Examining the Relationship between Foreign Direct Investment and Export in the Region of Selected Central and Eastern European Countries

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https://doi.org/10.53465/EDAMBA.2022.9788022550420.149-162

Abstract. The In today's globalized world, both foreign direct investment and exports of goods and services are an indicator of the level of competitiveness of the economy and play an important role in economic growth. It is also the same in the countries of Central and Eastern Europe. The aim of the presented scientific article is to use scientific methods to examine the relationship between the inflow of foreign direct investment and exports within the region of selected Central and Eastern European countries. Many scientific studies have looked at the relationship between FDI and economic growth, but fewer describe the long-term or short-term relationship between investment and export value. In the following article, we will deal with the mutual relationship between them within selected eleven countries of Central and Eastern Europe.

Keywords: foreign direct investment, export, CEE, panel data

JEL classification: *F10, F14, F20*

1 Introduction

The sharp rise in foreign direct investment (FDI) and international trade flows in recent decades, given the current instability of their flows following the global economic crisis, has prompted an interest in examining their relationship, as evidenced by growing theoretical and empirical literature in this area. Countries are currently fully aware of the potential benefits of foreign direct investment. Therefore, governments are increasingly trying to attract them, while offering significant incentives to motivate investors to invest in a given country. However, evidence of the export effects of foreign direct investment remains ambiguous, as does the validity of the host country's policies. The theory predicts the positive or negative effects of foreign direct investment on export values. Theoretical controversy and whether governments' interest in attracting investment is justified leads to a proliferation of empirical studies examining

this problem. So far, we have seen several attempts to evaluate the state of the existing empirical literature examining the relationship between foreign direct investment and exports.

The importance of foreign direct investment in the countries of Central and Eastern Europe, especially with regard to the process of transformation of their economies, is invaluable. In the CEE countries in particular, FDI has a significant positive impact on their economic growth. According to Ferenčíková and Dudáš (2010), we can talk about foreign investment on two levels of positive effects - the ability to supplement the missing domestic resources that are needed in process of economic transformation and to bring other positive secondary effects. This is the common denominator in the efforts of the aforementioned CEE countries to attract new foreign direct investment. Economic theory does not clearly identify the relationship between FDI and exports. In his seminar paper, Mundell (1957) examined this relationship on the assumptions of the neoclassical Heckscher-Ohlin-Samuelson theory, where foreign direct investment flows depend on differences in factor prices and factor subsidies between countries. With the growing mobility of international factors, these disparities are narrowing. The conclusion of his research was that the mobility of capital driven by foreign direct investment is a perfect substitute for exports. The so-called export learning is a closely related concept, which is important to mention at the beginning of the research and the subsequent explanation of the impact of foreign direct investment on the export of the host country. Firms decide for themselves whether to become exporters, deriving their decision from their production performance (Clerides et al., 1998). By gaining experience associated with the implementation of export operations, they improve their export competitiveness in foreign markets. This particularly emphasizes the importance of providing strong export support to domestic firms in order to improve their efficiency. Empirical evidence of export learning has been examined in a meta-analysis conducted by Martins and Yang (2009), which suggests that exports generally have a positive effect on productivity and that this effect is more pronounced in developing countries.

Helpman et al. (2003) point out that the complementary and substitutive relationship between investment and export needs to be taken into account. This is a question related to the type of individual FDI. Most macroeconomic models are based on general equilibrium models, so the relationship between the two variables can be analysed from the perspective of both the home and host countries (Kojima, 1973; Mundell, 1957). Based on the results of empirical studies, the complementary relationship shows a rather positive impact of investment on the host country's exports, while the substitution relationship speaks of no or rather a negative impact.

Zhang and Song (2000) examined the impact of FDI inflows on Chinese exports during the period 1986-1997. Based on their calculations, they concluded that FDI inflows undoubtedly play an important role in supporting Chinese exports. When calculating the correlation coefficient using a simple regression model, they found a strong dependence between the given quantities. Specifically, in their published output, it was found that the 1 % change in FDI levels in the previous year is associated with a 0.29 % increase in exports next year in the Chinese economy. Using a bivariate Granger causality test, Fabry (2001) examined the causal relationship between FDI and exports

in a group of 10 countries from the Central and Eastern European region. Based on this test, he pointed out that the relationship between FDI and exports was not found, on the other hand, there was a relationship between FDI and economic growth. In contrast, the Pacheco Lopéz (2004) study showed a two-way causal link between foreign direct investment and exports in Mexico, where it has been found that exports stimulate FDI and FDI, on the contrary, supports exports. Dritsaki C. and Dritsaki M. (2012) examined the causal link between foreign direct investment and exports of the twelve EU countries between 1995 and 2010 using the Granger causality methodology. The findings support the presence of a bilateral causal relationship between foreign direct investment and exports, both in the short and long term, for this group of countries. One of the main conclusions of this study is that exports and FDI are two important factors in economic growth. For these countries, promoting exports and attracting new foreign investors are crucial. For non-euro area countries, the devaluation of the currency may be the first step. Export promotion, combined with FDI and a stable exchange rate, can create a favourable environment for sustainable growth. Zamrazilová (2006) examined the relationship between FDI and exports in the neighbouring Czech Republic. The result of her study is that foreign investors not only brought funds to the Czech Republic, but their entry improved foreign-controlled companies' access to world markets and increased their adaptation to the changing conditions of demand in developed markets. The strong export orientation and performance of companies under foreign control contributed to a gradual increase in the country's export performance.

