RELATIONSHIP OF LABOUR COSTS AND LABOUR PRODUCTIVITY WITH FOREIGN DIRECT INVESTMENT IN THE V4 COUNTRIES

Hudáková J., Papcunová V., Štubňová M., Urbaníková M.[*]

Abstract: The aim of this paper was to determine the impact of labour costs and labour productivity on foreign investors when deciding on the placement of their investments in a given country. The relationship between labour costs and labour productivity and the inflow of foreign direct investment was examined. The data necessary for the analysis were obtained from the ILOSTAT database. The analysis for the V4 countries was demonstrated, i.e. the Czech Republic, Hungary, Poland and the Slovak Republic for the period of 2004 to 2018. Correlation analysis was performed to examine the statistical dependence of time series. In the analysis of aggregate data for the V4 countries, was observed only a moderate correlation between the amount of foreign direct investment and indicators of productivity and labour costs.

Introduction

The OECD definition reads as follows: "Foreign direct investment (FDI) is the category of international investment that reflects the objective of a resident entity (direct investor) in one economy to obtain a lasting interest in an enterprise resident in another economy (direct investment enterprise). The motivation of the direct investor is a strategic long-term relationship with the direct investment enterprise to ensure a significant degree of influence by the direct investor in the management of the direct investment enterprise." The key factor in securing foreign investment flows and taking advantage of the associated benefits is the country's state policy. It is necessary to ensure a healthy competitive environment and remove barriers affecting the inflow of FDI into the country. At the same time, efforts are being made to create a more transparent, stable and predictable legislative framework for foreign investment, which would ensure greater investment security and thus make it more attractive to foreign investors. In addition to the specific economic and legislative framework, economic factors are becoming the main determinant of FDI inflows into the country. With their effects, foreign direct investment contributes to

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[*] **Jarmila Hudáková**, **Viera Papcunová, Michaela Štubňová, Marta Urbaníková,** Institute of Economics and Management, Faculty of Natural Sciences, Constantine the Philosopher University in Nitra, Nitra, Slovak Republic, Assistant Professor

✉ corresponding author: jhudakova@ukf.sk

✉ vpapcunova@ukf.sk; mstubnova@ukf.sk; murbanikova@ukf.sk

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the economic growth and competitiveness of the economy. Based on the application of selected statistical methods, we examined the relationship between labour costs and labour productivity and the inflow of foreign direct investment in the paper. We searched for the relationship using correlation.

Literature Review

The existing theoretical and empirical literature on FDI inflow factors brings forward the following general statements (Balasubramanyam, 2001): Host countries with large domestic markets, measured by GDP per capita and the sustainable growth of these markets, measured by the rate of GDP growth, attract relatively large volumes of FDI. Subsidies for resources, including natural and human resources, are an important factor in the process of investment decisions of foreign companies. Infrastructure facilities, including transport and communication networks, are an important determinant of FDI. Macroeconomic stability, which is characterised by a stable exchange rate and low inflation, is an important factor in attracting foreign investors. Other authors Maier and Todtling (1997) presented the basic characteristics of localisation decisions of companies (including the localisation decisions of foreign investors) and defined the key concepts of localisation analysis. They also compiled the criteria of localisation decision used so far in different spatial levels (country, region, town, land) (Nidar, Diwangsa, 2017). Despite the fact, that the benefits of FDI for the economy are relatively difficult to quantify, there is a consensus among experts that foreign investment is an important factor in the current development of the economy, even though they have not been sufficiently demonstrated empirically. For small and open economies such as the V4 countries, foreign direct investment is one of the few opportunities to acquire new technologies and knowledge, create new jobs, gain access to international markets and improve the overall international situation. At the beginning of the 1990s, the V4 countries had very similar strategic advantages, with mainly Slovakia lagging behind in obtaining FDI (Cahyadin, 2016). When comparing FDI per capita, Slovakia received $380, Hungary received $1,480, and the Czech Republic received about $1,040 and Poland about $590. The main reasons for the low level of FDI in Slovakia were economic and political risks, especially the distrust of foreign investors in the state administration (Husaini, Pirzada, Saiful, 2020). An important factor was the method of privatization, which became a tool for transferring assets into the hands of people who did not have the necessary experience to manage them efficiently. Privatisation was limited in this period, the most prosperous companies were sold to domestic entities (Hoskova, 2000). After 2000, the situation in the V4 countries stabilised, the necessary legislative conditions were created, the infrastructure in these countries began to improve and the inflow of foreign direct investment increased. This also improved the business environment, increased employment and brought innovation to the business. Innovation is then a key factor in the development of any business

