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THE IMPACT OF E-COMMERCE ON FOREIGN DIRECT INVESTMENTS

Abstract

Foreign Direct Investment (FDI) has been one of the topical issues in international economics, especially, from the past decade. Empirical research on relation between E-commerce and economic factors, such as FDI, has been relatively scarce even though there has been a lot of work on the trends in FDI and E-commerce. This study attempts to examine the trend of Foreign Direct Investment (FDI) and its relationship with some selected economic indicators such as exchange rate, inflation, interest rates, Gross Domestic Product (GDP) and E-commerce market size. Yearly data on FDI in USA was used for the study spanning from 2000 to 2018. Results from the study indicated that FDI inflows into the country had experienced an increasing trend and E-commerce and interest rate played a significant role in attracting FDI into the country.

Key words: e-commerce, FDI, Multiple Regression, liberalization.

Introduction

According to eMarket [1], the global e-commerce market will reach $ 5 trillion in 2021. Today, it is an integral part of the economy of any country, whether developed or developing. In scientific works e-commerce is generally regarded as the result of globalization processes and the emphasis is placed on exploring its impact primarily on traditional trade and on the economic development of countries and regions in general. Despite the fact that e-commerce has many economic implications, there is clearly a lack of research on this.

Foreign direct investment (FDI) is an important resource of capital and competence for developing countries. The high level of development of e-commerce can be one of the indicators of a healthy state of the economy of the country and can promote the inflow of FDI to the country.

The subject of this study was the liberalization of the investment climate, and in particular e-commerce in the United States as factors influencing FDI.

The purpose of this paper is to test the relationship between e-commerce and FDI, to determine its nature and saturation, and to build a model that could predict the impact of e-commerce on FDI. For this purpose, a number of tasks were defined: form a database that would include all the factors that could determine the size of FDI, check the relationship between these factors, and build a model for testing the hypotheses of adequacy and representativeness.

The scientific novelty of this work is a comprehensive quantitative analysis of the impact of e-commerce on foreign direct investment.

Literature overview

E-commerce researches mostly focus on the factors that affect e-commerce volumes and distribution and on the important role it plays in economic globalization. When domestic scientists study e-commerce in international commerce, they are mainly focused on how small and medium-sized enterprises use e-commerce to support international trade. Overall, these studies focus on the shortcomings in the application of e-commerce in international trade. Studies tend to focus on the description of phenomena rather than on the necessary empirical analysis.

The Lei Yao and Zheng-yao Yan (2019) [2] study examines the impact of China's e-commerce and foreign direct investment (FDI) on traditional import and export trade, and discusses measures to be taken to promote the coordinated development of cross-border e-commerce. and traditional import-export trading in a world where cross-border e-commerce is booming. The article provides a regression empirical analysis of data collected from 2008 to 2018. The results show that the development of traditional imports and exports is affected by both cross-border e-commerce and foreign direct investment. However, the link is of a different nature: if foreign direct investment contributes to the growth of traditional trade, then e-commerce, by contrast, will reduce exports and imports by replacing part of it.

Mabintu Mansaray and Hanjia Bin (2016) [3] investigate the impact of e-commerce on the level of trade openness in Africa using country-level panel data from 1990 to 2013.

Several additional variables were included in the model to control for bias in adequacy estimates. Estimation using uniform weights for both the ordinary least squares (OLS) method and the generalized moment method (GMM) estimates indicates a significant positive relationship between e-commerce and trade openness in Africa. In addition, the study also gives an idea that FDI may or may not affect trade openness, depending on which industries use FDI. FDI correlates with an increase in exports in the short term, but not in the long run.

In their study, Jingting Fan, Lixin Tang, Weiming Zhu, and Ben Zou (2018) [4] show how e-commerce can increase internal trade and reduce inequality in spatial consumption because it (1) eliminates fixed entry costs and (2) reduces the impact of distance on trading costs. Using unique data from China's leading e-commerce platform, researchers provide data that meets these two functions: online shopping is less complicated than offline shopping, and residents of smaller and more remote cities spend most of their income online. The paper builds a multi-regional model of general equilibrium to quantify the impact of e-commerce on domestic trade and well-being. It has been identified that, although e-commerce partially displaces long-distance trade, the emergence of e-commerce increases aggregate domestic trade. E-commerce welfare growth is an average of 1.6% and about 30% more for cities with the smallest population.

