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EMPLOYMENT AND FOREIGN DIRECT INVESTMENT: THE MONTENEGRO EXPERIENCE

The purpose of this study is to examine and better understand the effects of foreign direct investments on employment in Montenegro over the period from 2005-2017. Time series data on a quarterly basis, obtained from Central Bank of Montenegro, Statistical Office of Montenegro - MONSTAT and Employment Office of Montenegro were used in this research. To perform time series stationary testing, Dickey-Fuller test (ADF) and Perron test were used, i.e. the unit root tests, while the examination of the effects of foreign direct investments on employment was performed using the regression analysis with the least square method. The results of the research, obtained by the evaluation of the simple linear econometric model show that if foreign direct investments increase by 1%, employment in Montenegro can be expected to increase by an average of 0.0058%. However, the regression analysis results clearly show that over the total observed period, the influence of foreign direct investments on employment does not have statistical significance. The obtained results are not surprising, considering the fact that the observed period is characterized by a modest share of the greenfield investment within the total structure of foreign direct investments in the Montenegrin economy.

Key words: FDI, greenfield investments, employment, regression analysis.

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1. Introduction

The problem of unemployment is currently seen as one of the most important problems. It is the problem that both the Montenegrin economy and the global economy as a whole, have been facing over the last few years. The present analysis starts with the explanation of the characteristics of Montenegrin labour market.

In this paper, the total employment in the period from 2005 to 2017 in the Montenegrin economy, had been observed. Over the period from 2000 to 2005, the employment growth was negligible, for which reason it has not been taken into consideration. In 2006, the employment rate increased by 4.47% compared with 2005 (in 2005 the average was 144,358). The increase in the number of employees can be attributed to the tax cuts, which resulted in a reduction of the grey economy, thereby leading to an increase in the employment rate (Macroeconomic model of Montenegro, 2009).

Graph 1.





Source: The author's calculation based on data of Central Bank of Montenegro according to Statistical Office of Montenegro - MONSTAT and Employment Office of Montenegro

In the period from 2007 to 2008, prior to the impact of the global economic and financial crisis on the Montenegrin economy, positive trends, reflecting in the increase in the number of employees, were recorded. Thus, in 2007, there was an increase of approximately 3.7%, in 2008 6.3%, while in 2009 it reached approximately 4.8%, compared to the previous year. In the previous period, as a result of both the economic growth and considerable cash flow generated by foreign direct investments, a significant increase in the employment rate was noted. Results from 2010 indicate a significant decline in the number of employees amounting to approximately 7.1%. The aforementioned results indicate that the global crisis affected the labour market in Montenegro and deepened the already existing problems such as significant structural unemployment, regional disparities, the unfavourable age structure of employees, a high employment rate of foreign employees during the tourist season, etc. (The National Strategy, 2011a). During the above mentioned period, the Montenegrin labour market showed a certain change in terms of employment in some of the sectors, with a tendency of increase in the number of tertiary sector employees, a decrease in the secondary sector, while within the primary sector there were no significant changes. Thus, for example, "in 2010, 20% of the total employees in Montenegro were employed in industry, 6.2% in agriculture, while 73.9% in the service sectors, including the public sector" (The National Strategy, 2011b, p.18). The Montenegrin labour market shows regional and gender disproportions in the number of employees. During 2011, the labour market was showing a slight recovery, when the growth rate was higher by 0.8% compared to the previous year. According to the data of Labour Force Survey (2011), in 2011, the number of employees (in thousands) in the south region was 52.3, in the central region 106.1, while in the northern region it was 37.6. Of the total number of employees in the same year, 55.9% were male and 44.1% female (Labour Force Survey, 2011). In the period after 2011, there was an increase of 11.83% in comparison with 2017. The increase in the number of employees in that period was observed again in the sector of services in comparison with the industrial sector, which is also characteristic of other countries in transition (The National Strategy, 2015, p. 29). The National Strategy (2015) recognizes the increase in the employment rate as one of the key priorities in the following period. The factors affecting the employment rate in the Montenegrin labour market have been presented in the research conducted by Katnic (2017). The research deals with a series of quarterly basis data over the period from 2009 to 2016. Using regression analysis, the research has shown that the employment rate in Montenegro depends on the salary tax burden, minimum salary, investment activities and tourism, as follows: an increase in the minimum salary and the salary tax burden by 1% will decrease the employment rate by 0.8 percentage points and 1.9% respectively, while the increase in investment activities and tourism (the growth rate

of nights spent by international tourists) by 1% will increase the employment rate by 0.04% and 0.15 percentage points respectively (Katnic, 2017).