An important aspect of the relationship examined is the level of economic development of the host country. This is a particularly important issue in predicting the potential for side effects in the host country (Görg & Greenaway, 2016). The lower level of development of the country presumes greater opportunities for new and rapidly developing technological innovations than side effects within foreign investment. This theory has been extended to the problem of export effects of foreign direct investment, which are more positive in a less developed host country (Brouthers, Werner, & Wilkinson, 1996).

Compared to foreign direct investment, basic export data are observed from an ex-post perspective, while foreign direct investment data is continuously monitored and evaluated to ensure value added. FDI is therefore constantly examined, especially from an ex-ante point of view. This is due to the fact that FDI represents the investor's interest in the form of a complex investment, which can be modified at the time of management of the relevant business entity. Therefore, foreign direct investment is much more difficult to research and predict.

The above literature review suggests that the theory alone cannot give a clear answer as to whether the impact of foreign direct investment on host country exports is positive, negative, or non-existent. The relationship examined is therefore essentially an empirical problem, which has also been examined by various empirical studies. The results are diverse, which is the motivation for our quantitative analysis in other parts of this paper.

2 Model

The aim of the scientific article is to use scientific methods to examine the relationship between the inflow of foreign direct investment and exports within the region of selected countries of Central and Eastern Europe. To achieve our goal, several research methods were used, namely the method of selection, analysis, induction, deduction, and comparison. Above all, we worked using mathematical and statistical methods. The analysis pointed out the development of the inflow of foreign direct investment, the position of foreign trade, its importance. The paper used mostly secondary sources of information provided by relevant economic organizations such as UNCTAD. Due to the rapid development of the world economy, in addition to the extensive publications of leading economists, up-to-date Internet resources were used to examine the issue.

As the scope of the researched issue is relatively extensive, relevant information was selected using the selection method to achieve the goal. In the first part, we focused our attention on the description of the position of foreign trade in the economies of Central and Eastern Europe, the inflow of FDI and the current FDI stock. Induction and deduction methods were applied to evaluate the given state of the examined attributes and competitiveness of the economy. Mathematical-statistical methods were used in the quantification of the obtained data, in which we used a graphical representation for clarity. A descriptive analysis is used in the paper to explain the charts and figures, which provided a comprehensive picture of the researched issue through comments and verbal descriptions.

To assess the causality between exports and the inflow of foreign direct investment, we decided to perform a correlation-regression analysis. The dependent variable (Y) is represented by export values. The independent variable (X) represents the inflow of foreign direct investment. The coefficient of determination (R2) expresses what percentage of the variation in the value of the dependent variable Y is due to the variation of the independent variables X.

Since we have many variables in our model, we decided to work with panel data - panel regression. Panel data includes a cross-sectional and a time component. In this case, it is a combination of observations of cross-sectional export data and the foreign direct investment stock in 11 countries over a period of 28 years. We chose a model with fixed effects, which, in contrast to the pooled regression model, assumes different absolute terms for the individual cross-sectional units:

(1) $$Y_{it} = \alpha_i + \beta_1 X_{it1} + \ldots + \beta_k X_{itk} + U_{it.}$$

Where:
Y is the real export,
X is the stock of foreign direct investment,
α_i is the specific constant for each cross-sectional unit. In our case, this can be the so-called other, unspecified effects,
index i is the cross - sectional component i = 1, . . . N, which we use to monitor N objects (countries),

index t is the time component t = 1, . . . T, by which we observe T time periods,
Y_{it} will denote the value of the object variable Y at time t,
β is the vector K X 1, X_{it} is the it-th observation of the explanatory variables,
U_{it} is a random component.

