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Abstract

The global trend in the information and communication technology (ICT) industry is the orientation on services for customers with higher value added. Over time access to and use of ICT services is increasing.

From this point of view, there is interesting issue to research the delocalisation of ICT services. The possibility of delocalisation creates new forms of competition between regions.

The ICT sector in Slovakia has been a source of growth in recent years, notably due to foreign investment. There also remains a sizeable challenge in terms of improving access to and take up of ICT technologies. The incoming international ICT firms to Slovakia are looking for the balance between the level of costs and quality of services that means between the level of wages and qualification of people.

In my paper I will analyse the current state of the ICT industry in Slovakia. Special focus will be given to relocation of the IT functions as in fact multinational companies specialised in IT services are recently highly concentrated in Slovakia. I will point out the regional overview of this global process.

Key words: ICT, delocalisation, IT centres, outsourcing, offshoring

1 Introduction

Information and communication technology (ICT) has made it possible to slice up the value chain and perform activities in any location that can help reduce costs. Globalisation also increasingly involves FDI and trade in services, with many service activities becoming

¹ Tento príspevok vznikol ako súčasť riešenia úlohy VEGA č. 1/4643/07 "Ľudské zdroje ako predpoklad konkurencieschopnosti regiónov".

internationalised, especially since ICT has enabled the production of many services independent of a specific location. [1]

Relocation or delocalisation is a hotly debated topic. It refers to the migration of jobs and production to other parts of the world. The relocation has become more pervasive also within ICT sector where the high-skilled jobs being delocalised.

The emergence of new technologies has enabled a dramatic decrease in communication and transport costs. At the same time, they have stimulated the creation of new goods and services, have opened up new markets and have enabled entirely new ways of doing business. Business process outsourcing (BPO), has revolutionised the way in which businesses and consumers operate and interact. ICTs have changed our lives and will continue to do so, also in other ways (think of the possible impact of ongoing automation, robotics, micro-systems and virtual manufacturing). There are many signs that we are indeed witnessing a Third Industrial Revolution. [2]

2 Delocalisation – prevailing definitions

There is no universally shared definition of relocation or delocalisation. Definitions used vary from very strict to much broader, encompassing notions of the concept. In its stricter interpretation, relocation implies 'the closing or scaling down of a firm's activities in the domestic market following the shifting of parts of the production chain abroad' (background note European Parliament, 2006). In the more broadly encompassing version, relocation implies the transfer of economic activities to locations elsewhere, outside the home country.

• European Parliament: 'Relocation – sometimes also referred to as delocalisation – means the closing or scaling down of a firm's activities in the home market following the shifting of parts of the production chain abroad.

• European Economic and Social Committee: 'Delocalisation occurs when a business activity is totally or partially ceased, to be reopened abroad by means of direct investment. Within the EU two types of relocation: internal (transfer of business activity to another Member State) or external (to non-EU countries)'.

• European trade unions: 'the process of shifting economic activities towards foreign sites, including the closing of domestic sites or scaling down their activities'.

• Bureau of Economic Policy Advisers: delocalisation is defined as 'the process of relocation of economic activities towards foreign sites, closing down activities at home'.

• European Commission (DG Enterprise): delocalisation concerns the transfer of production and of other manufacturing activities to locations outside the home country.

Delocalisation – the anglicised form of the French 'délocalisation' – and *relocation* are used interchangeably in this review, referring to the same phenomenon. It should be noted that in the Anglo-Saxon literature delocalisation is commonly referred to as *dislocation*. [3]

The fragmentation of the production process across various countries has given rise to considerable restructuring in firms including the outsourcing and offshoring of certain functions. Outsourcing typically involves the purchase of intermediate goods and services from outside specialist providers, while offshoring refers to purchases by firms of intermediate goods and services from foreign providers, or to the transfer of particular tasks within the firm to a foreign location (Figure 2.1). Offshoring thus includes both international outsourcing (where activities are contracted out to independent third parties abroad) and international in-sourcing (to foreign affiliates). [1]





Source: [2]

