

**Heri Bezić, PhD**

University of Rijeka, Faculty of Economics and Business  
[heri.bezic@efri.hr](mailto:heri.bezic@efri.hr)

**Tomislav Galović, PhD**

University of Rijeka, Faculty of Economics and Business  
[tomislav.galovic@efri.hr](mailto:tomislav.galovic@efri.hr)

**Davorin Balaž, MEcon**

University of Rijeka, Faculty of Economics and Business  
[davorin.balaz@efri.hr](mailto:davorin.balaz@efri.hr)

## WHAT IMPACTS FDI IN EU?

*There is variety of positive effects of FDI on national or regional economy because it ensures technology transfer, derives export competitiveness, employment and increases business dynamism. During the Fourth Industrial Revolution, there is significant importance of FDI. It is especially related to EU economy because it will help to overcome challenges and difficulties EU is facing with. These challenges are consequences of Covid-19 pandemic and competition represented by other developed and growing economies. Since FDI enhances convergence process, it can decrease differences in development level among EU economies. Research subject is competitiveness of the investment environment in EU and member states for the period 2014-2019. Objective we set is to appoint drivers of FDI in EU and its member countries. Determining key drivers to attract FDI will enable to create recommendations that can be guidelines for macroeconomic policies that will increase competitiveness and convergence level, enhance economic growth of EU and its member countries. Such macroeconomic policies will enable EU to overcome consequences of Covid-19 crisis and remain competitive in global environment in the age of the Fourth Industrial Revolution. The methodology is grounded on a system generalized method of moments estimator for dynamic panel data models and includes 27 EU members. Results show correlation of innovation capacity, tax burden, human capital, ICT and lower government involvement in monetary flows on FDI inflows in EU member countries. Most important contribution within our paper is explanation of important factors to attract FDI in EU, creation of policy recommendations to enhance economic growth, increase competitiveness and convergence level in EU during Fourth Industrial Revolution.*

**Key words:** FDI, EU, competitiveness, Fourth Industrial Revolution

## 1. Introduction

National economies compete in the global environment to attract higher amounts of FDI due to their positive effects. UNCTAD statistics (2021) confirm that their total amount increased exponentially from 1970 when it was 13257 million USD up to 1 539880 million USD in 2019. At the same time in EU, it grew from 5158 from to 445531 million USD. Trend was the same in all parts of the world. In the 21st century trend is changing very fast and becomes declining or increasing every two to four years. It is different by world regions, because more developing economies are integrating to global investment flows. EU is faced with slightly declining trend.

Joseph Schumpeter is known by term creative destruction. It is a process of technological shift, where old technologies are replaced by new. Manual labour was replaced with steam engine, steam with electricity. FDI has important role in creation and attraction of new technologies. Since 1970s and start of the Third Industrial or ICT Revolution, ICT started to replace human labour and machines. Adler (2019) refers to Schumpeter`s book Capitalism, Socialism and Democracy. Capitalism is never stationary and always evolving, creating new markets and new products entering the sphere. ICT fostered globalization process, increased level of international trade and investments. One of the major drivers of globalization process became and remain FDI. Leighton (1970) explains it on example of US economy. Total amount of FDI by US companies in 1955 was 20 billion USD. Majority of investments were directed to Canada. In 1968 this amount grew to 65,8 billion with Europe as main destination. Since MNEs developed and enlarged, global business became investment-driven, instead trade driven. In 1967, global FDI output reached the value of 240 billion USD, while export value was 130 billion USD. Galović (2017) states that globalization process was enabled by technological progress and enabled cost decreasing, creation of new processes, products and methods. It is a process that includes overall economic liberalization and opening of economies to capital flows. ICT represent basics for technological age humanity lives in, and it is called Fourth Industrial Revolution. It is term created by German government and represents great opportunity for EU to decrease the gap with other developed economies like USA. FDI are one of the most important drivers of economic growth with multiple positive effects, like: increasing employment, export, quality of human capital, budget revenues and transfer of new technologies. Technological development is the essence of overall economic growth. Industry 4.0 implies development of new technologies, and in case countries don`t want to lag behind, they have to create macroeconomic framework to attract FDI. Lasi et al. (2014) state that term Industry 4.0 is coined in German Federal Ministry of Education and Research and has become another name for a future project in the context of the High-tech strategy 2020. Xu, David and Kim (2018) state that there are variety of opportunities the Fourth Industrial Revolution provides. Its technologies will remove majority of obstacles among innovators, companies and market. Fourth Industrial Revolution is a period based on innovations and technology, but major driver of competitiveness is human capital. This is the reason why age we live in is also known as Knowledge economy. Human capital determines productivity of other resources. Countries that will invest in human capital will be able to compete in global market of 21st century.

