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## **The role of foreign direct investments (FDI) in establishing knowledge economy in the Czech Republic: the case of knowledge-intensive business services**

### THE ROLE OF FDI IN ECONOMY TRANSFORMATION

Without doubts, FDI play a very important role in the economy transformation and this is also the case of the region of Central and Eastern Europe (CEE). In this article I will try to focus on some later stage of FDI and their role in upgrading of economies on the way from branch-plant towards more knowledge-based economies. FDI started to play a more important role in later stages of the transition and are currently one of key tools for modernisation of national economies. Their share in gross fixed investment can be very high in certain stages of development and can exceed 60%, as in Bulgaria in the period 2004–2007 (Kekic, Sauvant 2007). Also in the case of the Czech Republic in 2001–06, FDI averaged just over 25% of gross fixed investment. They also had a significant impact on industrial restructuring in certain branches of economy, especially in industries (Kekic, Sauvant 2007).

FDI is generally regarded as a vital engine of growth and a powerful catalyst for market transition (Bandelj 2002). And thus, when state socialism collapsed in Central and Eastern Europe (CEE), liberal economists and international institutions declared that only a large influx of FDI in the region would open the door to a successful transformation from command economy to market economy (Pavlínek 2004).

It was expected that FDI would “play a critical role in the economic development of CEE and generate industrial restructuring that would spread throughout the entire economy and ultimately lead to national prosperity” (Pavlínek 2004).

Politicians and economists in the CEE themselves saw FDI as a panacea for economic revival (Pickels and Smith 2005). FDI was seen as a key to establishing dynamic national and regional economies, a catalyst for regional learning, and a basis for social upgrading (Pickels and Smith 2005).

But after tracing the development of the CEE economies in the succeeding years, today economists are more cautious in describing FDI as such a powerful instrument for economic growth. They are now careful to point out that FDI affect host countries both positively and negatively.

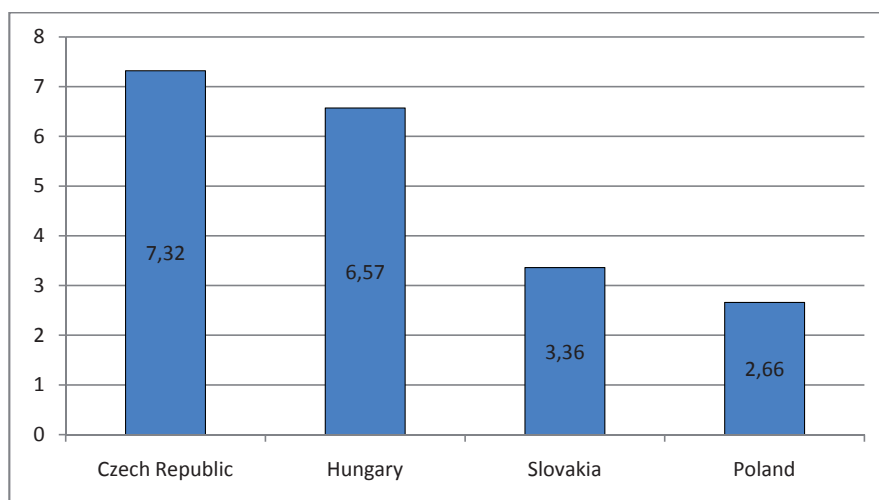
Tab. 1. Potential positive and negative effects of FDI in host countries

Positive	Negative
<i>Enterprise level</i>	<i>Enterprise level</i>
– continued and expanded production	– labour shedding
– increased labour productivity	– disinvestment and downsizing of production
– access to investment capital	– transfer of R & D abroad
– access to worldwide sales and distribution networks	
– transfer of Western technology and know-how	
– improved competitiveness and increased R&D	
<i>Local and Regional Economy</i>	<i>Local and Regional Economy</i>
– saving of existing jobs and creation of new jobs	– local dependency on foreign capital and external control of local economies
– growth or real income	– attracting skilled and semi-skilled workers from local companies
– increased tax base	– suppression or destruction of local firms unable to compete with FIEs supported by generous governmental investment incentives and benefiting from transfer pricing
– increased exports	– suppression of the development of new indigenous enterprises
– labour training	– deskilling
– provision of social services to local communities	– regional specialization in low-skilled, labour-intensive production
– spillovers to local and regional economy	– development of dual economy and branch plant syndrome
– increased opportunities for local companies to supply foreign-owned companies	– instability of Western investment

Source: Pavlínek 2004

FDI are also substantially spatially concentrated. In 2006, in the four Vysehrad countries, namely the Czech Republic, Hungary, Poland and Slovakia, over 50% of FDI of all post-communist countries was concentrated, and if we exclude former Soviet Union countries, this share reaches almost 70%, with the Czech Republic having currently the highest per capita FDI inflow (Fig. 1) (Kekic, Sauvart 2007).

