

The Relationship between FDI, Diversification and Economic Growth in Natural Resource Oriented Countries: Case of Kazakhstan

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Abstract

This paper investigates the relationship between foreign direct investment (FDI) and economic growth as a factor of diversification of economy of Kazakhstan. To analysis economic structural change as transition economyinnatural resource oriented countries, we examine both the natural recourseand manufacturing sectors affect to economic developmentfrom 1994 to 2013. Modified model from basic multiple regression model included Gross Domestic Product, Human Development Index, Gross Capital Formation and Foreign Direct Investment. We found that there is significant relationship among GDP, FDI and Gross Capital Formation. But there is no dependency between Human Development Index and GDP.However, FDI into manufacturing and commodity sectors show different results that has less effect on GDP.

Keywords: FDI, Economic growth, Oil and Gas, Diversification, Kazakhstan

JEL Classification:C22, F13, F21

1. Introduction

In the 1990s, foreign direct investment (FDI) became the largest single source of external finance for developing, emerging and transition economy. The globalization process of FDI has overtaken the borders of economy. The relationship between FDI and economic growth in host countries remains one of the most important issues in international business and economic literature. International Monetary Fund (IMF) states "The acquisition of at least ten percent of the ordinary shares or voting power in a public or private enterprise by nonresident investors. Consequently direct investment involves a lasting interest in the management of an enterprise and includes reinvestment of profits". They expand this market by investing in projects abroad (Salike, 2015).

Nowadays,the impact of globalization has completely redefined the way of doing business around the world. Globalization process expands marketplace as well as competition and globalization cover not only social life, but also economy, policy, international relations, social areas, culture, security. Many countries as transition economy understood the impact of FDI on the growth of economy. For instance, China realized that FDI is a good opportunity to increase its economy as well as go abroad with its own FDI into other countries. Thus, growth domestic product indicators started to increase dramatically in the end of 1970th and the beginning of 1980th (Agrowal, G., 2011).

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Respectively, Kazakhstan shows itself as developing country in the center of Eurasia and promises with its economic, social, political indicators to be attractive for a long time. The country that located at the crossroads of the former Silk Road can become a lucrative trade route between China and the West countries. Kazakhstan could become a natural point of integration between the growing tigers of Asia and progressive democracies of Eastern Europe. Macroeconomic stability and growth potential made three huge contributions to investors' willingness to invest in of Kazakhstan economy (Ernst and Young, 2010). Favorable business climate and political stability promoted a considerable FDI inflow to Kazakhstan. Kazakhstan has been attracted gross FDI of over 190 billion USD since 2005. And the FDI to GDP ratio was one of the highest among rapid-growth markets in 2011 (<http://stat.gov.kz>).

For the most part, natural resources as well as other potential sectors of growth of agriculture, logistics and transportation make Kazakhstan attractive to foreign direct investment. Kazakhstan is well known for its dependency on extracting mineral resources and raw materials. That is why many investors seek the project which will have positive and quick return in a short period of time. It is difficult for a young country with small economy and market to attract investment projects on non-commodity sectors, especially in manufacturing sectors. There are a lot of reasons of developing manufacturing clusters and try to deny from oil sector at all.

The purpose of this study is to investigate the FDI inflow in Kazakhstan and especially to analyze whether foreign direct investment has an effect on economic factors as GDP and other factors as gross capital formation and human development index to run multiple regression analysis.

The reminder of the paper proceeds as follows. Section 2 gives some theoretical framework and its previous studies on FDI effect on economic growth. Section 3 gives view of FDI inflow and economic growth in Kazakhstan. Section 4 focuses on the methodology and test the hypothesis. The Kazakhstani sample, the data collecting method and proceedings are explained and described. Section 5 deals with the estimation technique and the empirical analysis of the results. Section 6 concludes the paper.

2. Theoretical and empirical literature review

As it was mentioned above globalization makes some countries to open their economy and, thus, countries start striving for rapid economic growth. According to report of World Investment UNCTAD (2012), there are several factors that help the economic growth of the country. Additionally, factors that are often identified as stimulants for a country's growth: large amount of investment capital, advanced technologies, highly skilled labor, well-developed transportation and communication infrastructure, stable and supportive political institutions, low tax rates, favorable regulatory environment. It is explained that growth rates of different countries are varied by the level of aforementioned factors.

Characteristics of FDI, those are recognized as a major source of technology and new innovation proceedings for developing countries. Furthermore, FDI can accelerate growth in the ways of generating employment in the host countries, fulfilling saving gap and huge investment demand and sharing knowledge and management skills through backward and forward linkage in the host countries (Frenkel et al, 2004). When investor sees the potential location of investment, he also considers terms and conditions of contract. These terms and conditions (law, usage of natural resources, human resources, exchange of knowledge and so on) are various from one country to another country. If only local companies will rise simultaneously with multinational companies, with the same level of technology and knowledge. In general, it is well known that globalization process may reduce the role of the state and respectively the role of MNC will be increasing dramatically. Though that is a challenge to a state, which independency has not matured yet. However, this is not the case of Kazakhstan even it is still young developing (transitional) country.

