


THE IMPACT OF FOREIGN DIRECT INVESTMENTS ON INCOME INEQUALITY IN CEE-11 AND WESTERN BALKAN COUNTRIES


Tijana Tubić Ćurčić, Nemanja Lojanica*, Milena Jovanović Kranjec

University of Kragujevac, Faculty of Economics, Kragujevac, Serbia


ORCID iDs: Tijana Tubić Ćurčić

 <https://orcid.org/0000-0001-6012-5639>

Nemanja Lojanica

 <https://orcid.org/0000-0003-1460-8466>

Milena Jovanović Kranjec

 <https://orcid.org/0000-0001-5076-6213>

Abstract

Within Agenda 2030, the United Nations defined seventeen goals of sustainable development, whereby one of these goals is the decrease of inequality, and solving regional and global challenges. International investments (especially in the form of foreign direct investments) are stated as one of the important factors in the fight against economic inequality worldwide. The aim of the paper is the examination of the impact of foreign direct investments (FDI) on inequality in income distribution in CEE-11 and Western Balkan countries. A panel regression model was used as a methodological framework in the research, while the time framework was limited to the period between 1996 and 2020. It has been shown that FDI increase inequality in income distribution in two analysed periods: 1996-2020, and subperiod 1996-2008. Contrary to that, in subperiod 2009-2020, the income of FDI had a positive effect on income inequality, decreasing it. The research distribution is reflected in filling the gaps that exist in literature in this area, given that only a small number of papers examined the impact of FDI on income inequality in CEE-11, including the countries of the Western Balkans (WB).

Key words: income inequality, foreign direct investments, CEE-11 + WB, panel regression.

* Corresponding author: Nemanja Lojanica, Faculty of Economics University of Kragujevac, Liceja Kneževine Srbije 3, 34000 Kragujevac, Serbia, nlojanica@kg.ac.rs

УТИЦАЈ СТРАНИХ ДИРЕКТНИХ ИНВЕСТИЦИЈА НА НЕЈЕДНАКОСТ ДОХОТКА У ЕВРОПСКИМ ТРАНЗИЦИОНИМ ЗЕМЉАМА

Апстракт

У оквиру Агенде 2030, Уједињене нације су дефинисале седамнаест циљева одрживог развоја, при чему један од тих циљева јесте смањење неједнакости и решавање регионалних и глобалних изазова. Међународне инвестиције (посебно у облику страних директних инвестиција) наводе се као један од важнијих фактора у борби против економске неједнакости широм света. Циљ рада је испитивање утицаја страних директних инвестиција (СДИ) на неједнакост у расподели дохотка у земљама Централне и Источне Европе и Западног Балкана (CEE-11 + WB). Као методолошки оквир у истраживању, коришћен је панел регресиони модел, док је временски оквир ограничен на период између 1996. и 2020. године. Показано је да СДИ повећавају неједнакост дохотка у два анализирана периода: периоду 1996–2020. и потпериоду 1996–2008. Насупрот томе, у потпериоду 2009–2020. прилив СДИ је имао позитиван ефекат на неједнакост дохотка, смањујући неједнакост. Допринос истраживања се огледа у попуњавању гепа који постоји у литератури у овој области, будући да је мали број радова испитивао утицај СДИ на неједнакост дохотка у CEE-11, укључујући и земље Западног Балкана (WB).

Кључне речи: неједнакост дохотка, стране директне инвестиције, европске транзиционе земље, панел регресија.

INTRODUCTION

Inequality in income distribution represents one of the most common problems both in developed and developing countries. According to the World Inequality Report (2022), 10% of the richest world population possesses 52% of the global income, while the poorest 50% possesses only 8.4% of the global income. It means that the biggest part of the world population is quite poor. Almost 4 billion people in the world survive with less than 6.7 USD daily. As one of the important components of globalisation, foreign direct investments (FDI) can impact income inequality in a host country. On the one hand, economists and policy creators think that FDI can decrease income inequality contributing to the growth and development of a host country, through channels such as transferable managerial skills and modern technology, the access to export markets and human capital development. On the other hand, in spite of the fact they represent an important generator of economic development, FDI can increase income inequalities through the increase of salary inequalities in host countries and repatriation of profit in the home country (Wang et al., 2023).

The subject of this paper is the analysis of FDI impact on income inequality in the so called 'new' member countries of the EU (CEE-11) and the countries of the Western Balkans (CEE-11+ WB). In compliance with the chosen research subject, the aim of this paper is to examine,

through theoretical and empirical analysis, whether foreign direct investments have contributed to the decrease in income inequality in CEE-11+ WB. The hypothesis tested in the paper is the following:

H1: Foreign direct investments decrease income inequalities in CEE-11+ WB.

