THE FOREIGN PRESENCE AS A DETERMINANT OF CREATION OF SPILLOVER EFFECTS OF FOREIGN DIRECT INVESTMENT

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Abstract: This paper aims to quantify the value of foreign presence of foreign direct investment which gained investment incentive. This foreign direct investment is localized at the region NUTS 2 Northwest and NUTS 2 Northeast. The foreign presence is considered as one of the key determinants of creation of spillover effects. Despite the growth trend in the evolution of this indicator were identified low levels of foreign presence. In the analyzed period 2002 - 2013 - on average, there was range 1.6% - 7.3%. From the calculated values could be making the conclusion of the low potential for the emergence of spillover effects in the analyzed regions of the Czech Republic.

Keywords: Keywords: Foreign direct investment, foreign presence, host economy, spillover effects.

1 Introduction

Foreign direct investment (FDI) is a term which is mentioned in the world. Due to the forces of globalization, through which the world becomes more integrated in recent decades more than ever, FDI is currently an integral part of the Czech and other world economies. With the growth of international rank companies on a global scale is also paid more attention to the impacts of FDI. Especially, the impacts what are bringing through locating of FDI to the host region.

FDI has its supporters and opponents. The first ones (Wokoun and Tvrdoň, 2010) see them as a powerful engine of economic development, the bearer of know-how, new technologies and strategic employers. The inflow of foreign capital, that quickly helps to solve the economic problems of the local economy. The others (Říman, 2008) despite all the positives point out to the arrival of strong competition for home markets of newly started businesses. They also point out to the unfavorable system of investment incentives that causes a market disproportions.

Although FDI has many critics, individual states and regions are competing between each other to attract potential foreign investors. They offer a wide spectrum of prepared industrial zones, which in many cases remain in the Czech Republic for many years uncluttered. This situation is connected with the continued trend of excess supply of potentially suitable locations for international investment (CzechInvest, 2015).

According to the survey of the attractiveness of European countries for foreign investors, performs by Ernst & Young, is shown that the Czech Republic belongs to the top twenty most attractive countries for a long time. According to the latest data for the year 2013 was ranked at the 14th place in terms of FDI (Ernst & Young, 2014). Multinational companies (MNC´s) as well as domestic investment may apply for granting investment incentives.

This paper will deal with FDI received investment incentives. Actually these FDI creates the dominant share in The Czech Republic. It is about 80% (CzechInvest, 2015) of the total FDI flowing into the Czech Republic. It is therefore a representative sample of investment, which will be analyzed the effects of foreign direct investment on. The effects can be divided into economic, social and political. To the economic effects can be classified the spillover effects.

2 Typology of economic effects caused by FDI

Economic effects of FDI can be divided into direct (primary) and indirect (secondary). Indirect positive effects are in special literature frequently referred to as spillover effects. Indirect effects contain within themselves so-called side effects - externalities that are not clearly specified link to FDI. Nevertheless they result from the direct effects and the location of FDI (Mišun and Tomšík, 2002).

Indirect effects of FDI have the character of externalities, for whose existence anybody does not pay or does not get paid. This is similar principle which it is considered in the theory of public goods (Benáček, 2000). Spillover effects are kind of type “public interest", their existence is necessary to support government institutions that currently have a form of investment incentives (Pavlínek, 2004).

Spillover effects are one of positive economic externalities. Respectively, an external benefit for a host economy arises beyond the direct effects of FDI in terms of market transactions. It is anticipated that the overall contribution of FDI will be higher than the range granted institutional support. Foreign investors bring along to the host economy ,,a little bit extra" what might turn against them in the future. It is called the imitation effect of FDI. The government carries the risk in creating the appropriate institutional conditions that FDI brings with its not only positive but as well as negative effects, which can cause contra productivity of the whole system of investment incentives.

2.1 The potential for the creation of the economic effects of FDI

To maintenance at the domestic or foreign market businesses need to have a certain competitive advantage (firm specific asset). For example, there may be in the form of tangible assets that to allow to realize economies of scale. The firm specific asset can be intangible assets in form of know-how, managerial skills, marketing benefits, brand reputation, etc. As reported by Brainard (1993) if the company has only advantage in tangible assets, will not be for it lucrative to expand abroad and itself a competitive advantage not to lead to the internationalization of production. The concept of intangible assets as a competitive advantage deals Markusen (2001). An author highlights the simplicity and lower financial difficulty of the transfer of intangible assets abroad. Knowledge and skills can be freely moved from the parent company to subsidiaries, investment in science and research brings benefits to the headquarters and branches. Based on the research of these authors is possible to make a conclusion that if a company decides to move part of activities abroad, its competitive advantage is the most likely owned by specific intangible assets.