The idea that multinational companies offer know-how technology, production and management techniques, some of these factors might be captured by local firms when multinationals locate in the particular economy (Agrawal, 2011). Actually, it is the final point of particular country which is seeking for foreign direct investment. Usually, countries at the beginning of their economic era or independency, they need some support from professionals to growth of economy, to bring educated human resources who can manage their natural resources.

The relation between FDI and Growth in the economy has grown attention of many investors and economists. In addition, there are a lot of findings that support the idea that FDI tends to promote economic growth. It is not secret that FDI provides significant ingredients to the economic growth.

By providing new production process, techniques, managerial skills and new varieties of capital goods, FDI promotes economic growth of the less developed countries. However, there is another side of economic development for FDI as well. As Samad (n.d.) argues that economic growth firstly provides necessary and conducive economic factors for FDI to play a positive role for economic development. That is why there is no exact resolution whether FDI causes economic growth and exact relationship between economic growths between FDI.

Agrowal (2011) investigates the effect of FDI on economic growth in China and India. He takes the period between 1993 and 2009. He found that China's growth is more affected by FDI, than India's growth. He also said that the majority of the foreign investors prefer China over India because of its investment opportunities as China has a bigger market size than India. Also, he argues about accessibility to export market, government incentives, developed infrastructure, cost-effectiveness and macro-economic climate. Surprisingly, Agrowal (2011) pointed out that India has the incentive and very good chances to expand its FDI attractiveness with talented management system, rule of law, transparent system of work, cultural affinity and regulatory environment.

Wu and Hsu (2008) examine the influence of FDI on economic growth using GDP, human capital and volume of trade based a cross-sectional study of 62 countries covering the period 1975 -2000. Using threshold regression approach he identified that there are conflicting effects of FDI. The following results show that FDI promotes economic growth when the host country has achieved a certain threshold of development, GDP and human capital. Additionally, Aurangzeb and Stengos (2014) using data from 62 developing countries from 1970 to 2001 estimated the benchmark of Feder model using standard linear estimation techniques and it shows that growth effects depend on FDI inflow. The countries with higher levels of FDI inflows have higher factor-productivity in the exports sector comparatively to low FDI inflow countries.

Goldberg (2004) says that growth of economy is associated with higher rates of technology transfer and diffusion, and higher wages. Goldberg (2004) offered evidences of technological improvements from FDI and also believes that FDI will consequently stimulate economic growth. However he is not sure about the effects of mentioned factors that aforementioned that higher wages also are induced by FDI into host countries, although sometimes these wage effects are limited to the foreign-owned production facilities. According to Adams (2009), he made point on African countries. The result of empirical analysis showed that several regions of Africa have been able to increase the inflow of FDI; however increase of FDI inflow did not show positive effect of FDI on economic growth. According to his research there are four main implications in terms of diversification, enhancing the absorptive capacity of local firms, providing opportunities for linkages between domestic and foreign investors and a targeted approach to FDI. However, from this article it is true to say that the challenge for Africa is how to attract FDI in more dynamic products and sectors with high income elasticity of demand. We know that even in general Africa is potential location for foreign investment, but the unstable political, social, environmental issues are interfere to make final decision toward Africa. Thus, we see that absolute notion about FDI has an effect on economic growth, exactly on GDP, might be unproved.

Laura Alfaro (2003) found out that FDI flows into various sectors of the economy exert different effects on economic growth. Following Borensztein et al. (1998) and Alfaro et al. (2003) looked at the direct effect of the different types of FDI on economic growth using cross-section regressions with 47 countries for the time period 1980-1999. Following FDI inflows into the primary sector tend to have a negative effect on growth, whereas FDI inflows in the manufacturing sector a positive one. Alfaro (2003) identified that results from the foreign investments in the service sector is ambiguous. Despite the limitations of the data used, the results are robust to the inclusion of other growth determinants, such as income, human capita measures, domestic financial development, institutional quality, different samples, and the use of lagged values of FDI.

Eventually, we can not say that FDI always has an effect on economic growth in literature review. Its behavior depends on the factors and host countries terms and conditions. Other articles focused on the situation of developing countries and the major part of them shows that they have significant positive effect on economic growth. Authors used time-series regression and panel data analysis to establish the link between foreign direct investment and growth. Some studies used GDP per capita as a substitution for growth, but it was shown in research works that FDI affects the income of labor forces. However, overall GDP of country would be better to have an accurate result. Nevertheless, Dondeti and Mohanty (2007) used multiple regressions on their study.

