

The Impact of Competitiveness on Foreign Direct Investment: The Case of Emerging European Countries

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Abstract: The main purpose of this study is to investigate the impact of competitiveness on foreign direct investments (FDI) in developing European countries for the years 2009-2018. Employing MSCI's "MSCI ACWI Index", Czech Republic, Greece, Hungary, Poland, Russia, and Turkey are derived as developing European countries. We used competitiveness pillars of World Economic Forum (WEF), which is called as The Global Competitiveness Index (GCI). In measuring foreign direct investment inflows to developing European countries, we used OECD's FDI statistics. In order to investigate competitiveness related determinants of FDI, we employed a multiple regression analysis. Analysis results revealed that the change in FDI can be explained by three competitiveness pillars. Specifically, while market size and innovation pillars have a positive impact on FDI, goods market efficiency has a negative impact. In order to examine the same research question, we also run two more multiple regression analyses by clustering developing European countries in two groups. Analyses results show no significant differences.

Keywords: competitiveness pillars, foreign direct investment, developing European countries

1. Introduction

The substantial impact of FDI on prosperity and economic growth of countries is largely searched and argued in the literature. Especially in developing economies, which are substantially influenced by crisis, economic stability in creating jobs and generating revenues largely depend on attracting steady foreign investments. In order to attract FDI in a country, the role of governments has been largely examined. Providing a stable macroeconomic environment is significant for the attractiveness of a country for FDI. Additionally, a supporting institutional environment, infrastructure, technological and labor market related factors have been found especially important in encouraging foreign investors.

In this context, sustainable and crisis-resistant economy depend on attracting steady foreign direct investments, which is ultimately resulted from attractiveness of a country for foreign investors. This attractiveness is determined by the competitiveness level of a country, which implies that an investor would generate higher rates of return and grow faster. In national level, it is expected that competitiveness will lead to economic prosperity and as a result higher living standard. It is argued that a more competitive economy will grow faster over time. In this sense, the aim of this paper is to investigate, whether competitiveness level of six developing European countries has relationship with the level of inward FDI.

2. Theoretical Background

The determinants of FDI have been an attractive area of research and studied well in the literature. Introducing the eclectic theory of international production, Dunning (1980; 1981; 1988; 2001) had a great impact on FDI literature. The author examined the relationship between the determinants of FDI and the stage and structure of a country's economic development. The theory suggested that a country's international direct investment position can be explained by ownership, locational and internalization (OLI) advantages (Dunning, 1980; 1981). **The first** advantage discussed by Dunning is **ownership advantages** of a firm, which are firm specific competitive advantages that consist of tangible and intangible assets. Those assets are expected to provide firm opportunities in international competition (Almsafir, et al, 2011: 398). **The second** advantage is **locational advantages**, which are country specific advantages that include macroeconomic conditions, infrastructure, political conditions, level of education, transportation, market size, technological readiness, labor market etc. **The third** type is **internalization advantages**, which deals with the choice of the type of international production operation in order to best exploit advantages. In other words, internalization advantages deal with the question of "how international expansion would be more beneficial"? (For instance, selection between FDI or contractual resource exchanges).

Besides ownership and internalization advantages, locational advantages are discussed extensively by the eclectic perspective and FDI literature. The basic concern is to find an answer to the question that

whether foreign production would be more beneficial for enterprises by considering conditions, such as, a reduction in transport costs and/or the impact of regional trading blocs? (Dunning, 1988: 4). Similarly, Petrovic-Randelovic et al. (2013: 183) stated that there are three groups of locational factors that determine FDI in the host country: 1) the host country policy, 2) economic determinants, and 3) business incentives. Besides this general classification we can state that traditional determinants of FDI might include factors such as, market size and potential, cheap labor force, availability of natural resources, and proximity to host country. Addition to this list, in their empirical study, Almsafir et al (2011: 399) pointed out the importance of institutions and managerial rules, investment incentives, and geographic location and regional agglomeration. They found out that these three factors have a relationship with FDI. Demirhan and Masca (2008) in their study, investigated the relationship between FDI and some macroeconomic, infrastructural and political climate variables. Findings of authors revealed that growth rate of per capita, telephone main lines and degree of openness are significantly correlated with FDI. They found out negative correlation between FDI and inflation and tax rate, and no significant relationship with labor cost.