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(Korenkova, 2016, Fila 2017). Other authors pointed out that these changes also had a significant impact on the development of the regions (Maros, Rybansky, 2016). The significantly lower technology performance of the countries observed and the necessity of narrowing the gap brought pressure to bear on FDI-assisted technology transfer (Barrell, 2000). Many current studies deal with the issue of the determinants of foreign direct investment. Bevan, Estrin (2004) found the most important determinants of inward FDI into European transition economies which are unit labour costs, gravity factors, market size, and proximity. Other studies solve relationship between FDI and GDP. FDI tend to raise real GDP growth rate (Khawar, 2005), therefore, the higher the FDI inflow to an economy, the higher the economic growth the country achieves. Also, in Neuhaus book is illustrated impact of FDI on economic growth every stage of development of a country with special attention to the countries of Central and Eastern Europe. Justified is a claim that FDI has an important role to play in terms of the influence of individual factors on the performance of particular economies, above all, the transition countries of Central Europe (Yang, 2008). By and large, recent literature shows that the positive growth effects of FDI are contingent on host country policies and environments, including financial sector development, human capital (Hanif, Rakhman, Nurkholis, & Pirzada, 2019), trade openness, and level of economic development (e.g., Alfaro et al., 2010; Azman-Saini et al., 2010; Bluedorn et al., 2013; Bilir et al., 2014; Makiela and Ouattara, 2018; Kong et al., 2020, Osei, Kim, 2020). Empirical evidence regarding the nexus between FDI and growth shows that the benefits of FDI vary across countries and sectors, and its impact on economic growth particularly depends on the financial development of the host economy. Investments are an important source of development of enterprises and the economy. They depend on many factors. According to most of the major economic schools, an important factor influencing the level and dynamics of investment inputs is monetary policy. Some studies have examined the impact of various variables on foreign direct investment, as well as on its structure. Jędruchniewicz (2015) analysed the influence of the monetary policy of the National Bank of Poland on the dynamics and structure of investments in Poland. In the Polish economy, in the years 2006–2013 investment outlays were growing and annual dynamics were variable. The study proved a moderate linear relationship between the reference rate and the dynamics of investments. Onaran, Stockhammer (2008) studied effect of foreign direct investment on wages in Central and Eastern European Countries for the manufacturing industries. In the short run, productivity has a weak effect on wages, unemployment a strong one, FDI a positive one that is driven mostly by the capital intensive and skilled sectors, and international trade none. In capital-intensive sectors the effect of productivity seems stronger than in labor intensive ones, and the effect of unemployment seems stronger in unskilled sectors then in skilled ones. In the medium-run, the effects of productivity remain modest and that of unemployment stronger. Interestingly, the effect of FDI turns

negative. Foreign direct investment is closely linked to competitiveness at both national and corporate levels. The relationship between competition policy and inbound foreign direct investment (FDI) is important for a number of reasons. Primarily, FDI has important implications for the sustainability of national policies. High levels of FDI can challenge the government's ability to protect domestic industries. The tradeoff between higher FDI, which are considered to be beneficial for the recipient nation, against the ability of the government to maintain its control over certain sectors of the domestic economy, and the benefit of doing so, remains a largely unanswered policy question. Noland, Peterson (1997) examined there is a positive relationship between the existence of a competition law, the enforcement of competition law and FDI. The evidence for this relationship warrants further exploration, perhaps using a greater number of explanatory variables. In particular, the use of time an increased number of time variant regressors would be helpful to facilitate an analysis of the relationship between FDI and competition law in a fixed-effects setting. The data also showed a strong, positive link between FDI and openness to trade. The data did not support the conclusion that geographic location has an effect on FDI. Mihi-Rimerez, Sobierajc and Garcia-Rodrigez scanned relationship between international immigration and foreign direct investment, remittances and trade in Spain. As for the relationship between the number of immigrants and the FDI, it has been confirmed that the increase in the number of immigrants has a positive impact on the increase in the FDI to the immigrants' countries of origin. Another group of authors examined the relationship between FDI and innovative activities in enterprises. Girma et al. (2008) researched this topic in China. The results of the analysis suggest that private and collectively owned firms with foreign capital participation and those with good access to domestic bank loans innovate more than other firms do. Among enterprises not owned by the state, inward FDI at the sectoral level is positively associated with domestic innovative activity only among firms that engage in their own research and development or that have good access to domestic finance. At the sector level the effect of inward FDI into technology transfer is distinguished from the effect on domestic credit opportunities. FDI affecting credit is of little significance for state-owned enterprises and is independent of their access to finance. In contrast, better access to credit is an important channel through which FDI affects the innovation of domestic private and collectively owned enterprises. Khachoo and Sharma (2016) conducted research in India. They were looked for spillovers and their impact on the innovative performance of domestic firms active in the manufacturing sector. By employing data on FDI by industry and merging it with information on time-variant buyer–supplier linkages obtained from a series of national input–outputs tables, the study develops intra-industry and inter-industry measures to capture the effects of FDI on innovation performance of the incumbent firms' active in the same sector as the MNC and in upstream and downstream sectors. The econometric analysis after accounting for endogeneity issues reveals

