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## АНАЛИЗА ГРИНФИЛД СДИ И ЕКОНОМСКОГ РАСТА У ЗАПАДНОМ БАЛКАНУ И ВИШЕГРАДСКИМ ДРЖАВАМА

**Апстракт:** Циљ истраживања је идентификација корелације између гринфилд СДИ и стопе економског раста уз компарацију земаља Западног Балкана са Вишеградским државама ради пружања релевантних импликација према одрживом економском развоју мање развијених земаља Западног Балкана. Аутори презентују дескриптивну анализу заједно са корелационом анализом за Западни Балкан и Вишеградске државе у периоду 2003-2020. Истраживање анализира податке у односу на структурни лом изазван Светском економском кризом и пандемијом корона вируса. Препоруке државној управи су усмерене у правцу даљег унапређивања квалитета јавних институција, подстицајних мера и инвестиционог окружења у циљу привлачења повољних гринфилд СДИ и убрзавања реалне конвергенције ка развијенијим европским економијама.

**Кључне речи:** гринфилд СДИ, економски раст, Западни Балкан, Вишеградске државе.

## THE ANALYSIS OF GREENFIELD FDI AND ECONOMIC GROWTH IN WESTERN BALKANS AND VISEGRAD STATES

**Abstract:** The aim of this research is to identify a correlation link between Greenfield FDI inflows and GDP growth rate in Western Balkan countries compared to the Visegrad States in order to give relevant implications towards sustainable economic development in less developed countries of Western Balkans. The authors present descriptive analysis together with correlation analysis for the Western Balkans and the Visegrad States in the time period 2003-2020. This research analyzes data in regard to the structural break of the Global Financial Crisis and pandemic of corona virus. Government recommendations are directed in further improvements in the quality of public institutions, incentive measures and investment environment in order to attract favorable greenfield FDI investments and accelerate real convergence towards developed European economies.

**Key words:** greenfield FDI, economic growth, Western Balkans, Visegrad States.

### 1. INTRODUCTION

The objective of this study is to test the presence of a correlation link between Greenfield FDI inflows and GDP growth rate in Visegrad States compared to the Western Balkan (WB) countries in order to give guidance towards sustainable economic progress and the role of Greenfield FDI in achieving this goal in the less developed countries of Western Balkans. In previous research, Ercegovac & Beker Pucar (2021)<sup>1</sup> showed that Visegrad States, especially Poland, received the most FDI and Greenfield FDI inflows in the sample of Emerging European Economies, with moderately high positive correlation of Greenfield FDI and economic growth in Poland and Czech Republic and strong positive

<sup>1</sup> Descriptive and correlation analysis between FDI inflows and GDP growth rate in broader sample of Emerging European Economies (EEEs) was conducted with yearly data (1997-2019), while descriptive and correlation analysis between Greenfield FDI inflows and GDP growth rate included yearly data (2003-2019) in sample of EEEs.

correlation in Slovakia. On the other hand, WB countries received substantially less FDI and Greenfield FDI with weak correlation with exclusion of Albania that had strong positive correlation between Greenfield FDI and economic growth. Also, research of Ercegovic & Beker Pucar (2021a) point out that greater Greenfield FDI inflows could be related with a favorable trade balance in the Visegrad group of countries, while WB have unbalanced external position that is possibly linked to lower Greenfield FDI inflows. Mentioned findings in Visegrad States implicate that substantial Greenfield FDI inflows could produce beneficial effects on sustainable economic development and external position. The novelty of this research is to test the positive correlation hypothesis in regard to the Global Financial Crisis (GFC) and pandemic of corona virus. Authors conduct correlation analysis in the next time periods: 2003-2020, 2003-2007, 2008-2014, 2015-2020 on the county level and two country groups.

External shocks like GFC and pandemic of corona virus limits the possibility to achieve goals of sustainable economic growth and macroeconomic stability because foreign capital inflows substantially diminish. In the 2020 FDI inflows globally dropped by 35% and more by 58% in transition economies disrupting the economic prospects and trading position. Greenfield investments in industry and infrastructure in developing countries had great downfall and increasing the investments is vital to support a sustainable recovery from the pandemic. (UNCTAD WIR, 2021). Structural breaks provoke necessary government supportive measures in monetary and fiscal policy with promotion measures for foreign investors. Beljić & Glavaški (2021) observe effectiveness of government measures in selected Eurozone economies implemented in case of the GFC compared to corona pandemic with conclusion that fiscal and monetary support measures were stronger and more prompt in the corona pandemic crisis. Kostin, Runge & Adams, (2021) find that emerging markets performed considerably worse than developed markets during pandemic compared to the GFC with unfavorable higher costs of equity for investments.