Contemporary theories of FDI, focus on firm-specific advantages that are based on intangible assets such as, human capital, brand names, patents, and trademarks. (Jadhav, 2012). In this study, the author empirically investigates the determinants of FDI based on economic, institutional and political factor. Findings of this study point out that economic factors and market size are more significant variables in attracting FDI. Trade openness, natural resource availability, rule of law and voice and accountability are other variables that are revealed to be statistically significant determinants in attracting foreign investors.

Because many countries, often, struggle with economic crises, they need to attract foreign investments in order to create new jobs and facilitate growth. As Popovici and Calin (2012: 658) stated that “the EU countries were found inadequately prepared to face economic turbulences...EU instruments were outdated or too weak to reinforce growth”. Especially, developing countries lack necessary funds to recover during turbulent times and depend, heavily, on foreign investments to realize their socio-economic plans. Because firms’ resources are limited to develop infrastructure or enhancing institutional quality in a country, states undertake this responsibility in

order to attract investments by creating a competitive business environment. In this context, competitiveness has been found to be one of the most important qualifications in attracting foreign investments in order to correct macroeconomic imbalances and increase economic growth. At the multinational corporation level, a competitive environment creates a business environment in which they can find firm-specific advantages that will help them to realize their strategic goals and objectives

As we mentioned before that the role of states is inevitable in order to create a competitive environment to attract foreign investments. In order to investigate the determining role of competitiveness in attracting FDI, different competitiveness related variables are used by different researchers (Bevan and Estrin, 2004; Anastassopoulos, 2007; Demirhan and Masca, 2008; Popovici and Calin , 2012; Rodriguez et al., 2012; Jadhav, 2012; Tintin, 2013). In this paper, we will WEF’s The Global Competitiveness Index (GCI) in measuring competitiveness level of countries. For this study’s purpose, the main advantage of this index is that it provides a business environment perspective by including many different pillars (each pillar has various number of variables), each measuring different aspect of competitiveness. According to WEF’s classification, GCI consists of three sub-indexes and twelve pillars (for detailed explanations see, GCI 2017-2018 report):

- **Basic requirements:** The first pillar of this sub-index is *institutions*, which aggregates legal and administrative framework within which public and private stakeholders interact. The quality of the public institutions of a country has a great influence on investment decisions and the development of production strategies of firms. In order to measure institutions pillar, 21 variables are used such as, intellectual property protection, public trust in politicians, irregular payments and bribes, efficiency of government spending, business costs of crime and violence, ethical behavior of firms, strength of auditing and reporting standards, etc. **Infrastructure** is the second pillar, which consists of 9 variables, including quality of overall infrastructure, quality of electricity supply, fixed telephone lines, and quality of roads, air transport and railroads, etc. For instance, an extensive

telecommunications infrastructure eases a rapid flow of information, which increases processing of timely and all available information by economic actors in state and firm level. This is imperative for effective functioning of the economy in a country. The third pillar is called **macroeconomic environment**, which is so critical for business and overall competitiveness of a country. This pillar has 5 variables that are significant for a stable economy, namely, government budget balance, gross national savings, inflation, government debt, and country credit rating. **Health and primary education** is the fourth pillar and measured by using 10 variables, such as, infant mortality, life expectancy, HIV prevalence, quality of primary education, primary education enrollment rate, business impact of malaria and tuberculosis, etc. It is assumed that a healthy workforce and basic education have a positive impact on a country's competitiveness and productivity.