With strategy investment decisions also dealt Dunning (1981), who created the so-called Concept OLI (ownership advantage, location advantage, internalization advantage). The ownership advantage, the location advantage and the internalization advantage are the determinants of investment decisions of companies. If the investor is no different from the businesses in the host economy, it would not be lucrative for him to enter to that market. In order to competitiveness of FDI on the foreign market musts, as already mentioned, to own a specific competitive advantage so-called the ownership advantage. So-called the localization advantage of the site includes the attractiveness of the host region, incl. availability and cost of factors of production.

If an investor has the ownership advantage and in the host region sees the potential localization advantage does not have to realize the FDI. One of the alternatives entering the foreign market is for example the license sale. The reason for demanding access to foreign markets is the last determinant of the concept OLI - internalization advantage. It is the advantage of keeping the know-how and unique knowledge. Thru this kind of entry the investor protects himself against the risks associated with the sale of license and inadequate protection of intellectual property

and the problems associated with evaluating values of intangibles assets. At the same time, not everything can be patented (Blomströrm and Kokko, 1998).

According to Dunning (1981) have to be fulfilled all conditions of the Concept OLI an investor to decided to realize FDI. The concept OLI confirms and extends Markusen´s claim (2001) about investing abroad in the case of having specific intangible assets. MNC´s are according this concept companies that have specific intangible corporate assets, which are applicable to branches abroad. This means that is possible to realize a technology transfer within the same corporation. The technology transfer is multiplied if businesses in the host region are capable this transfer absorb. It is so-called spillover effects (Caves, 2007).

2.2 Definition of spillovers effects and possibilities of measurement

If MNCs realizes in the host region its FDI, the international company transferred to FDI a competitive advantage in the form of ownership of specific corporate assets. Thanks to the fact can FDI better faces competitive pressure from local companies that have the advantage of better knowledge about the local market, business practices, preferences of customers etc. The geographical dispersion reaches of know-how and technologies, respectively to technology transfer, but not automatically beyond the corporation. Spillover effects can be identified in case if the presence of FDI raises the productivity of domestic enterprises (Lesher and Miroudot, 2008).

In the case that FDI influences positively domestic firms in the same industry, there is a so-called identification Horizontal spillover effects. Blomström and Kokko (1998) defined four ways for local businesses to increase their productivity through the presence of FDI: the effect of imitation, human capital, competition, higher export performance.

Inflow of foreign investment brings with it an unpleasant impact on the investment itself – so called the effect of imitation. Competitors in companies host country observe a new foreign company - its procedures, marketing, public relations, the way how the company presents and acts. Thanks to observations of these methods the local firms could learn and improve in many cases. They could be more competitive and productive (Jahn, 2008). The range of this effect depends on the detail and complexity of the individual processes (Görg and Greenaway, 2001).

To the technology transfer most often occurs through the acquisition of human capital. Domestic firms can hire workers who previously worked in FDI. These people also could start their own businesses. Improving of productivity is the result of labor mobility. Although the primary incentive of an investor is cheap workforce, on the other hand MNCs are spending funds for training programs and they are different ways investing a lot of money in human capital. No company is able to protect 100% of its investment in staff. Workers themselves are bearers of intangible capital (Lindsey, 1986).

Transfer of know-how and an overall knowledge and management procedures is an impact that long and vigorously reflected in the economy of the host country. Employees who passed companies owned by foreign entities and had something to do with leadership, transfer sophisticated management and proven corporate culture further - to other businesses. They often become subsequently high executives in local companies or capable entrepreneurs (Jahn, 2008).

A key role in terms of spillover effects plays competition. The arrival of FDI to the host region disturbs the balance of the market and causes that the local businesses have to fight about its existing market share. One of the ways, how to face new competition is start to imitate the FDI. If to the imitation effect does not occur, domestic firms have to use their existing technology more efficiently, in order to maintain their position in the competition fight (Wang and Blomström, 1992). More effective use of technology leads to increasing of productivity. At the same time the competition fight may also result in a change in the speed of implementing new manufacturing processes (Kokko, 1994).

Over the last indirect source of the growth of productivity in domestic firms is considered export. According Blomström and Kokko (1998) export represents spending the costs of establishing distribution networks, getting information about consumers and foreign markets, respectively costs of lobbying. The international company has already incurred such costs and has key information at the entrance to the host country. These findings may apply during export from a host economy, which may assist domestic firms in the export.

A foreign investor is trying to prevent the horizontal spillover effects just by entering a foreign market through internationalization of their activities. Respectively he establishes FDI instead of for example license sale to local business (Shaver and Flyer, 2000).