Focus of our research is the WB region where the most FDI inflows in the previous period were received in service sectors through privatization and acquisitions with orientation to the local market. The WB countries need to furtherly improve investment environment and attract higher Greenfield FDI inflows in favorable sectors with innovative green technology that will speed up the sustainable development. Cvetanović, Despotović & Milovanović (2018) find that received capital inflows in the WB countries was insufficient and that it is necessary to continue improvements in public institutions and business conditions. Cvetanović, Nedić & Despotović (2019) point out that WB countries significantly improved business conditions measured with *World Bank Ease of Doing Business Indicators* with the great progress in the North Macedonia that lights the way to the rest of the region to furtherly elevate conditions for starting a business and attract foreign investors.

After the Introduction section, Section 2 presents the literature review, Section 3 contains information about data and used methodology, while Section 3 discusses results of descriptive and correlation analysis. Concluding remarks are summarized within the last section.

## 2. LITERATURE REVIEW

This research focuses a link between Greenfield FDI and economic growth, where in relevant literature the evidence of positive impact of Greenfield FDI inflows on the real economy can be found in papers Wang & Wong, 2009; Neto, Brandao & Cerqueira, 2010; Harms & Meon, 2014; Luu, 2016; and Bayar, 2017. The empirical studies that support general FDI positive effects on the economic growth are Li & Liu, 2015; Pegkas, 2015; Iamsiraroj & Ulubasoglu, 2015; and Iamsiraroj, 2016. This study compares Western Balkans region with Visegrad States, so in the literature review the emphasis is given to this country groups.

Uvalić & Cvijanović (2018) highlight that all WB countries improved macroeconomic performance (an acceleration of GDP growth, declining inflation, rise of foreign trade, substantial FDI inflows with implementation of many economic reforms) during the 2001-2008 period. The GFC severely disrupt the growth path of WB countries through two main channels: a drop in export demand and decreased foreign capital inflows. The economic crises reviled vast structural problems in WB: serious external imbalances caused by insufficient competitiveness on foreign markets, labor market problems and extreme deindustrialization along with a fast services expansion. After the GFC the macroeconomic situation has improved with gradual economic recovery, lower inflation, fiscal consolidation and lower current account deficits, but authors find that compared to the Central East European and Baltic countries, WB countries have still structural weaknesses and forehead more balanced economic development measures is needed. WB economic policy creators must elaborate a more efficient country-specific economic policy with special focus on sectoral distribution of investments in order to diversify and lift up the production and export base. In line with this, Moran (2014) showed that it isn't enough for the host economy just to be open to FDI, it's necessary to have sectoral targeting measures that will double FDI inflows in the chosen sectors and produce higher unit-value exports. The positive FDI effects on the WB as host economies depends on infrastructure development, market size, labor education, institution quality, political stability and the control of corruption (Estrin & Uvalic, 2016). Šušić (2018) found a strong positive correlation between FDI and economic growth in Serbia with significant positive impact of economic growth on the FDI inflows, implying that economic prospects are relevant factor to foreign investors. On the other hand, Skare & Cvek (2020) found that sizeable amount of FDI in the Republic of Croatia had no significant effect to country's competitiveness and economic growth, due to FDI sector distribution (services) and low levels of Greenfield investments.

