

THE ROLE OF FOREIGN DIRECT INVESTMENT IN HUMAN CAPITAL FORMATION FOR A COMPETITIVE LABOUR MARKET

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Abstract

The role of human capital in attracting foreign direct investment is discussed in this paper. A dynamic panel data model is estimated for the European Union countries in the period 2000-2017 to analyze the impact of some macroeconomic indicators on the FDI inflows. The main results suggested that foreign investors in the EU preferred countries with more recent graduates of higher education, with cheap labour force and with patents growth. Therefore, the quality of the higher-education is important in attracting foreign investors in the EU and the educational policies should focus more on the harmonization of the theoretical information provided by faculties with the requirements of employers in order to achieve a competitive labour market.

Keywords: foreign direct investment, human capital, labour market, graduates.

1. INTRODUCTION

From an economic point of view, there is a close link between foreign direct investment (FDI) and economic growth. Investments can contribute to a country's social and economic development. The economic growth of a country is influenced by the quality and volume of foreign direct investment, especially in moments of economic decline and instability. The economic crisis is a factor influencing both the structure and the volume of investments in the economy of a country, also influencing the labor market competitiveness.

This paper highlights the role that education has in attracting foreign investors. In addition to the theoretical presentation, this article explains the role of recent graduates of higher education absorbed by the labor market in attracting foreign investors based on a dynamic panel model for EU countries during 2000-2017. As expected, cheap labor force combined with increasing patents are factors that have attracted FDI in EU countries.

The paper continues with a presentation of the literature in this field, the presentation of the empirical results and the synthesis of the conclusions.

2. LITERATURE REVIEW

In the case of Romania, the Ludoşean (2012) study for 1991-2009 showed that FDI is not considered a factor of economic growth, but economic growth is a condition for attracting FDI in Romania (Simionescu 2016). Ivan and Iacovoiu (2008) consider that with the accession to the EU the opening of the Romanian economy to the economies of other countries was also facilitated, which contributed to the increase of the attraction of the FDI flows. Sandu (2013) showed that in our country, due to the weak influence of the positive externalities of FDI on the innovation of local firms, there is a vulnerability of FDI, which affects innovation. On the other hand, in the context of globalization, as competitiveness and local competition are increased, a process of improving FDI in order to ensure sustainable development is achieved, which will facilitate the increase of the quality of life (Simionescu 2016).

In the case of Romania, investments have an essential role in linking economic activity to European standards imposed by the phenomenon of rapid modernization of the dynamic society, as well as in launching the country into international economic relations under the conditions of competition and competitiveness demanded by the knowledge society and economy. FDI, together with other sources of funding, provides the capital, technology, knowledge, organizational practices that an economy needs in order to develop, create new jobs for the firms that benefit from investment.

The technology transfer that FDI makes possible in developing countries is not just about machines, equipment, managers, and experts in a particular field. The process has a higher degree of complexity, as FDI acts on the development of a company's human capital by focusing on the formation of all types of employees, either from its own subsidiaries or from suppliers and customers, from simple operators, professionals and even managers (Miyamoto 2003).

Training is influenced by both the external training models and the type of skills required at a given time. These types of competencies have been developed through the relationship with foreign companies and their way of referring to the reality and the specificity of the respective company and to the current context. After a brief analysis of the literature, there was a slight investment in the formation of human capital. That is why a number of policies have been implemented, which have provided a wide range of measures in the direction of human capital formation. Attracting foreign investors through projects tailored to the local specificity, which aim at capitalizing on the existing potential in the area for economic growth, can alleviate regional gaps. Effective use of foreign capital flows is supported by tailor-made and targeted policies in this respect. (Ivan & Iacovoiu 2008).

Training courses are required for well-trained employees, given that investing in qualified workforce will help increase labor productivity. Companies with a high volume of skilled workforce can offer training in developing countries, as suggested by Tan and Batra (1996). Several firms in East Asian countries are increasingly

concerned with the employment of highly qualified human resources, thus acquiring the skills needed to carry out the planned activities, as well as to train other employees (Miyamoto 2003).