To achieve a sustainable development that would rely upon the employment, i.e. a larger number of workplaces and a better quality of life, which is the purpose of Europe 2020 strategy (Jurčić, 2015), Montenegro has to create a critical mass of investments, both domestic and foreign. The subject paper deals with the extent of the impact of foreign direct investments on employment.

Firstly, a review of the empirical literature is given, followed by the simple linear regression model presentation that illustrates the impact of foreign direct investments on employment in Montenegro.

2. Literature review

2.1. Definition of foreign direct investment

To understand the impact of foreign direct investments on employment it is very important to know what foreign direct investment means. There are a lot of definitions of foreign direct investment. The International Monetary Fund defines foreign direct investment as "the category of international investment that reflects the objective of a resident entity in one economy obtaining a lasting interest in an enterprise resident in another economy" ([IMF], 1993, p. 86). "Farrell (2008) defined foreign direct investment as a package of capital, technology, management, and entrepreneurship, which allows a firm to operate and provide goods and services in a foreign market (see Almfraji & Almsafir, 2014, p. 207)". Organization for Economic Co-operation and Development describes foreign direct investor as "an entity (an institutional unit) resident in one economy that has acquired, directly or indirectly, at least 10% of the voting power of a corporation (enterprise), or equivalent for an unincorporated enterprise, resident in another economy" ([OECD], 2008, p. 49). Foreign direct investors have an important role in making the decisions related to management of the enterprises resident in other countries (UNCTAD, 2012). In the professional literature, foreign direct investments are divided into greenfield investment, cross-border acquisitions & mergers, brownfield investment and joint venture. The great interest in foreign direct investments is a result of the importance they have in the development of national economy. Unlike other forms of capital inflows, the advantage of foreign direct investments reflects primarily in the additional resources they bring, such as technology, management and organizational skills, access to foreign markets, new job opportunities, and so on.

From the theoretical viewpoint, the impact of foreign direct investment depends on whether there are complementary or substitution effects between the foreign direct investment and exports, or foreign direct investment and imports. For example, if there is a complementary effect between foreign direct investment and exports, an increase in foreign direct investment will lead to increasing exports, which will consequently increase employment. In the case of substitution, however, the situation will be reversed (Bilas, Franc, 2006; Babic, Pufnik & Stucka, 2001).

2.2. A review of the empirical literature

Various analyses of the impact of foreign direct investment on employment resulted in a number of different types of viewpoints in professional literature. In this section, we have presented some of the most important empirical studies that have contributed to the understanding of the impact of foreign direct investment on employment.

Zubin (2011) used VaR methodology to explain the impact of foreign direct investment on GDP, employment, and exports in Hungary over the period from 1993 to 2008. The results showed that the foreign direct investment caused a decline in employment. Also, foreign direct investments showed a short-term negative impact on GDP with a tendency to neutralize the impact after the 6-month period. Similar results were obtained in a research based on the period from 1996 to 2007, which observed FDI impacts in Croatia. VaR and VEC models, in the above-mentioned research, showed that FDI has no impact on GDP and exports, while they have a negative impact on employment (Kersan-Škabić, Zubin, 2009).

The negative impact of FDI on employment in general and employment of women has been proved in a study Umit&Alkan (2016), using dynamic ordinary least squares (DOLS), on the example of Turkey by analyzing time series quarterly data over the period from 2000 to 2013.

The conclusion of the research conducted on the sample of 17 transition countries over the period from 2000 to 2014, using a panel cointegration analysis, shows that a long-term impact of FDI inflows per capita on employment, in the mentioned countries, is either negligible or does not exist at all (Zdravkovic, Đukić & Bradić-Martinović, 2017). The results of the analysis carried out by Ester and Uvalić (2016) show that FDI inflows had no impact on manufacturing value-add-ed, manufacturing employment and manufacturing exports of the Western Balkan countries over the period from 2002 to 2012. The authors have explained that

positive effects were absent because of the low absorptive capacity of the Western Balkan economies in comparison to the Central East European countries.

Jude and Silaghi (2016) investigated the impact of foreign direct investment on aggregate employment in Central and Eastern Europe, using panel data techniques applied on a sample of 20 CEEC over the period from 1995 to 2012. Their results explain that the impact of FDI on employment was negative, which, however, could be partially compensated by higher levels of human capital. According to their research, FDI findings lead to a phenomenon of creative destruction.