European Commission (2020) states that EU is a major recipient of FDI and major global investor. With 17,3% of share in global export and 15,6% in global import EU is leading global importer and exporter. In the age of the Fourth Industrial Revolution in order to decrease development gap, EU has to create enhancing investment environment. Fourth Industrial Revolution will change investment flows from countries with cheap labour force to countries based on knowledge economy. World Economic Forum (2018) states that 74% of future investments will be based on availability of high quality human capital, and not anymore on cheap labour. Covid-19 crisis impacted investment flows. UNCTAD (2021) states that global investment flows reduced 42% in 2020, from 1,5 trillion USD in 2019 to 859 billion USD. Developed countries were faced with hardest decrease, while FDI in EU decreased for two thirds. If we compare it with 2019, when according to OECD (2020), FDI flows into EU increased 14%, this decline represents significant negative shock for EU economy. EU has to prepare for post Covid period where FDI can enhance recovery process. Forte and Paiva (2021) state that main barriers to FDI in EU are legal framework that increases number of regulations, administrative burden and labour market efficiency. Jimborean and Kelber (2017) state that drivers of FDI in CEECs are macroeconomic framework, global level of risk readiness, gross domestic product, population, taxation level, infrastructure, accession process, return on government bonds, geographical location near developed EU economies, trade-GDP ratio and cost of workforce.

Chong et al. (2009) state that FDI significantly positive affect economic growth. Negative impact could become positive, if the stock market development has attained a particular threshold level. Baharumshah, Law and Saini (2010) explain it doesn't have significantly positive impact on economic growth, but positively affects economic freedom that is one of main growth drivers. Hossain (2016) states that one standard deviation improvement in fiscal and monetary freedom impacts FDI growth rate for 32,5% and 38,5%. The result suggests that foreign direct investment is positively correlated with the economic growth and economic freedom in the host countries. Globerman and Shapiro (2003) confirm that determinants of FDI in host country are market size expressed in GDP, quality of human capital expressed in human development index, and quality of macroeconomic environment expressed with different variables like Index of Economic Freedom, rule of law, political stability, market law and government effectiveness. Dunning (1993) agrees with it and emphasizes skilled labour and infrastructure as important drivers of FDI.

Objective we set in this paper is to appoint most important drivers of FDI in EU and its member countries. Model includes EU27 countries. Basic hypothesis of this paper is:

- 1) EU has to create enhancing investment environment through creation of and investments in skilled talent and ICT infrastructure, stronger innovation capacity, tax reduction and lower government involvement in monetary flows.

Chapter 2 provides theoretical framework. Chapter 3 explains econometric model. In chapter 4 can be found explanations of the results. Chapter 5 includes conclusion and policy recommendations.

Limitation for this research is relatively short period of time taken into consideration. We wanted to examine the period of the Fourth Industrial Revolution that officially started in 2011. We assume first effects were seen in 2012. We decided to take 2019 as last year of our observation period, because there is a lack of relevant data for 2020. It was the year of global pandemic that disrupted economy. Fast pace of changes makes hard to provide long term policy recommendations. Despite increasing number of papers, there is still lack of relevant researches about Fourth Industrial Revolution, its impacts and especially about FDI in EU in that period. This is another limitation of this paper. There is a lack of data for Malta and Cyprus for skilled talent score measured by IMD that is taken as one of independent variables. Malta is not included in measurement and Cyprus is included in 2017. This is the reason why recommendations are limited.