On the other hand, MNCs can benefit from the existence of spillover effects. If they can use the high-quality production of domestic suppliers, they have no reason to prevent the spread of so-called Vertical (intersectoral) spillovers. The fundamental difference from the horizontal spillover effect is that it does not arise from competition, but arises from the cooperation (Lesher and Miroudot, 2008).

The vertical spillover effects occur through the backward linkages and forward linkages. Backward linkages occur when FDI finds among local companies their new suppliers (Watanabe, 1983). The emergence of spillover effects of backward linkages is dependent on voluntary MNCs provide technology transfer and the willingness and abilities of local companies to adapt to the requests of MNCs (Lenaerts and Merlevade, 2012).

2.3 Determinants of the creation of the spillover effects of FDI

If the overall indirect effect FDI in the host region is positive or negative and whether any indirect action occurs, depends on a number of factors. The key determinants of the indirect effect's creation can include technological gap, absorptive capacity of the firms in the host economy or degree of foreign presence.

Kokko (1996) concerned the question, if exists a link between the degree of foreign presence *(FP)* and spillover effects. He concluded from the analysis of competition in the case of Mexico that this relationship is not always true. On the one hand, he found that the crowding-in effect does not occur in areas with a dominant MNCs, but on the other hand in areas where the proportion of foreign presence is to 50% and at a time is increasing, this effect was identified. Graphically, the relationship between foreign presence (FP) and spillover effects can be illustrated by a modified Laffer´s curve - see Fig. 1.

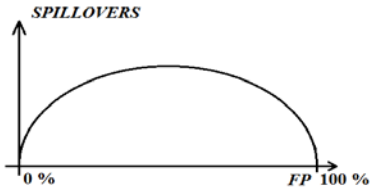

Fig. 1: The relationship between the size of spillover effects and the degree of foreign presence
Source: own processing

The fact of whether finally the effects will happen, depend not only on the foreign presence. The actual location of FDI is just kind of a first step, the final effect is dependent primarily on the interaction between domestic and foreign firms (Blomström, 2002).

3. Measurement of foreign presence in selected regions of the Czech Republic

Foreign presence is the level of state of foreign investment in the economy, region or sector, expressed by foreign companies' employment in total employment in the economy, region or selected sectors (Görg and Greenaway, 2004).

$$FP = \frac{\sum_{i=1}^{n} E_{FDI_i}}{E} * 100 \quad (1)$$

E_{FDI} represents the number of employees in FDI, which received investment incentives in individual regions. This figure was obtained from annual reports analyzed FDI in each year (Ministry of Justice, 2016), *E* represents the number of people employed in the region, according to CSO statistics (2016).

According to the relation (1) was calculated foreign presence in five regions of the Czech Republic. They are regions – Carlsbad, Usti nad Labem, Liberec, Hradec Králové and Pardubice. Respectively the area NUTS 2 Northwest and NUTS 2 Northeast.

Tab. 1 contains the calculations.

	Carlsbad region	Liberec region	Hradec Králové region	Pardubice region	Ústí nad Labem region
2002	0,885	1,191	4,792	3,840	3,028
2003	1,223	1,339	5,757	4,331	3,517
2004	1,564	1,523	6,419	4,787	4,209
2005	1,546	1,836	6,520	6,439	4,781
2006	1,551	2,036	6,654	5,745	5,573
2007	1,656	2,178	6,398	6,096	6,369
2008	1,679	2,290	6,236	6,577	6,696
2009	1,538	2,088	6,098	6,746	6,113
2010	1,643	2,635	8,532	5,982	6,438
2011	1,785	2,317	9,153	5,714	6,617
2012	1,956	2,621	10,628	6,180	6,613
2013	1,835	3,071	10,038	5,784	6,412
Avarage	1,572	2,094	7,269	5,685	5,531

Tab. 1: Calculations of foreign presence in the analyzed regions (in %)
Source: own processing based on own calculations and data from the CSO and annual reports analyzed FDI

Foreign presence was calculated for the period 2002 - 2013.[1] The year 2002 was chosen as the first reference year for the reason that from this year are reported data for the employment of foreigners at the regional level in the Czech Republic.[2]

Development of the inflow of FDI per 1,000 inhabitants in the analyzed regions illustrates Fig. 2. From the point of view of development of this indicator is clarify that these are regions with relatively high - Usti nad Labem, Liberec and also relatively lower inflow of FDI - Carlsbad.