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that FDI has a moderate impact on innovative performance of firms residing in identical industries. However, impact on the innovative performance of firms in supplying sectors appears to be statistically strong. A different impact was found in Germany. Stiebale and Reize (2010) examined the effects of cross-border mergers and acquisitions on innovation activities in target firms. The empirical analysis was based on survey and ownership data for a large sample of small- and medium-sized firms. After controlling for endogeneity and selection bias, we found that foreign acquisitions have a large negative impact on the propensity to perform innovation activities and a negative impact on average R&D expenditures in innovative firms. Furthermore, innovation output, measured as product and process innovations, and the share of sales from product innovations, was not significantly affected by a foreign acquisition for a given amount of innovation efforts. Hence, the estimation results did not provide any evidence of significant technology transfer through foreign acquisitions in form of a higher innovation success.

The first of the relevant studies from the region of Central and Eastern Europe was therefore created in 1999 in the environment of the World Bank. In this study, World Bank analysts Djankov and Hoekman examined the impact of FDI inflows on labour productivity in the Czech Republic. The authors examined the period from 1992 to 1996, when there was a gradual growth of FDI in the Czech economy. The study examines data at the enterprise level and compares domestically owned enterprises with foreign-owned enterprises. The study found that companies with a foreign owner had the highest labour productivity, followed by companies with a joint venture, and companies without direct contact with foreign countries were in the last place. The second, much more recent study examining the Czech Republic is the study by Javorcik and Spatareanu, published in The Scandinavian Journal of Economics (2009). This study addressed the issue of labour productivity and foreign direct investment in terms of the relationship between large production FDI and domestic subcontractors and examined in particular the advantages and disadvantages for domestic subcontractors arising from these relationships. According to the authors of the study, the initial analysis of the data suggests that Czech companies that are in a subcontracting relationship with multinational companies are different from other Czech companies. These companies are characterised by higher turnover, higher capital intensity, higher wages and especially higher labour productivity. Deeper statistical analyses in this study further confirmed the positive correlation between the presence of foreign-owned firms and the labour productivity of subcontractors in such sectors. The results of the analysis also indicate pressure from foreign-owned manufacturing companies on local subcontractors, which leads to increased labour productivity. Bacovic et al. (2020) conducted research with a similar focus to ours. They examined the impact wages and labour productivity on FDI. The authors state that wages and labour productivity have had a significant impact on FDI inflows in Europe Union countries. In Balkan countries, FDI inflows respond negatively to

shocks in labour productivity, which is contrary to the experience of EU countries. In EU countries, growth in gross wages has a negative impact on FDI inflows, while in Balkan countries, we found a paradoxical scenario, in that increased wages actually have a positive impact on FDI inflows.

Research Methodology

In the V4 countries, there is a gradual increase in wages. As the prices of goods and services converge rapidly, the people of these countries would like wage growth to match. However, labour productivity is lower in these countries than in the rest of the EU. We were interested in how and whether rising labour costs and lower labour productivity affect the inflow of investment into these countries. The aim of this paper is to determine the impact of labour costs and labour productivity on foreign investors when deciding on the placement of their investments in a given country. We examined the relationship between labour costs and labour productivity and the inflow of foreign direct investment. We obtained the data necessary for the analysis from the ILOSTAT database. We performed the analysis for the V4 countries, i.e. the Czech Republic, Hungary, Poland and the Slovak Republic for the period of 2004 to 2018. The amount of foreign direct investment is converted to USD 100,000 of the country's GDP for each country. Labour productivity is expressed per worker and per year in USD. Labour costs are expressed as an hourly rate per employee in USD. We searched for the relationship using correlation. We perform correlation analysis to examine the statistical dependence of time series. We examine the relationship between the amount of income from foreign investment and the indicators of productivity and labour price using correlation analysis. We measure the tightness and direction of the statistical dependence using a sample correlation coefficient