The article of Kowalska, Kovarnik, Hamplova & Prazak (2018) analyses the Visegrad four (V4) countries in aspect of GDP development, foreign trade and indicators of innovation and competitiveness. On the basis of comparison of the

results for V4 countries, it can be emphasized that countries differ in all aspects. The analysis of the GDP development has shown that the Czech Republic had the strongest position among V4 countries with slow growth rates after GFC. Moreover, Slovakia was getting closer to the Czech Republic in regard to GDP. Analysis concerning net trading balance with goods showed that the Czech Republic is again the strongest economy with the highest net balance per capita. According to the innovation levels, the Czech Republic and Hungary are moderate innovators, where Poland and Slovakia are so-called “catching-up countries” with values of Global Innovation Index (GII) for all the V4 countries in 2016 below the average for the European Union. Also, the competitiveness analysis of the V4 economies showed a significant difference between the countries with conclusion that the Czech Republic is the most competitive and has increasing level of Global Competitiveness Index, while, Hungary has the weakest competitiveness level. Dorozynski & Kuna-Marszalek (2016) analyze that Visegrad Group of countries as attractive FDI location with highlights of their strengths, which include skilled labor, assistance schemes and well-developed infrastructure. They demonstrated that important factors for foreign investors are: infrastructure, market size, availability of suppliers, subcontractors, business partners and State aid schemes, including resources from the European Union budget. Kemiveš & Barjaktarević (2020) are taking COVID-19 pandemic into the account and give estimates for the future expected values of FDI using the polynomial trend and conclude that the Republic of Serbia will have an increasing trend of FDI inflows. This result is explained with the development level of the country and possibility for further growth in IT industry, organic food production, tourism, creative industry and establishing clusters. The volumes of FDI inflows are mainly dependent on the external factors, like pandemics, economic crisis and political risks. Zavorská (2022) imply that FDI can play a crucial role in the industrial upgrading and economic development of the WB countries where changes in the configuration of Global Value Chains towards nearshoring gives attractive growth opportunities for the region. However, financial incentives and tax-breaks might not be the right path for WB strategy for attracting high-quality FDI but more effort in further improvements in human capital, infrastructure, institutions and elimination of corruption. Therefore, an FDI-friendly host economy is characterized as stable and transparent (Javorcik, 2020). The WB economies ought to implement the economic policy set of measures in order to drive possible nearshoring into the region with FDI inflows in higher value-added sectors.

### **3. DATA AND METHODOLOGY**

The research sample comprises from four countries of Visegrad States (Poland, Czech Republic, Hungary and Slovakia) with Western Balkan region (Albania, Bosnia and Herzegovina, Montenegro, Serbia and North Macedonia). Visegrad States after submission in EU received the considerable FDI and Greenfield FDI inflows with following real convergence progress, so authors intend to analyze Visegrad States compared to less developed Western Balkans to give significant conclusions.

Analyzed sample is chosen with purpose to test the hypothesis of positive correlation link between greater Greenfield FDI and economic growth in ex-transition European countries and provide implications towards faster sustainable development of Western Balkan region with appropriate mix of promotional measures for foreign investors. Authors compare received Greenfield FDI inflows with GDP growth rates by countries and two country groups in time period (2003-2020) with regard to Global financial crisis in 2007 and corona pandemic lockdown in 2020. Authors conduct Pearson correlation in four periods: 2003-2020, 2003-2007, 2008-2014, 2015-2020 on the county level and two country groups.

Data for Greenfield FDI inflows in millions of USD is collected from UNCTAD, WIR 2021. Annual GDP growth rates for selected countries are gathered from World Bank Development Indicators database. Methodology used in this research is comparative description method and Pearson correlation with focus on government recommendations for less developed countries of Western Balkans.

The existing literature finds evidence that FDI, especially Greenfield FDI inflows contribute to economic growth, therefore, this research strives to examine if there is a strong positive correlation between Greenfield FDI and GDP growth in the analyzed sample of countries. This research problem is relevant to economic policy creators in order to raise attractiveness of national economy for Greenfield investments. Following study compares values of received Greenfield FDI inflows by countries and two country groups with objective to find a potential link to the achieved economic development.

### **4. RESEARCH RESULTS**

Presented research involves three segments of analysis: 1) descriptive analysis of received Greenfield FDI inflows in Visegrad States and Western Balkans (2003-2020), 2) descriptive analysis of achieved GDP growth rates in Visegrad States and Western Balkans (2003-2020), 3) correlation analysis of Greenfield FDI inflows and economic growth by countries and country groups in total sample with corona lockdown (2003-2020), in total sample before corona pandemic (2003-2019), in period before the GFC (2003-2007), after the GFC (2008-2014), with corona pandemic (2015-2020).