Training and imitating the models promoted by multinational companies are a proof of the direct impact of FDI on a country's economy. Each FDI beneficiary country has a certain degree of FDI absorption which is dependent on the quality of human capital, the level of economic and technological development, and the stability and attractiveness of the legislation. In the current context, a country is made more attractive to investors by infrastructure and institutions rather than by natural resources. Therefore, ensuring a robust infrastructure that meets the competitiveness requirements will contribute to the development and consolidation of the economy and to the increase of the economic efficiency in the companies.

A desirable feature of FDI is their long-term stability. This is determined by the interest and responsibility of the investor, who, regardless of the conditions favorable or unfavorable to the development of an economy, does not immediately abandon the investment. Also, foreign investors, through the working methods they apply within a production or services company, as well as through the technologies and knowledge they promote, contribute to the increase of the employees' efficiency and the competitiveness of the respective company. Foreign investors, who are genuinely interested in increasing the efficiency of a company's employees and its competitiveness, work by imposing their own strategies and working methods, as well as by promoting the new technologies and knowledge involved in building a particular product.

At European level, increasing economic competitiveness, supported by an increasing labor productivity level, becomes a priority. This trend is highlighted by new initiatives in this respect, initiatives aimed at achieving important targets, such as: innovation, increased high-tech production and services intensively based on science, new skills and qualifications, sustainable development (Mihăilă 2014).

Knowledge and innovation have become important factors for increasing the competitiveness and sustainability of a company. Competitive, productive, technological culture is inspired by the business world. It has also been extended to the education system, which has facilitated an ever closer relationship between the educational process conducted in the school system and the labor market, thus contributing to the education of young people in the spirit of economic pragmatism and to the opening and orientation of the national education system modeled on other educational systems in other European countries. In this respect, it was possible for young people to study abroad, which contributed to the universal recognition of their own system through the exchange of experience and taking on successful models from other countries. However, it is not necessary to disregard the knowledge of its own educational structure, useful in the discernment of models of education systems in other countries.

When a developing country seeks to acquire skills specific to industrialized economies, sustained investment in human capital formation should be considered, in order to align the local model to the development model of developed countries, and to increase labor productivity. In developing and developed countries, there is no consistent investment in human capital formation, as evidenced by several comparative surveys conducted at enterprise level. Also, while in developed countries there are more chances for investing in human capital, in less developed economies, attention paid to human capital is lower (Batra and Tan 2002 & OECD 2003)

That is why continuing education is also required through the training of all employees of a company. In this way, it is possible to facilitate the process of acquiring and building new knowledge and skills necessary for the new professions and jobs provided by firms, which have to become active factors of investment in training and development, by increasing the level of competition and competitiveness of each country.

The competitiveness strategy for 2012-2020 elaborated by our country and linked to the European requirements provides for an investment in an economic development model centered on increasing the quality of the infrastructure. In this context, innovative enterprises will be looking for more and more highly skilled labor, which will lead to an increase in the competitiveness of Romanian products and services in order to support competition in the European single market.

The strategy is based on four pillars: economic performance, the efficiency of public institutions, the efficiency of the business environment and infrastructure. FDI has an important role to play in creating jobs for host countries. Foreign investors are also centered on the implications and consequences of the expansion of international production activity (Mihăilă 2014).

Concerning the performance of SMEs in achieving higher labor productivity than national firms, this is explained by the access that SMEs have to foreign capital, by greater opportunities to benefit from training and organizational techniques of training. Also, a larger volume of foreign capital is beneficial at national level. SMEs have the ability to stop labor fluctuations by providing attractive compensation packages meant to retain employees.

Technological externalities, stimulation of human capital formation, access to foreign markets are factors that contribute to the economic growth of the host country. Through the skills they develop and the technology transfer they promote, SMEs become true facilitators of transmitting learning outcomes (Zaman, Vasile 2006).