$$r = \frac{\sum_{i=1}^{n}(X_i - \bar{X}) \cdot (Y_i - \bar{Y})}{\sqrt{\sum_{i=1}^{n}(X_i - \bar{X})^2 \cdot \sum_{i=1}^{n}(Y_i - \bar{Y})^2}} \tag{1}$$

where n is the number of observations, X_i and Y_i are the values of the monitored indicators in individual observations and $\bar{X}$ and $\bar{Y}$ are the average values of the monitored indicators (Markechova, Stehlikova, Tirpakova, 2011). The sample correlation coefficient measures the dependence of the monitored indactors (**X** and **Y**). A correlation coefficient is a number that quantifies a type of correlation and dependence, meaning statistical relationships between two or more values in fundamental statistics. A high value, approaching +1.00, is a strong direct relationship, a low negative value, approaching -1.00, is a strong inverse relationship, and values near 0.00 indicate little if any relationship. We obtained the data necessary for the analysis from the ILOSTAT database. We performed the analysis for the V4 countries, i.e. the Czech Republic, Hungary, Poland and the Slovak Republic for the period of 2004 to 2018. The amount of foreign direct investment is converted to USD 100,000 of the country's GDP for each country.

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Labour productivity is expressed per worker and per year in USD. Labour costs are expressed as an hourly rate per employee in USD.

Results

Labour productivity from the ILOSTAT database is determined as an annual output per employee in $. Figure 1 shows that the V4 countries are below the EU-28 average. Labour productivity in these countries is much lower than the EU average. In 2018, the highest labour productivity in the Czech Republic was $66,627.70 per worker. This figure reaches only 79.63% of the EU-28 average. The lowest labour productivity this year was in Poland with $60,594.20; i.e. 72.42% of the EU-28 average
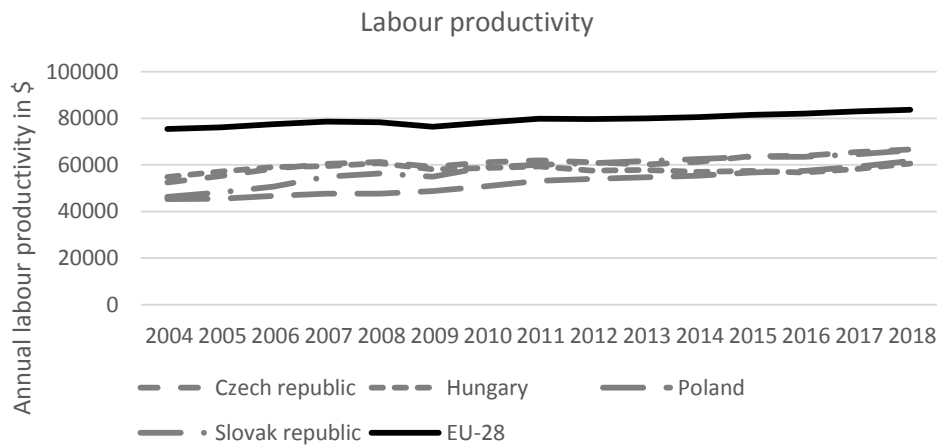

Figure 1: **Annual labour productivity per worker in the V4 countries in the period 2004-2018.** Source: Ilostat, own processing

