

Determinants Of Foreign Direct Investment Inflows in Afghanistan

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Abstract

The objective of this study is determining the impact of several factors like inflation, exchange rate, unemployment, government expenditure and economic growth on FDI (Foreign Direct Investment) attraction in Afghanistan. In this paper secondary data, the period from 2005 to 2017 has been used for statistical & econometrical analysis. Empirical analysis & estimation has been performed by analytical tools of regression. In addition, Augmented Dickey Fuller (ADF) test & Phillips-Perron (PP) test is used for time series data analysis which are derived from WDI. In the result of this study it was found that the unemployment in Afghanistan is statistically significant factor having positive relationship with FDI or contributing positive impact to the attraction of FDI in Afghanistan and economic growth are statistically insignificant factor with a positive contribution to the attraction of FDI in Afghanistan although, the inflation, exchange rate and government expenditure are also statistically significant with negative sign. This paper using data from 2005-2017, a time series data estimator suggested that the inflation, government expenditure, exchange rate, unemployment and economic growth are the main determinants of FDI inflows in Afghanistan.

Key words: FDI, Exchange Rate, Unemployment, Government Expenditure, Inflation and Economic Growth

Introduction

The foreign direct investment plays vital role in economic growth of those countries which suffers from lack of capital formation, contrary both positive and negative consequences of foreign direct investment can be evaluated but in case of inflow, FDI causes technological progress and job opportunities to the public.

Countries around the globe are competing on encouragement of foreign investors to attract FDI and as result of that the internal political and security stability alongside law enforcement are counted as most sensitive factors toward FDI inflow.

Afghanistan is suffering from both security and political instability and due to the fact the aggregate saving is low which cause low capital formation to enable financial sector in financing large scale domestic investments. Poor domestic sources of finance supports the fact that FDI is of great importance for economic growth and development.

During the past ten years many attempts have been made to attract foreign direct investment, different social and economic structures are reformed with posing proper adjustment in laws and cooperating with international institutions (WTO, IMF, World Bank...etc.) for increasing

FDI inflow but still FDI is not in satisfactory level which reveals the fact that different obstacles exists against attraction and inflow of foreign direct investment.

The paper aims to determine key factors affecting FDI in Afghanistan and to specify the impact level of every factor on FDI for policy recommendation purpose to attract foreign direct investment.

The paper consists different parts, first part is devoted to statement of problem and literature review, second part is devoted to explanation of variables and third part focused on data analysis and findings and fourth part will intensify on policy recommendations.

1.1 Problem Statement

Economic theories and empirical studies revealed that the economic growth of a country seriously depends on domestic capital formation and flow of investments. National saving is primary source of domestic financing the production sector meanwhile national saving is a function of aggregate production and income level in a country, so low national income leads to low national savings and as a result it cause low national output which resulted to low income again and it means poverty.

Afghanistan which is in war and military conflict since decades face sever poverty and worsening economic condition, needs to attract foreign capital inflow and raising foreign financial resources to tackle current worse economic situation and pave the way for economic betterment of the country.

Developing nations are aware of bad effects of acquiring financial resources from abroad, due to the fact they turn their attention to attraction of foreign direct investment to increase output and reduce poverty. Afghanistan which face serious shortage of financial resources to finance investments from domestic financial sources as a result, the lack of domestic financial resource rise the need for foreign direct investment which is highly important for economic growth and development purpose. Taking into consideration serious need of the country to foreign direct investment, the unknown deterministic factor of FDI is a key problem need to be addressed and dealt with, meanwhile the impact level of every deterministic factor is another aspect of problem concerned to FDI need to be solved.

Therefore, given the importance of this topic, we felt the need to conduct my own research paper on the factors influencing FDI in Afghanistan. To find out what are the factors influencing FDI inflow in the country? What is the effect?

1.2. Scope of Study

The study is about “The study on the relationship between foreign direct investment (FDI) and inflation rate, exchange rate, government expenditure, economic growth and unemployment rate” aims to analyze& determine whether the five independent variables, which are economic growth, inflation, government expenditure and exchange rate have positive effect towards inflow of FDI but unemployment has a negative impacts to the attraction of FDI. This study focuses on FDI in Afghanistan. While for exchange rate,

exchange rate AFN/US\$ is used as a proxy, economic growth is measured by Gross Domestic Product (GDP), unemployment rate is measured by (Active unemployment employees/Active Pop)*100 and inflation is measured by CPI. The dependent variable of FDI is measured by net inflow of FDI. In this research used secondary data for the period from 2005 to 2017 which covers 13 years. Data collected from World Development Indicators (WDI) Statistics, Central Bank, Department of Statistics and Ministry of Finance of Afghanistan.