Studies show a strong impact of the technology transfer vertically rather than horizontally (Javorcik 2004, Javorcik & Spătăreanu 2008, Hanousek et al 2011), taking into account the particularities of the host companies or countries. In each company there is a set of factors that influence the increase of externalities at the microeconomic level. Castelanni and Zanfei (2003), Javorcik and Spătăreanu (2008), Nicolini and Resmini

(2010) identify the following factors: the size of companies, human capital, innovation efforts, shareholder structure, technology intensity or export orientation.

At the macroeconomic level, studies have shown that the level of economic development (Borensztein, de Gregorio & Lee 1998), the commercial opening (Balasubramaniam et al. 2010), the development of financial markets (Azman-Saini et al. 2010) (Blomstrom et al. 1994), investment in research and development (Campos & Kinoshita 2002) have a stronger impact on the extent of externalities.

In developing countries, human capital formation is closely interdependent with FDI. There are complex links between the SME and the country's policies. Overqualified human capital becomes the target FDI, while also facilitating considerable benefits for host countries through its activities. Investing in human capital is a prerequisite for attracting FDI. Improving human capital can be seen in attracting more FDI. This approach should be related to the constraints of the host countries.

It is acknowledged that there are direct links between FDI and higher education, both visible in the award of scholarships and sponsorship of formal education, and in the capacity of CMN to support the development of universities, acting as a beneficial link between these institutions.

One way of showing this link is presented by UNCTAD, which shows that CMNs interested in highly skilled workforce will pursue the employment of those graduates who fit best in the presented scheme and will contribute directly to the formation of these young people in the promoted spirit, by providing financial support to business schools and scientific research in the field. Also, through their influence as a member of the Advisory Councils, the curriculum review committees councils and senates, CMN provide assistance and counseling. UNCTAD also offers some examples in this respect: Thai training programs supported and run by both international chambers of commerce and government. Skills development centers were established with the support of government, business and CMN in Malaysia (Blomstrom, Kokko 2003).

Empirical evidence on the relationship between human capital and FDI

In order to study the dependence of FDI on variables reflecting the quality of human capital, data series for EU-28 countries were analysed in the period 2000-2017 for several variables: FDI inflows (USD, 2010 = 100), GDP per capita in PPS, the index of education, the average number of school years, the employment rate of fresh graduates, the unitary labor cost, the employment rate of the population in the tertiary sector, the number of patents, the number of R & D employees, the population with tertiary education, expenditure on education as a share of GDP, household access to internet (share in total households).

The data series were stagnant at the Levin-Lin-Chu test at a 5% level of significance, excluding GDP per capita, number of employees in the research and development sector, number of patents, number of people with tertiary education, the employment rate in the tertiary sector, for which the differentiation in the first difference was made.

TABLE 1- DYNAMIC TYPE PANEL TO EXPLAIN FDI INFLOWS ATTRACTED BY EU COUNTRIES OVER 2000-2017
(ARRELANO-BOVER / BLUNDELL-BOND ESTIMATE)

Variable	Coefficient	Z	P> z
Inflows of FDI in the previous year	0.2954	5.81	0.000
Employment rate of fresh graduates of higher education	$1.8 \cdot 10^9$	1.91	0.056
The unitary cost of labor	$-1.86 \cdot 10^{11}$	-2.49	0.013
Tertiary sector population employment rate in first difference	$-1.11 \cdot 10^7$	-1.88	0.060
Patents at first glance	$2.11 \cdot 10^7$	4.32	0.000
Constant	$3.78 \cdot 10^{10}$	0.36	0.722

Source: author calculations

According to the dynamic panel model, FDI inflows depend on the inflows of FDI attracted in the previous period, but also on other variables:

- The employment rate of the recent graduates of higher education (positive correlation);
- Change in the employment rate of the population in the tertiary sector (negative correlation);
- Unitary cost of labor (negative correlation);
- Variation of the number of patents (positive correlation).