FDI inflow did result in speedy and deep-seated restructuring of foreign invested enterprises, which included organizational restructuring, technology transfer, worker training, transfer of Western management structures and practices, and new production strategies and organization (Pavlínek 2004). It also increased quality and competitiveness of produced goods, resulted in productivity gains and expanded production and sales, both domestically and abroad. However, although FDI played an increasingly important role in the CEE, its effects across the region have so far been very uneven both sectorally and geographically.



*Fig. 1. FDI Stock per capita in Central Europe in 2006*

Source: Kekic, Sauvant, (2007)

Petr Pavlínek (2004) points out the following interesting statistics about FDI in the region:

1. Even though there was a dramatic increase in annual FDI inflows to CEE in the 1990s, they remained low in the global context, when compared to its 5.4 percent share of the world's population.

2. While CEE attracted \$166.5B between 1990 and 2001, or 2.7 percent of the total, industrialized countries received a total of \$4,404B (71.4 percent) while less developed countries received \$1,598B (25.9 percent) in investments.

3. Furthermore, FDI inflows to CEE were low in the European context. Although CEE accounts for 46 percent of Europe's population, it received only 5.7 percent of total FDI inflows to Europe between 1990 and 2001. In this period, Spain alone, with a population of only 41 million, attracted FDI amounting to \$169.5B, higher than the cumulative FDI inflow received by the entire CEE with its population of 334 million.

Nauro Campos and Fabrizio Coricelli (2002) actually claim that capital accumulation slowed down significantly during the transition period. And thus we see that while FDI played an important role in transition economies, particularly as an agent of new technologies, this role was concentrated only in a few countries, and this was not enough to reverse the general downward trend of aggregate investment in the region.

It is also interesting to point out the dynamism of FDI inflow (Fig. 2). If we look at different periods, it is obvious that in earlier stages of transition (up to 1997) Hungary was the most attractive recipient country with the highest net FDI inflow per capita, while after 1998 it was the Czech Republic, from 2002 followed by Slovakia and Slovenia. If we prolonged the FDI investment wave, it is be obvious that next countries would follow (Bulgaria and Romania), especially as an effect of EU accession.

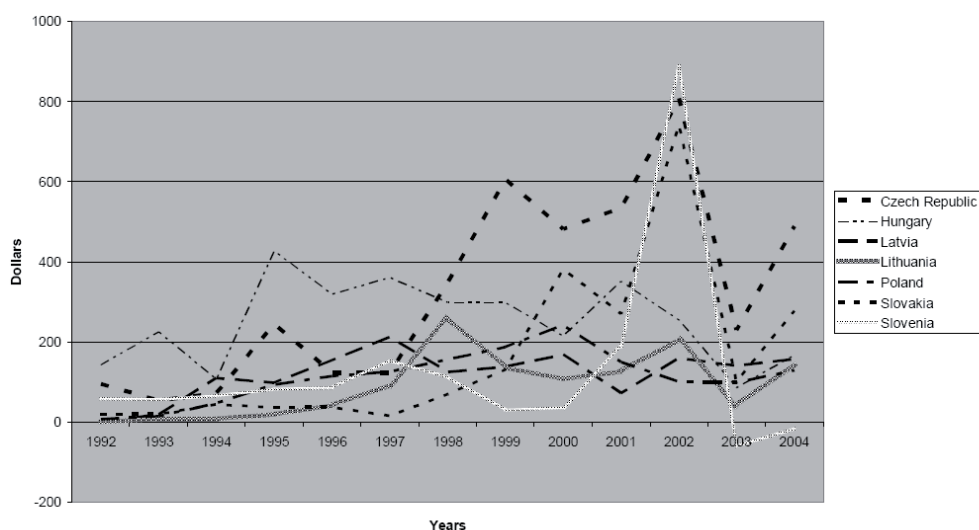


Fig. 2. Net FDI inflow per capita in selected countries of Central Eastern Europe (1992–2004)

Source: Kekic, Sauvant, (2007)

To summarise the effects on national and regional economies, we can say that FDI play the key role by establishing dynamics in national and regional economies, they are a catalyst for regional learning and a basis for regional upgrading (generating linkages, expanding into higher value-added activities). But we must also stress the danger of „defensive restructuring“ represented by establishing of CEE “cathedrals in desert“ (Massey 1984) and “disembodied“ national economies (Massey 1984, Bandelj 2002).