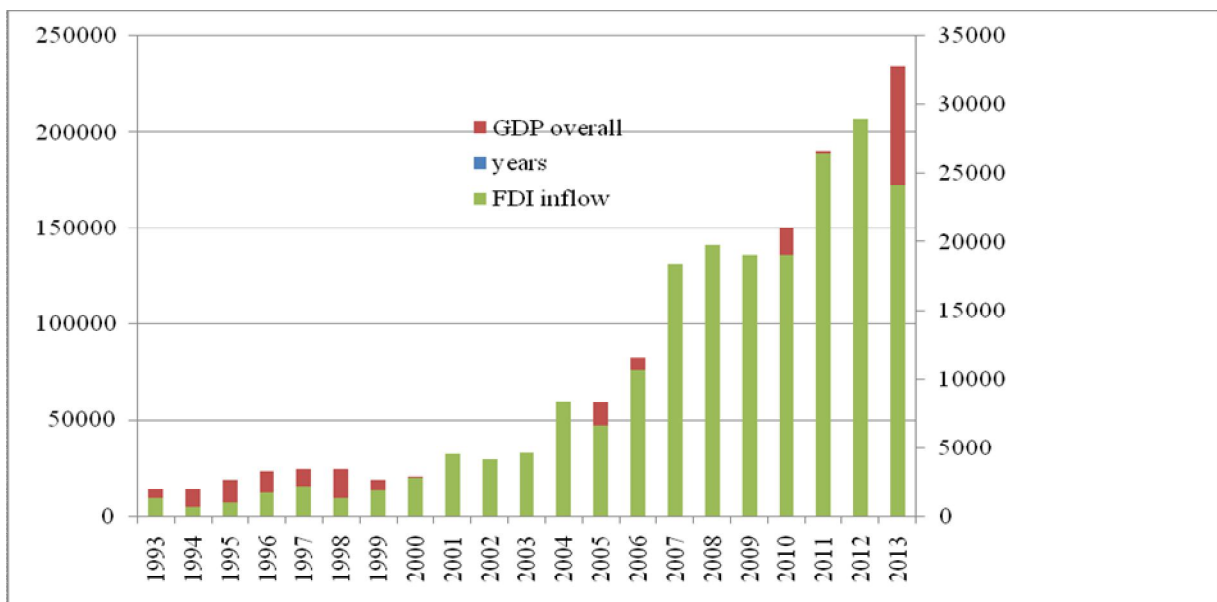
They explain Chinese and Indian economies that have undergone structural change in 1992 and 1993. So, multiple regression approach was useful to investigate the effect of FDI on growth of these particular countries' economies.

3. FDI and economic growth in Kazakhstan

3.1 FDI inflow and economic development (GDP)

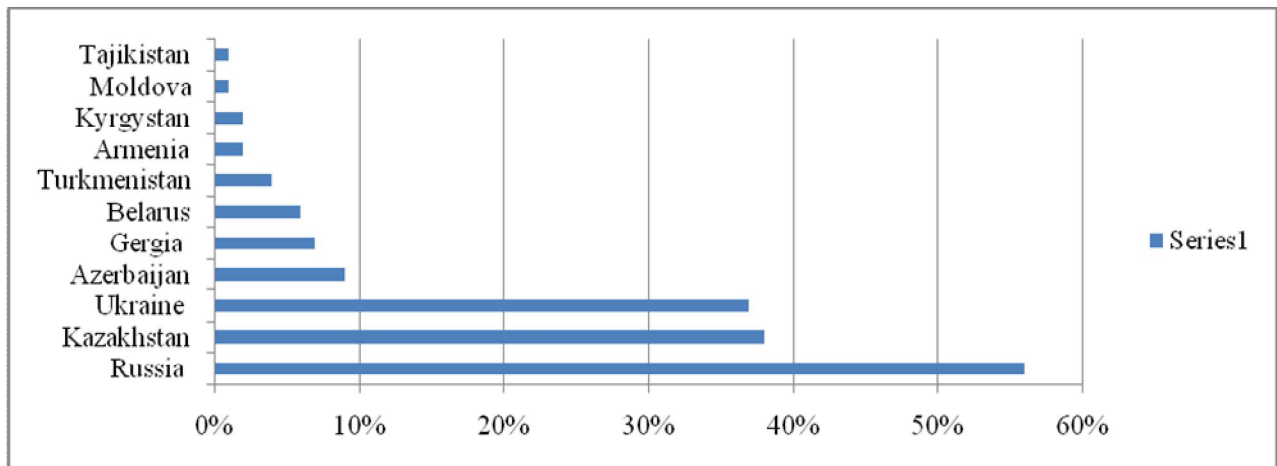
Today, the position of Kazakhstan significantly improved and has leading international rankings related to the assessment of the investment climate. The amount of World FDI decreased to 18 percent from 2011 to 2012, while Kazakhstan received its highest amount of FDI in 2012 in the amount of 14 billion US (UNCTAD, 2013). In the economic policy Kazakhstan adhered to the active cooperation with foreign companies. Consequently the volume of FDI inflow for the last two decades demonstrated high volume and growth (UNCTAD, 2013).