In addition to the fact that panel data allow us to compile and test more complex models, their advantage is that they also solve selected econometric problems that often occur in empirical work. One of them is the problem with immeasurable variables, which affect the explanatory variable, but since they cannot be measured, we cannot include them in the selected model. Panel data make it possible to eliminate this problem by using the first difference, while we get:

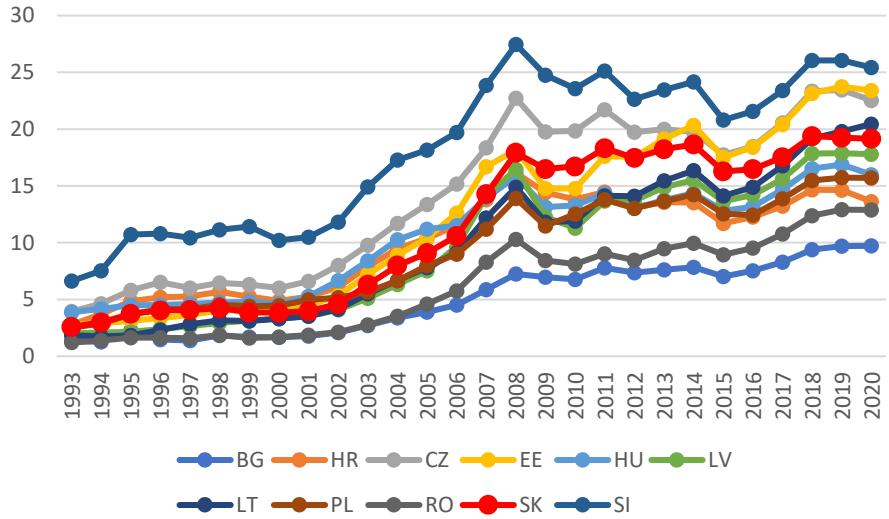
$$(2) \qquad Y_{it} - Y_{it-1} = \alpha_i + \beta_1(X_{it1} - X_{it1-1}) + \ldots + \beta_k(X_{itk} - X_{itk-1}) + (U_{it} - U_{it})$$

3 Results and discussion

The inflow of foreign direct investment also played an important role in terms of the economic transformation of the countries of Central and Eastern Europe (CEE)[1] in the early 1990s. Until 1989, the CEE countries were centrally planned, with export and import trade operations being conducted exclusively through state trading enterprises, which had a monopoly on foreign trade. At that time, foreign trade was characterized by strong concentration within the Council for Mutual Economic Assistance (CMEA)[2]. The liberalization of national economies in the CEE countries has led to a huge inflow of FDI into the region, and by joining the EU, FDI inflows have intensified. The integration process, which the CEE countries completed in three waves[3], opened up the EU market and brought new export opportunities, which was also reflected in the dynamics of export growth, especially in the V4 countries.

[1] CEE countries that are members of the EU: Bulgaria, Croatia, Czech Republic, Estonia, Hungary, Lithuania, Latvia, Poland, Romania, Slovak Republic, Slovenia.
[2] All the above-mentioned CEE countries were members of the CMEA, except Yugoslavia (Croatia also belonged to Yugoslavia in the past), which had observer status.
[3] The largest enlargement of the EU took place in 2004, with 10 countries becoming members: Cyprus, Czech Republic, Estonia, Lithuania, Latvia, Hungary, Malta, Poland, Slovak Republic and Slovenia. Romania and Bulgaria became members of the EU in 2007, and the last enlargement took place in 2013, when Croatia became a member.

Fig. 1. GDP growth p.c. in CEE countries in 1993 - 2020 (in thousands of USD)



If we look at Fig 1, which describes the overall economic condition of the national economies of the CEE region, we see that the highest GDP per capita within the CEE countries in 2020 is in Slovenia at USD 25,444; Estonia at USD 23,399 and the Czech Republic at USD 22,535. The Slovak Republic, as the most open and export-efficient economy in the CEE region, produced the 4th largest GDP per capita in 2020, amounting to USD 19,156. GDP per capita of Poland reached USD 15,706 and the lowest GDP from CEE countries in 2020 was recorded by the national economies of Croatia (USD 13,634), Romania (USD 12,875) and Bulgaria (USD 9,726).

In terms of export volume, we can divide the development in the CEE countries into the period before and after the integration into the EU i.e., from 2004. From Fig. 2 we can observe that a significant increase in exports after 2004 is characteristic especially for the group of V4 countries within which Poland's exports grew the most dynamically until 2020, namely by USD 238.1 billion, Czech exports by USD 97.9 billion, Hungary's exports by USD 57.7 billion and exports of the Slovak Republic by USD 58.3 billion. Outside the V4 countries, Romania is the only country in the CEE region with the largest volume of exported goods and services, but as we can see in the following Fig 3, the Romanian economy achieves this volume only in absolute terms, while its export performance is the lowest in the overall comparison of the CEE region and amounts to only 37.5 % of GDP. Other countries have long maintained a stable trajectory of the development of the volume of exported goods and services, which in a mutual comparison does not exceed the value of USD 50 billion. The lowest exports within the CEE region in 2020 is in Latvia at USD 20.2 billion, Estonia at USD 21.7

billion, Croatia at USD 23.5 billion, Bulgaria at USD 39.2 billion and Lithuania at USD 41.4 billion. At the same time, it should be noted that the exports of goods and services of the remaining economies of the CEE region in absolute terms do not reach a value comparable to the V4 countries.