1.3. Research Questions

The research questions were developed based on the relationship and analysis of the variables and are classified into two categories includes main research question and sub-questions. the main question formulized by the subject and title of the research, while the sub-questions are designed to find the answer of the main question. We present it as follows:

1.3.1. The main question of research

What are key determinants of FDI in Afghanistan? The following sub-questions are developed to better explain the main question:

1.3.2. Research sub-questions

- ✓ What is the impact of exchange rate on FDI attraction?
- ✓ What is the impact inflation on FDI attraction?
- ✓ What is the relationship between FDI and Government Expenditure investment in Afghanistan?
- ✓ What is the relationship between FDI and Unemployment rate in Afghanistan?
- ✓ What is the impact of economic growth on FDI attraction?

1.4. Research Objectives

The objectives are designed & developed based on research questions to find answers to the questions. In this paper our main and fundamental aim is to determine the factors influencing the inflow of foreign direct investment in Afghanistan and the extent of their effectiveness, in order to inform policy makers which factors affect the attraction of foreign direct investment in Afghanistan. Can be considered? In addition, some of the objectives of the current research are summarized as follows:

- ✓ To determine the relationship between Government Expenditure, exchange rate, unemployment rate, economic growth, inflation rate and FDI in Afghanistan.
- ✓ To find the Answers of main and sub-questions of the research.
- ✓ To understand how the exchange rate, inflation and unemployment can effect on foreign direct investment?
- ✓ To recommend specific policy measures for attraction of FDI.

1.5. Significance of Study

Economic development and sustainable economic growth is one of the best economic goals of any country. The achievement of these goals is impossible without the initial capital and capital inflows in developing countries especially in Afghanistan. Afghanistan is also one of the low-income countries, so the inflow of foreign investment is one of the best ways to get out of this situation and achieve the economic goals. FDI has an extraordinary role in maintaining the growth of Afghanistan economic growth. On the other hand, foreign direct investment is one of the best non-performing loans to the host country.

The flow of FDI besides the production and investment in the host country brings new technologies, management, organizational structure, technical personnel, research and innovation in production and its methods. In this research provide the researcher to identify the relationship between independent variable such as government expenditure, exchange rate, inflation rate, unemployment rate and economic growth with foreign domestic product (FDI). This result will get positive or negative impact to their analysis.

This paper also prepare some information for government to ensure financial market and also economic development. Government always need the information to use for the economic growth related analysis. The data will get from the World Development Indicators (WDI) Statistic. The result of this paper also prepare some information to the foreign investor to make decision about the investment to invest in our country or not.

2. Literature Review

The study split the review of literature into two parts, the first part focus on theoretical review and second part explored the empirical review of literature:

2.1. Theoretical Review

According to exchange market theory, from the point of view of an exporting country, for example the US, in increase in real exchange rate will reduce competition in US exports, while a decrease in real exchange rate will increase competition in exports. It can explain the FDI issued by exporting countries (Jaiblai & Shenai, 2019).

In existing literature theoretical foundations has discussed the role of government expenditures on foreign direct investment (FD), in the theory of international production, the path of investment development (IDP) is of great importance. The investment development path (IDP) is divided into five stages. In the first & second stages, foreign direct investment attraction and flows are low due to the lack of economic development. Government spending is critical at this stage, and production expenditure on infrastructure such as transportation, information and communication technology, energy infrastructure, education, health and building up of human resources creation can boost economic progress (Othman, Yusop, Gul Andaman, & Ismail, 2018).

The ownership, location and internationalization framework of electric paradigm hypothesis (Developed by Dunning 1973) that inflation is one of the economic locational advantages of

FDI, the direct inflation-FDI nexus has so far been pursued by very few empirical researchers (Tsauri, 2018).

In 1993, Dunning identified four motivations for attracting of FDI: searching for resources (to access raw materials, labor force, and physical infrastructure resources), and searching for the market (horizontal strategy for accessing the host-country domestic market), search for efficiency (vertical strategy to take advantage of lower labor costs, especially in developing countries), and to search for strategic-asset (to access research and development, innovation, and advanced technology) (Jaiblai & Shenai, 2019).