Figure 1 Overall GDP and FDI for Kazakhstan, 1993-2013



(Source: Statistics Agency of Kazakhstan, www.stat.gov.kz)

In Figure 1, 207,238 million USD invested into the Kazakhstani economy for the last decade and 98,598 million USD or 47.5 percent of them was attracted last four years. This is the period of new generation of investment policy about non-commodity projects. Statisticians believe that inflow into manufacturing sector will increase, for current time it is already increased twice. This inflow into manufacturing sector is allocated as following: engineering and chemical industries, as well as in the production of construction materials. Additionally, that is new for the economy of Kazakhstan, that partially it goes to high-tech industries such as pharmaceuticals, computers, electronic and optical products. For current time, it is announced that Ministry of Industry has about 300 investment projects (investKz.com), including 110 sold (totaling 20.6 billion USD), 98 running (44.7 billion USD) and 131 perspective (33.6 billion USD) (investKz.com).

Figure2 Most attractive CIS markets for investment

(Source: Ernst and Young 2012 attractiveness survey)

In the figure 2, over 50 percent chose Russia as a potential attractive investment location among CIS countries, due to the amount of huge market (population of Russia of 143 million), increasing of employment, and GDP per capita. Nevertheless, 38 percent voted for Kazakhstan, as it gives second place in the running. However, the results of potential investors and who are already working in Kazakhstan significantly different. 8 percent of potential investors voted as potential location, but 30 percent is given by foreign investors in Kazakhstan. And third place is given to Ukraine with 37 percent of respondents. 84 percent of investors in Kazakhstan, the most powerful factor of investment attractiveness of Kazakhstan is the macroeconomic stability.

However, as it was mentioned above in the sector of diversification, excessive dependence on extractive industries increase the number of external risks (instability of commodity prices). Moreover, the banking sector that faced huge problems of non-performing loans that reached 36 percent (National Bank of RK, 2013).

3.2 FDI inflow and diversification in economic development

In the economic policy Kazakhstan adhered to the active cooperation with foreign companies. Consequently the volume of FDI inflow for the last two decades demonstrated high volume and growth. During 1998 -2008 Kazakhstan maximized the usage of its advantages in the sphere of raw materials and attract investment into oil and gas sector, uranium sector, financial sector surprisingly production of construction materials and food industry.

Today, global economic crisis that caused a sharp drop in commodity prices, has demonstrated that for the carrying out sustainable development, country should pay attention to the role of manufacturing sector. It will be very difficult to survive in the globalization process with only exporting commodity, without having manufacturing sector. As a result, in 2009 government adopted a policy on industrial development, focusing on attracting MNC which are interested in the implementation of the non-commodity invest projects. By adopting this policy, government had to change many points of legislation on investment conditions. According to data on the official webpage of Kazakhstan to investors (www.invest.gov.kz) invest projects in non-commodity sectors were legislated land grants, these projects are exempted from custom duties on the import goods, raw materials and spare parts. Additionally, legislation on land and property tax, these projects are promised to be exempted from tax for a period of 7 years, as well as reimbursement for gas, electricity, and purchase of land, buildings and structures, utilities.

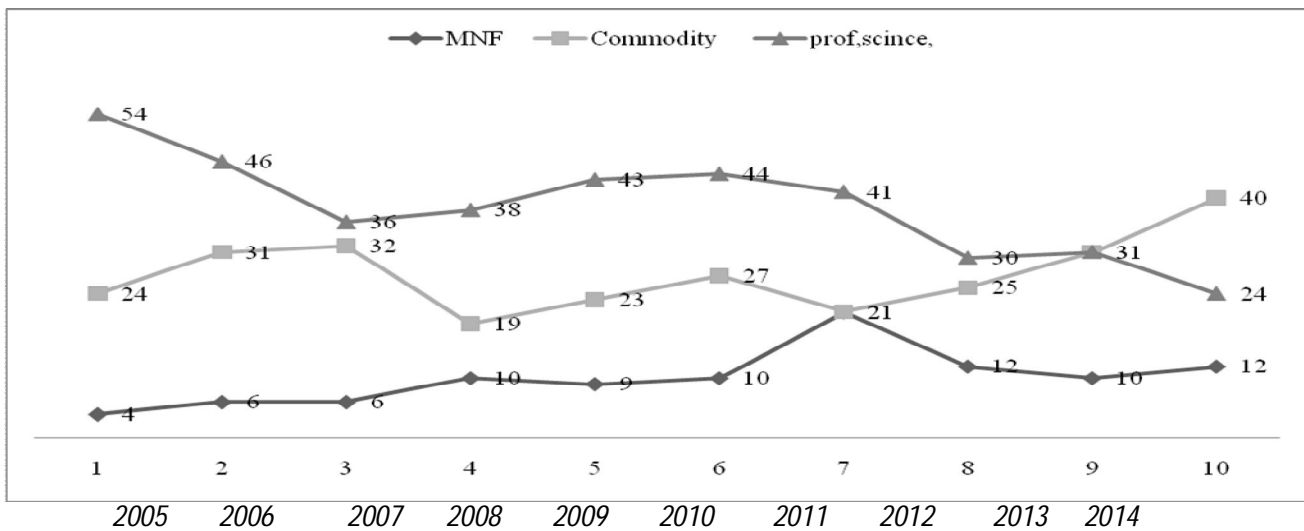
Table 1: FDI Inflow by sectors for Kazakhstan,2005-2013

