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EFFECTS OF FOREIGN DIRECT INVESTMENT IN BUSINESS SERVICES IN POLAND[1]

EFEKTY BEZPOŚREDNICH INWESTYCJI ZAGRANICZNYCH W SEKTORZE USŁUG BIZNESOWYCH W POLSCE

Summary: The main goal of the paper is to investigate the impact of foreign direct investment (FDI) in advanced business services sector on economic development. We analyse the topic on the regional level as FDI in Poland is not equally distributed across the country. In order to investigate the research problem we estimate linear regression model using panel data. The dependent variable is the value of GDP per capita as the indicator of economic development. The most important independent variable from the point of view of the main objective of the paper is the number of foreign-owned advanced business services firms. This variable will be also lagged to control time necessary for investment to materialise and influence the economy. The main conclusion of the analysis of data over the period of 10 years is that there is a positive influence of operations of foreign-owned firms in the analysed sector on the economic growth of particular regions in Poland.

Keywords: advanced business services, foreign direct investment, Poland.

Streszczenie: Głównym celem tej pracy było zbadanie wpływu zagranicznych inwestycji bezpośrednich (BIZ) w sektorze zaawansowanych usług biznesowych na rozwój ekonomiczny. Problem zbadany został na poziomie regionalnym, ponieważ BIZ napływające do Polski nie są równomiernie rozłożone na terenie całego kraju. W celu zbadania problemu badawczego oszacowany został model regresji liniowej na podstawie danych panelowych. Zmienną zależną była wartość PKB *per capita* jako wskaźnik rozwoju gospodarczego. Najważniejszą niezależną zmienną z punktu widzenia głównego celu badawczego była liczba zaawansowanych firm świadczących usługi biznesowe będących własnością nierezydentów. Ta zmienna została również przesunięta w czasie w celu wzięcia pod uwagę czasu potrzebnego, aby inwestycja mogła się zmaterializować i wpłynąć na gospodarkę. Głównym wnioskiem analizy danych w okresie 10 lat jest pozytywny wpływ działalności firm zagranicznych w badanym sektorze na wzrost gospodarczy poszczególnych regionów w Polsce.

Słowa kluczowe: nowoczesne usługi biznesowe, bezpośrednie inwestycje zagraniczne, Polska.

1. Introduction

The rising role of services in an economy is revealed through various channels. Due to the changing nature of many services, especially those related to intensive use of knowledge, it is necessary to include the impact of foreign-owned companies conducting service activities. Knowledge-intensive business services (KIBS) or advanced business services (ABS) create a distinctive category of services. Thanks to advances in technology and standardization of those services their tradability and role in international trade and foreign direct investment (FDI) increased.

Moreover, FDI in services constitutes the largest category of investment globally. The role of the services sector is increasing in many countries, including the economies of Central and Eastern Europe, with particular emphasis on Poland. According to data by the National Bank of Poland, the share of foreign investment in the services sector in Poland is gradually rising and since a few years is significantly higher than that recorded by the manufacturing sector. Very dynamic category of services are those of business type.

The main goal of the paper is to investigate the impact of foreign direct firms in advanced business services sector on economic development. We will analyse the topic on the regional level as FDI in Poland is not equally distributed across the country. Such an approach raises the issue of regional disparities due to foreign investment. FDI when unequally distributed may still exacerbate the differences in economic development. In order to investigate the research problem we will estimate linear regression model using panel data. The dependent variable is the value of GDP per capita as the indicator of economic development. The most important independent variable from the point of view of the main objective of the paper is the number of foreign-owned ABS firms. This variable will be also lagged to control for time necessary for investment to materialise and influence the economy.

The research on the proposed topic also justifies its timeliness. The number of new investment projects in services by foreign multinational companies (MNCs) is high and sufficient time has elapsed to assess the effects of the projects already completed. Additional measure of the significance of business services sector is the level of employment, which reached 150,000 jobs in Poland (2015), including 130,000 in enterprises with foreign capital.

There is a threat that the business services investment contributes to the exploitation of resources of talent in host countries. This is important from the point of view of economies that still are in the process of transformation. The question arises whether FDI in the sector will be a source of sustainable long-term development, or whether it will contribute to curb future growth.

The research problem is important because the inflow of FDI to the business services sector affects other areas of the economy. For instance, business services are important to the competitiveness of other enterprises.

The rest of the paper is organised as follows: chapter 2 provides an overview of theoretical background and recent contributions on the economic impact of FDI, chapter 3 contains results of the econometric analysis of economic growth with respect to FDI and chapter 4 contains concluding remarks.

2. Theoretical background and literature review

This part has been devoted to the outlining the theoretical background and recent empirical contributions to the influence of FDI in business services on host economies.