The study, conducted by Petanlar, Rasekhi and Ebrahimzadeh (2016), examined the impact of FDI on tourism employment in 48 countries over the period from 2009 to 2013, using panel data test. It was found that there was a negative impact on tourism employment in the selected countries. The study led to the conclusion that "FDI attracts tourism sector workforce and reduces employment through creating professions in other economic sectors" (Petanlar, Rasekhi & Ebrahimzadeh, 2016, p. 459). The examination of FDI and domestic investment impact on unemployment, conducted on the sample of 21 emerging economies over the period from 1994 to 2004, using panel data analysis, has shown a positive impact of FDI on unemployment in the long run, while domestic investments have shown a negative impact (Bayar, Sasmaz, 2017).

Brincikova and Darmo (2014) used panel data analysis applying a modified Okun's law to examine the FDI impact on employment over the period from 1993 to 2012 in V4 countries (Hungary, the Czech Republic, Hungary, Poland and Slovakia). Their results show no statistically significant FDI impact on employment, but the authors point out that most of the FDI were realized through the privatization process. Ownership transformation of enterprises resulted in the dismissal of workers. Usually, the beginning of the privatization process is accompanied by the decrease in both production and employment, but after that, it is followed by a recovery phase.

Vila (2010, pp. 1-81), using VaR methodology, explains that foreign direct investment had a positive impact on employment growth in Moldova, but that the relationship is transitory, and that this result is robust to model specifications. The results of a study that analyzed the impact of foreign direct investments on the investment activities over the period from 1993 to 2003, using panel regression analysis, in seven selected transition countries at that time (the Czech Republic, Croatia, Hungary, Poland, Romania, Slovakia and Slovenia), show a positive impact of foreign direct investments with lower level of significance (Lovrinčević, Buturac, Marić, 2004).

Additionally, Nikoloski (2017), using a single equation error correction model, proves that FDI and personnel costs show statistical significance and positive impact on employment in the Macedonian manufacturing sector. The results obtained by some researchers show that a certain level of foreign direct investment is not crucial for employment increase, but that it is of the same structure. "Only *greenfield* (both vertical and horizontal) investments turn out to create new employment in the short run, while other FDI modes operate as a buffer to reductions in overall employment, but show significant cross-country differences" (Begović, Mijatović, Paunović & Popović, 2008 a, pp. 1-111). The importance of *greenfield* FDI has been confirmed by the research using panel data for 78 developing and emerging countries over the period from 1987 to 2005. The obtained results show stronger effects of *greenfield* FDI on the growth than M&As (mergers and acquisitions), while M&As have no impact (Harms & Meon, 2012).

There are differences in FDI impact on employment depending on the region. For example, the impact of foreign direct investment on total employment and productivity in developing countries is mostly positive, but in advanced countries foreign direct investment effects are combined (Hale & Mingzhi, 2016). Also, there is a disparity in the effects in terms of economic sectors. For example, the research Wei (2013) conducted regarding China's national economy over the period from 1985 to 2011, using time series regression models, shows that there is a positive significant relationship between foreign direct investment and employment in the primary sector. In the secondary sector, there is no significant relationship. In the tertiary sector, the results show a significant negative relationship between the mentioned variables (Wei, 2013).

3. Analysis of the impact of FDI on employment in Montenegro

3.1. Data and methodology

The purpose of this research is to examine the impact of FDI on employment in Montenegro. The FDI impact was analyzed using the simple linear regression model with quarterly data over the period from 2005 to 2017, obtained from Central Bank of Montenegro, MONSTAT and Employment Office of Montenegro. Each series contains 52 observations. The inflows of foreign direct investments and employment before 2005 is negligible, and therefore not included in the analysis.

The research starts with a hypothesis that the employment growth depends on the inflow of foreign direct investments, particularly the *greenfield* investments.

The procedure of determining and quantifying the impact of FDI on employment is based on the following: stationarity of time series data using augmented Dickey-Fuller test (ADF) and Perron test, i.e. unit root test and the regression analysis using the least square method.

Graph 2.

MOVEMENT OF FOREIGN DIRECT INVESTMENT AND EMPLOYMENT IN MONTENEGRO OVER THE PERIOD FROM 2005 TO 2017, IN 000 EUROS.



Source: Eviews calculation based on data of Central Bank of Montenegro

Graph 2 presents the movement of foreign direct investment and employment over the period from 2005 to 2017. The total FDI inflow in the observed period of the analysis amounts to 6.640.708,94 million euros (according data Central bank of Montenegro). For this purpose, the raw (unprocessed) data were concerned, based on which the FDI inflow rise in 2009 and 2015 can be seen, as a result of large privatizations. According to UNCTAD (2018), within the observed period from 2005 to 2017, the number of announced *greenfield* investments was 71, while the value of announced *greenfield* investments amounted to 5.018 million dollars.

