

The Impact of Economic Sentiments on Foreign Direct Investments

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Abstract

The main purpose of this study is the estimation of the impact of subjective determinants on foreign direct investments. Thus, by applying an econometric model, the volume of foreign direct investments is considered to be a dependent variable and the gross domestic product (GDP), the trade openness and the Economic Sentiment Indicator are considered to be independent variables for Germany, Finland, Italy, Netherlands and Great Britain, during thirty years (1985-2014). The main results indicate the fact that between investors' sentiments and their investment decisions is an inverse relationship only in case of Italy and Great Britain due to the cultural specifications met in these states in which the emotional factors seem to prevail the rational ones.

Key words: foreign direct investments, sentiments, gross domestic product, return
J.E.L. classification: F21, G02, G11

1. Introduction

The financial markets evolved in a more integrated frame, globally, due to liberalization of the controls and market access. This integration, accelerated by the increasing competition between market participants and by the introduction of new financial instruments with a large access on the market and lower transaction costs, attracted many investors from around the world. Also, the expansion of cross-border financial flows was accelerated through the technological innovations in communication and data processing.

The foreign direct investments (FDI) represent a key element in this fast evolution of international economic integration. Foreign direct investments are considered to be an appropriate way to create long-term, stable and direct links between the economies. In a suitable environment, these can be used as an important vehicle for the development of local enterprises, and they can contribute as well at the improvement of competitive position of the beneficiary ("host economy") and also of the investor ("source economy"). Also, the foreign direct investments are encouraging the transfer of technology and the know-how between economies, but they can also represent an opportunity for the host economy to promote its products on a large scale on the international markets. Beside the positive effect on the development of the international trade, the foreign direct investments also offer an important source of capital for the economies implied in the process.

The significant growth in the last decades of the level of foreign direct investments and also the accelerated spread on the international plan reflect on the one hand an increase of the number and volume of the individual transactions and on the other hand a bigger diversity of the enterprises from the industrial sector or of the economy as a whole. The big multinational companies are traditionally dominant players in this kind of cross-board investments. This development also coincided with a growing trend of multinational companies' participation in external trade. Besides that, in the past years it is desired for the small and medium companies to be involved more and more in the process of foreign direct investments.

Based on these considerations, the first part of this paper summarizes and describes the most important studies found in the literature review which addresses on the one hand objective determinants and on the other hand the subjective determinants of foreign direct investments. The paper continues by describing the methodology used to develop the empirical study and the main results obtained. The final part of the paper presents the conclusions and the remarks on the

submitted study.

2. Literature review

There are several theories which are trying to explain the determinants of the foreign direct investments. These theories represent significant steps towards the development of a systematic framework for the emergence of foreign direct investments. Thus the following questions can be answered: What are the factors that attract foreign direct investments? What are the expected benefits of multinational companies when they invest in a foreign country? In order to answer these two questions, an analysis of two different but interconnected levels was required: 1) the identification of classic, objective determinants of foreign direct investments present in research studies performed over time; 2) the formation of a modern vision concerning the subjective determinants of the foreign direct investments using the investment psychology approach while identifying possibilities of measuring the investors' sentiments.

Over the last decade the changes that arose in the global economic and political environments have sparked a new interest in the foreign direct investment field. As a consequence the development activities of multinationals as foreign direct investment have increased at a rate faster than the growth of international transactions. There are many theories that try to explain the determinants of the foreign direct investments. These theories represent important steps towards the development of a systematic framework favorable to the emergence of foreign direct investments.

Regarding the analysis of the impact of the foreign direct investment determinants on their volume change, the literature discusses many controversies resulted from the undertaken studies.