## 4.1. THE ANALYSIS OF GREENFIELD FDI INFLOWS

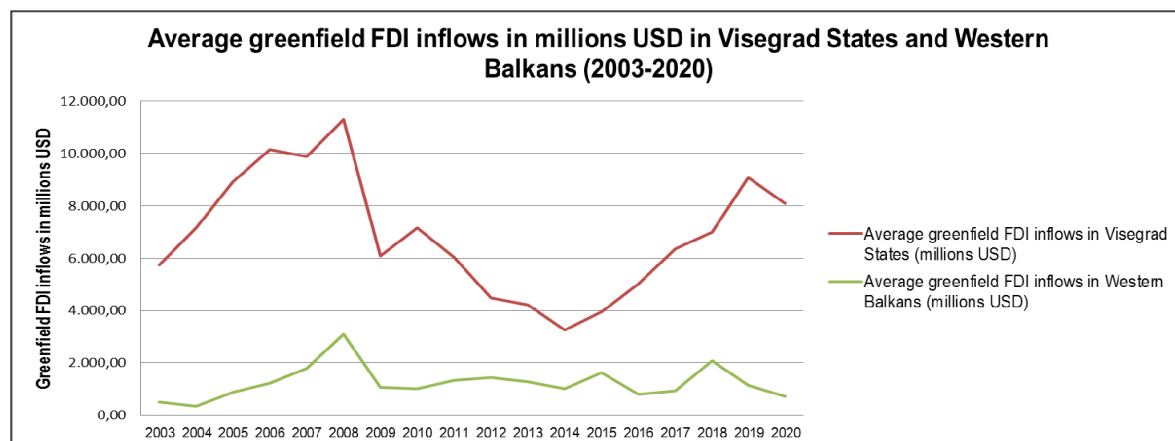
On the basis of descriptive analysis of FDI inflows in Ercegovac & Beker Pucar (2021), authors concluded that EU admission was relevant factor for attracting FDI in analyzed time period (1997-2019). Also, Visegrad States, particularly Poland and Czech Republic were top destinations for FDI after EU entrance in 2004. On the other hand, Baltic States and WB region had a low average of FDI inflows. Descriptive analysis in time period (2003-2019) indicates that Poland had the greatest average Greenfield FDI inflows (14 billion USD) in sample of sixteen Emerging European Economies, while other members of Visegrad group had significantly less average of Greenfield investments about 4-5 billion USD. The WB economies received substantially less Greenfield FDI inflows that for this group were slightly above 1 billion USD. In Table 1 authors present Greenfield FDI inflows in time period (2003-2020) in millions USD by countries and average of Visegrad States compared to Western Balkans. Related to this, in Figure 1 is given comparative outlook of average Greenfield FDI inflows in Visegrad States and WB region. Based on the average it is clear that Western Balkans received the small inflow compared to Visegrad States. Average for Western Balkans has been very low in 2003 and 2004, while after 2005 has started to grow, with maximum level in 2008 with 3 billion USD. GFC and now corona pandemic again slow down the Greenfield inflows in WB region that is only 707 million USD in 2020. In 2020 in WB group the Greenfield FDI dropped by -38.25% compared to 2019. In WB region Serbia received a major share of Greenfield FDI inflows in periods 2003-2004, 2006, 2008-2020. In 2005 Bosnia and Herzegovina received the most Greenfield FDI, while in 2007 the Albania was more attractive for investments.