The contribution of this paper is twofold. First, the relation between FDI and income inequality in the CEE-11 and the countries of the Western Balkans is analysed in the paper, by which the gap that exists in literature is being filled. Second, the results of this paper have significant economic and political implications for the analysed countries.

The paper is structured as follows: After the introductory part, an empirical literature review is presented. Methodology gives the review of the model that is used for the empirical analysis and shows the resources of data used in the research. The empirical results demonstrate the impact of foreign direct investments on income inequality. In the concluding considerations, the main results to which we came across in the paper are summed up, and the main limitations of the paper, along with recommendations for future research are indicated.

LITERATURE REVIEW

The concern about a possible connection between FDI and income inequality within a country is often present in current political discourse and academic debates. Despite there being a great number of theoretical and empirical papers related to the examination of the relation between FDI and income inequality, there is no unique attitude regarding this question. In accordance with the so called hypothesis of optimal income disparities, there is a determined level of income inequality that is optimal from the point of view of economic growth. If income inequality is lower than the optimal level, the most productive and most qualified workers are not paid enough, and motivated to completely use their skills and abilities in doing business. When the income of these workers is not significantly different than the income of less qualified workers and is characterised by lower income, they can feel underestimated. This situation leads to a decrease in the efficiency of their work and motivation, as well as their desire for improvement. In this situation, the inflow of FDI can lead to a decrease in the growth of work productivity of the most qualified workers and the increase of their income. In this case, this can lead to the increase in the disparity of a country's income (Lipsey & Sjöholm, 2004). On the other hand, if income inequality is above the optimal level, less qualified workers earn less, which can cause a sense of injustice, exploitation and poverty. As a consequence of this, workers with smaller incomes are prone to think less creatively and are less dedicated to work. In such conditions, the location of FDI in a country due to lower incomes

can increase the incomes of employees and contribute to the decrease of income inequality (Misztal, 2020).

In order to illustrate the complexity of the relation between FDI and income inequality, Huang, Sim, and Zhao (2020), using meta-regression analysis applied on 543 empirical studies, conclude that 41% of the research discovered positive and statistically significant effects of FDI on income inequality, while the remaining 59% of the research stated that there is a negative or insignificant effect. How FDI will affect inequality depends to a great extent on the level of economic development (Shahbaz, Loganathan, Tiwari, & Sherafatian-Jahromi, 2017; Huang, Sim, & Zhao, 2020). Having in mind the aforementioned, the relation between FDI and inequality changes as a country develops (Wu & Hsu, 2012).

Empirical studies on the relation between FDI and income inequality can be classified into four groups. The first group of studies concludes that FDI worsen income inequality in the host country (Wu & Hsu, 2012; de Groot, 2014; Asteriou, Dimelis, & Moudatsou, 2014; Huang, Chen, Bihong, & Yang, 2017; Zulfiu Alili & Adnett, 2018; Khan & Nawaz, 2019; Ma & Ruzic, 2020; Phan, 2022). Some of the reasons for the growth of inequality are financial globalisation (Milanovic, 2005; Azis & Shin, 2015; Furceri & Ostry, 2019) and inequality in salaries between the qualified and the non-qualified work force (Figini & Gorg, 2011). The second group of papers concludes that FDI decrease income inequality (Ulcal, Haug, & Bilgin 2016; Rezk, Amer, Fahti, & Sun 2022) as a result of the improved management of the corporate and public sector (Hecht, Razin, & Shinar, 2002), bigger investments (UNDP, 2017), bigger savings (Beer, 2015), reaching a moderate democracy level (Gossel, 2022), bigger trade openness and infrastructure improvement (Tung, 2022), and a higher level of human capital (Yuldashev et al., 2023). The third group consists of studies that do not find a significant connection between FDI and inequality (Sylwester's, 2006; Franco & Gerussi's, 2013, Im & McLaren, 2015; Fazaaloh, 2019). The last group of papers comes to mixed conclusions. For example, in the research carried out for Latin America states, Calvo and Hernandez (2006) conclude that FDI decrease inequality only if pre-requisite capital and conditions for work favour overflow effects, while Bhandari (2007) concludes that FDI worsen inequality in salaries, but improve capital inequalities. Bogliaccini and Egan (2017), show that the inflow of FDI in the sector of services contributes to an inequality increase, while inflows into primary and industrial sector are not connected with the increase of income distribution inequality. In their research, Cho and Ramirez (2016) show that the inflow of FDI has the tendency to increase inequality in the short term, and decrease it in the long term, emphasising that developing countries should accept the negative impact as a compromise in the process of development. Lee, Lee and Cheng (2020) conclude that the benefits of FDI that decrease inequalities

weaken as countries become financially more developed. Nguyen (2021) concludes that FDI increase income inequality in developed countries, and decrease it in developing countries. Furthermore, in both group of countries, the manner of managing and education decrease inequality, while economic growth increases it. The negative effect of FDI on income inequality in developing countries, and their positive effect in developed countries is also in the paper of Wang et al (2023). Gam, Oanh and Dang (2023) show that FDI increase income inequality in developing countries. However, when FDI reach 99% of the GDP, income inequality decreases. This result shows that the relation between FDI and income inequality has the shape of an inverted-U curve.