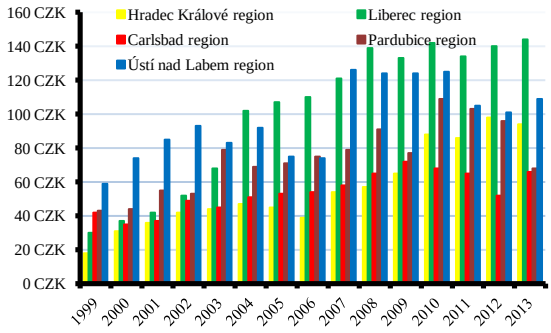

Fig. 2: Inflow of FDI in the analyzed regions (in milions CZK)
Source: own processing, data RISY

Fig. 3 illustrates the results of calculation of the foreign presence in the analyzed regions. It should be noted that this indicator does not correspond with the values of the indicators of inflow FDI. Indicator FDI inflows into the region does not reflect the kind of the investment. Respectively it does not reflect whether and how much influences the local labor market. FDI inflows does not indicate that in regions dominated a fully automated manufacturing with the low number of employees. FDI inflows does not reflect, if growth of the indicator was achieved by incoming from new investors to the local market or a rise of the value of investments etc. Foreign presence is therefore measured using the formula (1) that enables these drawbacks at least partly eliminated through the monitoring of the development of numbers of jobs.

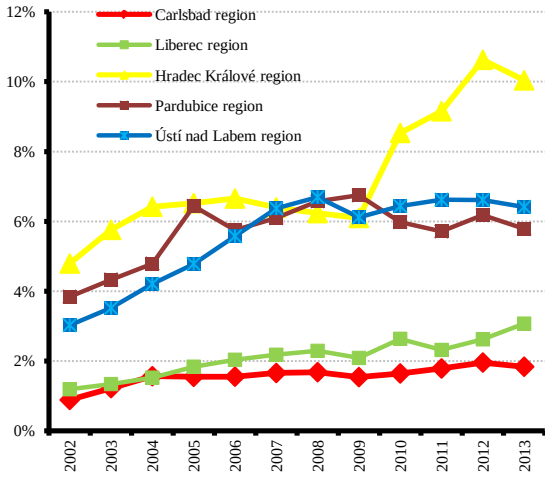

Fig. 3: Foreign presence in the analyzed regions of the Czech Republic
Source: own processing based on own calculations and data from the CSO and annual reports analyzed FDI

Although Liberec region has high long-term inflows of FDI (RISY, 2016), the number of new jobs created here in comparison with other regions is relatively low. This corresponds to the relatively low value of the indicator FP. Regions where on the contrary, FDI created relatively more jobs, have higher values of the indicator FP. The most progressive growth can be identified in case of Hradec Kralové region.

According to the methodology A. Kokko the highest rate of spillover effects should be identified precisely in Hradec Kralové Region, while low, if not minimal, the Carlsbad region – see Fig. 4.

[1] Due to comparability is the year 2013 is the last analyzed year. MNC´s annual report, containing information on the number of employees, are released with a time lag.
[2] FDI employs besides local population also foreigners. For example the expatriates or employees from third countries (Čuhlová, 2015). For the evaluation of foreign presence is necessary data of the number of persons employed modify of the number of employed foreigners. After that is given impact on the regional labor market in terms of the local workforce.

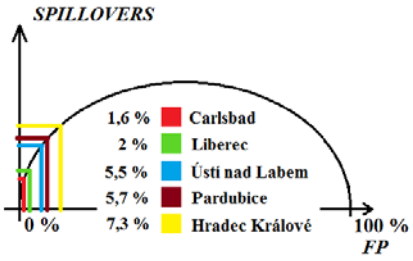

Fig. 4: Relationship between the size of spillover effects and the degree of foreign presence
Source: own processing based on own calculations

Figure reflects the low degree of foreign presence in all analyzed regions. This situation should indicate the low potential of creation spillover effect of FDI.

4. Conclusion

Inflow of foreign investment currently supports most world governments. Governments spend considerable funds to obtain positive effects that are taken for obvious, but in reality they are very difficult to measure. On the other hand, they have not to prove in the host region granted investment incentives may give the creation of crowding-out effect and the creation of dual economy. Where on one side there are the capital-intensive foreign companies with advanced technology, quality management and efficient organization of production and on the other side domestic producers that they are unable to cooperate with FDI or participate in supply chains of MNC´s.

As demonstrated the calculations of foreign presence in the five analyzed regions of the Czech Republic, despite the current inflow of FDI and awarding institutional aid could be considered the degree of foreign presence in the analyzed regions as a very low. The foreign presence as a determinant of the creation of spillover effects (positive indirect effects) reflected very low values. Therefore it can continue to argue about the efficient adjustment of institutional support.

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