**Table 1:** Value of Greenfield FDI inflows, 2003–2020 (Millions of dollars)

Greenfield FDI inflows	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Poland	9.743,49	14.118,47	14.054,57	15.551,67	17.883,61	28.257,06	13.199,13	10.761,11	10.784,68	10.759,47	8.507,91	7.510,96	6.238,53	10.713,64	16.406,13	18.220,29	24.462,34	24.299
Czech Republic	3.925,20	5.069,95	4.378,89	6.886,16	6.370,15	4.916,05	3.912,79	6.180,37	4.479,48	3.300,80	3.766,56	2.115,38	3.402,40	3.126,77	3.409,35	3.096,97	2.369,10	2.155
Hungary	6.261,68	5.221,30	8.249,72	8.912,00	9.480,33	9.172,84	3.932,80	7.768,86	3.502,15	2.372,32	2.446,62	2.220,14	2.628,69	4.563,23	3.055,39	4.894,23	7.515,38	3.683
Slovakia	3.054,80	4.223,01	9.030,85	9.259,54	5.773,63	2.894,26	3.339,84	3.875,75	5.372,72	1.464,67	2.116,17	1.198,19	3.540,39	1.702,27	2.513,50	1.822,04	2.016,91	2.264
Average Visegrad States	5.746,29	7.158,18	8.928,51	10.152,34	9.876,93	11.310,05	6.096,14	7.146,52	6.034,76	4.474,32	4.209,32	3.261,17	3.952,50	5.026,48	6.346,09	7.008,38	9.090,93	8.100,39
Albania	294,50	134,70	659,62	445,40	4.457,82	3.457,48	115,30	58,07	431,00	301,87	61,90	50,60	138,84	35,81	12,03	188,00	182,90	331
Bosnia and Herzegovina	895,50	470,50	2.311,96	640,34	599,07	1.984,09	1.316,04	290,75	1.234,85	1.210,45	888,47	974,66	3.140,49	935,65	552,24	700,82	557,56	355
Montenegro	76,00	0,00	0,00	130,80	694,68	989,97	120,37	509,73	387,80	342,90	849,70	1.135,70	43,50	615,32	47,30	1.987,95	582,40	872
Serbia	987,74	918,15	1.103,53	3.227,92	2.689,32	6.314,69	3.034,14	3.709,74	3.785,19	4.387,43	4.005,69	1.976,53	4.470,05	2.067,72	3.841,83	6.699,13	4.171,96	1.854
North Macedonia	273,50	159,70	265,80	1.677,09	534,16	2.661,53	775,00	414,47	811,26	966,23	555,06	853,88	342,49	291,37	110,53	855,33	237,09	128
Average Western Balkans	505,45	336,61	868,18	1.224,31	1.795,01	3.081,55	1.072,17	996,55	1.330,02	1.441,78	1.272,16	998,27	1.627,07	789,18	912,79	2.086,25	1.146,38	707,88

**Source:** Authors calculated average for Visegrad States and Western Balkans on the base of yearly data obtained at UNCTAD, WIR 2021, <https://unctad.org/system/files/official-document/wir2021en.pdf>.

It can be concluded that corona pandemic in the most of analyzed countris had affected the sizeable downfall of Greenfield investments. The exception was Slovakia that had the increase by 247 million USD, Montenegro with increase by 289.6 million USD and Albania with rise by 148.1 million USD. It is interesting to observe that Poland had the greatest level of Greenfield FDI that was in 2019 24.46 billions USD, while the 2020 bring only -0.67% drop on the 24.30 billions USD. Other three countries of V4 group had significantly less investements, only 2-3 billions USD. Therefore, average for the V4 group in 2020 was 8.1 billion USD and was decreased by -11% compared to 2019.



**Figure 1:** Average greenfield FDI inflows in Visegrad States and Western Balkans

**Source:** Authors review based on the average greenfield FDI inflows.

On the base of Figure 1 it is evident a great discrepancy between WB and V4 group with less difference after the GFC, where average investments had sharp drop in V4 economies while WB had low but balanced investment level. V4 countries had two major growth trends: after EU submission until GFC and after 2014 until corona pandemic in 2020. On the other hand, WB economies didn't have the sizeable crisis drops of average investments with high peak levels in 2008 and 2018 with average investment levels above 2 billion USD.