When it comes to the relation between FDI and income inequality in transition countries, the literature is pretty scarce and ambiguous (Mihaylova, 2015; Josifidis, Supić & Bodor,, 2020). A positive relation between FDI and income inequality in European transition countries is confirmed in numerous papers (Bandelj & Mahutga, 2010; Grimalda, Barlow, & Meschi, 2010; Halmos, 2011; Asteriou, Dimelis, & Moudatsou, 2014). On the other hand, a negative relation between FDI and income inequality is proven in a significantly lower number of papers (Georgantopoulos & Tsamis, 2011; Braha-Vokshi et al., 2021; Josifidis, Supić, & Bodor, 2021). Bhandari (2007), Franco and Gerussi (2013), and Misztal (2020) do not find a statistically significant relation between FDI and income inequality.

METHODOLOGY AND DATA

When choosing the sample, the choice is to observe the countries who are 'new' members of the EU (the CEE-11) and countries of the Western Balkans, for which there is available data. The sample consists of 14 European countries, of which 11 are the members of the EU (Poland, Czech Republic, Slovakia, Estonia, Latvia, Lithuania, Hungary, Slovenia, Bulgaria, Romania and Croatia), and the remaining three countries are EU candidates: the Republic of Serbia, North Macedonia and Albania. The research was carried out for the period between 1996 and 2020, as well as for two subperiods: 1996-2008 and 2009-2020. Secondary data from two data bases is used in the research: the World Bank and the United Nations (a detailed description of used variables is shown in the Appendix, Table A1). Panel data that has the character of balanced macro data is used in the research, and the formed model falls into the group of linear panel models. Bigger possibilities for identifying and measuring effects that cannot be established by using only the comparative data of more units of observation or only the time data of one unit of observation is an advantage of using panel data (Baltagi, 2005). Hsiao (2003) states that the advantages of using panel data are also reflected in the possibility of controlling individual het-

erogeneity, providing more and quality information, bigger variability and less collinearity between variables.

For testing the impact of FDI on income inequality, the following equation has been used:

$$GINI_{it} = \beta + \beta_1 FDI_{it} + \beta_k X_{kit} + \varepsilon_i + v_t + u_{it} \quad (1)$$

where: $GINI_{it}$ is a dependent variable and represents Gini index in country i in time t ; FDI_{it} is an independent variable and is measured as a leap of FDI inflow as % GDP in country i in time t ; X_{kit} represents control variables; ε_i represents individual effects; v_t represents time effects ($t = 1996 \dots 2020$); and u_{it} is an accidental error with null mean value and constant variance.

Control variables X_{kit} include GDP per capita in country i in time t (GDP_{it}), as a traditional measure of economic growth, enrolment in secondary school expressed in % of the total number of citizens (HSE_{it}), final public spending as % of GDP (PS_{it}) and unemployment rate (UR_{it}). The impact of independent variables on the dependent variable is assessed by using a Fixed Effects Model and a Random Effects Model. For the purpose of choosing an adequate and representative model, the choice between Fixed Effects Model and Random Effects Model was made by applying the Hausman test.

After choosing a corresponding model, the existence of autocorrelation and heteroscedasticity were also examined, by applying the following tests: the Wooldridge test for autocorrelation problem identifying, and the Wald test for heteroscedasticity problem identifying with fixed effects models, and the Breusch and Pagan Lagrangian multiplier test for the random effects model.

For the purpose of obtaining a valid statistical conclusion when some of the assumptions of the basic regression model are violated, leaning on the robust standard errors is usual (Hoechle, 2007). Under the condition that residuals are independently distributed, standard errors obtained with the help of this estimator are consistent even if the residuals are heteroscedastic. In Stata consistent, or 'White' standard errors are obtained by choosing option `vce (robust)`.

RESULTS AND DISCUSSION

For the purpose of checking the correlation and nature of the relation between independent variables, Pearson's Coefficient Correlation was used. The results of correlation analysis are shown in Table 1. The results of correlation analysis show that there is a slight or insignificant correlation between the independent variables.