Therefore, foreign investors choosing host countries among EU countries are targeting those countries where there is a higher rate of employment of fresh graduates. On the other hand, the correlation with the change in the population employment rate in the tertiary sector is negative, meaning that when there are increases in the employment rate of the tertiary sector from one year to the next, foreign investors are less attracted. The two results lead to the conclusion that foreign investors in EU countries are looking for more young graduates from higher education absorbed by the labor market than those with higher employment in the tertiary sector. Moreover, the increase in the number of patents in EU countries attracts more and more foreign investors in these countries. As expected, the increase in unit labor costs discourages foreign investors who are still interested in cheap labor, but with great willingness to work, such as young graduates. The results are similar to those obtained by Bellak et al. (2008), which showed that between 1995 and 2003 foreign investors from Central and Eastern Europe were attracted by lower unit labor costs than other western European countries, where labor costs are higher. Patents can be considered among the determinants of FDI for foreign investors investing in EU countries, as has happened in countries such as China (Cheung and Ping, 2004) Japan or USA (Branstetter, 2006). The quality of human capital, reflected in this case by the employment rate of recent graduates, is an important determinant factor of FDI in China (Lin 2011). The author measured the quality of human capital through employee education levels in Chinese companies.

3. CONCLUSIONS

The main results suggested that foreign investors in the EU preferred countries with more recent graduates of higher education, with cheap labour force and with patents growth. Therefore, the quality of the higher-education is important in attracting foreign investors in the EU and the educational policies should focus more on the harmonization of the theoretical information provided by faculties with the requirements of employers in order to achieve a competitive labour market.

However, our study is limited by the consideration of a small number of explanatory variables. Location determinants or other variables could be included in the model. A comparison between the EU countries in terms of patterns in FDI attraction would be also necessary in a future study.

REFERENCES

- Abraham, H. M. (2015). *Soluția Întreprinzătorului, Calea milionarilor moderni spre câștigarea de profit, susținători și libertate*. New York Morgan: James Publishing.
- Audretsch, D. B. (2007). Entrepreneurship capital and economic growth. *Oxford Review of Economic Policy*, 23(1), 63-78.
- Balasubramanian, N., Black, B. S., & Khanna, V. (2010). The relation between firm-level corporate governance and market value: A case study of India. *Emerging Markets Review*, 11(4), 319-340.
- Banca Națională a României. (2013). Investițiile străine directe în România – Raport anual 2012. Retrieved October 15, 2018, from <https://www.bnr.ro/PublicationDocuments.aspx?icid=9403>
- Batra, G., & Tan, H. (2002). Upgrading Work Force Skills to Create High-Performing Firms, in *Building Competitive Firms: Incentives and Capabilities*. Washington: World Bank.
- Batra, G. (2003). *Training, Technology, and Firm-Level Competitiveness: Evidence from the World Business Environment Survey*. Washington: World Bank.
- Beata, J. S., & Spatareanu, M. (2008). To Share or not to share: Does Local Participation Matter for Spillovers from Foreign Direct Investment? *Journal of Development Economics*, 85(1-2), 194-217.
- Beata, J. S. (2004). Does Foreign Investment Increase the Productivity of Domestic Firms? In search of Spillovers from backward linkages. *American Economic Review*, 94(3), 605-627.
- Bellak, C., Leibrecht, M., & Riedl, A. (2008). Labour costs and FDI flows into Central and Eastern European Countries: A survey of the literature and empirical evidence. *Structural Change and Economic Dynamics*, 19(1), 17-37.
- Blomström, M. & Kokko, A. (2003). Human Capital and Inward FDI. *EIJS Working Paper Series*, 167, 1-25. Retrieved October 3, 2018, from <https://swopec.hhs.se/eijswp/papers/eijswp0167.pdf>
- Blomstrom, M., Lipsey, R., & Zejan, M. (1994). What Explains Developing Country Growth?. *NBER Working Paper*, 4132, 1-36. Retrieved October 3, 2018, <https://core.ac.uk/download/pdf/6881612.pdf>
- Borensztein, E., De Gregorio, J., & Lee, J.W. (1998). How Does Foreign Direct Investment Affect Economic Growth? *Journal of International Economics*, 45(1), 115-135.