Fig. 2. Exports of goods and services of CEE countries in 1993 - 2020 (in billions of USD)

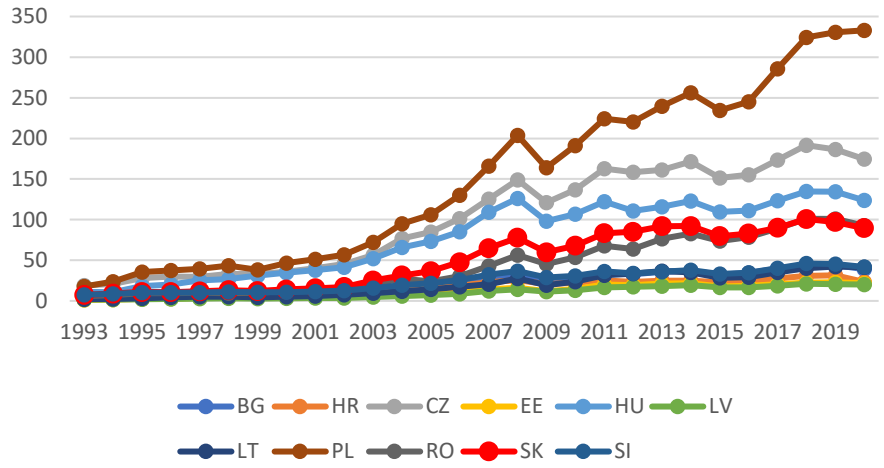
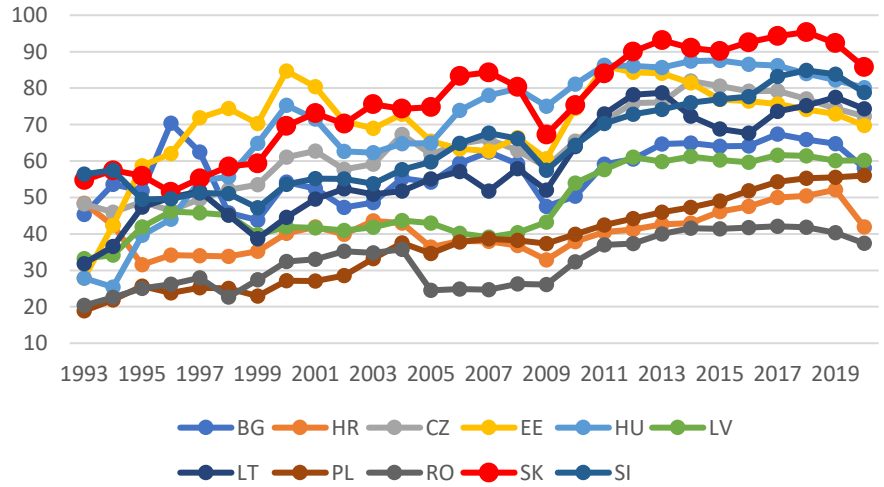


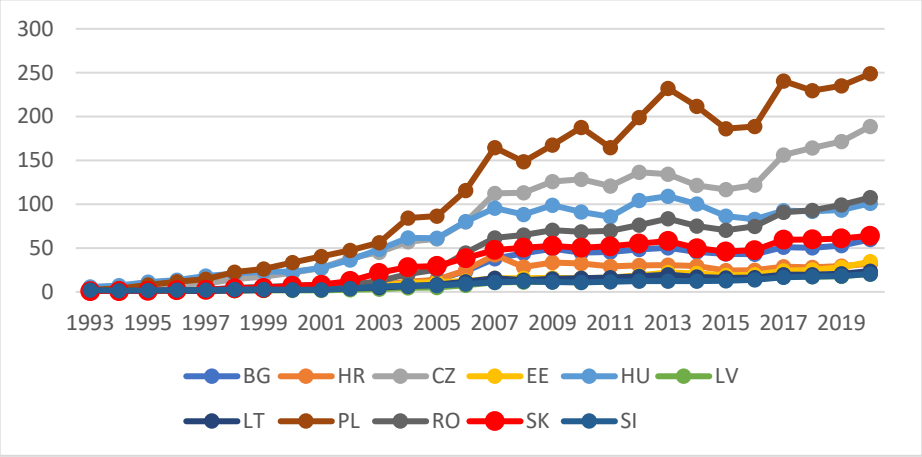
Fig. 3. Export performance of CEE countries in 1993 - 2020 (in % of GDP)



As the volume of exports in absolute terms cannot provide us with a more balanced view of the export potential of CEE countries, in the following section we decided to use the export performance indicator, through which we can express the percentage of the final value of exports in relation to the nominal value of GDP. This comparison does not disadvantage any country in terms of market size and domestic production. Export performance can be considered one of the key indicators in the analysis of foreign or global trade.