Table 1. Correlation Matrix

	FDI _{it}	GDP _{it}	HSE _{it}	PS _{it}	UR _{it}
FDI _{it}	1.000	-	-	-	-
GDP _{it}	0.5284	1.000	-	-	-
HSE _{it}	0.3907	0.6975	1.000	-	-
PS _{it}	0.0502	0.1656	0.2648	1.000	-
UR _{it}	-0.0663	-0.3446	-0.2512	0.0154	1.000

Source: Authors

On the basis of the analysis of the Hausman test (Table 2), it can be concluded that it is better to apply the Fixed Effects Model than the Random Effects Model in order to assess the impact of the independent variables on the dependent variable in all three of the observed periods.

Table 2. Results from Hausman test

Hausman test	Ho: Cross- section random effects
1996-2020	chi2(4)=17,80, prob>chi2=0,001
1996-2008	chi2(5) = 20,06, prob>chi2 =0.001
2009-2020	chi2(4) = 18,56, prob>chi2 =0,001

Source: Authors

Before interpreting the obtained assessments, the results of testing autocorrelation and heteroscedascity are shown (Table 3). The Wald test was used to test for the presence of heteroscedascity, and the Wooldridge test was used to test for autocorrelation. The results of the Wald test in this research show that the null hypothesis on the non-existence of heteroscedascity is not accepted in all three of the analysed periods, and there is a heteroscedascity, i.e. the variance of residual deviation is not equal. The results of testing for the existence of autocorrelation show that the null hypothesis on the non-existence of autocorrelation is not accepted, and it is concluded that there is autocorrelation, i.e. random errors are mutually correlated in the 1996-2020 and 2009-2020 periods.

Table 3. Results from diagnostic checks

	Wald test for group-wise heteroscedasticity Ho: Homoscedastic variances	Wooldridge test for autocorrelation Ho: No serial correlation
1996-2020	chi2(14)=7890,18 p>chi2 =0,000	F(1,13)=12.958 p>F=0.003
1996-2008	chi2(14)=3100,49 p>chi2 =0,000	F(1,13)=4.808 p>F=0.047
2009-2020	chi2(14)=1231,46 p>chi2 =0,000	F(1,13)=43,730 p>F=0.000

Source: Authors

On the other hand, in the 1996-2008 period, there is no autocorrelation. In cases when some of the assumptions of the basic regression model are violated, relying on the robust standard errors is usual for the purpose of obtaining valid statistical conclusions.

In that sense, we used the `vce(robust)` estimation of variance. This estimator is robust to some types of misspecification (i.e. heteroscedasticity, autocorrelation) so long as the observations are independent. After putting into control the problems of heteroscedasticity and autocorrelation, the indicators obtained within panel regression analysis and regression coefficients are shown in Table 4. Via the analysis carried out for the observed group of countries, the following results were obtained. First, within the observed time period – between 1996 and 2020, there is a statistically significant impact of FDI and GDP per capita on income inequality, while other variables do not have a statistically significant impact on income inequality. An increase of FDI inflow by 1% increases inequality of income by 0.05%, and an increase of GDP per capita by 1% decrease inequality by 0.01%. The chosen model is representative, which is confirmed by the value F of statistics, which amounts to 7.54. The value of determination coefficient of 0.273 implies that 27.3% of the variability of the variable Gini index is explained by the model. Second, in the pre-crisis 1996-2008 period, there is also a statistically significant impact of FDI on income inequality. An increase of FDI inflow by 1% impacts the increase of income inequality by 0.05%. Other analysed variables do not have an impact on income inequality. The chosen model is representative, which is confirmed by the value F of statistics, which amounts to 2.37. The value of the determination coefficient of 0.117 implies that 11.7% of the variability of the variable Gini index is explained by the model. Finally, research results show that even in the post-crisis period between 2009 and 2020, there is a statistically significant impact of FDI on income inequality. Unlike the previous two periods, in this period, the relation between FDI and inequality is inverse, i.e. the growth of FDI by 1% decreases inequality by 0.06%. As in the previous case, other analysed variables do not have a statistically significant impact on income inequality. The value F of statistics, which amounts to 3.69, confirms the representativity of the model, while the value of the determination coefficient of 0.1165 shows that 11.7% of the variability of the variable Gini index is explained by the model. Some points should be made. From 1996 to 2008, the analysed countries were in a transition period, wherein unemployment was high. Foreign direct investments inward in that period only increased economic inequality. It should be said that, at lower levels of human capital and economic development, FDI tends to increase income inequality. That effect was strong, which was also reflected in the entire observation period of this relationship. After the crisis and the recovery of the analysed countries, they achieved a higher level of devel-

opment, and foreign direct investments directed into the economy had a positive effect on the inequality in income distribution. So, after higher levels of human capital and economic development are reached, FDI can even contribute to a reduction of income inequality. In this sense, there are some signals of the existence of the EKC hypothesis, which could be empirically examined in future research.