After the crisis in 2008-2009, labour productivity has a slightly increasing trend in all countries, only in Hungary there were slight fluctuations even after the crisis. In this country, the development of labour productivity fluctuates throughout the period. The lowest labour productivity was $54,855.80 in 2004, rising to $60,594.20 by 2018, i.e. an increase of 9.47%. At the beginning of the period under review, Poland had the lowest labour productivity at $45,378.00. By the end of the period under review, it increased to $61,741.40; i.e. a 26.5% increase. The second lowest labour productivity in 2014 was in the Slovak Republic at $46,290.80. By the end of the period under review, it increased to $66,283.90; i.e. a 30.16% increase. The Czech Republic achieved the highest labour productivity at the beginning of the observed period at $52,528.70 per employee and maintained it

at the end of the observed period at \$66,627.70; i.e. an increase of 21.16%. Within the EU-28 average, labour productivity was \$75,490.60 per worker at the beginning of the observed period and \$83,668.20 per worker at the end of the observed period, i.e. an increase of 9.77%. As already mentioned, the Czech Republic has the highest labour productivity, despite this fact, at the end of the period under review, it reached 79.63% of labour productivity in the EU-28. At the end of the period under review, the Slovak Republic was at the level of 79.22%, Poland reached the level of 73.79% and Hungary 72.42%.

Nominal hourly labour costs per employee (hereinafter referred to as labour costs) can be seen in Figure 2. Also in this indicator, the V4 countries are significantly below the EU-28 averages. However, from the point of view of investors, this fact is an advantage over older EU members. Low hourly labour costs could attract new investors who choose the V4 countries over the original EU-28 countries, where these costs are much higher.

Figure 2: Nominal hourly labour cost per employee in \$
Source: Ilostat, Authors' elaboration

Again, the crisis years of 2008 to 2010 caused the growth of labour costs to stop or slow down. With the lowest labour costs, Slovakia started in 2004 at \$6.80 per hour and per worker. It reached \$10.80 in 2009 and dropped slightly to \$10.40 in 2010. In 2011, costs rose to \$11.40. For the next five years, they fluctuated from \$11.30 to \$11.40. The growth came only in the last two years, in 2017 it was \$12.30 and in 2018 \$13.70. The Czech Republic started in 2004 at the level of \$6.90. The increase in labour costs lasted until 2011 and their slight decrease did not occur until 2012, when they reached \$12.80. In 2013, they decreased to \$12.00. In 2014, they fell further to \$11.40. Further growth did not occur until the last two years, same as in Slovakia. In 2017, they rose to \$12.70 and in 2018 there was a more significant increase to \$14.80. This price is the highest of all V4 countries. In Hungary, labour costs in 2004 were \$7.00. The development of costs was similar to

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that in the case of the Czech Republic. In 2018, labour costs in Hungary amounted to $10.90. Poland started in 2004 with the highest amount of labour costs at $9.50 per worker and hour worked. The development was similar to that in the other V4 countries. The rate increased until 2009 when it reached $12.00. Then there was a decline and again a slight increase and decline until 2018 when it reached the level of $11.90 per worker and per hour. At the end of the period under review, the Czech Republic has the highest labour costs, followed by Slovakia, Poland and Hungary.
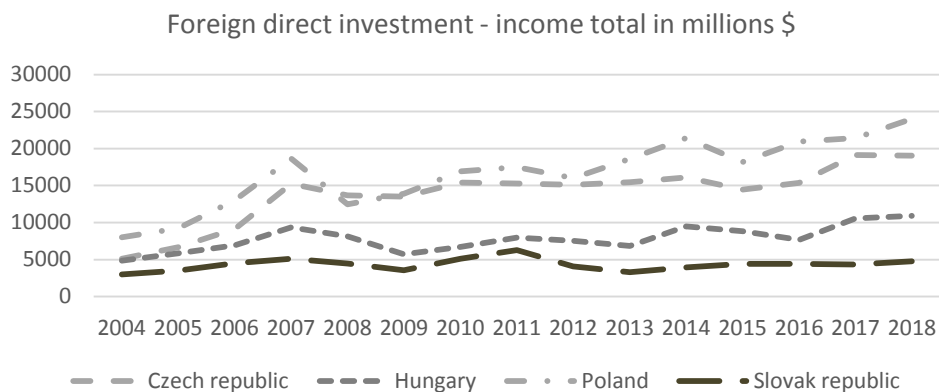

Figure 3: Foreign direct investment – income toal in millions $
Source: Ilostat, Authors' elaboration