## 4.2. THE ANALYSIS OF GDP GROWTH RATES

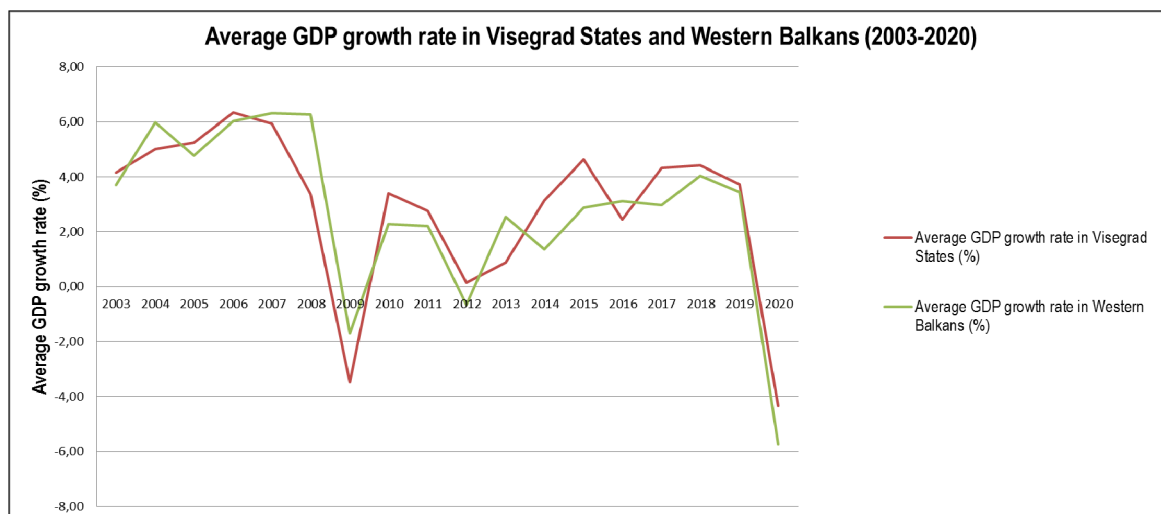
Ercegovic & Beker Pucar (2021) analyzed economic growth in the sixteen European Emerging Economies in the time period (1997-2019) with conclusion that Poland had high average GDP growth by 4% with low standard deviation of 1.53%, without negative growth rates, that implies a trend of substantial real growth that is likely linked with high levels of FDI. WB region and Serbia had a more volatile and lower growth rates compared to Poland. Previous research also indicates a substantial growth in WB in transition period but after the GFC growth pace was slower until the 2015 when trend is again rising. In Table 2 authors give a closer look at the annual GDP growth rates in time period (2003-2020) by countries with average for V4 and WB group of countries. In line with this, authors compare average economic growth by country groups in Figure 2.

**Table 2:** Annual GDP growth rate, 2003–2020 (%)

GDP growth rate	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Poland	3,50	4,98	3,51	6,13	7,06	4,20	2,83	3,74	4,76	1,32	1,13	3,38	4,24	3,14	4,83	5,35	4,74	-2,54
Czech Republic	3,58	4,81	6,60	6,77	5,57	2,69	-4,66	2,43	1,76	-0,79	-0,05	2,26	5,39	2,54	5,17	3,20	3,03	-5,79
Hungary	4,08	5,00	4,30	3,95	0,28	1,01	-6,60	1,08	1,86	-1,26	1,81	4,22	3,70	2,19	4,27	5,36	4,55	-4,68
Slovakia	5,50	5,28	6,62	8,49	10,83	5,57	-5,46	6,29	2,64	1,36	0,65	2,72	5,22	1,93	2,98	3,79	2,61	-4,36
<b>Average Visegrad States</b>	<b>4,17</b>	<b>5,02</b>	<b>5,26</b>	<b>6,33</b>	<b>5,94</b>	<b>3,37</b>	<b>-3,47</b>	<b>3,39</b>	<b>2,75</b>	<b>0,16</b>	<b>0,89</b>	<b>3,15</b>	<b>4,64</b>	<b>2,45</b>	<b>4,31</b>	<b>4,43</b>	<b>3,73</b>	<b>-4,34</b>
Albania	5,53	5,51	5,53	5,90	5,98	7,50	3,35	3,71	2,55	1,42	1,00	1,77	2,22	3,31	3,80	4,02	2,11	-3,96
Bosnia and Herzegovina	3,87	6,33	3,90	5,41	5,86	5,44	-3,00	0,87	0,96	-0,82	2,35	1,15	3,09	3,15	3,17	3,74	2,83	-3,20
Montenegro	2,48	4,43	4,18	8,57	6,81	7,22	-5,80	2,73	3,23	-2,72	3,55	1,78	3,39	2,95	4,72	5,08	4,06	-15,31
Serbia	4,39	9,03	5,53	5,11	6,44	5,66	-2,73	0,73	2,04	-0,68	2,89	-1,59	1,81	3,34	2,10	4,50	4,33	-0,94
North Macedonia	2,22	4,67	4,72	5,14	6,47	5,47	-0,36	3,36	2,34	-0,46	2,93	3,63	3,86	2,85	1,08	2,88	3,91	-5,21
<b>Average Western Balkans</b>	<b>3,70</b>	<b>5,99</b>	<b>4,77</b>	<b>6,03</b>	<b>6,31</b>	<b>6,26</b>	<b>-1,71</b>	<b>2,28</b>	<b>2,22</b>	<b>-0,65</b>	<b>2,54</b>	<b>1,35</b>	<b>2,87</b>	<b>3,12</b>	<b>2,97</b>	<b>4,04</b>	<b>3,45</b>	<b>-5,72</b>