- Branstetter, L. (2006). Is foreign direct investment a channel of knowledge spillovers? Evidence from Japan's FDI in the United States. *Journal of International Economics*, 68(2), 325-344.
- Campos, N. F., & Kinoshita, Y. (2002). Foreign direct investment as technology transferred: Some panel evidence from the transition economies. *The Manchester School*, 70(3), 398-419.
- Castellani, D., & Zanfei, A. (2003). Technology gaps, absorptive capacity and the impact of inward investments on productivity of European firms. *Economics of Innovation and New Technology*, 12(6), 555-576.
- Chen, Si-Hua. (2016). The influencing factors of enterprise sustainable innovation: an empirical study. *Sustainability*, 8(5), 1-17.
- Cheung, K. Y., & Ping, L. (2004). Spillover effects of FDI on innovation in China: Evidence from the provincial data. *China Economic Review*, 15(1), 25-44.
- Chigunta, F. (2002). *Youth entrepreneurship: Meeting the key policy challenges*. Oxford: Oxford University.
- Deyo, F.C. (1989). *Beneath the Miracle: Labor Substitution in the New Asian Industrialism*. Berkeley: University of California Press.
- Djankov, S., & Hockman, B. (2000). Foreign Investment and Productivity Growth in Czech Enterprises. *World Bank Economic Review*, 14(1), 49-64.
- Dunning, J.H. (2002). *Determinants of Foreign Direct Investment: Globalization Induced Changes and the Role of FDI Policies*. Washington: World Bank.
- Fleury, A., & Humphrey, J. (1992). *Human Resources and the Diffusion and Adaptation of New Quality Methods in Brazilian Manufacturing*. Sussex: University of Sussex.
- Grama, A., Fotache, D. (2005/2006). Integrarea informațională a IMM-urilor românești. *Analele Științifice ale Universității „Alexandru Ioan Cuza”*, 52, 294-299.
- Hanousek, J., Kočenda, E., Maurel, M. (2011). Direct and indirect effects of FDI in emerging European markets: A survey and meta-analysis. *Economic Systems*, 35(3), 301-322.
- Hanson, J.R., Jr. (1996). Human Capital and Direct Investment in Poor Countries. *Explorations in Economic History*, 33, 86-106.
- Ivan, M.V., & Iacovoiu, V. (2008). Rolul investițiilor străine directe în contextual obligativității îndeplinirii criteriilor de convergență. *Studii Financiare*, 4(2008), 73-92.
- Liebau, E., & Wahnshaffe, P. (1992). Management Strategies of Multinationals in Developing Countries. *Intereconomics*, 27(4), 190-198.
- Lin, F. (2011). Labor quality and inward FDI: A firm-level empirical study in China. *China & World Economy*, 19(3), 68-86.
- Ludoșean, B. M. (2012). A VAR analysis of the connection between FDI and economic growth in Romania. *Theoretical and Applied Economics*, 10(575), 115-130.
- Mihăilă, N. (2014). Implicațiile investițiilor străine directe asupra întreprinderilor mici și mijlocii din România. *Strategii manageriale*, 3(25), 18-25.
- Miyamoto, K. (2003). Human capital formation and foreign direct investment in developing countries. *Working Paper of OECD*, 211, 1-53.
- Narula, R. (1996). *Multinational Investment and Economic Structure: Globalization and Competitiveness*. London: Routledge.
- Nicolini, M., & Resmini, L. (2010). FDI spillovers in new EU member states, The Economics of Transition. *The European Bank for Reconstruction and Development*, 18(3), 487-511.

