

Foreign Direct Investment and Gross Domestic Product in Kazakhstan

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ABSTRACT

The study explores a relationship between foreign direct investment and gross domestic product in Kazakhstan. It was found that, in general, Kazakhstan remains the leader in the sphere of investment attracting among the Central Asian countries. The risks of investing in other countries of Central Asia seriously exceed the risks of investing in Kazakhstan. The capital and investment, along with human resources, is an important development center. Foreign direct investment played an important role in the economic growth of developed countries. Almost every developed country has assisted foreign financial institutions in addition to its own small savings in the early stages of its development. Kazakhstan is known as a developing country in the center of Eurasia, which attracted over 151 billion of USA dollars since its independence. The aim of the study is to find out the relationship between foreign direct investments and Gross Domestic Product. The study proved the fact that foreign direct investment does significantly positively affect Gross Domestic Product in Kazakhstan. Thus, we can make a practical conclusion that these results can be helpful as a base for the new researches as well as for the practical implementation and potential government' use in Kazakhstan. The further research may employ such variables as exchange rate, inflation rate. Some new methods can be employed such as Ordinary Least Squares. Practically, policy makers should take into consideration the fact that foreign direct investment positively and significantly affects Gross Domestic Product.

Keywords: GDP, Foreign investment, Economy, Apital, Economic growth, Development

JEL Classification: F43.

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1. INTRODUCTION

Since the end of 1980 foreign direct investments became the largest source of potential growth and finance for developing and transition economies, so the majority of such countries started the improvement of their investments climate towards favorable for attracting FDI (Kotrajaras *et al.*, 2011). Theoretical literature of different authors suggests opposite points of view, concerning the effects of foreign direct investments in the country-recipient. On the side of advantages there are the import of new technologies, knowledge, experience and management (Yu *et al.*, 2011). Kotrajaras *et al.* (2011) are reporting that FDI can possibly stimulate the economy through the international trade channel by augmenting domestic capital for exports, facilitating access to new and large foreign markets, providing training programs to the local workforce.

However, despite the fact, than in theory, capital inflows should offer large benefits to the country-recipient, there are some other studies, which are standing out for the economy instability, which is caused by foreign direct investments. For example, Melnyk *et al.* (2014) mentioned the repatriation of profits, which represents the outflow of the profits from the foreign transnational companies into origin economies, by thus damaging the host-country's economy. Also it was mentioned that there is a "market stealing" effect, when domestic firms are not so productive compared to the foreign ones. Another negative effect is that companies with foreign direct investments can drawn highly qualified workforce, consequently may cause brain drain.

Overall, the issue of the role of foreign direct investments in economic growth is hotly argued, especially in recent years, in the times of crisis (2011), when the dynamics of FDI growth extremely increased around the world (Róžański, 2014).

Kazakhstan is known as a developing country in the center of Eurasia, which attracted over 151 billion of USA dollars since its independence. According to Lee (2015) Kazakhstan could become natural point of FDI integration between growing Asia and progressive Eastern Europe. "Macroeconomic stability and growth potential made a huge contribution to investor's willingness to invest in Kazakhstani economy" (Ernst & Young, 2010). The research aim is to find out the relationship between foreign direct investments and GDP. The research objectives and hypotheses are as follows (all concerning Kazakhstan):

Question 1. What kind of relationship is there between foreign direct investments and GDP?

Hypothesis 1. GDP is positively affected by foreign direct investments.

2. LITERATURE REVIEW

Kotrajaras *et al.* (2011) analyzed trends of GDP growth, FDI and other economic conditions to determine the relationship between FDI and economic development with GDP as a measure. It was found out that although the relationship between FDI and GDP growth were negative in some of East Asian economies before 1997, after 2000 almost all turned positive. Adeolu (2007) made an OLC regression and found out that FDI has a positive impact on growth, but high level of human capital and trade openness can help FDI to contribute more into economic growth. Kotrajaras *et al.* (2011) based on their panel cointegration analysis made a conclusion that FDI has a positive relationship with economic growth (GDP as a measure) in high-income and middle-income countries. And according to World Bank list of economies (July 2016), Kazakhstan is the upper-middle-income country. As a continuation, low-income countries do benefit less due to the low degree of trade openness, low level of financial development and high level of corruption.