## INSTITUTIONS AND FDI: THE CASE OF THE CZECH REPUBLIC AND CZECH INVEST

Until the second half of 1990 a mistrust prevailed among Czech economic elites towards FDI in the Czech Republic, mostly because of ideological reasons. Simply, foreign capital was not so much welcome. The same was also true among Western investors. Poor knowledge of foreign languages, bureaucratic obstacles, poor logistics, expensive and unreliable telecommunication services, corruption, “tunnelling” and non-existing entrepreneurial ethics characterised “grinder capitalism” of that period. “It is like in Africa, but it is closer” was an opinion among Western managers in early 1990 (Třešňák 2007).

It is not a surprise that more systematic institutional support of FDI inflow started to play role only after the change of general attitude of state administration after the 1998 elections. Logical steps then followed: liberalisation of FDI-specific laws, reduction of burdensome regulations, investment promotions, investment incentives and, of course, changing of fundamental institutional and economic characteristics.

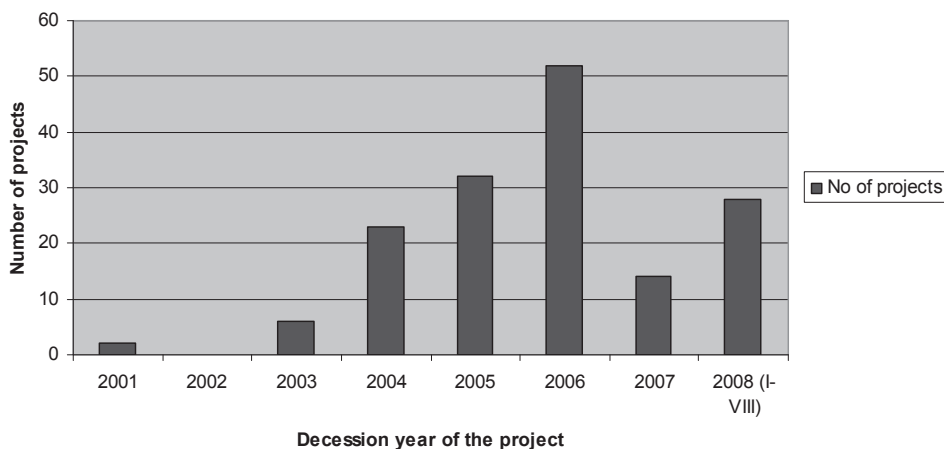
Nevertheless, before this time any sort of FDI had been welcome and until 2001 almost exclusively mounting lines factories prevailed, because of cheap labour force. But the fact is that the Czech Republic started to be the most popular country in the region of CEE for FDI.

Most states develop inward investment agencies, which are focused on place selling, investment promotion, etc. This was also the case of the Czech Republic. Czech Invest soon became one of the most successful state agencies in Europe for promoting the FDI. It was also so thanks to sophisticated complex care programmes and „after care“ programmes. In this period majority of FDI was arriving to automotive and electro-engineering sectors using mostly low-paid and rather unqualified labour force. But the first stage, called “mounting halls époque” is probably not possible to skip. Investors firstly need to prove the terrain with rough investment.

But in 2001 we can observe quite a clear change in investors’ behaviour: from simple low-wage oriented to high value-added branches of activities.

### FROM “CLOSER AFRICA” TOWARDS “BANGALORE OF EUROPE”

Improving institutional environment, NATO membership and the perspective of EU membership, together with improving quality of the labour force, contributed to a qualitatively new wave of investment. It was focused on the service sector – technological centres (TC), IT centres, call centres, and other business support services (BSS) started to arrive in higher and higher numbers. During the last six years, more than 150 large “white collars” companies have appeared, and only in 2007 they created around 7 000 working places, i.e. about 25 % of all working places created by FDI. The next figures show time and sector distribution of projects between 2001 and the end of August 2008.



*Fig. 3.* Time development of project realisation in the sector of technological centres (TC) and business support services (BSS)

Source: Czech Invest (2008)

In figure 4 we can see the sector distribution of newly arriving TCs and BSSs. One half of them is concentrated in automotive, aerospace, electronics and electrotechnics, as well as engineering sectors, being tightly connected with previous investments. Firstly, corporations like IBM and Accenture made investments, and then others followed. But a more and more

important role is played by IT and SW development and other services, like DHL centre, or Exxon Mobil Business Support centre and the like.