As we can see from the graph, the Slovak Republic has long achieved the lowest level of long-term foreign investment. In 2018, it reached the level of $4,773.819 million. The highest level in that year was reached by Poland, namely $24,016.76 million. The Czech Republic is catching up with Poland with the amount of investments in 2018 of $19,052.19 million. Hungary is also ahead of Slovakia with the amount of foreign direct investment in 2018 of $10,916.97 million. We converted foreign direct investment to USD 100,000 of the GDP (Figure 4).
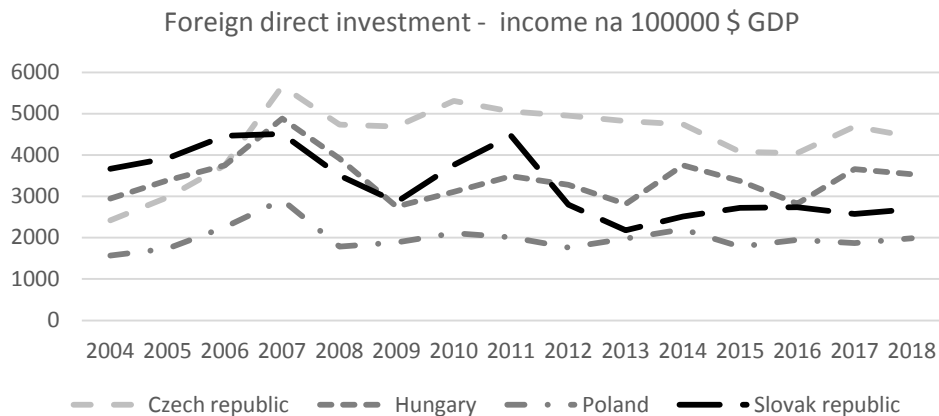
Foreign direct investment - income na 100000 $ GDP

Figure 4: Foreign direct investment – income per 100000 $ GDP. *Source*: Ilostat, OECD

After converting foreign direct investment to $100,000 of the GDP, the Czech Republic is in the highest position. Poland fell from the first place to the fourth place. In 2008 and 2009, it means in the time of the crisis, we see a decline in investment, same as in the previous graph. In case of the Slovak Republic, in addition to the years of crisis, we see a decline after 2011 until 2013. After this year investments grow but slowly. In case of Hungary, apart from the crisis years, the development is steady, with only slight increases or decreases.

Table 1 shows the results of the correlation analysis. The results show the differences between the individual V4 countries.

Table 1. Results of correlation analysis

	FDI and labour productivity	FDI and labour cost
V4 countries	0,423032	0,210352
Czech Republic	0,594984	0,693864
Hungary	0,526292	0,228299
Poland	-0,07927	-0,01744
Slovak Republic	-0,64325	-0,59809

Source: Authors' elaboration

Discussion

In the analysis of aggregate data for the V4 countries, we observe only a moderate correlation between the amount of foreign direct investment and indicators of productivity and labour costs. However, in the analysis of these relationships within individual countries, we observe the values of correlation coefficients

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ranging from trivial correlation to strong statistical dependence. The trivial (negligible) dependence between the amount of income and foreign investments and both monitored indicators is observed in the case of Poland. The analysed data for the Czech and Slovak Republic shows a strong statistical dependence between the amount of foreign direct investment and indicators of labour productivity and labour costs. In the Czech Republic, positive values of correlation coefficients are measured, which means that despite increasing productivity and labour costs, there is an increase in the inflow of foreign direct investment. The authors of the Balcan study also found similar results finding that rising wages do not have negative impact on FDI inflows (Sasongko, Huruta, Pirzada, 2019). This is due to the fact that, at the same time as rising labor costs, labor productivity is also growing (Bacovic et al., 2020). On the contrary, in the Slovak Republic we observe a negative statistical dependence and thus an increase in productivity and the price of labour brings a decrease in the volume of foreign direct investment. The analysed data for Hungary shows only a small statistical dependence between the amount of foreign direct investment and labour costs and a strong statistical dependence with labour productivity. We have achieved different results in each country, and each country has its own specifics in both the business and political environment. FDI activity depends on a wide range of factors and conditions, including specific local determinants and home country characteristics.

Conclusion

The results of the research are valuable for the national and regional policy makers especially in terms of rising labour costs. The limit of this work is that it takes into considers only two factors influencing the flow of foreign direct investment. A very important factor is the business environment and political stability in each country. The business environment is evaluated by various indices (The Global Competitiveness Index, World Competitiveness Index, Doing business index). In the future, further research could address the impact of other factors on the inflow of foreign direct investment. Factors for which a stronger relationship is expected, e.g. macroeconomic stability, market size, infrastructure, labour availability and the like.