FDI inflow by sectors/(2005-2013)	%/ million USD
Professional, scientific and technical activities	37.5/73,684.1
Commodity sector	26.5/51,956.4
• Crude oil and natural gas	81/42,159.2
Manufacturing Sector	10.9/ 21,446.1
Trade	8% /16,517.2
Construction	3.4/6,705.5
Sector of information and communication	2% / 4,004.0
Transport and warehousing	1.4/2,887.8
Electricity, steam, water supply (utilities)	0.86/1,705.2
Real estate operations	0.58/1,156.0

(Source: Statistics Agency of Kazakhstan, www.stat.gov.kz)

In the table 1 it is given the total amount of FDI Inflow that attracted during the period 2005-2013. 37.5 percent of overall FDI inflow attracted by professional, scientific and technical activities of country. 26.5 percent or 51,956.4 million USD out of 100 percent had commodity sector which is divided into sub point of crude oil and natural gas that absorb almost 81 percent of FDI that goes to commodity sector. At the same time, the share of manufacturing sector is accounted for only 10.9 percent or 21,446.1 million USD which majority amount goes to mastered metallurgy, where Kazakhstan cannot yet boast a high level of redistribution of production. Investments of foreign companies in the trade do not exceed 8 percent or 16,517 million USD ,construction has only 3.4 percentor 6,705.5 million USD, sector of information and communication has 2 percent or 4004 million USD, transport and warehousing has 1.4 percentor 2,887.8 million USD , and the least amount as electricity, steam and water supply with 0.86 percent or 1,705.2 million USD.

Figure 3. Manufacturing(MNF), commodity and professional scientific(prof.scince) sectors in % for Kazakhstan, 2005-2014



(Source: Statistics Agency of Kazakhstan, www.stat.gov.kz)

The figure 3 shows FDI inflow into manufacturing sector was growing up till 2011 for 21 percent and then started to drop by 10 percent. It shows only 12 percent for the half of 2014. FDI Inflow into commodity sector is fluctuating in the given period of time. However in the last two years FDI inflow into commodity sector increased dramatically, even for 40 percent for the half year of 2014. Surprisingly, inflow of FDI into professional, scientific sector is dropping time by time from 54 percent and now it shows only 24 percent for 2014.

The analysis of the sectorial structure of FDI inflows into Kazakhstan shows that FDI flows mainly in the sphere of production and primary processing of mineral raw materials (Stat.gov.kz/invest.gov.kz). In the period of 1993 to 2013, the exploration, extraction and primary processing of mineral resources directed about 80 percent of the gross proceeds of FDI. In 2013, FDI inflows show not the best records after USD 28.9 billion received in 2012, the amount is dropped to 16.6 percent to USD 24.1 billion. Particularly, there is data that concerning emerging trend of reducing the activity of foreign investors in the manufacturing industry, where their investments have decreased from 3.4 billion USD to 2.8 billion USD.

Thus, FDI is not exact factor of stimulating the diversification of the national economy, modernization and development of production with higher degrees of processing. Orientation of FDI is one of the factors affecting the preservation of the raw concentration of the economy. At least all data calculations, percentage shows that majority of FDI inflow directed to this sector. Huge amount of FDI coming to Kazakhstan are rent oriented. FDI are characterized by large capital flows and generate high revenues in foreign currencies and however they are directed to oil industry, which are least transparent sectors of the economy, and have weak links with the national markets of goods and labor (Nunnenkamp, 2003). Nunnenkamp (2003) explains that a small economy, nominally activating economic growth, FDI rent-seekers in the medium and long-term periods in the case of Kazakhstan, stimulate resource dependence and sectorial imbalances of the economy of the recipient. In the case of Kazakhstan, it was an active policy to attract FDI in the mining sector might be the stimulus to the structural imbalance of the economy and thus contradicts the long-term development goals. However, it was described a new policy of government to attract non-commodity invest projects. By adopting this policy, government had to change many points of legislation on investment conditions. According to government of Kazakhstan (www.invest.gov.kz) invest projects in non-commodity sectors were legislated land grants, these projects are exempted from custom duties on the import goods, raw materials and spare parts. Additionally, legislation on land and property tax, these projects are promised to be exempted from tax for a period of 7 years, as well as reimbursement for gas, electricity, and purchase of land, buildings and structures, utilities.