3.2. Interpretation of the results

At the beginning of the analysis, data of foreign direct investment and employment are seasonally adjusted. Logged data are shown in Graph 3.

Graph 3.



SORTED (LOGGED) FOREIGN DIRECT INVESTMENT AND EMPLOYMENT DATA

Source: Eviews calculation based on data of Central Bank of Montenegro

Specification of the equation:

Employment is dependent variable in the analysis, while foreign direct investments represent an independent variable.

The influence of direct foreign investments on employment could be presented with regression equation in the form:

$$EMP_{t} = C + C1*FDI_{t} + u_{t},$$

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Where:

 $EMP_t = employment at time t;$ C = constant;

 $FDI_t = FDI$ flow at time t;

 u_t = residue from the regression in time period t.

Using Augmented Dickey-Fuller test, the stationarity of time series has been tested. Stationarity is one of the basic presumptions for successful empirical research. Dickey-Fuller test (ADF), i.e. unit root test, is based on model $\delta yt = \delta yt-1 + ut$. Series will be non-stationary if the coefficient δ has value 1, but if the value of the coefficient δ in absolute value is less than 1, the series will be stationary (Dickey & Fuller, 1979).

Table 1.

AUGMENTED DICKEY-FULLER TEST IN LEVELS

Null Hypothesis: L_FDISA has	a unit root					
Exogenous: Constant						
Lag Length: 0 (Automatic - based on SIC, maxlag=10)						
		t-Statistic	Prob.*			
Augmented Dickey-Fuller test statistic		-5.889679	0.0000			
	1% level	-3.565430				
Test critical values:	5% level	-2.919952				
	10% level	-2.597905				
* MacKinnon (1996) one-sided J						
Source: Eviews						
Null Hypothesis: L_EMPSA has	a unit root					
Exogenous: Constant, Linear Trend						
Lag Length: 1 (Automatic - based on SIC, maxlag=10)						
		t-Statistic	Prob.*			
Augmented Dickey-Fuller test statistic		-2.893446	0.1733			
Test critical values:	1% level	-4.152511				
	5% level	-3.502373				
	10% level	-3.180699				
*MacKinnon (1996) one-sided p-values.						

Source: Eviews

The results of ADF test (Table 1) concerning the series of foreign direct investments (L_FDISA) show that ltl statistics is bigger than critical values, which clearly confirms that it is a stationary series, i.e. the null hypothesis that a unit root is present can be rejected. However, the problem of non-stationarity is obvious when the employment series (L_EMPSA) is concerned because the results of ADF test in levels show that a unit root is present. If attention is paid to the graph presentation of the employment time series, the presence of permanent structural break that changes a segment of the observed series can be presumed (Graph 4).

Graph 4.



EMPLOYMENT SERIES

Source: Eviews calculation based on data of Central Bank of Montenegro

Regarding the fact that ADF test is sensitive to the presence of structural break and apt to accept the hypothesis about the presence of a unit root (Mladenovic & Nojkovic, 2012; Park & Sung, 1994), in further analysis of the stationarity of time series regarding employment, it will be necessary to apply Perron test (Perron, 1989a; Byrne & Perman, 2006). The null hypothesis, being the starting point in the Perron test, says that time series is non-stationary with continuous inflow, where

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immediately upon the structural break the level of continuous inflow changes. An alternative hypothesis says that time series is trend stationary provided that a trend segment changes one step after the structural break (Perron, 1989b; Glynn, Perera, Verma, 2007).

The employment time series (L_EMPSA) will be evaluated according to the function of a constant, dummy variable, deterministic trend and the employment time series from the previous period. Dummy variable is included in the model to present variations by non-measurable factors (dummy variable taking value 0 until structural break i.e. until 2010q1; dummy variable taking value 1 from structural break i.e. from 2010q2). The results of the employment time series, modelled as above, have been displayed in Table 2.

Table 2.