- **Efficiency enhancers:** Efficiency enhancers are the second sub-index of GCI, which consists of six pillars. **Higher education and training** are the first pillar, which focuses on both secondary and tertiary enrollment rates and the quality of education. The pillar also takes the importance of staff training into consideration because of the need for executing complex production and information processes by using well-educated work force. The second pillar, **goods market efficiency** deals with 16 variables such, as intensity of local competition, total tax rate, time to start a business, imports, degree of customer orientation, buyer sophistication, etc. Countries with efficient good markets will ensure that firms produce goods demanded by the market. Another pillar is called as **labor market efficiency**, which deals with subject such as, cooperation in labor-employer relations, hiring and firing practices, pay and productivity of labor, country capacity to attract and retain talent, female participation in the labor force, etc. These factors determine labor productivity and attractiveness of a

country for talents. **Financial market development** is the fourth pillar, which is measured by availability and affordability of financial services, ease of access to loans, venture capital availability, soundness of banks, etc. The fifth pillar of efficiency enhancers sub-index is **technological readiness**, which deals with conditions of FDI and technology transfer, availability of latest technologies, internet bandwidth, firm-level technology absorption, etc. The central point for this variable is that firms in a country need to have access to production and information and communication technologies in order to be more innovative for competitiveness. **Market size** is the last pillar of efficiency enhancers sub-index, which is measured by domestic and foreign market size, GDP, and exports (%GDP). Because large markets provide firms to benefit economies of scale, this pillar is traditionally important for firms' strategic makers in their decisions to invest abroad.

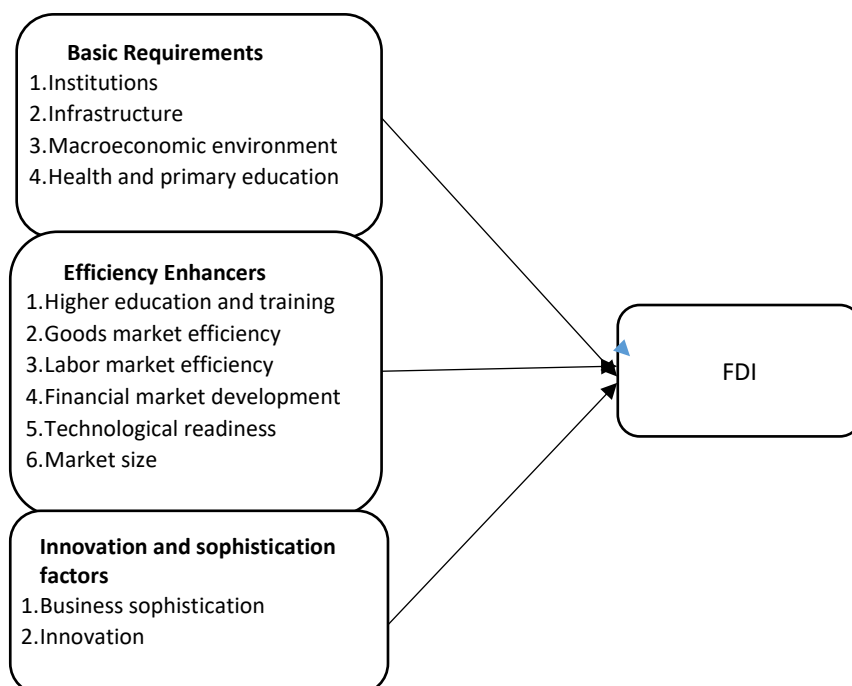
- **Innovation and sophistication factors:** This sub-index of GCI has two pillars: Business sophistication and innovation. **Business sophistication** pillar focuses on the quality of a country's overall business networks, and the quality of individual firms' operations and strategies. More specifically, the pillar is measured by variables such as, local supplier quantity and quality, state of cluster development, value chain breath, production process sophistication, extent of marketing, etc. **Innovation** pillar is measured by 7 variables, which focuses on designing cutting-edge products and processes by value added activities and advanced technologies. The variables for the measurement of this variables are capacity for innovation, quality of scientific research institutions, company spending on R&D, university-industry collaboration in R&D, PCT patents, availability scientists and engineers, and government procurement of advanced technology products.

GCI analysis the factors that play significant role in creating favorable business-climate environment in

a country and are important for attracting foreign investors. Taking above discussion into consideration, we propose a model that

summarizes the relationships between FDI and competitiveness sub-indexes and pillars.