- Niculescu, G. (2015). Implementing Policies for Innovative entrepreneurship, *Annals of the „Constantin Brâncuși” University of Târgu Jiu. Letter and Social Science Series*, 2(2015),13-18.
- Noorbakhsh, F., Paloni, A., & Youssef, A. (2001). Human Capital and FDI to Developing Countries: New Empirical Evidence. *World Development*, 29(9), 1593-1610.
- Nunnenkamp, P. & Spatz, J. (2002). Determinants of FDI in Developing Countries: Has Globalization Changed the Rules of the Game?. *Transnational Corporations*, 2(2), 1-44.
- OECD. (2003). *Employment Outlook 2003*. Paris: OECD.
- Porter, M.E. (1997). Competitive strategy. *Measuring Business Excellence*, 1, 12-17.
- Ritchie, B.K. (2002). Foreign Direct Investment and Intellectual Capital Formation in Southeast Asia. *Technical Paper of OECD*, 194, 1-45.
- RooT, F. & Ahmed, A. (1979). Empirical Determinants of Manufacturing Direct Foreign Investment in Developing Countries. *Economic Development and Cultural Change*, 27, 751-767.
- Saini, A., Baharumshah, A. Z., Law, S. H. (2010). Foreign direct investment, economic freedom and economic growth: International evidence. *Economic Modelling*, 27(5), 1079-1089.
- Sandu, S. (2013). Impact of FDI on innovativeness of the host countries: between Theory and practice. Conferința internațională Dezvoltarea durabilă în condiții de instabilitate economică, 21-22 iunie 2013, Satu Mare.
- Schneider, F., & Frey, B. (1985). Economic and Political Determinants of Foreign Direct Investment. *World Development*, 13, 161-175.
- Schoof, U. (2006). *Stimulating Youth Entrepreneurship: Barriers and incentives to enterprise start-ups by young people*, International Labour Office.
- Shaiken, H. (1990). *Mexico in the global economy: high technology and work organization in export industries*, San Diego: University of California Press.
- Simionescu (Bratu), M. (2016). Investițiile străine directe și criza economică recentă. *Institute for Economic Forecasting Conference Proceedings*, 161106, 1-13. Retrieved October 7 2018 from <https://econpapers.repec.org/RePEc:rjr:wpconf:161106>
- Smarzynska, B. (2002). *Spillovers from Foreign Direct Investment through Backward Linkages: Does Technology Gap Matter?*, Washington: World Bank.
- Soare, E. (2008). *Educația antreprenorială. Ultima provocare a școlii*. București: V. & L Integral.
- Soosay C.A. (2005). An empirical study of individual competencies in distribution centres to enable continuous innovation. *Creativity and innovation management*, 14(3), 299-310.
- Tan, H., & Batra, G. (1996). *Enterprise Training in Developing Countries*. Washington: World Bank.
- Tan, H. (2001). *Do Training Levies Work? Malaysia's HRDF and its Effects on Training and Firm-Level Productivity*. Washington: World Bank Institute.
- UNCTAD (2002a), *World Investment Report 2002*. Geneva: UNCTAD.
- World Bank. (1997). *Malaysia: Enterprise Training, Technology, and Productivity*. Washington: World Bank.
- World Bank. (2003). *Global Economic Prospects*. Washington: World Bank.
- Zadek, S., & Thake, S. (1997). Send in the social entrepreneurs. *New Statesman*, 126(458), 31-48.

Zaman, Gh., & Vasile, V. (2006). Aspecte ale eficienței macroeconomice a investițiilor străine directe în România. *Theoretical and Applied Economics*, 4, 65-88.

Zamfir, A.-M., Lungu, E.-O., & Mocanu, C. (2013). Studiul comportamentului de antreprenoriat în rândul absolvenților de învățământ superior din 13 țări europene. *Economie teoretică și aplicată*, 11(588), 35-43.