Table 4. Evaluated model specifications

Variable	GINI _{it}		
	FE 1996-2020	FE 1996-2008	FE 2009-2020
FDI _{it}	0.0485** (0.0161)	0.0480** (0.0196)	-0.0593* (0.0299)
GDP _{it}	-0.0001*** (0.00003)	-0.00005 (0.0001)	-0.000076 (-0.00007)
HSE _{it}	0.0393 (0.0473)	0.0594 (0.0928)	0.0379 (0.0638)
PS _{it}	-0.0437 (0.1003)	-0.0906 (0.2611)	0, 2889 (0.4267)
UR _{it}	-0.0015 (0.0485)	0.1322 (0.1321)	-0.0228 (0.0615)
Constant	29.8577 (4.5134)	26.6687 (10.523)	29.105 (11.519)
No. of observations	350	182	168
R ²	0.2732	0.1171	0,1165
F	7.54	2.37	3.69

*Note: standard errors are in brackets, * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$.*

Source: Authors

CONCLUSION

Along with the growth of income inequality, upon commencing the process of transition, there was an increased inflow of foreign direct investments into these countries, which encouraged the research on this subject of the relation between FDI and income inequality in transition economies. The results of this research show that, in the entire analysed period, larger FDI inflow increases income inequality. The same result was obtained for the pre-crisis period as well (1996-2008). On the other hand, in the post-crisis period – between 2009 and 2020, it has been proven that FDI have a positive effect on income inequality, i.e. they decrease it. In accordance with the aforementioned, the initial hypothesis can be only partially accepted. The increase of income inequalities as a consequence of FDI inflow in the pre-crisis period can be explained by the fact that, during the first years of transition, privatisation represented a key channel for investment. Privatisation led to mass lay-offs, and redirected

wealth to a few members of the ‘elites.’ Besides, the FDI inflow in transition countries at the beginning of transition was small, since their economic and political surrounding (decline in production, high inflation rate, underdeveloped financial market, and political instability) was not attractive to foreign investors. After 2004, and after several of the analysed countries joined the European Union, there was an increase in employment in the domestic sector, and a decrease in the gap between the foreign and the domestic sector – hence, a decrease in income inequality. A larger scope and better quality of FDI realised due to institutionalised and economic reforms, undertaken for the purpose of joining the EU, also contributed to the decrease of income inequality. Besides, after joining the EU, the countries of Central and Eastern Europe improved their absorption capacities, so that the quality and not the price of work had a more and more important role in attracting foreign investments. Through that, the countries realised the benefits of having an educated work force and technological transfers derived from FDI inflow.

The limitation of this research is reflected in the deficiency of data for certain countries of the Western Balkans, due to which it was not possible to include them in the analysis. Furthermore, the research included the period in which the effects of the global economic crisis and debt crisis were manifested, which had a great impact on the obtained results of the research. In such conditions, there can be significant deviations from the cyclic movement of certain variables in relation to their long-term trend. Besides, the countries of the Western Balkans faced numerous social and political problems during the 1990s, even disputes, which had a great impact on their income, as well as other variables included in the analysis, which explains the obtained results in this research. One of the recommendations for future research is focusing on transmission channels, by means of which FDI manifest the impact on income inequality. Furthermore, it is of great importance for future research to establish sector structures of FDI, i.e. whether and to which extent they are directed to the parts of economy that can lead to the transfer of modern technologies and the creation of well-paid work positions, and in which way they can contribute to the greater economic development of a country.

REFERENCES

- Asteriou, D., Dimelis, S., & Moudatsou, A. (2014), Globalization and income inequality: a panel data econometric approach for the EU27 countries, *Economic Modelling*, 36(1), 592-599. <https://doi.org/10.1016/j.econmod.2013.09.051>
- Azis, I.J., & Shin, H.S. (2015). Capital Flows and Income Distribution, *Managing Elevated Risk*, Springer, Singapore, 79-99 https://doi.org/10.1007/978-981-287-284-5_5
- Baltagi, B. H. (2005). *Econometric Analysis of panel data*. West Sussex, Uk, John Wiley & Sons Ltd.