In the long run, the most export-efficient economy within the CEE region as well as within the V4 is the Slovak Republic, whose exports of goods and services accounted for 85.7 % of GDP in 2020. The highest level of export performance was achieved by the Slovak economy in 2018, when up to 95.4 % of GDP was produced by goods and services located on foreign markets. From the crisis year 2009 to 2019, the increase in export performance in the Slovak Republic represented 25.1 %, but the global pandemic caused a subsequent year-on-year decrease of 6.6%. The decline in export performance caused by the Covid-19 pandemic has affected almost all CEE countries in the range of around 2 - 10%, with the exception of Latvia and Poland, which have remained stable. Export performance in Croatia fell the most, by as much as 10 %.

Fig. 4. FDI stock in CEE countries in 1993 - 2020 (in billions of USD)



The development of the FDI stock in the CEE region largely copies the development trend of exports of goods and services. As we can see from Chart 4, the inflow of FDI into these countries also began to gain momentum after integration into European structures in 2004 and 2007 respectively, when the V4 countries in particular were able to attract the largest amount of foreign capital in the form of FDI in the following years. The largest concentration of FDI is in Poland, where the total increase in the volume of FDI since 2004 is approximately 33.8 %, in absolute terms, FDI stock in Poland amounts to USD 248.7 billion. It is important to point out that Poland, as the

country with the highest volume of FDI in the economy amounting to USD 248.7 billion, managed to create up to the 8th highest gross domestic product per capita within the CEE countries according to the previous Fig. 1. The second most attractive territory within the CEE region is the Czech Republic with a value of FDI stock of USD 188.8 billion, followed by Romania with a FDI stock of USD 107.5 billion and Hungary with a FDI stock of USD 101 billion. Within the CEE region, the Slovak Republic is the country with the 5th largest accumulated foreign capital in the form of FDI with a value of approximately USD 64 billion in 2020, while in 1993 the volume of FDI in the Slovak economy was only USD 641.9 million. In 2004 – 2009, FDI stock in the Slovak Republic increased by 86.4 %, in 2009 - 2014 decreased by 5.8 % and in 2014 – 2020 increased again by 28.7 %. The lowest accumulation of FDI in the CEE region is in Slovenia, where the FDI stock is only USD 20.4 billion, followed by Latvia with a FDI stock of USD 20.5 billion, Lithuania with a FDI stock of USD 23.7 billion and Croatia with a FDI stock of USD 32.1 billion.

As we stated in previous sections of this scientific article, we decided to perform a panel regression to assess the relationship between foreign direct investment and exports. From the first observation of the results according to Table 1, it is clear that the observation is of statistical significance. The coefficient "fdistock" has a value of 1.08951, which means that with an increase in FDI by USD 1 million, we can expect exports to increase by an average of USD 1.08951 million. The value of R2, the correlation determinant, is at the level of 92.5 %. However, the low value of the Durbin-Watson statistic of 0.873658 is alarming, which signals an obvious autocorrelation i.e., a serial dependence of random faults or residues. The Durbin-Watson test is the best-known test for error autocorrelation testing in linear regression models.

Table 1 Relationship test between FDI and exports in selected CEE countries

```
Included 11 cross-sectional units
Time-series length = 28
Dependent variable: export

             coefficient   std. error    t-ratio    p-value
  ------------------------------------------------------------
  const      6082.21       960.698        6.331    9.01e-10  ***
  fdiStock      1.08951      0.0179279   60.77     3.18e-169 ***

Mean dependent var   48320.59   S.D. dependent var   59863.27
Sum squared resid    4.01e+10   S.E. of regression   11639.59
LSDV R-squared       0.963549   Within R-squared     0.925800
LSDV F(11, 296)      711.3205   P-value(F)           1.4e-205
Log-likelihood      -3314.461   Akaike criterion     6652.921
Schwarz criterion    6697.682   Hannan-Quinn         6670.819
rho                  0.563784   Durbin-Watson        0.873658

Joint test on named regressors -
  Test statistic: F(1, 296) = 3693.2
  with p-value = P(F(1, 296) > 3693.2) = 3.18113e-169

Test for differing group intercepts -
  Null hypothesis: The groups have a common intercept
  Test statistic: F(10, 296) = 15.349
  with p-value = P(F(10, 296) > 15.349) = 4.31169e-22
```

When estimating the relationship between two nonstationary variables using the least squares method, we can find an estimated relationship, even if there is no real relationship between them. For example, if both time series are increasing, which is also our case, they may be correlated, although the cause of their growth is different. Such regression is characterized by a high R2 value and a low Durbin-Watson statistic value. And that is exactly what happened in our measurement.