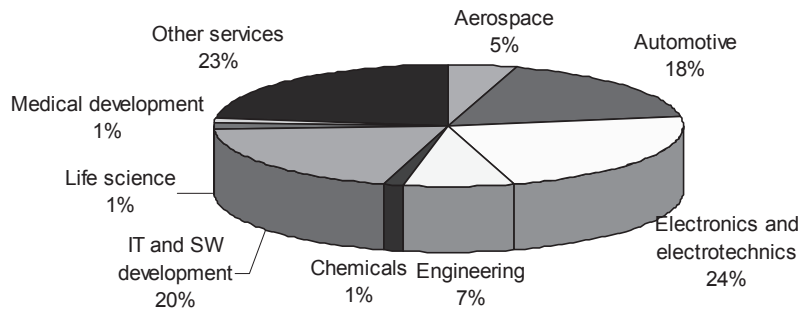


Fig. 4. Sector distribution of TC and BSS projects (2001–2008)

Source: Czech Invest (2008)

Especially metropolitan areas of Central Europe offer a better mixture of attractors for this kind of investments than the world-known capital of outsourcing in India - Bangalore. Well-qualified labour force with very good language skills, or geographical proximity to the most important clients in Western Europe are appreciated by many investors, as well as soft factors, like quality of life and other psychological factors (Třešňák 2007). “Many people think that the world of economics is pure mathematics. But this is to a large extent a psychological phenomenon” says an economist T. Sedláček (Třešňák 2007). And he continues about Prague: “The city is nice and offers a rich cultural programme; there are many foreign language kindergartens and schools, it is relatively safe so they can leave their wives at home alone at night”. Also statistics show that nice environment plays an important role in decision making of investors. In the Vysehrad region, the biggest portion of outsourcing investment was attracted by such pretty cities like Prague or Cracow (but also Budapest or Brno), in comparison to relatively less attractive Warsaw or Bratislava (Třešňák 2007). The main advantage is not to be the cheapest one, but cheaper and closer (to Western Europe). And also cultural proximity is very important for decisions.

From the geographical point of view, metropolitan areas are the most attractive location for this kind of activities. The metropolitan area of Prague (Prague and Central Bohemia) concentrates almost 40% of all projects; together with Brno it counts for more than one half of projects. As shown in figure 5, it is also obvious how geographical diffusion works. Brno and Central Bohemia started to play a more important role only some years after first investors arrived in Prague.

To provide a better illustration of concrete examples of investment in TC or BSS, I have selected top ten investors in the period 2001 to 2008 (end of August), showing the most important companies, their proclaimed investment and the number of created workplaces, as well as their geographical location and the year of decision to invest in the Czech Republic. As a case study, I have selected the largest, to some extent, the flagship investment, by DHL Information Services, as a good example of multiplying effect of this kind of FDI in the national economy.

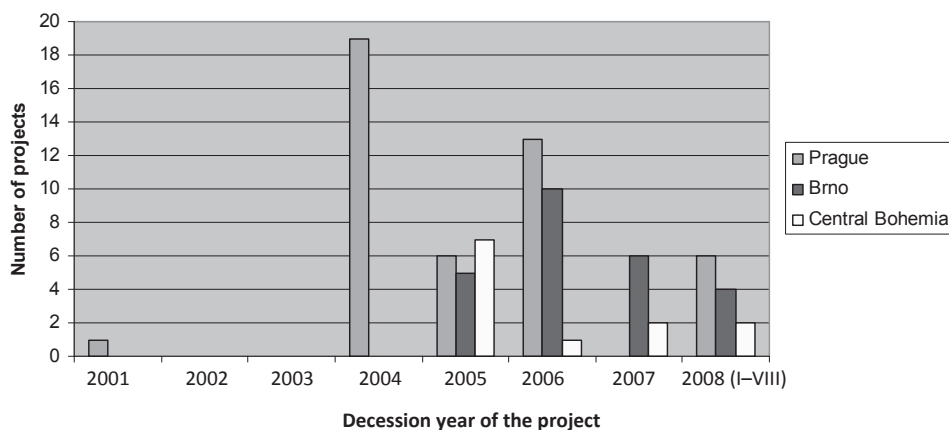


Fig. 5. Spatial concentration of TC and BSS by regions (2001–2008)

Source: Czech Invest (2008)

Tab. 2. Top 10 investment in TC and BSS (2001–2008)