2.2. Empirical Review

Norzashida Othman, Zulkornain, Gul Andaman & Mohd Mansor Imail (2018) studied impact of government spending of FDI flows using panel data for ASEAN-5 countries including Malaysia, Indonesia, Singapore, Thailand and Philippine with inclusion of China and India and concluded government expenditure positively impacts FDI Argiro Moudastsou (2003) in a study of FDI and economic growth in the European Union between(1980-1996) found that FDI has a positive impact on economic growth of EU economics.

Sh. Sofia Devi (2014) in a study of Determinants of Foreign Direct Investment: Empirical evidence from India between (2001-02 to 2011-12) finds that the most determinant of FDI is a market size which has positive impact on FDI inflow but, exchange rate impacts negatively inflow of FDI. Zunaidah Sulong and D.Agus Harjito (2005) used time series annual data averaged over the period 1970 – 1999 using the OLS regression. They found that the GDP, inflation, import and export are the key determinants of FDI in Malaysia.

Obida Gobna Wafure & Abu Nurdeen (2010) studied the determinants of FDI in case of Nigeria using error correction model, the research concludes that market size of host country, de-regulation, exchange rate depreciation and political instability are the main determining factors of the flow of FDI in case of Nigeria.

T.R.Panigrahi & B.D. Panda (2012) examined the factors influencing FDI inflow to India, China and Malaysia: an empirical analysis for the period between (1991-2010) that finds GDP, gross capital formation, capital infrastructure, external debt, and export and import volume are the key determinants of FDI in Malaysia. Openness trade and exchange rate are the main determinants of FDI flow with positive sign in Sierra Leone (FAROH & SHEN , 2015).

Adam P. Balcerzak and Mirosława Zurek conduct a research on FDI and unemployment, during the period (1995-2009) for Poland using VAR analysis found out that the FDI inflows in Poland leads to decrease unemployment.

Dijana Grahovac, Senad Softic (2017) studied impact of FDI on unemployment rate in countries of West Balkan using econometrical model and found that the absence of positive relation between un-employment. Joun C.Anyonwu (2011) examined the Determinants of FDI inflows to Africa using a multiple regression model during the (1980-2007) and finds that there is positive relationship between the FDI, market size and trade openness, but

financial development has negative effect on FDI. Ab Qayoom Khachoo & Mohd Imran Khan (2012) studied determinants of FDI inflows to developing countries using panel data analysis and results of the study suggests that market size, total reserves, infrastructure and labor costs are main determinants to developing countries. Sridevi R.K. Narayanan and Hassanudin Mohd Thas Thaker (2015), in a study on macroeconomic determinants of FDI in Malaysia, It was found that labor productivity and inflation have positive impact on FDI inflows while the per capita income and trade openness have a negative impact on FDI inflows.

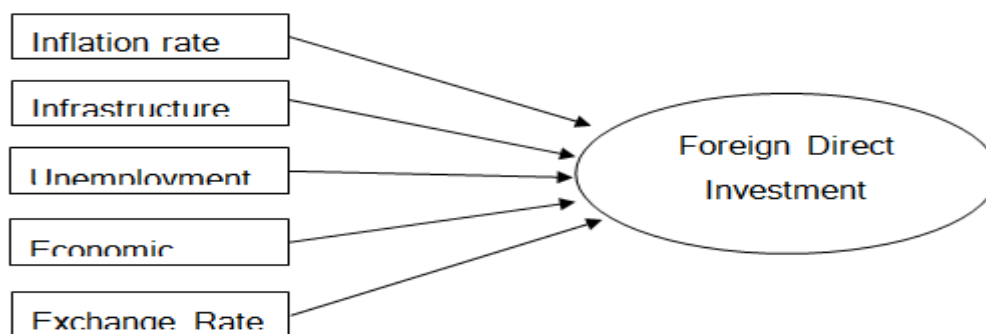
WIJEWEERA Albert and MOUNTER Stuart (2008) examined the VAR analysis on the determinants of FDI inflows in Sri Lanka. Their findings indicate that wage rate is the key determinants of FDI in Sri Lanka. Konstantinos Dellis, David Sondermann and Isabel Vansteenkiste (2017) studied the role of economic structure as determinants of FDI inflows in euro area countries and results of the study show that there is an empirical relationship between the economic structure and FDI inflows.