4. Data collection and description of variable

The quantitative data is gathered using overall dynamic statistics of Kazakhstan from Statistics Agency of Kazakhstan and World Bank Data, Human Development Index from 1994 to 2013 quarterly. The data on overall FDI inflow into Kazakhstan is available in quarterly based from 1994 to 2013 (FDI inflow into manufacturing sector and FDI inflow into commodity sector). All these data of dynamic statistics are available publicly and can be classified as secondary data. Gross Domestic Product and Foreign Direct Investment are used in billion dollars. Both data were available on the web page of Statistics Agency of Kazakhstan in dollar amount that there was no need to convert it. Gross Capital Formation was absorbed in the currency of Tenge, quarterly. And we converted it into dollar amount using historical data of average currency rate of 1 dollar to Tenge. The average currency rates of Tenge in quarterly based was absorbed from the web page for average currency rate of world currencies. The last indicator human development index was absorbed from the Human Development Index worldwide (www.hdr.undp.org) webpage. Kazakhstan is ranked in the list of high human development of 70 after Turkey with 0.757 in 2013. Human development Index is the composite index measuring average achievement in three basic dimensions of human development index: Knowledge, life expectancy and standard of living. The maximum index is 1 and Kazakhstan range between 0.7 and 0.8 which is average for overall. All aforementioned factors are positively correlated with each other, that is why we can take them for running regression analysis without doubt. However, previous studies instead of human development index used different factors related to human development indicators as human capital or labor force. But this research work is based on Gross Domestic Product (GDP), Foreign Direct Investment overall (FDI), Foreign Direct Investment to manufacturing sector (FDIM) and Foreign Direct Investment into commodity sectors (FDIC), Gross Capital Formation (GCF), Human Development Index (HDI).

5. Econometric mythology and empirical result

The empirical study is based on basic production function of multiple linear regressions. In the given model Gross Domestic Product is a dependent variable and other taken variable of Foreign Direct Investment, Gross Capital Formation and Human Development Index are independent variables in this research study.

Majority authors argue that FDI is a major indicator for the development and the integration of developing countries in the global economy. Aforementioned articles proved the case of positive effect of FDI on economic growth in host countries. Some authors argue and convince that FDI consist of a package of capital, technology management and market access. FDI tends to be directed at manufacturing sectors and key infrastructures as it is undertaken in Kazakhstan.

The hypothesis for the relationship between GDP and FDI is following:

1. *Hypothesis1: Foreign Direct Investment inflow has an effect on Gross Domestic Product*

$$Y = \beta_0 + \beta_1 (\text{FDI}) + \beta_2 (\text{GCF}) + \beta_3 (\text{HDI}) + \epsilon, \quad (1)$$

Where Y= Gross Domestic Product,

FDI=Foreign Direct Investment overall,

GCF=Gross Capital Formation,

HDI=Human Development Index,

2. *Hypothesis2: Foreign Direct Investment inflow into commodity sector has an effect on Gross Domestic Product*

$$Y = \beta_0 + \beta_1 (\text{FDIm}) + \beta_2 (\text{GCF}) + \beta_3 (\text{HDI}) + \epsilon, \quad (2)$$

Where Y= Gross Domestic Product,

FDI=Foreign Direct Investment to manufacturing sector,

GCF=Gross Capital Formation,

HDI=Human Development Index,

3. *Hypothesis3: Foreign Direct Investment into manufacturing sector has an effect on Gross Domestic Product*

$$Y = \beta_0 + \beta_1 (\text{FDIm}) + \beta_2 (\text{GCF}) + \beta_3 (\text{HDI}) + \epsilon, \quad (3)$$

Where Y= Gross Domestic Product,

FDI=Foreign Direct Investment to commodity sector,

GCF=Gross Capital Formation,

HDI=Human Development Index,

5.1 The result of Hypothesis1: FDI inflow has an effect on GDP

The results on Table 2 present the estimated regression model explaining the effect of Foreign Direct Investment overall, Gross Domestic Formation and Human Development Index on Gross Domestic Product respectively. It is clearly seen from the figure that Human Development Index is insignificantly has an effect on GDP. It has no linear relationship. Hypothesis that we offered on FDI has an effect on GDP that any change on them have to change GDP value. In the figure you can see the linear relationship between them. However there is no relationship between GDP and HDI and moreover HDI showed to be insignificant. But in correlation method we get positive results of Human development index with other indicators. In the above chapters of literature review it was mentioned that investors also seek for labor force and it can be one reasonable answer why HDI of Kazakhstan is not significant to GDP. Kazakhstan is not market oriented country for FDI and in general we say export-oriented.