Company	BSS TC	Applicant's country of origin	Sector	Investment	Newly created jobs	Region	Decision -year
				mil. EUR			
DHL Information Services (Europe) s.r.o.	BSS	Netherlands	Other	147,56	866	Prague	2004
ExxonMobil Business Support Center Czechia s.r.o.	BSS	USA	Other	32,31	1 300	Prague	2004
ON Semiconductor CHC, s.r.o.	TC	Czech Republic	Semiconductors	10,56	40	Zlin	2005
ŠKODA AUTO a.s.	TC	Germany	Automotive	35,77	370	Central Bohemia	2005
Ingersoll-RandEquipment Manufacturing Czech Republic s.r.o.	TC	Netherlands	Engineering	8,92	73	Central Bohemia	2005
LONZA BIOTEC, s.r.o.	TC	Netherlands	Life Sciences	13,59	50	Central Bohemia	2005
České aerolinie a.s.	BSS	Czech Republic	Aerospace	41,57	153	Central Bohemia	2005
CCG a.s.	BSS	Czech Republic	Aerospace	36,15	176	Moravia-Silesia	2006
SWELL, spol. s.r.o.	TC	Czech Republic	Automotive	8,36	52	Hradec Kralove	2006
				<b>334,79</b>	<b>3080</b>		

Source: Czech Invest (2008)

## THE CASE STUDY OF DHL IT SERVICES PRAGUE

DHL is a 100% subsidiary of Deutsche Post World Net (DPWN) – the world's leading logistics group. Its integrated companies – Deutsche Post, DHL and Postbank – employ over 500,000 full time employees providing tailored, customer-focused solutions for management and transport of goods, information and payments to millions of customers in over 220 countries and territories around the globe.

DHL IT Services belongs to the Global Business Services (GBS) division which bundles all common and non-business-specific services and provides them at cost and at world-class service levels to the entire DPWN group. DHL IT Services is divided into three geographical regions:

- IT Services Europe (offices in Prague, Czech Republic and Bonn, Germany)
- IT Services Americas (offices in Scottsdale, USA)
- IT Services Asia-Pacific (offices in Kuala Lumpur, Malaysia).

IT Services employs over 13 000 people around the globe, delivering end-to-end IT solutions and support for the company's IT infrastructure, consisting of networks, hardware, operating systems and applications.

DHL IT Services Europe in Prague began operation in 2004 and has become one of the premiere employers of the most talented and dedicated IT professionals in the region. The Prague office is also one of the most important hubs within DHL IT Services worldwide: in the modern facility in Prague-Chodov the state-of-the-art data centre is operating, housing hundreds of servers and processing millions of transactions per day. The Prague office employs over 1000 people representing over 60 nationalities.

In the business park in Prague-Chodov companies like IBM, SAP or Honeywell are located, creating one of the most important clusters of business services in the city. Beside Kuala Lumpur (the centre established in 1997) and American Scottsdale, London was the European centre of DHL IT Services. At the dawn of the new millennium it was more and more questioned if it makes sense to maintain business in one of the world's most expensive locations. Originally, the company was thinking about location in Spain, Greece, Baltic states and also in other CEE countries. In the selected countries the location decision was concluded by a survey, scanning the situation on the labour market, available professionals, expected salaries and other factors, and Prague won. Until now the company have not regretted their decision.

In 2004 DHL IT recruited four hundred employees, now they employ over twelve hundred employees. To avoid shortage of employees, DHL IT Services collaborates with universities and offers a special programme whose framework enables selected students or graduates to leave for a half-year stay in Malaysia or in the USA. Over one third of the employees come from abroad (Třešňák 2007). So, the positive multiplying effect and positive externalities on the national economy are clear.

## CONCLUSIONS

For the location of new activities in CEE, a helpful factor was sobering up of the European companies from the Indian euphoria. Because of different, lower-level property rights, difficulties in intercultural communication and, very often, only superficial knowledge of the topic, the companies stopped outsourcing of some more sensitive activities to India or China.



From the global point of view the “CEE miracle” is hard to compare with Asia, if in 2006 the CEE region received only a little more than \$2B, in comparison to \$386.5B worldwide (Třešňák 2007). But it brings new high-quality working places and highly embedded investments; additionally the multiplying effect is also much higher than in mounting factories activities.

Outsourcing also supports motivation for education, world languages knowledge, travelling, and other positive phenomena. There are no or only very few risks. Who can be the competitor in the region? Economists do not suppose that the investment boom will stop in the near future. But Bulgaria, Romania, Ukraine, and maybe countries of former Yugoslavia are perceived as direct future competitors of the Vysehrad region.

Despite the fact that we can observe a geographical trend towards selective concentration of these quaternary activities to big centres, especially metropolitan regions, and increasing polarisation between regions, positive effects for the country as a whole prevail. An important role of FDI localisation is played by the presence of technical universities and other „soft“ infrastructure. They do not bring the highest number of created jobs, but they are crucial in embedding other economic activities.

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