Regarding to FDI, the literature distinguishes between 'vertical' and 'horizontal' foreign investments models. This paper was not made such a distinction to cover several theoretical approaches to the subject. At the same time, was proposed this as a future line of research which could boil down to analysing of a sample of a subgroup, relying on a relative factor endowment differences and similarities in the countries. In the future, it will be also interesting to analyse the impact of the pandemic COVID-19 on the analysed indicators. From the current economic development, it is possible to conclude that the labour cost and labour productivity will be significantly affected by this pandemic. In the analysis, we monitored the V4 countries, which are part of the EU-28, which significantly affects foreign

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direct investment through the common economic policy. Another change for the EU is the Brexit, which has created space for economic change within the EU, which will also have an impact on the labour market of member countries and foreign direct investment.

References

Alfaro, L., Chanda, A., Kalemli-Ozcan, S. and Sayek, S., (2010). Does foreign direct investment promote growth? exploring the role of financial markets on linkages. *Journal of Development Economics* 91 (2), 242–256.

Azman-Saini, W.N.W., Law, S.H. and Ahmad, A.H., (2010). FDI and economic growth: new evidence on the role of financial markets. *Economics Letters* 107 (2), 211–213.

Bacovic, M., Jacinovic, D., Bazovic, L., M. and Ivanovic, M. (2020). The Balkan Paradox: Are Wages and Labour Productivity Significant Determinants of FDI Inflows? *Journal of Balkan and Near Eastern Studies*, 22.

Balasubramanyam, V. N. (2001), *New Horizons and Policy Challenges for Foreign Direct Investment in the 21 st Century Foreign Direct Investment in Developing Countries: Determinants and Impact*. In OECD Global Forum on International Investment. 1–23.

Barrell, R., Holland, D. (2000). Foreign Direct Investment and Enterprise Restructuring in Central Europe. *Economics of Transition*. 8 (2), 477–504.

Bevan, A.A., Estrin S., (2004). The determinants of inward foreign direct investment into European transition economies. *Journal of Comparative Economics* 32, 775–787.

Bilir, K., Chor, D. and Manova, K., (2014). *Host-country Financial Development and Multinational Activity.* National Bureau of Economic. Research WP Series No. 20046.

Bluedorn, J., Duttagupta, R., Guajardo, J. & Topalova, P., (2013). *Capital Flows Are Fickle: Anytime, Anywhere*. International Monetary Fund, Research Department.

Cahyadin, M., (2016). Foreign Direct Investment, Trade Openness, Government Expenditure and Economic Growth in Asian-African Conference Countries, 2000-2014. *Journal of Business and Economics Review, 1*(1) 9.

Djankov, S., Hoekman, B., (1999). *Foreign Investment and Productivity Growth in Czech Enterprises*. In: World Bank Policy Research Paper 2115.

Eurostat, (2020), https://ec.europa.eu/eurostat

Fiľa, M., (2017). *Innovations and Clusters as an Engine of Enterprises & Regional Development.* In: Engines of Urban and Regional Development", 6th Central European Conference in Regional Science – CERS. UMB Banská Bystrica.

Girma, S., Gong, Y. and Görg, H., (2008). Foreign Direct Investment, Access to Finance, and Innovation Activity in Chinese Enterprises. *The World Bank Economic Review*, 22,(2), 367–382.

Hanif, H., Rakhman, A., Nurkholis, M. and Pirzada, K., (2019). Intellectual capital: extended VAIC model and building of a new HCE concept: the case of Padang Restaurant Indonesia. *African Journal of Hospitality, Tourism and Leisure*, 8 (S), 1-15.

Hošková, A., (2000*). Comparison of the development of foreign direct investment in Slovakia and in transforming economies*. Slovak national bank, Bratislava.

Husaini, Pirzada, K. and Saiful, (2020). *Risk Management,* Sustainable Governance Impact on Corporate Performance. *Journal of Security and Sustainability Issues*, 9(3), 993-1004.

Ilostat, (2020). https://ilostat.ilo.org/

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Javorcik, B., Spatareanu, M., (2009). Tough Love: Do Czech Suppliers Learn from their Relationships with Multinationals? *The Scandinavian Journal of Economics*, 111, (4), 811-833.

Jędruchniewicz, A., (2015). Monetary Policy and Investments in the Polish Economy. *Oeconomia Copernicana*, 6(3), 7-22.

Khachoo, Q., Sharma, R., (2016). FDI and Innovation: An Investigation into Intra- and Inter-industry Effects. *Global Economic Reviw,* 45, (4).