In the table below we can see that all variables significant. Further the value of R^2 and adjusted R^2 are quite high, 0.90 and 0.91 respectively. Also Durban-Watson statistics is 1.97 which is close to 2 but not 2. Foreign Direct Investment is quite high and it shows that change in even 1 unit, have a change the same at GDP.

Table 2. The results of the relationship between GDP and FDI

Variable	Coefficient	t-statistics	Prob
FDI	0.644624	2.619645	0.0106
GCF	0.463724	3.930424	0.0002
HDI	52.53805	2.481612	0.0153
Constanta	-29.44230	-2.016047	0.0473
$R^2=0.911419$	Adjusted $R^2=0.906$	$S=1.69$	$D-W=1.97$

5.2 FDI inflow to commodity sector has an effect on GDP

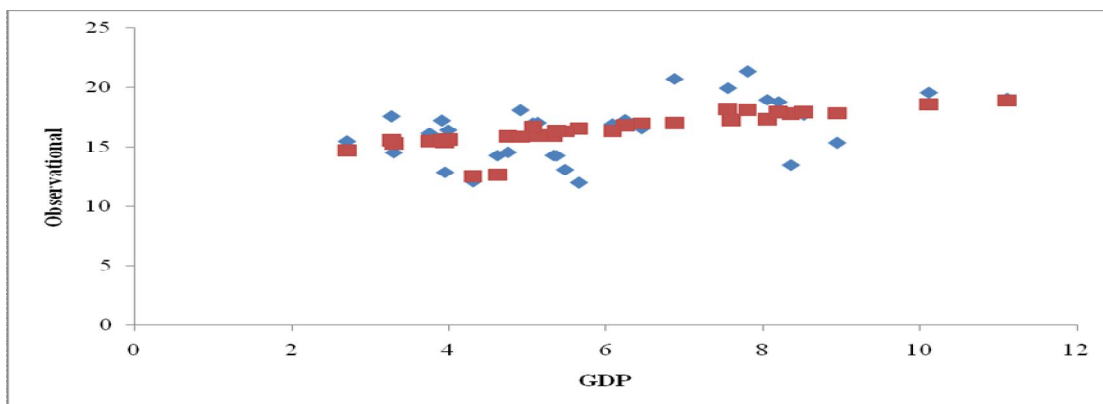
The results on Table 3 present the estimated regression model explaining the effect of Foreign Direct Investment into commodity sector, Gross Capital Formation, Human Development Index on Gross Domestic Product. The beta coefficient b_1 of FDI com is expected change in GDP for each unit change in FDI. However, here we have negative beta coefficient that means 1 unit positive standard deviation change in FDI is expected to result in a negative beta coefficient change in GDP. So, we take all data in billions of USD that is why 1 unit standard deviation change in FDI is expected to result in a -0.34 standard deviation change in GDP. Respectively to constant, it shows negative and that means the expected value on your dependent variable will be less than 0 when all independent variables are set to 0. Further the value of R^2 and adjusted R^2 are quite low than overall FDI inflow, 34 percent and 27.5 percent.

Table 3 . The results of the relationship between GDP and FDI

Variables	B coefficient	t-statistics	P-value
FDI com	-0.34972	-0.59181	0.558903
GCF	0.478672	2.570361	0.015993
HDI	53.39171	2.167423	0.039189
Constanta	-25.5914	-1.43588	0.162521
$R^2=0.34$ is 34%	Adjusted $R=0.275$ is 27.5%	$S=2.11$	

In the figure 4, you can see the line fit plot of variables. It is obviously seen from this figure that GDP and independent variables do not have perfect linear relationship. Thus, FDI into commodity sector has an effect on GDP that any change on them has to change GDP value, should be considered further. Because of very low and weak results dependency of GDP on FDI commodity with only 34 percent. Moreover, this figure shows not perfect relationship between GDP and independent variables. Additionally, correlation of these four variables shows positive relationship between them. However, surprisingly correlation between GDP and FDI commodity is only 0.11 that is positive but not perfect correlation.