## **2. Literature overview**

UNCTAD (2007) defines FDI as an investment that includes a long-term ownership and control by a company from one country over the company in other country. OECD (2021) defines it as type of investment in other national economy where investor from one country establishes a long-term interest in and at least 10% of ownership over a company from another country. OECD considers FDI as important enabler of economic integration, because it impacts cooperation between different economies. FDI enables technology transfer among national economies, enhances international trade and possibility of entrance to global markets, and derives economic growth.

Chowdhury and Mavrotas (2006) explain that majority of researches related to role of FDI in host economies stress that FDI is one of main sources of capital and enhances domestic investment. It is usually connected with job creation, technology transfer, and enhances economic growth in domestic economy. Relationship between economic growth and FDI is vice versa. Lipsey and Sjöholm (2004) state there are different claims about effects of FDI on host economy. Impacts are: production of higher quality or cheaper goods and services, resulting in higher consumer welfare, adding capital stock and raising the level of output. Foreign firms pay higher wages in both developed and developing countries. Barrios, Gorg and Strobl (2004) confirm that FDI has positive effect on competitiveness of domestic firms and local industry. Kurtishi - Kastrati (2013) states that to gain all benefits from foreign investments, a healthy enhancing macroeconomic and business environment that boosts domestic and foreign investment, enables incentives for innovation and upgrading labour force skills and creates dynamic business climate, is top priority. Her paper emphasizes effects like technology spillovers, human capital formation support, enhancement of competitive business environment, contribution to international trade integration, improvement of enterprise development, environment and social condition in the host country by relocating cleaner technology and guiding to more socially responsible corporate policies. FDI are primary channels of knowledge, skills and technology transfer, and by that impacts on increasing quality of human capital. FDI improves balance of payments through import substitution, establishing subsidiaries in host countries and usage of subsidiaries to export to another countries. Sas, Gal and Juhasz (2018) examined impact of FDI in Visegrad countries. They emphasize Visegrad

countries as great recipients of FDI and their main conclusion is that effects vary by country, but in general FDI has positive impacts on employment and export in ICT, telecommunication services and other business activities. Only in financial services effects are negative. Alguacil, Cuadros and Orts (2011) state that effects of FDI vary by countries and their level of economic development. They confirmed importance of internal and external macroeconomic stability as well as the quality of institutions when evaluating the economic impact of FDI inflows. These variables contribute to economic growth. Impact on economic growth is significant in lower income economies, while it varies in higher income economies. Piscitello and Rabiosi (2005) examined impact of FDI on Italian local companies and confirmed FDI increases labour productivity in these companies. They claim that one of main goals of Italian authorities is attracting FDI, but focus is on greenfield investments, since it brings capital and increases employment.

Faeth (2009) examined determinants of FDI. The micro dimension is related to factors intrinsic to the company itself, such as ownership advantages, cost decreasing and economies of scale, while macro dimension implies market specific factors such as obstacles to entry, resource scarcity or abundance, political stability and risk and market size. Brainar (1997) assesses another drivers like scale economics, size of GDP in domestic currency, R&D investments, possibility of political instability, neighbor economies, EU membership, identical language as national economy where does investor come from, impacts on the international and domestic share of subsidiary revenues and sales volume in overall revenues and sales volume. Galović (2016) states that national economy or firm can be competitive if it invests in human capital since it represents most important creative potential and contributes to higher level of R&D intensity. Enders and Sandler (1996) state that terrorism is another factor that impacts FDI. Bond and Samuelson (1986) showed that national economies can become FDI destinations, with investment incentives, like tax reduction. It is a message to potential investors that business environment in the host country is stimulative for investors. Mudambi (1999) states that government incentives positively affect FDI are tax cuts, loans and infrastructure investments. Root and Ahmed (1978) state that per capita GDP, trade, transport and communication ratio, urbanization level and regular executive transfers encourage FDI. Corporate tax level discouraged FDI. Grubert and Mutti (1991) found that FDI will increase inverse with tax rates and tariffs. Horst (1972), Caves (1974) and Swedenborg (1979) found that sales volume reached in host economy, capital and labour intensity, investments in promotion, and research and development positively impacts FDI. Braunerhjelm and Svensson (1995) found that agglomeration effects of FDI are present, predominantly in technologically advanced industries and that market size, the supply of skilled labor and earlier exports pattern affect FDI in host country. Samir and Mefteh (2020) confirm significant influence of ICT on FDI and economic growth by strengthening country's economic openness and increasing their participation in international trade. Van Ark and Piatkowski (2004) confirm significant impact of ICT on FDI, productivity and economic growth in EU15 and CEE countries. Innovations are important driver of economic growth. Uzagalieva, Kocenda and Meneses (2012) confirm that innovations foster technological growth which is one of the main sources of economic growth. Anderson (2005) confirms that innovation capacity positively impacts FDI level and R&D in particular

country and this correlation is vice versa. Innovation and investment policies should supplement each other.