The impact of FDI may be analysed from two main perspectives. First, FDI may influence the performance of firms in host economy. Second, there is an impact on the economic development of the host country. In this paper we will look at FDI from the latter point and its indicator, in spite of its many drawbacks, is the gross domestic product (GDP) per capita. However, the two perspectives go very close one to another as the FDI influence on host country enterprises increases their productivity thus increasing the economic growth of the host economy [Lipsey 2002].

The effects of FDI also depend on the type of the economy. Higher positive results are expected in less developed economies than highly developed ones due to the fact that the differences in technology level and managerial skills are greater. The impact of FDI on the firm performance in transition and emerging economies may come in two ways. "Foreign ownership effect" influences the firm performance by introducing more sophisticated technology and management expertise, and "productivity spillover effects" influence the performance of home country firms [Iwasaki, Tokunaga 2016]. The effects are also described as "direct" and "indirect", respectively. The important characteristics of the effects of FDI is that they are diminishing over time [Hanousek et al. 2011]. Anyway, there are still many discrepancies in the results measuring the impact of FDI on performance of firms in a host economy [Domena, Bergeijk 2017].

In the literature, much more prevalent is the analysis of FDI in manufacturing. However, due to the dominant role of services in FDI, the issue has to be thoroughly analysed. This paper aims at filling the gap in the literature regarding the effects of FDI in service sector. We will examine the impact of a distinctive group of services, that are advanced business services.

The analysis of business services frequently considers business services as complementary to manufacturing. Therefore, the welfare effects are analysed as the combination of goods and services. In this respect, welfare of the society may be lower after allowing foreign firms to operate both in manufacturing and services [Lu et al. 2014]. Again, the ambiguous role of FDI in economic growth across various economies was confirmed by Alfaro et al. [2004]. However, the impact was positive if a host economy has an efficient financial market. Positive effects of FDI on the social welfare and infrastructure of a host country were confirmed by Lehnert, Benmamoun, and Zhao [2013]. Anyway, particular elements, such as the transfer of

knowledge, were significantly negative. The positive effects were associated with the quality of governance. The quality of institutions and sound macroeconomic policies were necessary conditions for FDI to contribute positively to the economic growth according to Makki and Somwaru [2004].

Spillover effects are predominantly analysed using firm-level data. The distinctive approach is applying regional perspective to firm-level analysis [Yi et al. 2015]. On the other hand, economic or welfare effects of FDI are based on the economy wide data. We argue that there is a neglected level of analysis of FDI effects – regions.

The analysis of FDI is rarely conducted on the regional level. Among few contributions Rutherford and Tarr [2010] tried to establish links between liberalisation of FDI in business services and regional development. Their results show that liberalisation may lead to 20 times greater welfare gains than constant-returns-to-scale model. The effects of FDI depend on the level of development of regions. The evidence from the United States suggests that employment-intensive FDI in richer states positively influenced economic growth, whilst capital-intensive FDI directed to poorer states did not have such effects [Bode, Nunnenkamp 2011]. The evidence from an emerging economy also provides evidence about mixed influence of FDI on regional growth. According to Liu et al. [2014] the inflow of FDI widens the interregional growth gap by physical capital accumulation and technology while it narrows by, for example, changing the industrial structure. Such findings are particularly important from the point of view of this paper, which focuses on the regional perspective and potential impact of FDI on regional development.

The impact measured on the regional scale must take into consideration significant disparities on the regional level. Frequently, FDI inflows exacerbate differences between regions as the most prosperous regions attract disproportionally more capital than less prosperous ones. It is associated both with the agglomeration economies and endowments of regions [Klimek 2017]. Such findings were also confirmed in the case of Malaysia [Ali, Ahmad 2010].

3. Empirical analysis of welfare effects of foreign direct investment

Due to the nature of the research problem and available data we applied here the linear regression method. We will estimate a panel of data over the period of time 2004 and 2013 across NUTS2 regions in Poland. The source of firm-level data was Amadeus database by Bureau von Dijk. Unlike many earlier contributions dealing with the issue of FDI we do not use data on FDI flows or stock. We applied here the number of foreign-owned firms as the result of FDI. Thanks to such an approach we could control the fact that not all FDI flows eventually materialise in the form of business activities. Some flows are not aimed at real operations, but are rather the result of financial issues within particular MNCs. Moreover, we analysed the impact of new business entities, as we have inception date of each firm in Poland.

Therefore, we avoided the issue of consecutive flows of capital into already existing units. We applied here very narrow classification of activities that were included in the advanced business services (Tab. 1).

Table 1. Activities in the group of advanced business services

NACE Rev. 2 code	Description
6209	Other information technology and computer service activities
6910	Legal activities
6920	Accounting, bookkeeping and auditing activities, tax consultancy
721	Research and experimental development on natural sciences and engineering
722	Research and experimental development on social sciences and humanities

Source: own elaboration.