The figure 4. The results of the relationship between GDP and FDI



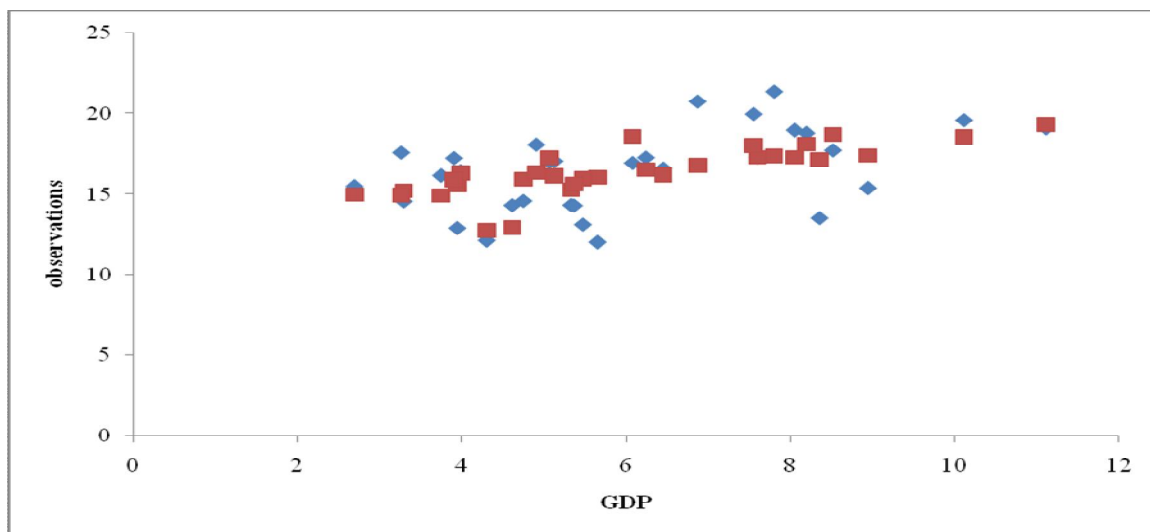
5.3 FDI inflow to manufacturing sector has an effect on GDP

The results on Table 4 present the estimated regression model explaining the effect of Foreign Direct Investment into manufacturing sector, Gross Capital Formation, Human Development Index on Gross Domestic Product. The beta coefficient of FDI is expected change in GDP for each unit change in FDI. For all variables we have positive betas and it means that 1 unit positive standard deviation change in FDI is expected to result in a positive beta coefficient change in GDP. So, as we take all data in billions of USD that is why 1 unit standard deviation change in FDI is expected to result in a 1.17 standard deviation change in GDP. Respectively to constant, it shows negative and that means the expected value on your dependent variable will be less than 0 when all independent variables are set to 0. Further the value of R^2 and adjusted R^2 are quite low than overall FDI inflow, 38 percent and 31 percent.

Table 4 The results of the relationship between GDP and FDI

Variables	B coefficient	t-statistics	P-value
FDI manufacturing	1.179811	1.344635	0.189931
GCF	0.52562	2.856769	0.008138
HDI	35.80765	1.457909	0.1564
Constanta	-13.9407	-0.78437	0.43965
R ² =0.38 is 38 %	Adjusted R=0.31 is 31%	S=2.06	

In the figure 5, you can see the line fit plot of variables. You can see from this figure that GDP and independent variables do not have perfect linear relationship. Thus we can identify that we offered on FDI into manufacturing sector has an effect on GDP that any change on them have to change GDP value, should be considered further. Because of very low and weak results dependency of GDP on FDI commodity with only 38 percent. However, it shows little bit favorable results than we expected; surprisingly FDI into manufacturing has an effect on GDP more than FDI into commodity sector. Moreover this figure shows not perfect relationship between GDP and independent variables. Additionally, correlation of these four variables shows positive relationship between them except GCF and FDI. However, correlation between GDP and FDI commodity is only 0.32 that is positive but not perfect correlation. If we look at GCF and HDI their relationship between FDI it shows more than 0.5.

Figure 5. The results of the relationship between GDP and FDI

6. Conclusion

The result showed that Kazakhstan still operate the huge amount of FDI into raw material and extracting sector. However, now is global economic crisis and the world and countries as Kazakhstan who depends on this sector suffering from fluctuating of commodity price overall.

This research on Foreign Direct Investment, Gross Capital Formation and Human Development Index impact on Gross Domestic Product, analyzed three different analysis proved the hypothesis that FDI has an effect on GDP and has shown in the scatter plot graph that GDP is very dependent on FDI inflow and GCF in Kazakhstan. So the R² is about 90 % and adjusted R² is 91 % and it shows its dependency on FDI inflow and GCF. However if we take FDI by sectors as it was shown in this study, FDI into manufacturing and commodity sectors show different results. Surprisingly, FDI by sectors has less effect on GDP. That the relationship between FDI commodity is only about 34 % and FDI manufacturing has only 38 %.

In order to diversify the economy Kazakhstan government adopted non-commodity projects by changing legislation factors and other factors that easier the existence of foreign investor in Kazakhstan.

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