Competitiveness Pillars



Model of the Study: The Relationship between Competitiveness Pillars and Foreign Direct Investment

3. Methodology

In this study, we investigate the relationship between competitiveness pillars and foreign direct investment attraction in developing European countries. More specifically, first, we would like to unravel the relationship between twelve competitiveness pillars and FDI in developing European countries. Second aim of this study is to find out whether this relationship reveal any difference, if any, between clustered developing European countries in. Our previous study (Develioğlu, 2019) pointed out that developing

European countries could be classified into two groups based on GCI’s classification of competitiveness pillars. The results of this study revealed that the first cluster (Cluster 1) consists these four countries: *Greece, Hungary, Russian Federation, and Turkey*. There are two countries that constitute second cluster (Cluster 2), which are *Czech Republic and Poland* (See, Table 1). As it can be observed from table, Cluster 2 countries have lower rank on GCI, which implies that these two countries are more competitive than Cluster 1 countries.

Table 1: Countries in Clusters and Their Global Competitiveness Ranks

Cluster 1	GCI Rank*	Cluster2	GCI Rank*
Greece	87	Czech Republic	31
Hungary	60	Poland	39
Russian Federation	38		
Turkey	53		

* WEF, The Global Competitiveness Report, (2017-2018).

(Source: Develioğlu, K., 2019)

In order to empirically examine relationships mentioned above, we used the data of WEF’s classification of “Global Competitiveness Index” pillars as independent variables and OECD’s FDI

inflows data as dependent variable for the years between 2009 and 2018. In the index, pillars have scores on a 1–7 scale, with 7 becoming the most desirable outcome.

In order to determine developing European countries, we used MSCI's "MSCI ACWI Index" (<https://www.msci.com/acwi>). In this index, 24 countries are listed, which are divided into three groups: America, Asia and Europe, Middle East & Africa. American group of the index consists of 5 countries: Brazil, Chile, Colombia, Mexico, and Peru. The second group of emerging countries list has 9 Asian countries: China, India, Indonesia, Korea, Malaysia, Pakistan, Philippines, Taiwan, and Thailand. The third group is Europe, Middle East & Africa group, which has 10 countries: Czech Republic, Egypt, Greece, Hungary, Poland, Qatar, Russia, Saudi Arabia, South Africa, Turkey, and United Arab Emirates. Among these 10 countries, we selected 6 emerging European countries and ended up with a list of following countries: *Czech Republic, Greece, Hungary, Poland, Russian Federation, and Turkey.*

To examine the relationship between competitiveness pillars and FDI, we employed a multiple regression analysis. The main purpose of this analysis is to understand which competitiveness pillar is more prone to explain any changes in FDI in developing European countries. Furthermore, we performed two separate multiple regression analyses in order to investigate the same relationship for clustered developing European countries.

4. Findings

Multiple regression analysis results in Table 2 indicate that the regression model is significant at 99% level. The change in FDI is significantly explained ($R^2= 0,75$; Sig. of $F=0,000$) by competitiveness pillars. Three pillars that have explanatory power in the model are market size ($\beta_1=0,784$; Sig. of $t=0,000$), goods market efficiency ($\beta_2=-0,395$; Sig. of $t=0,000$) and innovation ($\beta_3=0,271$; Sig. of $t=0,006$). Results also imply that remaining nine pillars do not have any explanatory power in attracting FDI in developing European countries.

As it can be inferred from Table 2 that, goods market efficiency has a negative impact on FDI in our sample. The results might show problems in intensity of local competition, effectiveness of anti-monopoly policy, total tax rate, time to start a business, etc. Addition to this, yearly statistics of goods market efficiency pillar show irregular characteristic and fluctuated a lot compared to other pillars. Analysis results revealed that the impact of innovation pillar on FDI is also significant. It means that, in most of developing European countries, an increase R&D spending, university-industry collaboration, patents and other innovation related variables correspond a simultaneous increase in FDI inflow.