Education and investments in human capital will be essential to attract FDI. World Economic Forum in report Future of Jobs (2018) states that 65% of today primary school children will work some job that doesn't exist. Future of Jobs (2020) states that skills for the future are: analytical thinking, innovation, active learning, critical thinking and analysis, complex problem solving, creativity, originality, initiative, leadership, social influence, technology use, design and programming, resilience, stress tolerance, flexibility, reasoning, problem solving and ideation. Lifelong learning and transformation from knowledge to project based learning becomes necessity. Bell (2010) confirmed that students engaged in project based learning outscore their traditionally educated colleagues. They are superior in answering applied and conceptual problems over students who used standardized tests. Reason for it is because in project based learning students solve real world problems and they learn to self-monitor their progress, accountability.

EU is attractive market for FDI. EC (2020) provides reasons why EU is the largest economy in the world with 500 million consumers and 25000 € of GDP per capita. It is the largest trading block and top trading partner for 80 countries. EU is heterogeneous integration where 27 countries differ in economic, social, cultural and political level. Question is what impacts FDI in EU and what are the effects of it. Galović, Bezić and Mišević (2016) state that terrorism, natural disasters and limitations to cross border financial transactions negatively affect FDI, while GDP per capita has positive impact. Hubert and Pain (2002) state that EU membership increases FDI, while tax competitiveness and government fixed investment expenditure have positive effects on FDI in EU. FDI stock from previous year, industry output and gross domestic product in European Union, research and development expenditure in Germany, workforce costs, population and patent applications affect FDI. Benassy-Quere et al. (2001) find that the tax burden, trends in exchange rates, gross domestic product differential, geographical location and transport costs reduce FDI. Share of trade in GDP, population and market potential positively affect FDI. Taxation level is especially important. European Parliament (2020) states that in March 2018 is launched the idea of digital taxation and that EU is looking for solution for fair digital taxation. This is OECD idea to establish global digital tax rate. Bauer (2018) states that digital tax is harmful to EU economy. Taxation of digital revenues is opposite to EU's main policy objectives for the digital economy. Not only it is not in accordance with tax efficiency and neutrality, but it also undermines digitalisation, European integration and the Digital Single Market. Bun (2018) agrees with it and states that EC is wrong when it claims that digital companies face significantly lower effective average taxation rates than non digital. Janicki and Wunnava (2004) confirm that EU accession process had positive impact on FDI in candidate countries. Main determinants were market size (GDP), host country risk, labour costs and trade openness. Popovici (2016) analyzing determinants in New Europe countries, finds that market size or total GDP, labour costs, overall infrastructure and public debt are enablers of FDI. Shahmoradi, Thimmaiah and Indumati (2010) examined determinants of FDI in developed economies in EU and the world from 1990. They state that FDI was a driver of transition of host economies from centrally planned economies to market economies, due to transfer and

diffusion of financial capital, technological and managerial knowledge, and that determinants of FDI in high income countries change over years. They find that balance of payments and FDI outflows significantly impact FDI inflows, while GDP impact was insignificant. From 2000, export positively impacted FDI, while in certain years, GDP and skilled labour negatively impacted GDP. Özkan-Günay (2011) finds that EU countries differ in FDI determinants and the biggest differences are among EU15 countries and New Europe. In EU15 countries tax burden significantly negative impacts FDI. Gross capital formation has significantly positive impact. GDP impact is insignificant, while macroeconomic stability, price of gas and oil show unexpected signs. In new member countries GDP and gross capital formation, high technology export, internet access and decrease in gas and oil prices significantly positive affect FDI, while macroeconomic stability doesn't have significant impact.