Dependent Variable: L_EMPSA								
Method: Least Squares								
Date: 06/09/18 Time: 18:13								
Sample (adjusted): 2005Q2 2017Q4								
Included observations: 51 after adjustments								
Variable	Coefficient	Std. Error	t-Statistic	Prob.				
С	4.018664	0.970332	4.141535	0.0001				
@TREND	0.002296	0.000570	4.030836	0.0002				
V1	-0.040385	0.010759	-3.753653	0.0005				
L_EMPSA(-1)	0.663068	0.081485	8.137252	0.0000				
R-squared	0.938730	Mean dependent var		12.02310				
Adjusted R-squared	0.934819	S.D. dependent var		0.065674				
S.E. of regression	0.016767	Akaike info criterion		-5.263637				
Sum squared resid	0.013213	Schwarz criterion		-5.112121				
Log likelihood	138.2227	Hannan-Quinn criter.		-5.205738				
F-statistic	240.0302	Durbin-Watson stat		1.268546				
Prob(F-statistic)	0.000000							

PERRON TEST FOR UNIT ROOTS

Source: Eviews

The result of Perron test (PT= 0.0663068-1/0.081485= -4.13) is under the critical value (- 3.72), which points to refusing the null hypothesis about the unit root presence. Using the Perron test, we have shown that the employment time series is trend stationary, but that it has a break which has changed 2010 segment.

Further, given that the problem of stationarity has been solved, we will perform the regression analysis using the simple linear regression model. The least squares method is the most widely used method for estimating values of the dependent variable (Y) for certain values of the independent variable (X). "In the least squares method, the unknown parameters are estimated by minimizing the sum of the squared deviations between the data and the model" (NIST, 2012).

The equation which we will evaluate:

L_EMPSA = $c + \alpha^* TREND + \beta^* V1 + \delta^* L_EMPSA(-1) + d_1 * L_FDISA + u(t)$

where:

TREND - deterministic trend,

V1 - dummy variable,

L_EMPSA(-1) – the first lag of employment,

L_FDISA - logged foreign direct investment,

 α - coefficient that measures the influence of the trend,

 δ - coefficient that measures the influence of the first lag of employment,

d₁ coefficient of the influence of FDI,

u(t) – residue from regression in time period t.

Table 3.

EVALUATION OF REGRESSION BY THE METHOD OF THE LEAST SQUARES

Dependent Variable: L_EMP	SA					
Method: Least Squares						
Date: 06/08/18 Time: 15:21						
Sample (adjusted): 2005Q2 20	017Q4					
Included observations: 51 after adjustments						
Variable	Coefficient	Std. Error	t-Statistic	Prob.		
С	4.430344	1.059495	4.181561	0.0001		
@TREND	0.002455	0.000593	4.140038	0.0001		
V1	-0.039891	0.010777	-3.701370	0.0006		
L_EMPSA(-1)	0.622797	0.091481	6.807926	0.0000		
L_FDISA	0.005849	0.006025	0.970794	0.3367		
R-squared	0.939960	Mean dependent var 12.0		12.02310		
Adjusted R-squared	0.934739	S.D. dependent var 0.065		0.065674		
S.E. of regression	0.016777	Akaike info criterion -5		-5.244702		
Sum squared resid	0.012948	Schwarz criterion -5.0		-5.055307		
Log likelihood	138.7399	Hannan-Quinn criter5.1723		-5.172329		
F-statistic	180.0378	Durbin-Watson stat 1.271259				
Prob(F-statistic)	0.000000					

Source: Eviews

Accordingly, the evaluated coefficients are as follows:

The coefficient of determination (\mathbb{R}^2) is 94%, which shows that about 94% of variations of dependent variable or employment have been explained by the model. If the coefficient of determination is higher, the preconditions are greater for prediction. The coefficient of current foreign direct investments is not statistically significant because of the t-statistic value (0.970794), which is under the theoretical value. In other words, the results of regression analysis indicate by employment can be expected to increase by an average of 0.0058% if foreign direct investments increase by 1%. This result shows that the contribution of foreign direct invest-

ment on employment is very small, without statistical significance. The presence of deterministic trend, which is positive and statistically significant (4.140038), has also been observed. The coefficient of dummy variable has a negative sign. A negative coefficient suggests that if dummy variable increase, employment tends to decrease. In this case, dummy variable has statistical significance (-3.701370).

4. Conclusion

In this paper we have empirically examined the effects of foreign direct investments on employment in Montenegro over the period from 2005 to 2017, using the simple linear regression model. Statistical significance of variables has been checked by stationarity testing using Dickey-Fuller (ADF) and Perron test. The results of regression analysis, using the least square method, suggest that employment can be expected to increase in Montenegro by an average of 0.0058% if foreign direct investments increase by 1%, but the effect of foreign direct investment on employment does not have statistical significance. Time series, which have been considered, are characterized by a deterministic trend, which shows statistical significance as well as the coefficient of dummy variable.