The ODI (1997) specifies that the econometric studies, which compare different countries in terms of FDI, show a significant correlation between the investment flows and the market size, the latter representing a substitute for the gross domestic product level as well as some of its characteristics, such as the average income or the level and growth rate. Some studies have shown that the growth rate of the gross domestic product is a more relevant explanatory variable compared to the gross domestic product indicator. This is due to the fact that in case of very low current size of the national income of a country, its growth may be less relevant to the investment decision and in this case relevance is given to the indicator which reflects the growth potential of the market. Jordaan (2004) notes that investments will go to countries with wider markets, which have larger purchasing power, markets from which investors will be able to obtain a higher return on equity and therefore higher profit as well.

Another determinant of the foreign direct investments debated in the literature is the rate of market opening to free trade measured by the sum of imports and exports reported in the GDP. Thus in his study, Edwards (1990) tested the significance of market openings regarding the attracting of investment flows in developing countries by identifying a significant positive relationship between investment flows and market opening to free trade. A few years later, Chakrabarti (2001) conducted another relevant study which confirmed the positive link between the two variables.

Regarding the cost of human capital and labor productivity, the literature does not show any unanimity regarding the results obtained from studies about the importance of wages in the process of attracting foreign direct investment. Likewise, Beer and Cory (1996) investigated the investments of the American entrepreneurs in eleven of the twelve EU countries concluding that a high level of labor remuneration discourages foreign direct investments. ODI (1997) states that a correlation between investment flows and a relatively higher remuneration degree is supported only in industries that require a higher workforce consumption or in export-oriented investments.

The results of studies are vast when it comes to quantifying the influence of tax incentives on the foreign direct investments. Some studies demonstrate that a high level of taxes induces a considerably negative effect on investment flows while other argue the opposite. Loree and Guisinger (1995) note that the tax policy causes a significant negative influence on the allurements of foreign direct investments. However, Porcano and Price (1996) present an analysis about the importance of fiscal policies and non-fiscal incentives in the context of the investment decisions of the American, British, French, German and Japanese entrepreneurs. The study results indicate that the tax system does not present a significant determinant of the investments.

Another level analyzed in this paper refers to the identification of possibilities for measuring the impact of subjective determinants on foreign direct investments through a series of indicators which measure the investors' sentiments. In the recent past the question was raised whether there is a link between the investors' sentiments, the share prices and the economic activity (Brown and Cliff 2005; Baker and Wurgler 2006, 2007). Thus, in most studies, the results show a link between the indicators that measure the investors' sentiments on the one side and the share prices or the economic activity on the other hand.

Thus, further research of this topic is necessary in order to obtain a concrete vision and perspective on the role of sentiments and their meaning. Although the literature provides research studies that are focused on indicators which express "native sentiments", researchers are beginning to orient their attention towards indicators that measure the so-called "foreign sentiments", with the consideration that these indicators have the ability to influence prices or even local the market performance.

Although to our knowledge there are no studies in the existing literature which analyze the correlation between the investors' sentiments and the foreign direct investments, we do find however many analyses which describe the manner in which sentiments and other psychological variables influence the investment behavior.

In a larger study, Jansen and Nahuis (2003, 2004) investigated European countries between the years of 1986 and 2001. The countries belonging to Central and Eastern Europe were excluded from the analysis. The authors find that the market share prices are influenced by consumer confidence, which shows a positive influence on a short-term analysis period, but a negative influence on a long-term analysis period. This can be explained by price deviations from the fundamental value on short-term, although these deviations are corrected on the long-term. Within just one year, Brown and Cliff (2005) raised the question of the association between the investors' sentiments and the stock market performance, considering not only the daily performance but also the weekly and monthly performance. The regression analysis results indicate that the investors' sentiments are not able to influence the stock market performance on a short-term. However, in the same study, the results are completely different when taking into account a longer period of time. Actually the authors say that the investors' sentiments can exert very well a positive influence on the performance within an interval of two to three years.