The determinants of FDI in case of Afghanistan through employing existence theories from macro perspective is not explored yet, so in case of Afghanistan an independent research needs to be conducted to fill the gap.

3. Theoretical Framework, Variables and Hypothesis

Theoretical framework explain the relationship from one variable (dependent variable) to the other variables (independent variables) (Veera & Chandran, 2009). “A variable is a phenomena that can take on different quantitative values. As such the concepts like weight, height, income are all examples of variable” (Kothari, 2004). Or a variable is a phenomena or anything that can take on different values (sekaran, research methods for business, 2003, p. 89). In theoretical framework, variables are classified into two categories like as criterion variable (dependent) & predicator variable (independent variable). The dependent variable (criterion variable) is the main interest of the researcher and the independent variable (predictor variable) is a variable that positively or negatively affects the dependent variables (sekaran, research methods for business, 2003). Relationship between the dependent variable & independent variables shows and present to the schematic diagram as below:

Figure 1: Schematic Diagram of the Theoretical Framework



INDEPENDENT VARIABLES (IDV)DEPENDENT VARIABLE (DV)

The above Figure (Figure 1) shows a schema relation between five independent variables to the dependent variable.

3.1. Variables

The model specified in this paper is consist of five independent variables and dependent variable FDI for which data is collected from WDI site, a brief description of variables seems essential before to estimate the model and run relevant statistical tests.

3.1.1. FDI

The FDI is dependent variable which is the subject matter of this research, BPM5 defined FDI as below:

FDI is a type of international investment that reflects the aim that resident of one country (the direct investor) invest in companies and enterprise resident in another country to gain more (the direct investment enterprise) (Neil Petterson, 2014).

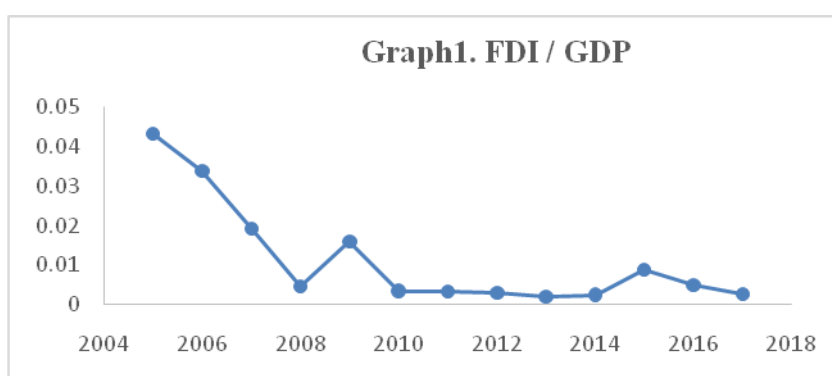
The theoretical and empirical study on determinants of FDI is discussed with detail in literature part, data for FDI is considered as ratio of FDI and GDP for simplification purpose of data analysis. Time series data collected on FDI is for period (2005 – 2017) shown in table below:

Table1. Data on FDI/GDP

YEAR	FDI/GDP
2005	0.043187
2006	0.033723
2007	0.019168
2008	0.004517
2009	0.015818
2010	0.003401
2011	0.003214
2012	0.002996
2013	0.001979

2014	0.002432
2015	0.008747
2016	0.004807
2017	0.002565

The data on FDI for the period (2005 – 2017) is graphed for fluctuation analysis purpose below:



3.1.2. Exchange rate

Exchange rate is a dependent variable and it was hypothesized that it negatively affects FDI, exchange can be defined as below:

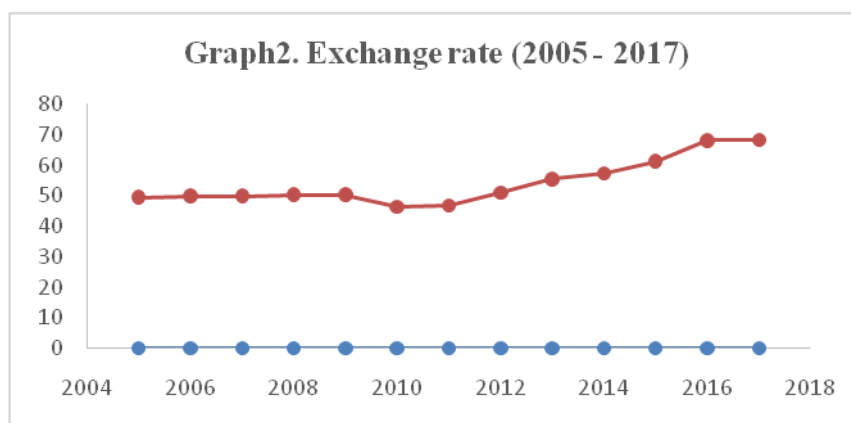
The exchange rate is the price at which the currencies trade take place. When one currency becomes more valuable than other currencies, economists say that the currency will rise and if the value of one currency falls below than other currencies, it depreciates (Well, 2006).

Data on exchange rate for period (2005 – 2017) is collected from WDI site which is tabulated below:

YEAR	EX RA	FDI
2005	49.49459750	0.043187
2006	49.92533083	0.033723
2007	49.96201777	0.019168
2008	50.24961474	0.004517
2009	50.32500000	0.015818
2010	46.45246100	0.003401
2011	46.74700774	0.003214
2012	50.92140000	0.002996
2013	55.37750000	0.001979

2014	57.24750000	0.002432
2015	61.14346154	0.008747
2016	67.90000000	0.004807
2017	68.00000000	0.002565

Graphical representation of the data is also made to graphically view fluctuation of FDI for the mentioned period:



3.1.3. Inflation

Inflation is an independent variable of the study and it is hypothesized that it will negatively affect the FDI flow to the country. Inflation can be defined as below:

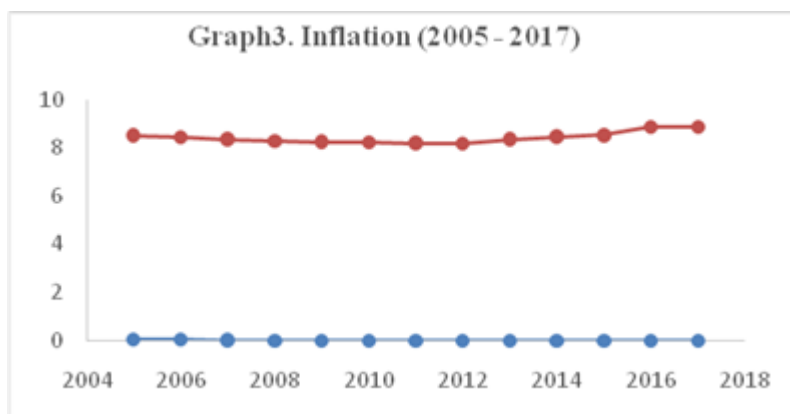
The overall increase in prices is called inflation (Mankiw, 2005). Inflation an increase in the whole level of prices in a country, different measures are used to represent inflation, CPI is one of indexes is used to measure inflation which is defined as a measure of the retail prices of a fixed “market basket” of several thousand goods and services purchased by households (Froyen, 2013).

The data on inflation for period (2005 – 2017) is tabulated and do so graphically represented to easily view the fluctuation of inflation in the given period as below:

YEAR	INF	FDI
2005	10.90026799	0.043187
2006	7.171260735	0.033723
2007	22.38201578	0.019168
2008	2.179103285	0.004517
2009	-2.107082550	0.015818
2010	9.437794773	0.003401
2011	10.56113929	0.003214
2012	8.304760856	0.002996

2013	4.717531184	0.001979
2014	0.243080560	0.002432
2015	3.817148924	0.008747
2016	4.400000000	0.004807
2017	5.000000000	0.002565

Below is a graphical representation of inflation for mentioned period:



3.1.4. Economic growth

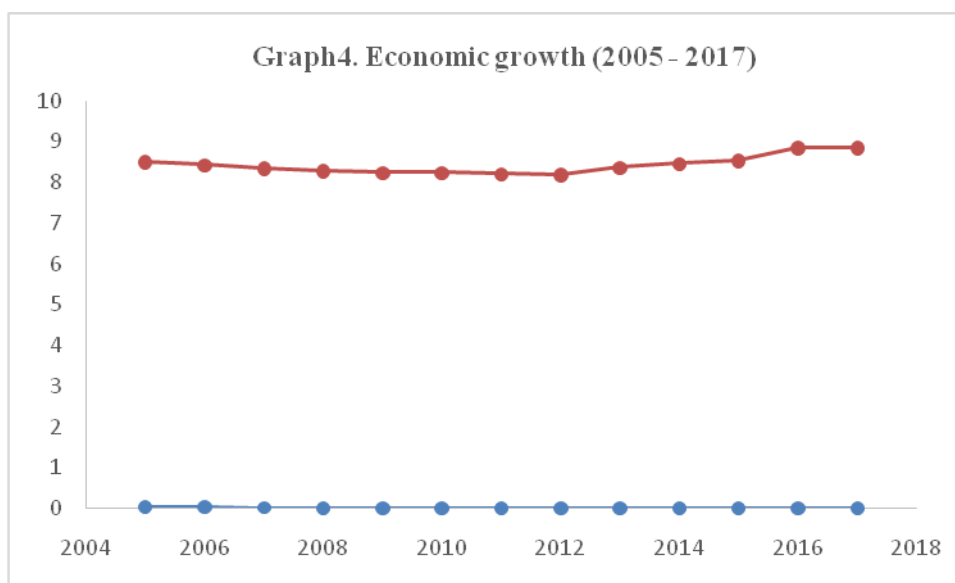
Economic growth is an independent variable in our model and it is hypothesized that I will positively affect the FDI in Afghanistan, economic growth of Afghanistan experienced tremendous ups and downs in the given period for which withdrawal of foreign forces, decline in foreign aid and introducing support package in national level procurement process from domestic product are main responsible factors for them.

The data for economic growth is collected from WDI site for period (2005 – 2017) which is tabulated and graphed for visualization of fluctuation of economic growth in mentioned period below:

YEAR	FDI / GDP	E GR
2005	0.043187	11.17527
2006	0.033723	5.554138
2007	0.019168	13.74020
2008	0.004517	3.611368
2009	0.015818	21.02065

2010	0.003401	8.433290
2011	0.003214	6.113685
2012	0.002996	14.43474
2013	0.001979	1.959123
2014	0.002432	1.312531
2015	0.008747	0.840719
2016	0.004807	2.400000
2017	0.002565	2.600000

The data for the period (2005 – 2017) on economic growth is graphed as below:



3.1.5. Un employment

Unemployment is an independent variable in our model and the data on variable is collected form WDI site for the period (2005 – 2017), unemployment can be defined as below:

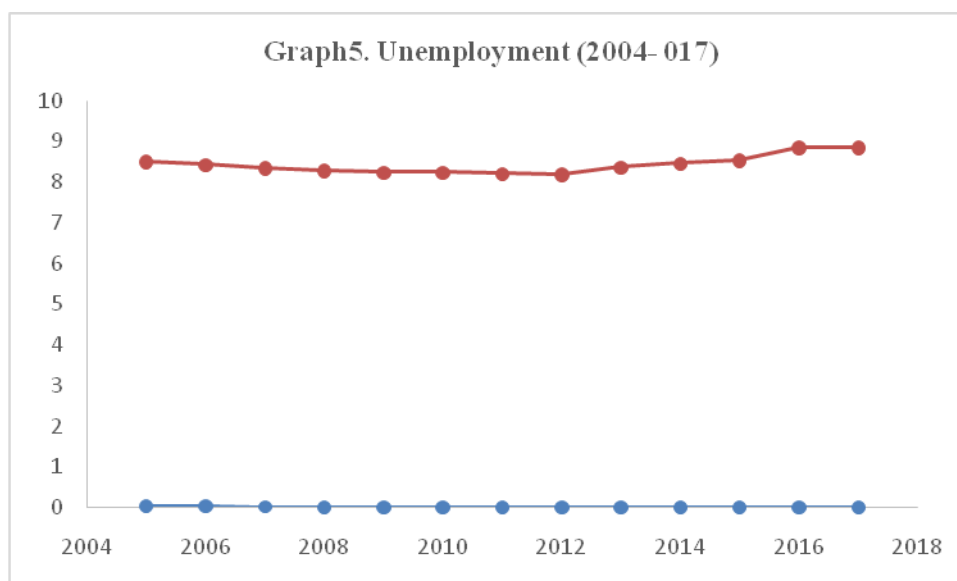
Unemployment rate is the ratio of the number of unemployed people to the total number of people in the labor force, where the labor force consists of people who are either currently working or looking for jobs. (Well, 2006)