The research results are not surprising if we consider the fact that the structure of foreign direct investments in Montenegro is mostly the reflection of privatization and investment in real estate, and only to a small extent, of *greenfield* investments. Empirical literature shows that the effectiveness of foreign investment depends on its structure (see Begovic et al., 2008; Harms&Meon, 2012; Jovancevic, 2007). The experience of many transition countries showed that FDI inflow during the privatization process was usually followed by employment changes because the restructuring of enterprises lead to dismissal of employees (Hunya & Geishecker, 2005). It confirms the research conducted on the specimen of 67 business-active enterprises that were privatized in Montenegro. The results of the research show that privatization of domestic enterprises resulted in the decrease of the number of employees by an average of 37.54% in relation to the number of employees before privatization (Radović, Đurašković, Žugić, 2011).

Over the next period, it will be very useful to work on increasing the share of the *greenfield* investment within the total structure of foreign direct investment in Montenegro, because the experience of many countries that have completed the transition process shows that the *greenfield* investments play an important role in generating new jobs (for example, in 2016 greenfield investment created approximately 230,000 new jobs in EU), training and quality of employees, increasing productivity, increasing salaries - in relation to local companies, technology spillovers etc. (see Greenfield Investment Monitor, 2017). Also, it is very important to point out that the experience of some countries shows that the share of *greenfield* investments began to grow significantly after the completion of the privatization process and during their progress towards joining the EU, which Montenegro is yet to achieve in the future.

Finally, we consider that the results obtained in this paper are not negligible and that they can be useful in further research of FDI impact on employment in the future period.

References:

- Almfraji, M. A. & Almsafir, M. K. (2014). Foreign direct investment and Economic Growth Literature Review from 1994 to 2012. Procedia – Social and Behavioral Sciences, 129, 206-213. Available at: https://doi.org/10.1016/j.sbspro.2014.03.668.
- Babic, A., Pufnik, A. & Stucka,T. (2001). Teorija i stvarnost inozemnih izravnih ulaganja u svijetu i u tranzicijskim zemljama sa posebnim osvrtom na Hrvatsku [Theory and reality of FDI in the world and in countries in transition, with special emphasis on Croatia]. Pregledi, 9, 1-27, Available at: https://www.hnb.hr/ documents/20182/121897/p-009.pdf/3f1c8c9e-8483-4dd1-9b03-74ad98e3785b
- Bayar, Y., Sasmaz, M.U. (2017). Impact of Foreign Direct Investments on Unemployment in Emerging Market Economies: A Co-integration Analaysis. International Journal of Business and Economic Sciences Applies Research. Vol.10 (3): 90-96. Available at: http://ijbesar.teiemt.gr
- Bilas, V., Franc., S. 2006. Uloga inozemnih izravnih ulaganja i načini poticanja. [The role of foreign direct investment and the way of stimulation]. Sveučilište u Zagrebu, 06-13: 1-16. Available at: http://web.efzg.hr/repec/pdf/clanak%2006-13.pdf
- Begovic, B., Mijatovic, B., Paunovic, M. & Popovic, D. (2008). Grinfild strane direktne investicije u Srbiji. [Greenfield foreign direct investments in Serbia]. Belgrade: Center for liberal-democratic studies. Available at: http://www.clds.rs/newsite/Grinfild%20 SDI%20monografija%20eng.pdf
- Brincikova, Z., Darmo, L. (2014). The impact of FDI inflow on employment in V4 countries. European Scientific Journal, (1), pp. 245-252. Available at: file:///C:/Users/user/ Downloads/2830-8417-1-PB.pdf
- Byrne, J.P., Perman, R. (2006). Unit Roots and Structural Breaks: A Survey of the literature.
- Available at: https://www.gla.ac.uk/media/media_219103_en.pdf
- Dickey, D.A., W.A. Fuller. (1979). Distribution of the Estimators for Autoregressive Time Series with a Unit Root. Journal of the American Statistical Association, (Vol. 74), 366: 427–431.