Results

In this study, statistical tools such as trend models and regression were used for the analysis. The object was the US economy as an example of a developed economy with a lot of data. The first part of the section looks at the trends in foreign direct investment in the United States over the past 19 years (Fig. 1).

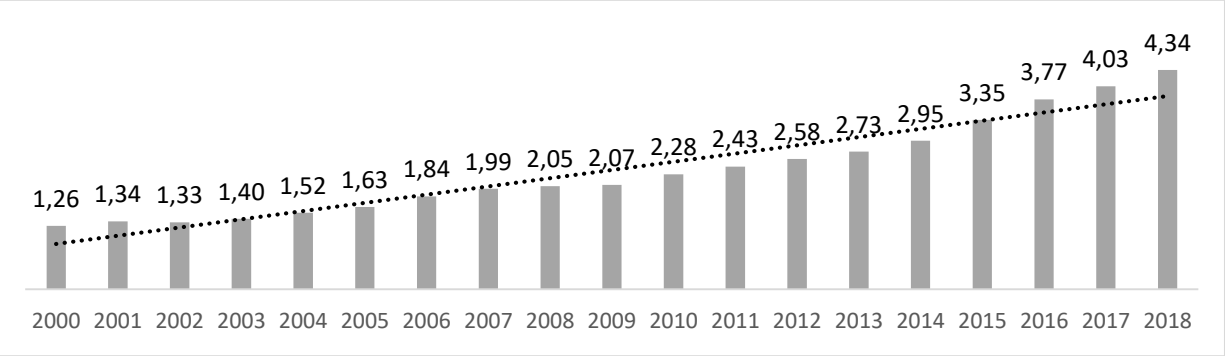

Fig. 1. USA FDI dynamics

Source: [4]

As we can see, there is a trend of gradual growth at a high rate ($163B of additional investment every year during the study period) and a marked acceleration in the last 5 years. Even during the Great Recession (2007-2008), there was a slight increase. The presence of an upward pronounced linear trend is explained primarily by the investment attractiveness of the United States because of developed stock market, private enterprise and advanced infrastructure.

The purpose of this study is to investigate the relation between foreign direct investment and e-commerce in the country. However, it is clear that investment is determined by the whole system of economic factors. Therefore, a number of economic determinants were selected to further investigate their impact on foreign direct investment in the United States. The choice of variables was primarily based on general economic considerations and statistical measures. In addition to the volume of the e-commerce market, the USD / EUR exchange rate was chosen, which characterizes the advantage of trading with the main trading partner of the USA - the European Union; inflation and interest rate, as a characteristic of the current state of the economy and monetary policy of the state; and GDP, as the most integral indicator of economic performance.

On the basis of the collected data, a multiple regression was constructed, which took the following form:

$$Ln(FDI) = 14.13 + 0.09Ecommerce - 0.01Inflation$$

Table 1

Regression model characteristics

Measure	*Coefficients*	*Standard error*	*t-statistics*	*p-value*	*Adjusted R Squared*	*Significance F*
Intercept	14,13	0,06	221,46	2,51E-29		
E-commerce	0,000010	0,00	17,20	9,68E-12	0,95	1,37E-11
Inflation	-0,013678	0,02	-0,69	5,01E-01		

Source: author calculations based on [4]

The model shows that e-commerce market size and inflation rate on 96% determine the level of foreign direct investment in the country. Both factors are significant at the 99% reliability level. Based on the model, e-commerce has a positive impact on foreign direct investment: by increasing the e-commerce market by $ 1 million. FDI increases by 0.09%. The model itself is also adequate, based on significance of Fisher's statistics.

Conclusions

The main scientific value of this work is the quantitative analysis of the impact of e-commerce on foreign direct investment. Based on a built-in regression model, we can conclude that there is a significant relationship between e-commerce and direct investment. This link can be explained both by the direct improvement of infrastructure and business in the country and indirectly as an indicator of economic growth and improvement of the investment climate. The results of this study may be useful in terms of building long-term strategies for developing countries and regions, taking into account the direction and strength of the relationships being explored.

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