**Source:** Authors calculated average for Visegrad States and Western Balkans on the base of yearly data obtained at World Bank database, <https://datacatalog.worldbank.org/dataset/sustainable-development-goals>.

On the base of data in Table 2 it is evident that GFC affected analyzed countries with economic downfall and negative growth rates in 2009, with exclusion of Poland and Albania that remain less growth pace but around 3%. Average GDP growth rate of V4 in 2009 was -3.47% , while WB had less drop by -1.71%. Compared to GFC, corona pandemic induced greater disturbances in analyzed economies, with -4.34% drop in V4 and -5.72% drop in WB in 2020.



**Figure 2:** Average GDP growth rate in Visegrad States and Western Balkans  
**Source:** Authors review based on the average GDP growth rate.

Figure 2 implies similar pattern of average GDP growth rates in V4 and WB country groups in time period 2003-2020 with greater average growth rates of V4 group. Nevertheless, WB group achieved faster average growth rates in 2004, 2007, 2008 with smaller economy drop in case of the GFC. Also, WB group had greater average growth rates in 2013 and 2016. The corona pandemic disrupted the most economic tendencies in Montenegro with decrease by -15.31%, Czech Republic with drop by -5.79% and North Macedonia by -5.21%.

### 4.3. THE CORRELATION ANALYSIS OF GREENFIELD FDI AND GDP GROWTH

In order to give contribution to the hypothesis that countries with high levels of Greenfield FDI can achieve positive transmission effects on economic growth, authors present results of the Pearson correlation analysis in Table 3. Correlation by countries is calculated with original data while correlation for Visegrad States and Western Balkans are calculated between average Greenfield FDI inflows and GDP growth rates in country groups for analyzed time period. Correlation analysis of Greenfield FDI inflows and economic growth by countries and country groups is conducted on total sample with corona lockdown (2003-2020), in total sample before corona pandemic (2003-2019) presented in Ercegovac & Beker Pucar (2021), in period before the GFC (2003-2007), after the GFC (2008-2014), with corona pandemic (2015-2020).

**Table 3:** Pearson correlation between Greenfield FDI inflows and GDP growth rate

Visegrad States & Western Balkans	Correlation (2003-2020)	Correlation (2003-2019) <sup>2</sup>	Correlation (2003-2007)	Correlation (2008-2014)	Correlation (2015-2020)
Poland	0,00	<b>0,43*</b>	<b>0,85**</b>	<b>0,39*</b>	<b>-0,37*</b>
Czech Republic	<b>0,45*</b>	<b>0,35*</b>	<b>0,58**</b>	0,24	<b>0,81**</b>
Hungary	0,16	0,09	<b>-0,69**</b>	-0,01	0,26
Slovakia	<b>0,54**</b>	<b>0,54**</b>	<b>0,38*</b>	0,09	<b>0,31*</b>
<b>Visegrad States</b>	0,27	<b>0,45*</b>	<b>0,96**</b>	0,26	<b>-0,38*</b>
Albania	<b>0,46*</b>	<b>0,60**</b>	<b>0,72**</b>	<b>0,88**</b>	<b>-0,81**</b>
Bosnia and Herzegovina	0,08	0,15	<b>-0,73**</b>	<b>0,33*</b>	<b>0,30*</b>
Montenegro	-0,02	0,19	<b>0,45*</b>	<b>0,72**</b>	-0,07
Serbia	-0,06	-0,15	-0,24	<b>0,82**</b>	<b>0,62**</b>
North Macedonia	<b>0,30*</b>	0,23	<b>0,30*</b>	<b>0,50**</b>	<b>0,40*</b>
<b>Western Bakans</b>	<b>0,30*</b>	0,22	<b>0,54**</b>	<b>0,74**</b>	<b>0,52**</b>

Notes: \*\*strong correlation ( $\rho \geq 0.5$ ), \*moderately high correlation ( $\rho \geq 0.3$ ), weak correlation ( $\rho < 0.3$ ).