- Greenfield Investment Monitor. (2017). In Focus: China's Expansion in the EU. European Political Strategy Centre, issue (1). Available at: https://ec.europa.eu/epsc/sites/epsc/ files/greenfield-investment-monitor-1.pdf
- Ester, S., Uvalic, M. (2016). Foreign Direct Investment in the Western Balkans: What role has it played during transition?. Comparative Economic Studies, pp. 1-29. Available at: http://dx.doi.org/10.1057/ces.2016.10
- Farrell, R. (2008). Japanese Investment in the World Economy: A Study of Strategic Themes in the Internationalisation of Japanese Industry. UK: Edward Elgar.
- Hale, G., Mingzhi, H. (2016). FDI effects on the labor market of host countries (Working Paper No. 25). San Francisco: Federal Reserve Bank of San Francisco. Available at: http://www.frbsf.org/economic-research/publications/working-papers/wp2016-25.pdf
- Harms, P., Meon, P. G. (2012). Good and bad FDI: The growth effects of Greenfield investment and mergers and acquisitions in developing countries. Available at: http:// www.etsg.org/ETSG2012/Programme/Papers/204.pdf
- Hunya, G., Geishecker, I. (2005). Employment Effects of Foreign Direct Investment in Central and Eastern Europe (wiiw Research Reports No. 321).Vienna: The Vienna Institute for International Economic Studies. Available at: https://wiiw.ac.at/employment-effects-of-foreign-direct-investment-in-central-and-eastern-europe-dlp-348.pdf
- Glynn, J, Perera, N and Verma, R. (2007). Unit root tests and structural breaks: a survey with applications. Journal of Quantitative Methods for Economics and Business Administration, 3(1), pp. 63-79. Available at: http://ro.uow.edu.au/commpapers/455
- IMF. (1993). Balance of Payment Manual fifth edition. Washington: IMF.
- Jude, C., Silaghi, M. I. S. (2016). Employment effects of foreign direct investment: New evidence from Central and Eastern European countries, International Economics, 145, pp. 32-49.
- Available at: https://doi.org/10.1016/j.inteco.2015.02.003
- Jurčić, Lj. (2015). Stanje hrvatskog gospodarstva Hrvatska u Evropskoj Uniji. [The state of the Croatian economy – Croatia in the EU]. Ekonomski pregled, 66(6), 609-642. Available at: https://hrcak.srce.hr/150393
- Jovancevic, R. (2007). The Impact of Foreign Investments Flows on Croatian Economy -A Comparative Analysis. Ekonomski Pregled, 58 (12) 826-850.
- Katnic, M. (2017). Minimalna zarada u Crnoj Gori. [Minimum wage in Montenegro]. Podgorica: UNDP.
- Kersan-Skabic, I., Zubin, C. (2009). Utjecaj izravnih inozemnih ulaganja na rast BDP, na zaposlenost i na izvoz u Hrvatskoj [Influence of foreign direct investment on GDP, employment and export in Hungary]. Ekonomski pregled (Vol. 60), 3-4: 119-151. Available at: https://hrcak.srce.hr/36848
- Labour Force Survey. (2011). Podgorica: Monstat.
- Lovrincevic, Z., Buturac, G., Maric, Z. (2004). Priliv inozemnog kapitala utjecaj na domace investicije i strukturu robne razmjene [The inflow of foreign capital impact

on domestic investments and the structure of commodity exchange]. Ekonomski pregled, 55 (11-12), pp. 894-934. Available at: https://hrcak.srce.hr/16321

- Makroekonomski model Crne Gore [Macroeconomic model of Montenegro]. (2009). Podgorica: Komisija za hartije od vrijednosti. Available at: http://issp.me/wp-content/uploads/2012/10/Makroekonomski-model-Crne-Gore.pdf
- Mladenović, B., Nojković, A. (2012). Primenjena analiza vremenskih serija [Applied time series analysis]. Ekonomski fakultet Beograd: CID
- Nacionalna strategija zaposljavanja i razvoja ljudskih resursa 2012-2015. [The National Strategy for Employment and Human Resources Development 2012 - 2015]. (2011). Podgorica: Ministarstvo rada i socijalnog staranja. Available at: http://www.zzzcg. me/wp-content/uploads/2015/12/Strategija-zaposljavanja-i-RLjR-2011-2015-MNEjanuar.pdf
- Nacionalna strategija zaposljavanja i razvoja ljudskih resursa 2016-2020. [The National Strategy for Employment and Human Resources Development 2016 2020]. (2015). Podgorica: Ministarstvo rada i socijalnog staranja.
- Nikoloski, D. (2017). The impact of Foreign Direct Investments on employment: the case of the Macedonian manufacturing sector. EASTERN JOURNAL OF EUROPEAN STUDIES, Vol.8, Issue 2. Available at: https://econpapers.repec.org/article/jes-journl/
- NIST/SEMATECH e-Handbook of Statistical Methods. (2012). Retrieved from ITL http:// www.itl.nist.gov/div898/handbook/.
- OECD. (2008). Benchmark definition of foreign direct investment: fourth edition. Paris: OECD.
- Park, Y.J., Sung, J. (1994). Testing for Unit Roots in Models with Structural Change. Econometric Theory, Vol.10, No.5, pp. 917-936. Available at http://links.jstor.org/sici ?sici=02664666%28199412%2910%3A5%3C917%3ATFURIM%3E2.0.CO%3B2-C
- Petanlar, K. S., Rasekhi, S. & Ebrahimzadeh, S. (2016). The Effect of Foreign Direct Investment on Employment in Tourism Industry: A Case Study of Selected Countries. International Journal of Management, Accounting and Economics (Vol.3), 9: 459-472. Available at: http://www.ijmae.com/files/accepted/571_final.pdf
- Perron, P. (1989). The great crash, the oil price shock, and the unit root hypothesis. Econometrica 57. pp. 1361-1401. Available at: https://www.jstor.org/ stable/1913712?seq=1#page_scan_tab_contents
- Radovic, M., Đuraskovic, J., Zugic, R. (2011). Uticaji privatizacije na položaj zaposlenih u privatizovanim preduzećima u Crnoj Gori [The impacts of privatization on employees in privatized enterprises in Montenegro]. Tržište rada, 7, pp. 7-19.
- Umit, A., Alkan, I. (2016). The Effects of Foreign Direct Investments and Economic Growth on Employment and Female Employment: A Time Series Analysis With Structural Breaks For Turkey. International Journal of Business and Economic Sciences Applied Research 9(3): 43-49