The data on unemployment for the given period is tabulated and graphed for visualization of fluctuation in unemployment rate as below:

Table5. Unemployment (2005 – 2017)

YEAR	FDI / GDP	UNE
2005	0.043187	8.500
2006	0.033723	8.418
2007	0.019168	8.342
2008	0.004517	8.278
2009	0.015818	8.238
2010	0.003401	8.228
2011	0.003214	8.200
2012	0.002996	8.180
2013	0.001979	8.357
2014	0.002432	8.449
2015	0.008747	8.516
2016	0.004807	8.840
2017	0.002565	8.840

The data on unemployment is represent in the following graph:



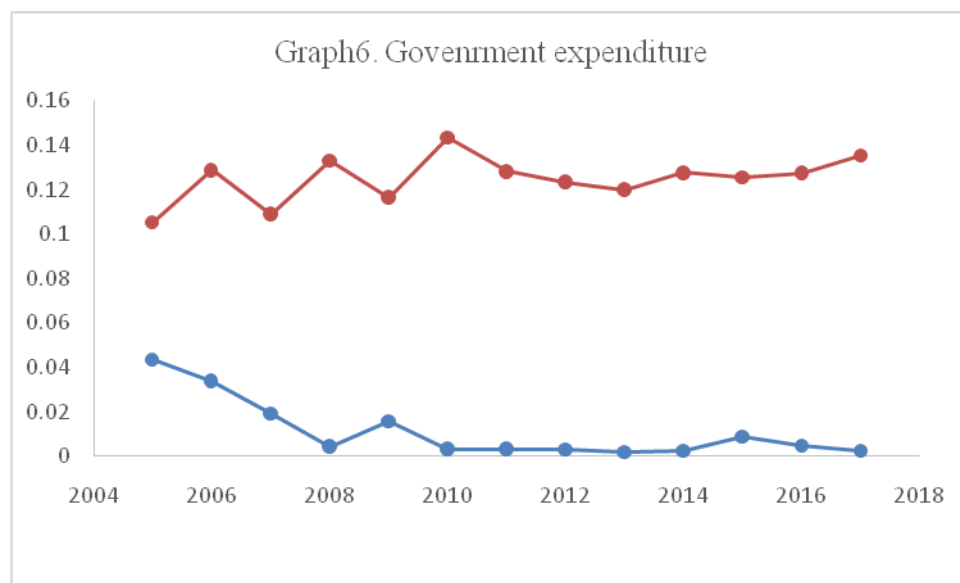
3.1.6. Government expenditure

Government expenditure is an independent variable of the study and data for the variable is collected in GE/GDP form to simplify the data analysis and data on GE is collected for the period (2005 – 2017) and is represented in the following table:

Table6. Government expenditure (2005 – 2017)		
YEAR	FDI/GDP	GE/GDP
2005	0.043187	0.105582
2006	0.033723	0.1288
2007	0.019168	0.109298

2008	0.004517	0.133093
2009	0.015818	0.116732
2010	0.003401	0.143361
2011	0.003214	0.128321
2012	0.002996	0.123598
2013	0.001979	0.120081
2014	0.002432	0.127652
2015	0.008747	0.125558
2016	0.004807	0.127558
2017	0.002565	0.135558

The data is represented in graphical form for the visualization of fluctuation as below:



3.2. Research hypotheses

“A hypothesis can be defined as a logically conjectured relationship between two or more variables expressed in the form of a testable statement” (sekar, research methods for business, 2003).

- ✓ The exchange rate has a positive impact on the inflow of foreign direct investment in Afghanistan
- ✓ Inflation has a negative Impact on the attraction of foreign direct investment in Afghanistan.
- ✓ There is a significant relationship between government expenditure and foreign direct investment in Afghanistan.
- ✓ There is a significant relationship between unemployment and foreign direct investment in Afghanistan.

✓ The economic growth rate has positive impact on the inflow of foreign direct investment in Afghanistan.

Research Methodology

A quantities approach will be adopted based on data collected from WDI site and regression model will be used to relate the dependent and independent variables based on theoretical support from existed literature. The O.L.S multiple regression model will be applied in linier form using time series data.