Therefore, we proceeded to control the residuals i.e., the differences between the expected, hypothetical value and the actual value of the variables. After performing the ADF - GLS residual test, the p-values for each country deviated from the required value < 0.05. We decided to solve the problem using the first difference and repeat the test.

Table 2 Relationship test between FDI and exports in selected CEE countries (first difference)

```
Included 11 cross-sectional units
Time-series length = 27
Dependent variable: d_export

              coefficient   std. error    t-ratio   p-value
  ------------------------------------------------------------
  const        2622.54       515.137       5.091    6.48e-07 ***
  d_fdiStock      0.155961     0.0625019     2.495    0.0132   **

Mean dependent var   3087.590   S.D. dependent var   8791.683
Sum squared resid    1.95e+10   S.E. of regression   8276.325
LSDV R-squared       0.146734   Within R-squared     0.021380
LSDV F(11, 285)      4.455537   P-value(F)           3.33e-06
Log-likelihood      -3094.583   Akaike criterion     6213.166
Schwarz criterion    6257.491   Hannan-Quinn         6230.911
rho                 -0.119592   Durbin-Watson        2.162617

Joint test on named regressors -
  Test statistic: F(1, 285) = 6.22649
  with p-value = P(F(1, 285) > 6.22649) = 0.0131511

Test for differing group intercepts -
  Null hypothesis: The groups have a common intercept
  Test statistic: F(10, 285) = 2.98044
  with p-value = P(F(10, 285) > 2.98044) = 0.00137271
```

After repeating the test, the "d_fdistock" coefficient is 0.155961, which means that with an increase in FDI of USD 1 million, we can expect exports to increase by only USD 0.155961 million on average (see Table 2 above). The value of R2, the correlation determinant, dropped to a level of only 0.02 %, which is a very low value. However, we know from theory that the value of the correlation determinant in panel regression is often very low. It is therefore not significant for a given model. However, if we look at the value of the Durbin-Watson statistic, it shows that we have eliminated autocorrelation i.e., the presence of random faults, because its value is around the number 2. It is this value that is required and signals zero autocorrelation.

As the measured value of dependence is lower in this case, we decided to postpone the measurement of the impact of FDI on the economies of the countries concerned by one year. Nevertheless, we have to reckon with the so-called delays in the effects of foreign direct investment. We did the test again.

Table 3 Relationship test between FDI and exports in selected CEE countries (first difference + lag1)

```
Included 11 cross-sectional units
Time-series length = 26
Dependent variable: d_export

                 coefficient   std. error    t-ratio   p-value
  ------------------------------------------------------------
  const          1394.39       436.906       3.192    0.0016   ***
  d_fdiStock_1      0.621103     0.0527864   11.77     3.83e-26 ***

Mean dependent var    3156.184   S.D. dependent var   8946.927
Sum squared resid     1.32e+10   S.E. of regression   6941.293
LSDV R-squared        0.421320   Within R-squared     0.335671
LSDV F(11, 274)       18.13557   P-value(F)           5.24e-27
Log-likelihood       -2929.426   Akaike criterion     5882.853
Schwarz criterion     5926.725   Hannan-Quinn         5900.438
rho                   0.014957   Durbin-Watson        1.889827

Joint test on named regressors -
  Test statistic: F(1, 274) = 138.446
  with p-value = P(F(1, 274) > 138.446) = 3.82932e-26

Test for differing group intercepts -
  Null hypothesis: The groups have a common intercept
  Test statistic: F(10, 274) = 1.64772
  with p-value = P(F(10, 274) > 1.64772) = 0.0931717
```

After the retest, we can see from Table 3 that the value of "d_fdistock_1" has increased. With an increase in FDI by USD 1 million, we can expect exports to increase by an average of USD 0.621103 million. The determination coefficient is approximately 33 %. Durbin-Watson statistics did not show the occurrence of autocorrelation. Thus, it has been shown that FDI, taking into account the year needed to adapt to a given economy and to start the production, has a more significant impact on the export of the economy in the host country.

4 Conclusion

Each country seeks to promote exports, and one of the main tools of pro-export policy is to support the inflow of foreign direct investment. FDI can help channel foreign capital to sectors that have the potential to compete internationally, while the global ties of multinational companies can facilitate their access to foreign markets. In addition to direct support, there is also indirect support for exports through new strategies, procedures and distribution channels. Our observations document the fact that significant investments have been made in Central and Eastern Europe in recent years. The inflow of foreign direct investment also played an important role in terms of the economic transformation of the countries of Central and Eastern Europe (CEE)[4] in the early 1990s. The subsequent integration process, which the CEE countries completed in three waves, opened up the EU market and brought new export

[4] CEE countries that are members of the EU: Bulgaria, Croatia, Czech Republic, Estonia, Hungary, Lithuania, Latvia, Poland, Romania, Slovak Republic, Slovenia.

opportunities, which was also reflected in the dynamics of export growth, with the V4 countries at the forefront.