Pegkas (2015) confirms significantly positive impact of FDI on Eurozone countries. Moudatsu (2003) states that FDI affects positively economic growth of EU directly and indirectly through increasing trade openness. Moudatsu and Kirikilis (2011) find that economic growth and inward FDI in EU are interdependent, while effects differ by country. EU countries want to attract FDI to increase export, productivity, knowledge capacity and technology level. Albulescu and Tamasila (2013) confirm in their paper that inward FDI positively affects entrepreneurship level in EU countries. Bezić, Galović and Stojčić (2016) state that economic recovery of developed EU economies after crisis from 2009 was export driven and based on manufacturing. Fastest growing regions in these countries are those with the fastest growing share of manufacturing in their value added. Such reasoning signals are repositioning European industries towards sophisticated industries characterized by high value added, knowledge and technological intensity. Ciobanu and Florina (2020) state that FDI significantly positive affected economic growth of CEE countries between 2009-2018 through increasing export, labour productivity, transfer of innovation, capital and technology. They estimate that due to Covid crisis, decrease in FDI will cause significant economic decline of these economies.

### **3. Data and methodology**

In analyzing determinants of FDI in EU27 we have chosen generalized method of moments two step estimations dynamic panel with asymptotic standard errors function. Galović, Bezić and Mišević (2018), referring to Ullah et al. (2018), state that the two-step estimator is asymptotically efficient and robust to whatever patterns of heteroskedasticity and cross-correlation between the sandwich covariance estimators exist. Sequeira and Nunes (2008) state that dynamic panel model enables more degrees of freedom, more accurate estimators' large sample properties, and lower level of endogeneity, because of particular country effects, omitted variables, vice versa correlations and standard error. Das (2019) states that dynamic panel is widely used in macroeconomics due to usage of lag dependent variable and dynamic adjustment of the model. GMM ensures coherent estimations of data parameters with finite time periods and large cross section dimension. GMM estimator enables asymptotically efficient conclusions based on small number of assumptions. Allisson (2019) states that panel data have two big attractions for making causal inferences with nonexperimental data: ability to control for unobserved, time-invariant confounders and to model the direction of causal relationships. He states that the most popular econometric method for estimating dynamic panel models has

been the generalized method of moments that relies on lagged variables as instruments. Brañas-Garza, Bucheli and Garcia Munoz (2011) state that usage of dynamic panel data models in the context of experiments enables to explain novel correlations among experimental variables and emphasize different types of their behaviors. Dynamic GMM estimators created in our econometric model are: differentiated (Arellano – Bond 1991) and system (Arellano – Bover 1995; Blundell – Bond 1998).

Research is questioning FDI determinants in EU27 countries for the period 2014-2019 and is based on 128 observations.

Equation below (1) represents dynamic model that includes single time-shifted (lagged) variable:

$$y_{it} = \beta y_{it-1} + u_i + v_{it}, |\beta| < 1$$

Galović and Bezić (2019) explain that in equation,  $y_{it}$  is set as dependent variable in period  $t$ ;  $y_{t-1}$  represents dependent variable with lag for one period from  $t$ ;  $u_i$  marks individual time-invariant effects. Value  $v_{it}$  is the random error. Individual effects were considered as stochastic. Another important assumption for the invariancy of the model are errors  $v_{it}$  which are serially uncorrelated. Individual time-invariant effects are mostly related to previous effect of the dependent variable in our model, that aims to before explained problem of endogeneity.

#### 4. Model results and discussion

Model, we will use in this research is based on theoretical framework:

$$LNFDI_{glo} = \beta_0 + \beta_1 LNFDI_{glo(-1)}_{it} + \beta_2 LNGII_{it} + \beta_3 LNtaxbur_{it} + \beta_4 LNskilltal_{it} + \beta_5 LNICTinfr_{it} + \beta_6 LNmonfree_{it} + \sum_{t=2015}^{2019} year_t + u_{it} + v_{it}$$

Detailed results of our model are in Appendix.