- Bandelj, N., & Mahutga, C.M. (2010). How Socio-Economic Change Shapes Income Inequality in Post-Socialist Europe. *Social Forces*, 88(5). 2133-2161. <http://dx.doi.org/10.1353/sof.2010.0042>
- Bhandari, B. (2007). Effect of Inward Foreign Direct Investment on Income Inequality in Transition Countries. *Journal of Economic Integration*, 22(4): 888-928 <http://dx.doi.org/10.11130/jei.2007.22.4.88>
- Beer, L. (2015). Income inequality and transnational corporate penetration, *Journal of World-Systems Research*, 8 (1) . 1-25 <https://doi.org/10.5195/jwsr.1999.144>
- Bogliaccini, J.A., & Egan, P. (2017), Foreign direct investment and inequality in developing countries: does sector matter?, *Economics and Politics*, 29(3), 209-236. <https://doi.org/10.1111/ecpo.12098>
- Braha-Vokshi, L., Rexhepi, G., Ramadani, V., Abazi-Alili, H., & Sharif, A. (2022). The impact of multinational companies on inequality in Western Balkan countries. *Review of International Business and Strategy*, 32(2), 305-323. <https://doi.org/10.1108/ribs-04-2021-0057>
- Calvo, C., & Hernandez, M.A. (2006). Foreign Direct Investment and Poverty in Latin America, Leverhulme Centre for Research on Globalisation and Economic Policy, University of Nottingham, Nottingham. <https://doi.org/10.18356/8cead7a4-en>
- Cho, H.C., & Ramirez, M.D., (2016), Foreign Direct Investment and Income Inequality in Southeast Asia: a Panel Unit Root and Panel Cointegration Analysis, 1990–2013, *Atlantic Economic Journal*, Vol. 44, pp. 411–424. <https://doi.org/10.1007/s11293-016-9521-7>
- De Groot, O. (2014). Foreign direct investment and welfare, *Desarrollo Productivo* 196, Naciones Unidas Comisión Económica para América Latina y el Caribe (CEPAL). <https://doi.org/10.18235/0004906>
- Fazaaloh, A. M. (2019), “Is foreign direct investment helpful to reduce income inequality in Indonesia?”. *Economics and Sociology*, 12(3), 25-36. <https://doi.org/10.14254/2071-789x.2019/12-3/2>
- Figini, P., & Görg, F. (2011). Does Foreign Direct Investment Affect Wage Inequality? An Empirical Investigation. *The World Economy*, 34(9), 1455-1475. <http://dx.doi.org/10.1111/j.1467-9701.2011.01397.x>
- Franco, C., & Gerussi, E. (2013). Trade, foreign direct investments (FDI) and income inequality: Empirical evidence from transition countries, *The Journal of International Trade & Economic Development*, Taylor & Francis Journals, vol. 22(8), 1131-1160, <https://doi.org/10.1080/09638199.2011.647048>
- Furceri, D., & Ostry, J.D. (2019), Robust determinants of income inequality, *Oxford Review of Economic Policy*, 35(3), 490-517.
- Gam, T.T.H, Oanh, D.L.K., & Dang, N.M.B (2023). The impact of foreign direct investment on income inequality in developing countries: The Bayesian approach. *Journal Ekonomi&Pembangunan*, 24(1), 127-143. <https://doi.org/10.18196/jesp.v24i1.18164>
- Georgantopoulos, A.G., & Tsamis. A. (2011). The Impact of Globalization on Income Distribution: The Case of Hungary. *Research Journal of International Studies*, 21: 17-25.
- Grimalda, G, Barlow, D., & Meschi, E. (2010). Varieties of capitalisms and varieties of performances: accounting for inequality in post-Soviet Union transition economies, *International Review of Applied Economics*, Taylor & Francis Journals, vol. 24(3), pages 379-403. <https://doi.org/10.1080/02692171003701602>
- Gossel, S. (2022). FDI and inequality in SUB-Saharan Africa: does democracy matter? *International Journal of Emerging Markets* <https://doi.org/10.1108/ijoem-03-2021-0321>