Available at: http://ijbesar.teiemt.gr

UNCTAD. (2012). World Investment Report: Towards a New Generation of Investment Policies. UN: UNCTAD.

UNCTAD. (2018). World Investment Report: Annex Tables. UN:UNCTAD.

- Villa, S. (2010). Exploring the linkages between investment and employment in Moldova: A time-series analysis (Working Paper No. 52). Available at: http://www.ilo.org/employment/Whatwedo/Publications/working-papers/WCMS_161397/lang--en/index.htm
- Wei, Y. (2013). The effect of FDI on employment in China (Graduate Theses and Dissertations). Iowa State University. Iowa. Available at: http://lib.dr.iastate.edu/etd/13379?utm_source=lib.dr.iastate.edu%2Fetd%2F13379&utm_medium=PDF&utm_campaign=PDFCoverPages
- Zubin, C. (2011). Utjecaj inozemnih izravnih ulaganja na gospodarstva Mađarske, Češke i Slovačke [Influence of foreign direct investment on economy of Hungary, the Czech Republic and Slovakia] (doctoral dissertation). Sveučilište Jurja Dobrile, Pula
- Zdravkovic, A., Đukic, M., Bradic-Martinovic, A. (2017). Impact of FDI on Unemployment in Transition Countries: Panel Cointegration Approach. Industrija, Vol.45, No.1. Available at: http://aseestant.ceon.rs/index.php/industrija/article/view/13548/5250

www.cb-cg.org

www.monstat.org

www.zzzcg.me

ZAPOSLENOST I INOZEMNA IZRAVNA ULAGANJA: ISKUSTVO CRNE GORE

Sažetak

Cilj ovog rada je ispitivanje i bolje razumijevanje utjecaja inozemnih izravnih ulaganja na zaposlenost u Crnoj Gori u vremenskom razdoblju od 2005. - 2017. godine. Za potrebe istraživanja korišteni su kvartalni podaci vremenskih serija, dobiveni od Centralne banke Crne Gore, Monstata i Zavoda za zapošljavanje. U cilju testiranja stacionarnosti vremenskih serija, korišteni su testovi jediničnih korjenova, Dickey-Fuller test (ADF) i Perronov test, dok se ispitivanje utjecaja inozemnih izravnih ulaganja na zaposlenost provelo regresijskom analizom odnosno metodom najmanjih kvadrata. Rezultati istraživanja dobiveni ocjenom jednostavnog linearnog ekonometrijskog modela, pokazuju da ukoliko se strane direktne investicije povećaju za 1%, može se očekivati povećanje zaposlenosti u prosjeku od 0,0058%. Međutim, tokom cjelokupnog promatranog razdoblja, rezultati regresije jasno ukazuju da utjecaj inozemnih izravnih ulaganja na zaposlenost u Crnoj Gori nema statističku značajnost. Dobiveni rezultati nisu iznenađujući, ukoliko se ima na umu činjenica da promatrano razdoblje karakterizira skroman udio *greenfield* investicije u ukupnoj strukturi inozemnih izravnih ulaganja u crnogorskoj ekonomiji.

Ključne riječi: inozemna izravna ulaganja, greenfield investicije, zaposlenost, regresijska analiza.