Khawar, M., (2005) Foreign Direct Investment and Economic Growth: A Cross-Country Analysis. *Global Eonomy Journal*. 5 (1), 1-12.

Kong, Q., Guo, R., Wang, Y., Sui, X. and Zhou, S., (2020). Home-country environment and firms' outward foreign direct investment decision: evidence from Chinese firms. *Economic Modelling* 85, 390–399.

Korenková, M., (2016). *Business in Slovakia*. In Conference: International Scientific Conference on Region in the Development of the Society, 2016, Brno, Czech Republic, 459-469.

Maier, G., Tödtling, F., (1997). *Regional and urban economics - Localization theory and spatial structure*. ELITA, ekonomická literárna agentúra, Bratislava.

Makiela, K., Ouattara, B., (2018). Foreign direct investment and economic growth: exploring the transmission channels. *Economic Modelling* 72, 296–305.

Maros, M., Rybansky, L., (2016), Development of wage disparities in Slovakia and the use of quantitative methods for their analysis, Conference: 19th International Colloquium on Regional Sciences, Cejkovice, Czech Republic, 387-391.

Mihi-Rimerez, A., Sobierajc, J. and Garcia-Rodrigez, Y., (2019). Interaction of emigration and immigration with foreign direct investment, international trade and remittances. *Economics,* 63.

Nidar, S. R., Diwangsa, E. J., (2017). The Influence of Global Stock Index and the Economic Indicators of Stock Investment Decision by Foreign Investors in the Indonesian Stock Exchange. *Journal of Finance and Banking Review*, 2(1), 32-37.

Noland, M., Peterson, G., P., (1997). Competition Policy and Foreign Direct Investment. *The Japanese Economic Review* 48.

Onaran, O., Stockhammer, E., (2008). The effect of FDI and foreign trade on wages in the Central and Eastern European Countries in the post-transition era: A sectoral analysis for the manufacturing industry. *Structural Change and Economic Dynamics* 19, 66–80.

Osei, M.J., Kim, J., (2020). Foreign direct investment and economic growth: Is more financial development better? *Economic Modelling*, 93, 154–161.

Sasongko, G., Huruta, A.D. and Pirzada, K., (2019). Why labor force participation rate rises? New empirical evidence from Indonesia, *Entrepreneurship and Sustainability*. Issues, 7(1), 166-176.

Stibale, J., Reize, F., (2010). The impact of FDI through mergers and acquisitions on innovation in target firms. *International Journal of Industrial Organization*, 29, (2). 155-167.

RELACJA KOSZTÓW I WYDAJNOŚCI PRACY W RAMACH BEZPOŚREDNICH INWESTYCJI ZAGRANICZNYCH W KRAJACH V4

Streszczenie: Celem pracy było określenie wpływu kosztów pracy i wydajności pracy na inwestorów zagranicznych przy podejmowaniu decyzji o lokowaniu inwestycji w danym kraju. Zbadano zależność między kosztami pracy a wydajnością pracy a napływem bezpośrednich inwestycji zagranicznych. Dane niezbędne do analizy uzyskano z bazy danych ILOSTAT. Przedstawiono analizę dla krajów V4, tj. Czech, Węgier, Polski i Słowacji za lata 2004-2018. Analizę korelacji przeprowadzono w celu zbadania zależności statystycznych szeregów czasowych. W analizie danych zagregowanych dla krajów V4 zaobserwowano jedynie umiarkowaną korelację między wielkością bezpośrednich inwestycji zagranicznych a wskaźnikami produktywności i kosztów pracy.

Słowa kluczowe: koszty pracy, wydajność pracy, bezpośrednie inwestycje zagraniczne, kraje V4.

劳工成本与外国直接劳动生产率在V4国家投资

摘要：本文的目的是确定在决定外国投资者在特定国家的投资时，劳动力成本和劳动生产率对外国投资者的影响。研究了劳动成本和劳动生产率与外国直接投资流入之间的关系。分析所需的数据是从ILOSTAT数据库获得的。对V4国家（即捷克共和国，匈牙利，波兰和斯洛伐克共和国）的2004年至2018年进行了分析，并进行了相关分析，以检验时间序列的统计依赖性。在分析V4国家的汇总数据时，仅观察到外国直接投资额与生产率和劳动力成本指标之间的适度相关性。

关键字：劳动力成本，劳动生产率，外国直接投资，国家V4