- Halmos, K. (2011). The Effect of FDI, Exports and GDP on Income Inequality in 15 Eastern European Countries. *Acta Polytechnica Hungarica*, 8(1): 123-136.
- Hecht, Y., Razin, A., & Shinar, N.G. (2002), *Interactions between capital inflows and domestic investment: international panel data*, Paper Presented at Pinhas Sapir Center Conference on FDI, Tel-Aviv University <https://doi.org/10.3386/w9204>
- Hoechle, D. (2007). Robust standard errors for panel regressions with cross-sectional dependence. *The Stata Journal*, 7(3), 281-312. <https://doi.org/10.1177/1536867x0700700301>
- Hsiao, C. (2003). *Analysis of Panel Data (Second Edition)*. Cambridge University Press, New York
- Huang, K., Sim, N., & Zhao, H.. (2020). Does FDI Actually Affect Income Inequality? Insights from 25 Years of Research. *Journal of Economic Surveys*, 34(3): 630-659. <http://dx.doi.org/10.1111/joes.12373>
- Huang, J., Chen, X., Bihong, H., & Yang, X. (2017), "Economic and environmental impacts of foreign direct investment in China: a spatial spillover analysis", *China Economic Review*, Vol. 45, 289-309. <https://doi.org/10.1016/j.chieco.2016.03.006>
- Im, H., & McLaren, J. (2017), Does foreign direct investment raise income inequality in developing countries? A new instrumental variables approach, available at: www.rse.anu.edu.au/media/772451/Im-Hyejoon.pdf
- Josifidis, K., Supić, N., & Bodor, S. (2021). Distributional Effects of Foreign versus Domestic Investment: Evidence from Post-Communist EU Member States. *Panoeconomicus*, 68(2), 187-211. <https://doi.org/10.2298/PAN2102187J>
- Josifidis, K., Supić, N., & Bodor, S. (2020). Institutional Reforms and Income Distribution: Evidence from Post-Transition EU Countries. *Panoeconomicus*, 67(3): 309-331. <http://dx.doi.org/10.2298/PAN2003309J>
- Khan, I., & Nawaz, Z. (2019). Trade, FDI and Income Inequality: Empirical Evidence from CIS. *International Journal of Development Issues*, 18(1): 88-108. <http://dx.doi.org/10.1108/ijdi-07-2018-0107>
- Lee, C.C, Lee, C.C., & Cheng, C.Y. (2020). The impact of FDI on income inequality: Evidence from the perspective of financial development. *International Journal of Finance and Economics*, 27 (1). 137-157. <https://doi.org/10.1002/ijfe.2143>
- Lipsey, R. E., & Sjöholm, F. (2004), Foreign direct investment, education and wages in Indonesian manufacturing, *Journal of Development Economics*, vol. 73, no. 1, pp. 415-422. <https://doi.org/10.1016/j.jdeveco.2002.12.004>
- Ma, L., & Ruzic, D., (2020). Globalization and top income shares, *Journal of International Economics, Elsevier*, vol. 125(C). <https://doi.org/10.1016/j.jinteco.2020.103312>
- Mihaylova, S. (2015), Foreign direct investment and income inequality in Central and Eastern Europe, *Theoretical and Applied Economics*, 22(2), 23-42.
- Milanovic, B. (2005). Can we discern the effect of globalization on income distribution? Evidence from household surveys. *The World Bank Economic Review* 19(1), 21-44. <https://doi.org/10.1093/wber/lhi003>
- Misztal P. (2020). Foreign Direct Investment, Production Factors Productivity and Income Inequalities in Selected CEE Countries, *TalTech Journal of European Studies*, 10(1), 146-172. <https://doi.org/10.1515/bjes-2020-0008>
- Nguyen, V. B. (2021). The difference in the FDI inflows – Income inequality relationship between developed and developing countries. *The Journal of International Trade & Economic Development*, 30(8), 1123-1137. <https://doi.org/10.1080/09638199.2021.1925331>
- Phan, P. V. (2022). Does Globalization Affect Inequality? An Analysis of Vietnamese Data. *Southeast Asian Economies*, 39(1), 96-108. <https://doi.org/10.1355/ae39-1f>

- Rezk, H., Amer, G., Fahti, N., & Sun, S. (2022). The impact of FDI on income inequality in Egypt. *Economic Change and Restructuring*, 55(3), 2011-2030. <https://doi.org/10.1007/s10644-021-09375-z>
- Shahbaz, M., Loganathan, N., Tiwari, A.K., & Sherafatian-Jahromi, R. (2015) Financial development and income inequality: is there any financial Kuznets curve in Iran? *Social Indicator Research*, 124(2), 357–382. <https://doi.org/10.1007/s11205-014-0801-9>
- Sylwester, K. (2006), Foreign direct investment, growth and income inequality in less developed countries, *International Review of Applied Economics*, 19(3), 289-300. <https://doi.org/10.1080/02692170500119748>
- Tung, Le T. (2022). Impact of Foreign Direct Investment on Inequality in Emerging Economies: Does the Kuznets Curve Hypothesis Exist? *Montenegrin Journal of Economics* 18 (1). 161-168. <https://doi.org/10.14254/1800-5845/2022.18-1.13>
- Ucal M., Haug, A.A., & Bilgin, M.H. (2016) Income inequality and FDI: evidence with Turkish data. *Applied Economics*, 48(11), 1030–1045. <https://doi.org/10.1080/00036846.2015.1093081>
- UNDP (2017), Income Inequality trends in Sub-Saharan Africa: Divergence, determinants and consequences, available at: <https://www.undp.org/content/dam/rba/docs/Reports/OverviewIncome%20inequality%20Trends%20SSA-EN-web.pdf>.
- Wang, W., Xu, T., Liu, X., & Sun, Y. (2023). FDI inflow and income inequality: A Schumpeterian economic growth. *International Review of Economics & Finance* 83, 805-820. <https://doi.org/10.1016/j.iref.2022.10.023>
- World inequality report, (2022). available at: https://knowledge4policy.ec.europa.eu/publication/world-inequalityreport-2022_en.
- Wu, J.-Y., & Hsu, C.-C., (2012). Foreign direct investment and income inequality: Does the relationship vary with absorptive capacity?, *Economic Modelling*, 29(6), 2183-2189. <https://doi.org/10.1016/j.econmod.2012.06.013>
- Yuldashev M, Khalikov U, Nasriddinov F, Ismailova N, Kuldasheva Z, & Ahmad M (2023) Impact of foreign direct investment on income inequality: Evidence from selected Asian economies. *PLoS ONE* 18(2): <https://doi.org/10.1371/journal.pone.0281870>
- Zulfiu Alili, M.Z., & Adnett, N. (2018). Did FDI increase wage inequality in transition economies?, *International Journal of Social Economics*, 45(9), 1283-1304. <https://doi.org/10.1108/ijse-09-2017-0373>

