for, regional systems of innovation was typically conspicuous by its absence.

The locational motives of the bulk of investors were also characteristic of the KBE in the narrow sense: they included low labour costs, proximity to markets in the West and the availability of educated workers. Only rarely did they include a unique set of spatially fixed competitive advantages – perhaps with the awkward exception of the command of 'exotic languages' that was important for call centres established in Hungary.

In contrast to the early wave of manufacturing investments that contributed to the development of production networks - which gave important structural competitive advantages when attracting more complex manufacturing in later years (Greskovits 2005; Myant and Drahokoupil 2010) - the bulk of the SFDI studied did not seem to create a unique set of spatially fixed competitive advantages that could attract mobile knowledge-intensive business services, characteristic of a KBE. At the same time, the continuing reliance on cost competitiveness does not seem to be a viable strategy in the V4 context, given the low-cost competitors in South Eastern Europe and beyond.

The non-hierarchical production networks characterizing the service sector seem to be favourable to functional upgrading by increasing the overall skill content of activities. They do not entail any hindrances to such upgrading, as is the case with hierarchical networks organizing complex manufacturing (see e.g., Pavlínek and Ženka 2010). At the same time, our data confirmed that integrating through the non-hierarchical network does not automatically lead to skill-content upgrading either. This is particularly the case for the market-based networks which characterize much of the lower skill SFDI sector. Public policies could arguably help firms to take advantage of these non-hierarchical networks, and develop more network-type linkages involving

more intense knowledge-based interactions. However, the passive policy of targeted subsidies, often implemented separately from knowledge promotion policies, has contributed to development of the KBE in its narrowest sense only. Rather than ensuring the knowledge contribution of the SFDI to regional innovation systems and promoting network linkages within production chains, they focused merely on attracting activities with a higher knowledge content.

Spatially fixed competitive advantages, including the linkages in regional systems of innovations and global value chains, are likely to be key determinants of upgrading in the service sector. As they do not appear to come automatically with the lower-tier SFDI activities, this seems to leave a scope for a more active public policy.

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