Table 2: The Impact of Competitiveness on FDI in Developing European Countries

Independent Variables	Beta	Significance of t
Constant	-44533,1	0,019
Market size	0,784	0,000
Goods market efficiency	-0,395	0,000
Innovation	0,271	0,006
Institutions	0,001	0,992
Infrastructure	0,032	0,671
Macroeconomic environment	0,129	0,214
Health and primary education	0,052	0,500
Higher education and training	0,057	0,483
Labor market efficiency	0,047	0,657
Financial market development	0,007	0,949
Technological readiness	0,164	0,094
Business sophistication	-0,059	0,646
R^2	F	Significance of F
0,75	50,153	0,000

Dependent variable: Foreign Direct Investment (FDI)

In order to understand, which cluster performed better, we run two separate multiple regression analysis. Analysis results in Table 3 and Table 4 betrayed that for Cluster 1 and Cluster 2 countries, market size is the only influential variable that has the power to explain any change in FDI. It also shows us that multinational corporations see these

countries big markets and would like to exploit economies of scale. In this sense, any increase in GDP of these countries, will create an opportunity to sell and invest by multinational corporations.

Table 3: The Impact of Competitiveness on FDI in Cluster 1 Countries

Independent Variables	Beta	Significance of t
Constant	-77960,8	0,000
Market size	0,803	0,000
R ²	F	Significance of F
0,68	72,518	0,000

Dependent variable: Foreign Direct Investment (FDI)

Table 4: The Impact of Competitiveness on FDI in Cluster 2 Countries

Independent Variables	Beta	Significance of t
Constant	-44952,0	0,009
Market size	0,663	0,003
R ²	F	Significance of F
0,44	12,025	0,003

Dependent variable: Foreign Direct Investment (FDI)

5. Discussion and Suggestions

We should bear in mind that 12 pillars of competitiveness are not independent each other. They reinforce each other and a strength in one area has a positive impact in others. For instance, a weakness in favoritism in decisions of government officials, which is one of the variables in measuring institutions pillar, will have a negative impact on effectiveness of anti-monopoly policy, time to start a business, burden of customs procedures or government procurement of advanced technology products. The results are in line with economic theory's assumption that countries will follow stages of development, which starts with factor-driven factors and ends with innovation-driven performance. In our regression analysis results, we did not observe any of the basic requirements pillars, such as institutions, infrastructure and macroeconomic environment, as influential variables on FDI. These results can be explained by the level of competitiveness scores compared to each other. For our sample, mean values for competitiveness sub-indexes are: Basic requirements (mean= 4,69), efficiency enhancers (mean= 4,39) and innovation and sophistication factors (mean= 3,70). Evaluating these scores together, we can interpret that basic requirements scores of developing European countries are highest and these countries moved to second and to third stage in the development stage. Specifically, it means that these countries meet expectations of foreign investors and moved to the second and third stages, which are namely, efficiency enhancers and innovation and sophistication factors. It does not mean that they should not make any improvement in basic requirements, because 4,69 is still far away from the highest score of 7.

It is revealed in findings section that there are three competitiveness pillars that have an impact on FDI. The most influential pillar, market size, has an average score of 4,89/7, which shows us an upper-

middle level of competitiveness score. It implies us that there is still a long way to go in order to rise this score by increasing their GDP and exports. Good market efficiency pillar, with an average score of 4,27/7, has a middle level score. The most problematic characteristic of this pillar is its fluctuating structure year by year. It shows us that in developing European countries, there is no a stable or long-run policies that cause frequent changes in variables of this pillar. For instance, these frequent changes in total tax rate, trade tariffs or intensity in local competition would bother international decision maker in their decisions to go abroad or not. Innovation pillar also found to have an influence on FDI inflows to developing European countries. Although, its average score (3,37/7) is lower than medium, it is still an influential variable in attracting FDI inflows. Because R&D investments require a higher amount of financial resources, the role of state investment and policies are inevitable in increasing capacity for innovation. Furthermore, not only states but also private firms should invest on R&D in terms of production and communication technologies. At the same time, they should develop cutting-edge products and procedures in order to attract efficiency seeking foreign investors.

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