УТИЦАЈ СТРАНИХ ДИРЕКТНИХ ИНВЕСТИЦИЈА НА НЕЈЕДНАКОСТ ДОХОТКА У ЕВРОПСКИМ ТРАНЗИЦИОНИМ ЗЕМЉАМА

Тијана Тубић Ђурчић, Немања Лојаница, Милена Јовановић Крањец
Универзитет у Крагујевцу, Економски факултет, Крагујевац, Србија

Резиме

Доходовна неједнакост се повећала у развијеним и у земаљама у развоју током протеклих деценија, у условима растуће глобализације. Још увек не постоји консензус да ли су стране директне инвестиције као један од главних покретача глобализације допринеле порасту доходовних неједнакости. Утицај СДИ на неједнакост дохотка привлачи пажњу из више разлога. Прво, неједнакост дохотка негативно утиче

на економски раст. Друго, пораст неједнакости у доходу може угрозити напредак у смањењу сиромаштва. Коначно, људи који су забринуте за релативне приходе имају жељу да живе у равноправном друштву. Дакле, ако СДИ повећају неједнакости дохотка, њени позитивни ефекти на економски раст ће бити замењени нижом стопом раста, као и другим социоекономским негативним ефектима. Ово представља посебно велику бригу за земље у развоју, које су у великој мери зависне од СДИ. У овим земљама социјална стабилност игра кључну улогу у економском развоју. У овом раду је анализиран утицај СДИ на доходну неједнакост у тзв. „новим“ земљама чланицама ЕУ (СЕЕ-11) и земљама Западног Балкана. Циљ рада је да испита да ли су СДИ допринеле смањењу неједнакости дохотка у европским транзиционим земљама. У истраживању је коришћен панел регресиони модел. Резултати истраживања се разликују у зависности од временског периода који је анализиран. СДИ повећавају неједнакост дохотка у два анализирана периода: 1996–2020. и 1996–2008. године, а смањују у периоду после кризе 2009–2020. године. Раст неједнакости условљен страним директним инвестицијама пре кризе резултат је чињенице да је у првим годинама транзиције приватизација представљала кључни облик инвестирања, као и мали прилив СДИ на почетку транзиције због њиховог економског и политичког окружења. Поред повећаног прилива СДИ у ове земље након приступања Европској унији, повећава се и њихов квалитет, чиме се може објаснити позитиван утицај СДИ на неједнакост дохотка након кризе. Осим обима и квалитета СДИ, побољшан је и апсорпциони капацитет земаља Централне и Источне Европе, што је резултирало у томе да квалитет, а не цена рада, постане све важнији приликом привлачења страних инвестиција.

APPENDIX

Table A1: Name of variables, description and source of data

Name of variable	Description	Source
Gini index	Data on income inequality calculated on the basis of available income. All the people were included in the survey and unit of observation is a household.	UNU-WIDER WIID World Income Inequality Database
FDI inflow	Stock of FDI measures total level of direct investments in given moment, usually at the end of a year or quarter. It is expressed as % of GDP.	UNCTAD
Secondary school enrollment	It is measured as the relation of total enrollment of population of all ages and population that officially corresponds to the shown level of education.	World Development Indicators
Final public spending	Shows annual percentage of public spending growth, based on the constant local currency. The aggregates are based on constant (permanent) prices expressed in American dollars.	World Development Indicators
GDP per capita	GDP per capita is used in current international dollars and is expressed by the parity of purchase force.	World Development Indicators
Unemployment rate	Refers to the share of work force which is unemployed, but is available on work market and seeks employment.	World Development Indicators