While both forms of international sourcing are referred to as offshoring, the former is known as captive offshoring, whereas the latter is termed offshore outsourcing (see Figure 2.1). International sourcing can be seen as part of a broad variety of internationalisation strategies for firms. From an economic theoretical point of view, however, international or global sourcing is a form of trade (Bhagwati et al. in [2]

The offshoring of services has been significantly increasing in all OECD countries, driven by the liberalisation in services sectors and technological advances. Also in Slovakia the offshoring of services reached over 20 % (figure 2.2). Improvements in technology, standardisation, infrastructure growth and decreasing data transmission costs have all facilitated the sourcing of services from abroad. Rapid advances in ICT have also increased the tradability of many service activities and created new kinds of tradable services. In particular, 'knowledge work' such as data entry and information processing services and research and consultancy services can easily be carried out via the Internet and e-mail, and through tele- and videoconferencing. [1]







3 IT sector in Slovakia

Slovakia's IT sector has seen consistent growth since 1996. By 2006, the industry was anticipated to be more than twice its 1996 size and constitute 2.94% of Slovakia's GDP.

In 2000 has employed 18.423 employees, in 2003 the number increased to 31.140. In 2006 the number of employees was 43.786. Looking at the development of employment in the IT sector we can see the progressive growth in IT services and software.

By total IT revenue, the moderate stagnation during the beginning of 1990s was followed by gradually growth of the total revenue with growth trend in the IT services.

From the point of revenue for IT sector, predominant majority is represented by hardware followed by IT services and software. [4]

Software is one of the most important sectors within ICT business in Slovakia. Software and related services development influences many areas of our lives together with evolution of areas with "e-" in the beginning such as e-business, e-education, e-content, e-government, e-economy. Software development is provided frequently as one of the areas of expertise, mostly as a complement to other services such as hardware equipment installation, design and implementation of computer networks. Software development in Slovakia is concerned primarily on information systems development and related services (together with system integration solutions). Web-based information systems are being developed in last years. Several companies work also for central European partners with the closest relationship to the Czech Republic. Large international software corporations have branches in Slovakia (e.g., Microsoft, IBM, Hewlett-Packard, Oracle, SAP). They mostly provide services and consultancy in Slovakia. In first ten of the most growing IT companies in Slovakia dominate companies developing original software applications. Some of them deal also with the implementation for the end user and integration with other software solutions. Software products constitute approximately 15% of ICT market in Slovakia in 2004. [5]

Software solutions are easily exported and there are almost no barriers to selling such products to foreign customers as long as you can perfectly tailor them to their needs. Slovak IT firms generally agree that the small software market in Slovakia does not offer enough challenges, and if a company wants to develop, its only opportunity is to penetrate markets abroad. Foreign clients follow the newest software trends and are more willing to buy sophisticated solutions developed through progressive technologies, compared to conservative Slovak customers. [6]

3.1 FDI in IT sector in Slovakia

The technological revolution in IT and the accompanying innovations at the level of industrial organization coincided with a new wave of opening and liberalization of countries outside the centre of the world economy. Countries that managed to attract and absorb FDI in IT manufacturing have achieved excellent macroeconomic results as an evidence of the structural and technological upgrading of their economies. The IT revolution has significantly accelerated the ongoing transformation in the sectoral composition of economic activity. It boosted the shift from manufacturing to services not only by creating new service types but also by creating new opportunities for the two sectors interconnections. [7]

The investments in the Slovak IT sector are recently concentrated on IT services. They represented so called second phase of investments to IT. The first phase is founding of business representations focused on sale, deliveries and services to customers. With creation of favourable business environment has started the second phase of investments (IBM, Dell, Accenture and HP). Logical third phase will be extending of R&D. On the software development is focused e.g.

Siemens PSE, Alcatel, Ness etc.

3.2 IT centres in Slovakia

The recent global trend in the ICT industry is orientation on customer services that represents the higher value added. The global MNCs specialised in IT services are recently highly concentrated in Slovakia. They are looking for new human resources to cover their needs. There are 3 types of centres: call centres, international operation centres and software houses. The operation centres employed especially high qualified IT specialists as software engineers, project engineers, consultants etc.