Sapienza (2010) made a comparative analysis of two sides of the impact of the role of FDI. As growth-enhancing factors in transition and developing countries, the author provided following points. Firstly, foreign direct investments advocate as a bundle of enhancing the quality capital stock, transferring the innovation and

technology, thus behaves as a catalyst to the level of competition in a host country. In contrast to the mainstream theories, the author suggests that foreign direct investments can also have a negative impact on economic growth due to different reasons. And, one of them is that FDI performs as transferring capital-intensive technology instrument, bypassing to match the factor of local supplies in a host-country, by creating a displacing effect and deforming the development of local industry. Sapienza also noted the view of [Agosin and Mayer \(2000\)](#) that foreign direct investments decreases the availability of finance for regional firms, due to the multinational companies' access privileges, by that enforcing long-term costs to the host-economy. Taking into account previous point, the author makes a conclusion that positive impact of FDI on economic growth depend on local conditions. Also the author observes the impact of FDI on the rates of economic growth of 25 transition economies for the period from 1990 till 2005 and found out that FDI inflow of 25 countries steadily increased from about 3.3 billion USD in 1990 to about 74 billion USD in 2005, from 0.9 percent to 3.5 percent of Gross Domestic Product (GDP) during this period of time. [Sapienza \(2010\)](#) determines that "lagged FDI" has a positive effect on economic growth due to the fact that brought technologies and know-hows need a time to be assimilated, but "current FDI" has a negative effect due to the mentioned above disposition effect on regional firms.

[Yao and Wei \(2007\)](#) argued that foreign direct investment is an intense catalyst of economic growth for a newly manufacturing economy, due to its dual role as a transmitter of production efficiency. Another study proposing that FDI inflows has been hugely positive for Southeast European countries was done by [Demekas et al. \(2007\)](#). As for a contrast, [Qi \(2007\)](#) argued that the relationship between growth, total investments, and foreign direct investments inflow had mixed results. It was mentioned that countries, which are heavily dependent on petroleum export had more difficulties than other countries in benefiting from FDI. [Lee \(2015\)](#) in their article indicated that FDI inflows in Kazakhstan show that the mining and quarrying industry makes up about 48 percent (total 24.6 billion US dollars); manufacturing industry is 10.8 percent (5.5 billion US dollars); wholesales and retail trade sector is 3.6 percent (1.8 billion US dollars); transport and communications sector is 2 percent (1 billion US dollars); and the real estate industry is about 29 percent, with 15 billion US dollars of investments. The authors concluded that there is no correlation between FDI inflows and economic growth in Kazakhstan, and the hypothesis, that there is a relationship cannot be rejected. This means FDI inflows has indirect effect on the economic growth in Kazakhstan. According to the authors, their results supports an argument that natural resource-seeking FDI may not have a direct effect in enhancing the economic growth of a developing country by comparison with fixed capital investment, which does have a direct effect in enhancing the economic growth of a developing country.

[Ozturk and Kalyoncu \(2007\)](#) study points out that it is GDP that causes FDI in the case of Pakistan; while for Turkey, there is a strong evidence of bidirectional causality between the two variables.

Abbas and co-authors studied the FDI impact and GDP dynamics of South Asian Association for Regional Cooperation member countries ([Abbas et al., 2011](#)). The study has concluded that the overall model in these countries has established a positive relationship between FDI and GDP, and the negative relationship between the consumer price index and GDP. This conclusion was tested using several regression models. The data of the SAARC countries ranged from 2001 to 2010.

As it was noticed before, [Melnyk et al. \(2014\)](#) advocated two sides of impact of foreign direct investments on economic growth. On the side of positive influence, there were listed following points. First is the stimulation of the development by newly appeared productive foreign companies. Second is the "technological diffusion", introduced by firms accepting foreign capital and spreading to related companies in a form of technical support of suppliers (customers) and business environment. On the side of negative influence, the author stating two effects: repatriation

of profits (which represents the outflow of the profits from the foreign transnational companies into origin economies) and “market stealing” effect, when domestic firms are not so productive compared to the foreign ones. Host countries do develop their economies faster with higher indicators of infrastructure, bank reforms and institutional police. Therefore, transition and developing economies should pay more attention to the business climate (Melnyk *et al.*, 2014).