In another study of the investors' sentiments, Finter et al. (2010) investigated whether these sentiments had an impact on the performance from the stock market in Germany. In this study they included all issuers of financial assets during 1993-2005. The results of the study highlighted similar conclusions regarding the relationship between variables, namely that the indicator that reflects the investors' sentiments has no predictive power over future performance. These results are consistent with the fact that the investors' sentiments represent a small importance when it comes to a market which includes mainly institutionalized investors.

Beckmann et al. (2011) examined the importance of various indicators that measure sentiments in four Central and Eastern European countries. These countries are: Poland, Hungary, Slovakia and the Czech Republic. On the one hand they analyzed the importance of the investors' trust in these financial markets while on the other hand they concentrated on the relationship between the domestic product and the stock prices on the market. The authors distinguish different dynamics between short-term results and long-term results regarding the investors' sentiments noting their important role in the markets analyzed in this context.

3. Data and methodology

Traditionally scientists have attributed special importance to explaining the change of some economic variables under the impact of certain classic, objective determinants but in recent years the studies have begun to develop their own area of coverage showing interest in explaining the economic variables through behavioral indicators specific to behavioral finance.

Thus, in order to examine the relationship between the foreign direct investments and both objective and subjective investment determinants, I took into consideration the relevant indicators found in the studies performed so far. In order to represent the foreign direct investments I took into consideration an indicator which expresses their volume and in order to represent the

determinants I took into consideration the market size measured by the gross domestic product (GDP), the opening rate of the market to free trade measured by the sum of imports and exports reported in the GDP and, in the end, an European indicator well known in behavioral finance, as the Economic Sentiment indicator (ESI).

The data needed for the case study are taken and calculated by different organizations as follows: the series of data representing the foreign direct investments, the GDP and the indicator of the market opening flow to free trade were taken from the World Bank and those representing the economic sentiment indicator from the European Economy - European Commission. The analysis period for which this testing was performed was thirty years, namely the years 1985 – 2014, for five European countries: Germany, Finland, Italy, Great Britain and Netherlands. The reason I selected these economies is due to the fact that the data set used for testing did not present any gaps among them. The methodology used for the execution of the empirical study consisted of the application of an econometric model in which we considered, on the one hand, an indicator present in the literature, namely the indicator expressing the volume of foreign direct investments rendered by their flow of inputs in an economy (Foreign Direct investment - FDI), and, on the other hand, a number of determinants of the investments, namely the gross domestic product (GDP), the rate of market opening to free trade (Trade openness) and the Economic Sentiment indicator (ESI).

The data used in the model were processed as growth rates of indicators, using the next formula:

$$\text{Indicator value} = \frac{\text{Indicator value} - \text{Indicator value } (t-1)}{\text{Indicator value } (t-1)} \quad (1)$$

A number of stationary tests were applied on the considered variables (Augmented Dickey-Fuller, Dickey-Fuller GLS (ERS) and Phillips-Perron) in order to avoid erroneous results.

The proposed model has the following general form:

$$\text{FDI } t = \beta 1 * \text{GDP } t + \beta 2 * \text{TO } t + \beta 3 * \text{ESI } t + \varepsilon t \quad (2)$$

where:

FDI t – Foreign Direct Investment

GDP t –Gross Domestic Product

TO t– Trade Openness

ESI t –Economic Sentiment Indicator

εt – standard error

4. Results

The following section discusses the results obtained by applying an econometric model to estimate coefficients of the independent and dependent variables used in the regression equation. It also includes references to the coefficients' meaning and their economic interpretation in order to determine the impact of the considered determinants on the volume of foreign direct investments.

The table below shows the results of applying a regression in which I considered the volume of foreign direct investments to be a dependent variable and the GDP together with the rate of market opening to free trade and with the Economic Sentiment Indicator to be independent variables in order to represent the investment behavior considered within Finland, Germany, Italy, Netherlands and Great Britain over the analyzed period.