Slovakia belongs to the top countries for IT centres (table 3.2). There is positive development that IT corporations are moving to Slovakia their services for customers in the world. According to consulting company AT Kearney, Slovakia is on the 5th position in the EMEA region, where it makes sense to establish the global customer centres.

	EMEA	World
ČR	1	7
Egypt	2	12
Jordan	3	14
Bulgaria	4	15
Slovakia	5	16
Poland	6	18
Hungary	7	19
SAE	8	20
Ghana	9	22
Romania	10	24
Russia	11	27
Britain	12	28
Tunisia	13	30
Germany	14	31
JAR	15	32

 Table 3.2: TOP 15 countries for IT centres

Source: [8] Hospodárske noviny, 21.6.2006

There is a strong segment of IT centres in Slovakia. More than 25, among them HP, DELL, Accenture, T-System, Lenovo, IBM, SkyEurope, Kraft, AT&T, BASF, KONE, ON Semiconductors etc. From global point of view Bratislava belongs to the top localities of global network of delivery centres (e.g. Accenture - map 1). In the last time there is also quite visible trend in the localization of new IT centres in Košice (Ness, T-Systems).





3.3 Demand on the IT labor market

Globalisation enables also to move fast the production activities or to open up services to localities with low production costs. This kind of locality is for American or European firms recently India, especially Bangalore that we knows as "Silicon Valley of India".

Offshoring can bring to firms savings of costs but also can bring lost of labor places in the affiliation country. Despite increasing of effectiveness and saving of costs in both countries they contributed to the growth of productivity as well as they create new labor places. [10]

The global firms know that because of looking for low costs they don't need to go to Asia but it is enough to go to CEE countries and they have realized so called nearshoring. According to Peter Weber, general director of HP Slovakia, in case of cost structure, nearshore centres in CEE region represents half of cost structure in comparison to Western Europe. Offshore centres in Asia have half of the cost structure in comparison to CEE region. [11]

Nearshoring is bringing two types of possibilities:

- Opportunities that are related to supply of IT products and services for firms that moved their production or services to CEE countries (e.g. move of service centre of logistic company DHL from London to Prague)
- The second type of opportunities is from the point of vies of value added more interesting realization of service and competence centres that from our area open up IT services for Europe. E.g. HP, IBM, Dell, Accenture and others global IT firms have opened in Slovakia their service centres. Together with traditional competition pressure, there is also competition in case of qualified human resources that could be employed in IT centres.

There is the highest demand for labor forces in IT centres in Slovakia. Recently in the IT sector in Slovakia employed 30 000 employees. During the last 3 years the big IT firms have created 50 000 labor places. The others will be created by NEC and T-Mobile. [12]

In case of localized IT centres in Slovakia the higher demand on the IT labor market we can see in the following IT centres: IBM Slovensko -Bratislava, HP Slovakia - Bratislava, Accenture – Bratislava, Ajilon Consulting Slovakia – Bratislava, Soitron – Bratislava, Ness Slovakia Development Center – Košice, Siemens PSE Košice, T-Systems Slovakia – Košice.

4 Conclusion

From the point of evaluation of demand on the IT labor market in Slovakia that we have observed on the case of IT centres we do see the IT sector as very progressive one with high value added of work and also with over average level of wages. The IT profession is also one of the most interesting and dynamic on the labor market. There is growing number of labor places direct in the IT sector but also in other close sectors. As the IT profession is regularly connected with higher value added, we see this profession also perspective to the future form point of increasing of employment in this sector.

IT centres represented in Slovakia strong segment. The qualified labor forces created conditions for further development of offshore/nearshore services with low value added (call centres), high value added (operation centres) to the highest value added (R&D centres). The IT centres make some kind of pressure on educational system with the intention to fulfill their needs for educated and high qualified labor force. If the reaction of universities is not sufficient – there is threat of lack of this high qualified labor force. The final objective should be to transform positive experiences from IT centres and software houses to the future offshoring with high value added R&D.

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