Although foreign direct investment in terms of data is not a variable that can be easily estimated, according to our panel regression, there is a significant, statistically significant dependence of foreign direct investment in Central and Eastern Europe on the export of goods and services of these countries. In our observations, we conclude that the most intense measured relationship between foreign direct investment and exports is when we take into account the delay in FDI effects. In the case of a one-year shift, we found that with an increase in FDI of USD 1 million, we can expect exports in CEE countries to increase by an average of USD 0.621103 million, based on the results of measured values. Our analysis thus showed that the aforementioned investments during the observed period 1993 - 2020 helped to increase the export of goods and services in selected countries of Central and Eastern Europe.

Acknowledgements

This article is a partial output of the research project of VEGA č. 1/0777/20: Belt and Road initiative - opportunity or threat for the EU and Slovak export competitiveness.

Project of Foundation of the Ministry of Economy of the Slovak Republic „A New Vision of the Economic Diplomacy of the Slovak Republic as a Pro-export Policy Tool by the year 2023.

References

1. ALBULESCU, C. T. - GOYEAU, D. (2016). *The interaction between trade and FDI: the CEE countries experience*. Available at: https://arxiv.org/ftp/arxiv/papers/1609/1609.02334.pdf
2. BROUTHERS, L. E. - WERNER, S. - WILKINSON, T. J. (1996). *The aggregate impact of firms' FDI strategies on the trade balances of host countries*. Journal of International Business Studies, 27(2), 359–373. Available at: https://doi.org/10.1057/palgrave.jibs.8490139
3. CIESIELSKA - MACIĄGOWSKA, D. – KOŁTUNIAK, M. (2021) *Foreign Direct Investments and Home Country's Institutions: The Case of CEE Countries*. In European Research Studies Journal. Available at: https://www.ersj.eu/journal/1965
4. CLERIDES, S. K., LACH, S., & TYBOUT, J. R. (1998). *Is learning by exporting important? Micro-dynamic evidence from Colombia, Mexico, and Morocco.* The Quarterly Journal of Economics, 113(3), 903–947. Available at: https://doi.org/10.1162/003355398555784
5. DRITSAKI, C. - DRITSAKI, M. (2012). *"Exports and FDI: A Granger Causality Analysis in a Heterogeneous Panel",* Economics Bulletin, 32(4), 3128-3139. Available at: https://www.researchgate.net/publication/273141320_Exports_and_FDIA_Granger_causality_analysis_in_a_heterogeneous_panel

6. ECB. *Trade Integration of Central and Eastern European Countries Lessons from a Gravity Model*. (2005). Available at: https://www.ecb.europa.eu/pub/pdf/scpwps/ecbwp545.pdf
7. ECONOMIST. *The pandemic cut annual FDI flows by one-third*. Available at: https://www.economist.com/graphic-detail/2021/06/21/the-pandemic-cut-annual-fdi-flows-by-one-third
8. EUROPEAN STUDIES. *COMECON*. (1970). Available at: http://aei.pitt.edu/73844/1/DODGE013.pdf
9. EUROSTAT. (2021). *EU direct investment flows, breakdown by partner country and economic activity (BPM6)*. Available at: https://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=bop_fdi6_flow&lang=en
10. FABRY, N. H. (2001). *The role of inward – FDI in the transition countries of Europe. In: Enterprise in transition. Split: Faculty of Economics Split,* p.1032– 1055. Available at: https://mpra.ub.uni-muenchen.de/83136/
11. FERENČÍKOVÁ. S - DUDÁŠ. T. (2010). *The impact of foreign direct investment inflows on the economic growth in the New EU member states from Central and Eastern Europe*. Available at: https://www.researchgate.net/publication/298867799_The_impact_of_foreign_direct_investment_inflows_on_the_economic_growth_in_the_New_EU_member_states_from_Central_and_Eastern_Europe
12. GÖRG, H. - GREENAWAY, D. (2016). *Much ado about nothing? Do domestic firms really benefit from foreign direct investment?*. H. Görg (Ed.), In Multinational enterprises and host country development (pp. 163–189). London: World Scientific Publishing Co., Ltd.
13. KAŠŤÁKOVÁ, E. – RUŽEKOVÁ, V. 2019. *Medzinárodné obchodné operácie*. Bratislava: Vydavateľstvo EKONÓM, 2019, 202 s. ISBN: 978-80-225-4611-9
14. KOJIMA, K. (1973). *A Macroeconomic approach to foreign direct investment.* Hitotsubashi Journal of Economics, 14(1), 1–21.
15. KRUGMAN, P. – OBSTFELD, M. – MELITZ, M. (2015). *International Economics: Theory and Policy*. Bratislava: Pearson, 2015. 792 s. ISBN 000-0133423646.
16. Martins, P. S., & Yang, Y. (2009). *The impact of exporting on firm productivity: A meta-analysis of the learning-by-exporting hypothesis.* Review of World Economics, 145(3), 431–445. Available at: https://doi.org/10.1007/s10290-009-0021-6
17. MATEMATICKO-POČÍTAČOVÉ MODELOVANIE. (2021). *Dvojrozmerný štatistický súbor, korelačná analýza.* Available at: https://www.math.sk/mpm/wpcontent/uploads/2017/11/korelacnaAnalyza.pdf
18. MDPI. (2020). *Determinants of German Direct Investment in CEE Countries.* Available at: https://www.mdpi.com/1911-8074/13/11/268/pdf
19. MONDAL, S. – PANT, M. (2020). *FDI and Export Spillovers: A Case Study of India.* Available at: https://www.researchgate.net/publication/339283755_FDI_and_Export_Spillovers_A_Case_Study_of_India
20. MUNDELL, R. (1957). *'International Trade and Factor Mobility'*, In: American Economic Review, 47 (3), p. 321-335. Available at: https://pages.ucsd.edu/~jlbroz/Courses/PS245/handouts/mundell_AER1957.pdf