3. METHODOLOGY

Foreign direct investment data was retrieved from World Bank’s official website for the period of time between 1994–2016 years, and the data for Gross Domestic Product was retrieved from World Bank official website for the same period of time. Only one country was employed in the study, which is Kazakhstan. In order to find out the relationship between foreign direct investments and GDP, the regression analysis was employed in Excel. The regression and correlation analyses make it possible to establish and evaluate the dependence of the study random variable 'y' on one or more other values of 'x', and to predict the values of 'y'. The parameter 'y', the value of which is to be predicted, is a dependent variable or indicator-factor. The parameter 'xi', which values are given, and which affects the values of 'y', is called an independent variable. The regression analysis is a method for modeling an analytic expression of stochastic dependence of the features under study. The regression equation shows how, on average, the value of 'y' varies with any of 'xi' value change, and has the following form:

$$Y=f(x)$$

where: y is the dependent variable (it is always one);

x is the independent variables (one or more).

In this case we will consider:

$$GDP=f(FDI)$$

It is important to remember that the implementation of the correlation-regression analysis requires a fairly large number of observations of the indices of the dependent and independent variable (in order to obtain sufficiently reliable estimates - at least 30), since it is the mass nature of the observations that makes it possible to reveal the regularity against the backdrop of random phenomena. Scientists assume that as a result of such regression-correlation analysis, regression dependence will be built (that is, regression analysis will be performed) and the coefficients of its tightness and significance will be calculated. (i.e. the correlation analysis will be performed).The main task of the correlation-regression analysis is to show the form and tightness of the relationship between the dependent and independent factors. The advantage of regression analysis lies in the fact that it is based not only on the general conclusion about the cause-and-effect mechanism, but also on specific information about the form and type of the given dependence of variables.

The correlation-regression analysis of the impact of Foreign Direct Investments (FDI) on the GDP

ANOVA					
	df	SS	MS	F	Significance F
Regression	1	4,81853E+22	4,81853E+22	13,94020608	0,001652534
Residual	17	5,87616E+22	3,45657E+21		
Total	18	1,06947E+23			

Source: SPSS

Table-1. Summary Output

Regression Statistics	
Multiple R	0,671232531
R Square	0,45055311
Adjusted R Square	0,418232705
Standard Error	58792573753
Observations	19

Source: SPSS

First of all, the most important indicator is multiple R, which is the correlation coefficient. It tells us how strong the linear relationship is. For example, a value of 1 means a perfect positive relationship and a value of zero means no relationship at all. It is the square root of r squared. The linear correlation coefficient takes values from -1 to +1. The connections between the signs can be weak and strong (tight). Their criteria are assessed on the Cheddock scale:

- 0.1 < rxy < 0.3: weak;
- 0.3 < rxy < 0.5: moderate;
- 0.5 < rxy < 0.7: notable;
- 0.7 < rxy < 0.9: high;
- 0.9 < rxy < 1: very high;

In the case of relationship with influence of FDI on GDP we have 67%, more than a 50% that means the relationship can be determined as notable one. That means increasing of FDI variables causes the GDP variable to rise also.

Second, r-square is the coefficient of determination. In our case, 0.45055311, or 45.05%. This means that the calculated model parameters at 45.05% explain the relationship between the parameters studied. The higher the coefficient of determination, the better is the model or in another words, 45.05% of FDI changes are leading to the change in GDP values.

4. CONCLUSION

It was found that, in general, Kazakhstan remains the leader in investment attracting among the Central Asian countries. The risks of investing in other countries of Central Asia seriously exceed the risks of investing in Kazakhstan.

The capital and investment, along with human resources, are an important development center. Foreign direct investment played an important role in the economic growth of developed countries. Almost every developed country has assisted foreign financial institutions in addition to its own small savings in the early stages of its development. As if FDI inflow increases by 1%, GDP is suppose to increase also, but by 0.69%. Additionally, 45.05% of FDI changes are leading to GDP changes.

Thus, we can make a practical conclusion that these results can be helpful as a base for the new researches as well as for the practical implementation and potential government' use in Kazakhstan. The further research may employ such variables as exchange rate, inflation rate. Some new methods can be employed such as Ordinary Least Squares, Cointegration techniques and Generalized Method of Moments. Practically, policy makers should take into consideration the fact that foreign direct investment positively and significantly affects gross domestic product.

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