The data on the regional level were extracted from the Main Statistical Office in Poland.

The specification of the econometric model is as follows:

$$GDP\_cap_{it} = \beta_0 + \beta_1 no\_abs + \beta_2 inv\_cap + \beta_3 cons\_cap + \beta_4 pop + \beta_5 RD\_cap + \varepsilon_{it} ,$$

where *GDP_cap* is the dependent variable measured as the value of GDP per capita in particular regions across 10-year period. We were aware that the measure is not the perfect gauge of economic development or welfare, however widely used and still important in national statistics.

The independent variables were selected to influence the level of production in an economy. We have here investment per capita (*inv_cap*) and consumption per capita (*cons_cap*) as important elements of GDP formula. Foreign trade in Poland is not measured at the regional level, therefore net exports had to be excluded. Similarly the government spending was not possible to be measured on the regional level. Instead we applied also two more elements influencing the level of GDP per capita. We applied total level of population (*pop*) to control the impact of size of the particular regions. The most important variable in the analysis was the number of foreign-owned firms in particular regions (*no_abs*). This variable was also lagged one year and two years to measure the impact of the investment on the regional economies over time. All the measures are in the local currency, so we avoid any disruptions due to the exchange rate volatility.

The coefficients for variables related to the important elements of GDP formula were according to the theory, that is, higher consumption and investment positively influenced the level of GDP per capita. The coefficient for population was also positive and statistically significant which can be interpreted that the largest regions are also more prosperous. The level of R&D spending was also positive and highly statistically significant. The coefficient for the most important variable from the point of

view of the goal of this paper, *number of ABS firms*, is also positive and significant at high 1% level. It means that regions with the large number of foreign investment projects in advanced business services reported higher GDP per capita than regions with lower number of such firms. Important is also the fact that the positive effects are also reported when the variable for ABS firms was lagged 1 and 2 years.

Table 2. Result of OLS panel data estimation

Independent variable	Nominal	1 year lag (*no_abs*)	2 years lag (*no_abs*)
Number of ABS firms (*no_abs*)	116.6775*** (26.2684)	94.5688*** 30.7855	113.8603*** 35.1046
Investment per capita (*inv_cap*)	0.5615*** (0.1904)	0.4254** 0.2053	0.4569** 0.2167
Consumption per capita (*cons_cap*)	31.2916*** (1.9378)	31.0769*** 2.0220	30.8634*** 2.1512
Population (*pop*)	1.4072*** (0.2954)	1.6143*** 0.3279	1.6300*** 0.3601
R&D per capita (*RD_cap*)	9.1590*** (2.4814)	10.8121*** 2.6338	10.7124*** 2.7458
Constant	–4053.0970*** (1338.3020)	–3708.2720** 1468.4970	–3687.2430** 1701.6660
Observations	160	144	128
No. of groups	10	9	8
R^2 within	0.9614	0.9531	0.9385
R^2 between	0.9256	0.9218	0.9239
R^2 overall	0.9403	0.9326	0.9278

Notes: Standard error in parentheses, *** – significance at 0.01, ** – significance at 0.05, * – significance at 0.1

Source: own elaboration.

The results of the empirical analysis confirmed a positive impact of operations of foreign-owned firms on the regional GDP per capita. Such results are in line with earlier findings regarding positive influence of foreign capital on the economic growth. However, we cannot ignore the fact that FDI in business services is located in already well developed regions having capacity for more dynamic growth than less prosperous regions. The strength of the influence of FDI is the highest in the first year of operations. There is a significant drop in the coefficient one year after the inception and recovery in the second year.

4. Conclusions

This objective of the present study was to empirically investigate the impact of foreign direct investment in business services on the economic development in Poland.

The main conclusion of the analysis of data over the period of 10 years is that there is a positive influence of operations of foreign-owned firms in advanced business services on the economic growth of particular regions in Poland. The more firms operate in a voivodeship the higher level of economic growth.

The issue that should also be raised is the regional concentration. This is the case as the firms operating in ABS sector are prone to agglomerate only in limited number of areas. The Mazovian voivodeship is the location of around 50% of all ABS in Poland. Top 5 regions host around 90% of all foreign firms in ABS in Poland. There are also regions that have no foreign-owned companies of this type. There is two-way causality. First, ABS investment is attracted to the regions were many foreign-owned firms already operate and these regions are most prosperous. Second, the ABS due to its vast employment positively influences the economic growth of host regions.

Further analysis of the topic of influence of FDI in business services should take into consideration other dependent variables, like level of salaries, level of unemployment in particular age groups or the qualifications of employees. Such a construction of research will add more insights into the welfare effects of FDI in services.

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