**Source:** Authors calculation on the basis of yearly data obtained at UNCTAD WIR 2021 & World Bank database.

Previous research (Ercegovac & Beker Pucar, 2021) indicates that in time period (2003-2019) a strong positive linear link between analyzed variables is evident in Albania (0.60) and Slovakia (0.54) with a moderately high positive link in Poland (0.43) and Czech Republic (0.35). Correlation in V4 group is 0.45 that implies that this group has moderately high positive correlation between Greenfield FDI and economic growth. Besides Albania, other WB countries have weak correlation coefficient, while Serbia has an inverse correlation. If we include 2020 in analyzed sample and conduct correlation analysis (2003-2020) we obtained following results. Slovakia maintain the same result of a strong positive link (0.54), Albania have lower result with now a moderately high positive link (0.46), Czech Republic have greater result but still on a moderately high level (0.45), while North Macedonia now have a borderline correlation link (0.30). V4 states have lower correlation because of corona pandemic downward spiral, while WB has borderline correlation between analyzed variables. Also, it could be pointed out that corona pandemic disrupted correlation link between Greenfield FDI and GDP growth in Poland giving that result is a zero.

If we perform correlation analysis in the period before GFC (2003-2007), the results are mainly significant with a strong positive correlation in Poland (0.85), Albania (0.72), Czech Republic (0.58) and a moderately high positive correlation in Montenegro (0.45), Slovakia (0.38) and North Macedonia (0.30). A strong inverse correlation is present in Bosnia and Herzegovina (-0.73) and Hungary (-0.69). Correlation before GFC is positive and very high in V4 (0.96) and WB (0.54). It is interesting to compare results after the GFC (2008-2014) and observe that WB economies have better correlation coefficients in regard to V4: Albania (0.88), Serbia (0.82), Montenegro (0.72) and North Macedonia (0.50). Only Poland has a moderately high positive correlation after the GFC with result of 0.39, while other V4 countries had weak correlation results. If we analyze correlation results in period 2015-2020, it could be emphasized that a strong positive correlation is present in Czech Republic (0.81), Serbia (0.62), while a strong inverse correlation is present in

<sup>2</sup> These results are part of previous research Ercegovac & Beker Pucar (2021) in Ekonomika. Authors calculated correlation between FDI inflows and greenfield FDI inflows with GDP growth rate in broader sample of sixteen Emerging European Economies.

Albania (-0.81) and a moderately high inverse correlation in Poland (-0.37). A result of Poland in this sub period is possibly related with recorded the only negative growth rate in 2020.

## CONCLUSION

Based on the presented results of a strong and moderately high positive correlation it can be stressed that greater Greenfield FDI inflows are stimulating factor of economic development in this sample of countries, but also that achieved economic growth is a relevant determinant for attracting foreign investors. A presence of a strong positive correlation link is a starting point to furtherly research and back up the hypothesis of a positive bi-directional link between FDI and host country real economy. A presence of a negative correlation link indicates that in some sub periods received Greenfield FDI inflows wasn't as stimulating factor as expected and that some other factors determines the economic growth. Also, structural breaks of GFC and corona pandemic affects correlation results. In WB region GFC have impact on better correlation results with a strong positive link between following variables. On the other hand, corona pandemic disrupted correlation results in Poland and Albania giving a negative correlation result.

Presented results and literature review are basis for government recommendations in poorer countries of Western Balkans. Government authorities in WB economies should introduce an investment promotion strategy that aims to attract better quality Greenfield FDI in higher-value added industries and preferred sectoral distribution that would facilitate technological upgrading in the key industries like agriculture, energy, R&D, education and innovation. The WB sustainable development strategy must reduce economic dependence on the highly polluting energy production and orient to the renewable energy sources. The economic smallness of the WB region implies to furtherly harmonize investment environment and strengthen the cluster cooperation in the region. More intensive regional cooperation in the area of R&D, energy, transport and agriculture has stimulation potential to accelerate economic growth in the region and attract nearshoring foreign investors. Furthermore, improvements in the quality of government institutions and infrastructure with stable investment environment will benefit to national attractiveness to foreign investors.

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