Table 1: Model results

INDEPENDENT VARIABLE	VALUE
Lagged dependent variable <i>LNFDI<sub>glo</sub>(-1)</i>	0,0113307
const	-34,3709***
<i>LNGII~</i>	2,94536***
<i>LNtaxbur~</i>	1,54065***
<i>LNskilltal~</i>	1,49064***
<i>LNICTinfr~</i>	1,58724***
<i>LNmonfree~</i>	1,90883
T3	-0,701822***
T4	-0,568355***
T5	-0,331943
T6	-0,380827**
MODEL DIAGNOSTICTS	
Number of observations	128
Number of instruments	24
Wald test	310,399
Prob>chi2	0,0000
Sargantest	15,8881
Prob>chi2	0,2552
Arellano-Bond test for AR(1) in the first differentions	-1,60507



Prob>chi2	0,1085
Arellano-Bond test for AR(2) in the first differentions	0,215499
Prob>chi2	0,8294

Explanation: P-values are marked with signs \*\*\*, that implies level up to 1% significance, and signs \*\*, that imply level up to 5% significance. P-values were obtained by calculating the two-step dynamic procedure.

Source: Author`s calculation

*LNFDI<sub>glo</sub>* is taken as dependent variable. It represents percentage of global FDI inflows in national economy. Values are taken from database UNCTAD (2021). In the age of globalized economy for each country is important to be engaged in global trade and investment flows. This is the reason why we decided to measure what impacts percentage of global FDI inflows in EU economies and their participation in investment flows. *LNFDI<sub>glo</sub>(-1)* is taken as a proxy for global percentage of FDI inflows from previous years. OECD (2021) states that FDI flows imply the amount of direct investments outside of investors` country in particularly observed period. Inflows are related to enhancement of the investment that companies or residents from other countries have in companies placed in host country reduced for transactions that decline the investment of that companies or residents from other countries in domestic companies. FDI flows are expressed in US dollars. *LNGII~* is taken as a proxy for innovation capacity and is taken from Global Innovation Index database. Index includes different indicators like investments in R&D as percentage of GDP, private investments in R&D, STEM graduates, collaboration between universities and industry, universities ranked in QS 1000, intangible assets, knowledge output, different ICT indicators etc. It is measured by Cornell University, WIPO and INSEAD Business school. Reason, why we decided to take it as a proxy for variable innovation capacity is because it consists of indicators that represent basics for the Fourth Industrial Revolution. Indicator *LNICT<sub>infr</sub>~* from Global Innovation Index is taken as a proxy for quality of ICT infrastructure. Global Innovation Index score and its indicators are measured in scores from 0 to 100 or 0 to 10. Higher score means country performs better in certain indicator. Two indicators of Index of Economic Freedom are taken in this model. *LNtaxbur~* or fiscal freedom is taken as a proxy for tax burden set by central authorities and measures taxation level in host economy. It is related to direct taxes that imply top marginal tax rates on individual and corporate incomes, and overall taxes, that implies all types of direct and indirect taxation at all levels of government, as share in GDP. *LNmonfree~*, monetary freedom, is taken as a proxy for regulatory efficiency. The score for the monetary freedom component is based on two factors: weighted average inflation rate for recent three years and price controls. Indicators in Index of Economic Freedom are measured in scores from 0-100. Higher score means higher level of monetary and fiscal freedom. IMD (2020) score for skilled talent is taken as a proxy for quality of human capital that is according to relevant literature crucial driver of FDI.

Used indicators show expected results. There is an evident significant impact of innovation capacity, tax burden, skilled talent and ICT infrastructure on percentage of FDI global inflows.

If GII score grows 1%, global percentage of FDI inflows will grow 2,94%. If tax burden score grows 1%, global percentage of FDI inflows will grow for 1,54%. If IMD World Talent Ranking score grows 1%, global percentage of FDI inflows will grow 1,49%. If quality of ICT infrastructure grows 1%, global percentage of FDI inflows will grow 1,5872%. Results for this indicators are confirmed with 1% significance. Percentage of global FDI inflows from last year and monetary freedom have positive effect, but there is no significant correlation. If global percentage of FDI inflows from last year grows 1%, global percentage of FDI inflows in present year will grow 0,01%. Growth of monetary freedom for 1%, causes global percentage of FDI inflows growth for 1,90%.