21. MUSTI, B. M. (2020). *Impact of foreign direct investment (FDI) on export performance in Nigeria (1970-2018).* In: International Journal of Advanced Academic Research-Social and Management Sciences, 6 (4), p.22-38. Available at: https://www.researchgate.net/publication/350790006_IMPACT_OF_FOREIGN_DIRECT_INVESTMENT_ON_EXPORT_OF_PRIMARY_SECTOR_EVIDENCE_FROM_PAKISTAN
22. NBS. (1997). *Viera Hošková Vplyv zahraničných investícií na prijímajúcu krajinu.* Available at: https://www.nbs.sk/_img/Documents/PUBLIK/1997_Posobenie%20priamych%20zahranicnych%20inv.pdf
23. OECD. (2020). *Data Cube Trade in goods and services*. (2020). Available at: https://data.oecd.org/
24. OECD. (2021). *OECD Library - Foreign direct investment (FDI).*
25. Available at: https://www.oecd-ilibrary.org/finance-and-investment/foreign-direct-investment-fdi/indicator-group/english_9a523b18-en
26. OECD. (2015). *Measuring International Investment by Multinational Enterprises*. Available at: https://www.oecd.org/corporate/FDI-BMD4-brochure.pdf
27. PACHECO-LOPÉZ, P. (2004). *Foreign Direct Investment, Exports and Imports in Mexico.* Kent: University of Kent Available at: https://www.econstor.eu/bitstream/10419/68087/1/387227547.pdf
28. SITA. (2021). *Tridsať rokov V4 v číslach: najviac poskočilo Poľsko, na čele však zostávajú Česi.* Available at: https://www.prservis.sk/tridsat-rokov-v4-v-cislach-najviac-poskocilo-polsko-na-cele-vsak-zostavaju-cesi/
29. UNCTAD. (2007). *Foreign direct investment and host country economic growth: Does the investor's country of origin play a role?* Available at: http://unctad.org/en/Docs/iteiit20072a2_en.pdf
30. UNCTAD. (2021). *UNCTAD STAT Foreign direct investment: Inward and outward flows and stock, annual.* Available at: https://unctadstat.unctad.org/wds/TableViewer/tableView.aspx
31. UNCTAD. (2021). *UNCTAD STAT Merchandise: Total trade and share, annual.* Available at: https://unctadstat.unctad.org/wds/TableViewer/tableView.aspx?ReportId=101
32. UNCTAD. (2021). *UNCTAD STAT Goods and services (BPM5): Trade openness indicators, annual, 1980-2013*. Available at: https://unctadstat.unctad.org/wds/TableViewer/tableView.aspx
33. WOKOUN, R. – TVRDOŇ, J. a kol. 2010. *Přímé zahraniční investice a regionální rozvoj.* Praha: Oeconomica, 2010, 203 s. ISBN 978-80-245-1736-0
34. ZAMRAZILOVÁ, E. (2006). *Přímé zahraniční investice v ČR: makroekonomické souvislosti.* Working Paper No. 7, CES VŠEM. Available at:https://docplayer.cz/5512821-Prime-zahranicni-investice-v-cr-makroekonomicke-souvislosti-eva-zamrazilova.html
35. ZHANG, K.H. – SONG, S. (2000) *Promoting exports - The role of inward FDI in China In: China economic review.* p. 385-396. Available at: https://www.researchgate.net/publication/222605195_Promoting_exports__The_role_of_inward_FDI_in_China