Table no. 1 Results of the regression analysis

Variables	Coefficients				
	Finland	Germany	Italy	Netherlands	Great Britain
Gross Domestic Product (GDP)	0.3078*** (0.0795)	0.2046*** (0.0496)	0.3383*** (0.0806)	0.2399*** (0.0712)	0.5647*** (0.0924)

Trade Openness (TO)	1.4507*** (0.1867)	1.2640*** (0.1220)	1.3451*** (0.1705)	1.4981*** (0.1960)	1.5743*** (0.2172)
Economic Sentiment Indicator (ESI)	-0.0186 (0.1278)	-0.0191 (0.0768)	-0.2162* (0.1095)	0.0095 (0.1112)	-0.2066* (0.1027)
R-squared	0.7019	0.7797	0.5783	0.7035	0.6070
Adjusted R-squared	0.6790	0.7627	0.5458	0.6806	0.5768

Source: Author's personal estimations

*, **, *** denote significance at 10%, 5%, 1%
() standard deviation

As for the results which refer to the impact of the considered determinants on the foreign direct investments, the influence exerted by the representative indicators of the objective determinants is straightforward, meaning that an increase in the gross domestic product (GDP), which represents the market size, respectively an increase of the market opening to free trade, representing the trade openness, leads to the increase of foreign direct investments in the considered countries. When it comes to subjective determinants, the econometric results differ from one country to another. The Economic Sentiment Indicator (ESI), which represents one of the behavioral indicators specific for the behavioral finance, on the one hand exerts an inverse influence on the foreign direct investments in countries such as Italy and Great Britain, and, on the other hand, it does not present statistical significance in countries such as Finland, Germany and Netherlands. A viable explanation for these differences in the results on the impact of investors' sentiments on the volume of foreign direct investments in the five considered countries refers to cultural differences and cultural specificities found in each one of them.

5. Conclusions

Throughout this work I aimed at achieving an incursion into the literature with the purpose of presenting theoretical issues related to the degree of influence of the change of economic variables, at observing the impact of certain classic, objective determinants and at the explanation of economic variables through behavioral indicators, specific to behavioral finance.

For a better understanding of the results related to the negative impact of the investors' sentiments on investment decisions, it is important to present some explanations from the theory of behavioral finance which refers to the links that can be created between the mood of the investor and his decision to take risks. Thus, in recent decades a theory was proposed and debated. The purpose of this theory was to describe the connection between the mood and the risk taking, namely the Mood Maintenance Hypothesis (MMH) enunciated by Isen, Nygren & Ashby (1988). The Mood Maintenance Hypothesis model is based on the idea that regardless of the current mood, the main purpose of any person is to achieve and maintain his own well-being. More specific, this theory finds explanations for two different situations that individuals may encounter: on the one hand, by having a good mood they will avoid risky situations in order to keep the current state, while on the other hand, individuals with a less good mood will choose riskier alternative investments hoping for the possible gains to improve their disposal.

By correlating these explanations with the obtained results I believe that in countries where this reverse link is highlighted, the emotional factors seem to prevail over the purely rational ones. Furthermore when investors are in a good mood they are unwilling to take risks by making investment decisions with the purpose of keeping that good feeling. This idea is also supported by Parker & Tavassoli (2000) and Kliger & Levy (2002) who demonstrated that individuals with a good mood have a greater aversion to risk.

As for the limits of the empirical study, data availability has presented an obstacle in carrying out a more exhaustive econometric analysis. Keeping in mind the obtained results, this paper can be extended by introducing other significant indicators for improving the considered model and it can also generate new relevant explanations for a better understanding of the influence of objective

and subjective determinants on the foreign direct investments. By extending the empirical study a larger number of countries could be analyzed. These countries could be grouped according to the regions in which they are located resulting in a more comprehensive analysis. Thus, other potential determinants of foreign direct investments could be identified (depending on the region in which the country is located or depending on the activity branch), determinant which could remain unidentified when the analysis is performed on a microeconomic level.

6. References

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