Arellano-Bond test confirmed there is no second order autocorellation, since coefficient value is 0,8294, while the highest value that determines it is 0,05. Sargan test value (Prob>chi2) equals 0,2552, what is bigger than 0,05. It confirms model is satisfactory and accurate. Wald test is significant and it confirms satisfactory explanatory power of used variables. Tests we did can confirm model is set appropriately.

## **5. Conclusion and policy recommendations**

Researching databases and papers, we find that FDI in EU during Fourth Industrial Revolution is understudied topic. Objective of this paper was to appoint drivers of FDI in EU in the period 2014-2019, that relates to the Fourth Industrial Revolution. Our model was grounded on previous researches about drivers of FDI. We consider results of our model as the most important contribution. Not only because, we appointed drivers of FDI, but also because topic is understudied and results provide relevant cognitions for EU economic, industrial and trade policy. Results of the model are in accordance with relevant literature. There were two indicators taken from Index of Economic Freedom, measured by Heritage Institute: tax burden and monetary freedom. Our results indicate that lowering tax burden and government involvement in monetary flows, especially through price control, significantly positive affects FDI. It is in accordance with relevant literature in this paper that emphasizes impact of overall economic freedom for attracting FDI. References in theoretical framework state that skilled talent and human capital will be crucial driver of FDI and this is confirmed in our model. EU has to invest in creation and development of its own human capital through education system and create encouraging environment to attract and retain it. Third Industrial Revolution that is known as ICT revolution is characterized with exponential rise of FDI (see Leighton, 1970). ICT infrastructure significantly positive impacts FDI. This is the reason why EU has to constantly upgrade it, especially during Fourth Industrial Revolution. Digitalization is marked as one priorities in EU policies and its pace has to be faster. We didn't find many papers that are dealing with impact of innovation on FDI, especially in EU. Researches examine mostly reverse impact and confirmed that FDI positively affect innovation activity. Our results indicate significance of innovation performance to attract FDI that implies neccessity of encouraging of innovations in EU. Despite, our findings, there are questions that remain open and provide possibilities for further research. Since, 21<sup>st</sup> century and Fourth Industrial Revolution are characterized with technological discoveries and radical innovations that cause fast change of trends, most important question is time validity of our results. They are in accordance with

relevant literature, but open questions are: What will drive FDI in EU in the following decades? Another unanswered question that leaves possibility for further research is related to differences in FDI drivers and its structure in each member. But, we consider that results of our model and literature, we examined, provides guidelines for EU and member countries policy makers to create encouraging environment to attract FDI.

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Appendix 1:

Model 17: 2-step dynamic panel, using 128 observations

Included 26 cross-sectional units

Time-series length: minimum 2, maximum 4

Including equations in levels

H-matrix as per Ox/DPD

Dependent variable: FDIglo

Asymptotic standard errors

	<i>Coefficient</i>	<i>Std. Error</i>	<i>z</i>	<i>p-value</i>	
FDIglo(-1)	0,0113307	0,0116786	0,9702	0,3319	
const	-34,3709	7,38322	-4,655	<0,0001	***
lnGII	2,94536	0,449742	6,549	<0,0001	***
lnntaxbur	1,54065	0,428824	3,593	0,0003	***
lnskilltal	1,49064	0,274319	5,434	<0,0001	***
lnICTinfr	1,58724	0,391614	4,053	<0,0001	***
lnmonfree	1,90883	1,92806	0,9900	0,3222	
T3	-0,701822	0,204871	-3,426	0,0006	***
T4	-0,568355	0,214756	-2,647	0,0081	***
T5	-0,331943	0,212419	-1,563	0,1181	
T6	-0,380827	0,158416	-2,404	0,0162	**
Sum squared resid	284,3720	Standard error		1,559016	

Number of instruments = 24

Test for AR(1) errors:  $z = -1,60507$  [0,1085]

Test for AR(2) errors:  $z = 0,215499$  [0,8294]

Sargan over-identification test: Chi-square(13) = 15,8881 [0,2552]

Wald (joint) test: Chi-square(6) = 310,399 [0,0000]

Wald (time dummies): Chi-square(4) = 49,2912 [0,0000]