The FDI is considered as a function of inflation, unemployment, exchange rate, government expenditure and economic growth and the relation between dependent (FDI) and independent (exchange rate, inflation, government expenditure, unemployment and economic growth) variables is modeled in following regression equation form:

$$FDI/GDP = \beta_1 + \beta_2 (\text{Government Expenditure/GDP}) + \beta_3 (\text{Exchange}) + \beta_4 (\text{Inflation}) + \beta_5 (\text{unemployment}) + \beta_6 (\text{economic growth}) + UI$$

Where,

FDI/GDP= the ratio of Foreign Direct Investment per Gross Domestic Product

And the variables are the same as explained in the above section and UI is the error term which satisfies the usual OLS properties. And β_s are the coefficients of the independent variables. Expressing all the variables the above regression model is estimated by using the method of OLS.

Data Analysis and Findings

Before to estimate β 's and determine the impact direction of independent variables on FDI the model fitness tests are required, following econometrical tests are applied to determine whether the model best fits or not?

5.1. Unit root tests

Unit root test is required to assure the stability of variables, for this purpose PP and ADF test is applied, the result of the tests is shown in the table below.

Variables						Test	Result
FDI/GDP	GE/GDP	INF	UNE	EX-RA	EG		
0.090	0.5123	0.100	0.959	0.984	0.665	ADF	No-Stationary
0.006	0.009	0.074	0.945	0.983	0.074	P_P	No-Stationary

Table7: the unit root results for relevance variables

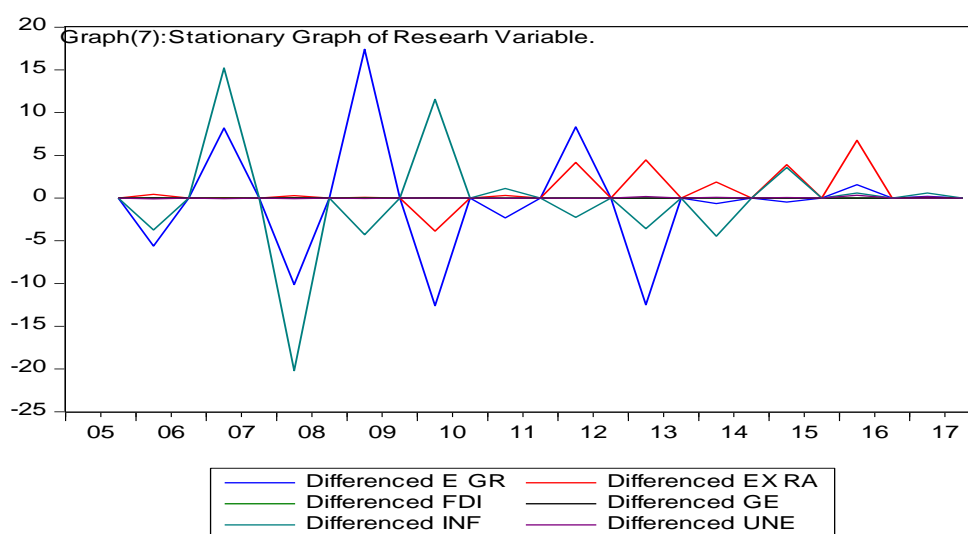
The table above shows that using the ADF test and PP test at the level is not stationary considering the alpha 5% in the given period. So we use ADF test and PP test indicated the

existence of unit roots in first and second lag for all related variables ($p = 0.05$) are reported in the table below:

Variables						Test	Result
FDI/GDP(-1)	GE/GDP(-1)	INF(-1)	UNE(-1)	EX-RA(-2)	EG(-1)		
0.018	0.000	0.000	0.000	0.000	0.000	ADF	Stationary
0.000	0.000	0.000	0.000	0.000	0.000	P_P	Stationary

Table8: The results of Unit Root in first and second lag for related variables

The table above shows that using the ADF test and P-P test at the first difference is stationary for all variables considering the alpha 5% in the given period. That the following graph is also show the stationary of relevance variables:



5.2. Testing for Heteroscedasticity

One of the most important assumptions of a proper model of linear regression is that the residual must have equal variances so that our model is a viable model or not? We test the heteroscedasticity.

The hypothesis being use is:

H_0 : The residual is Homoscedasticity

H_1 : The residual is Heteroscedasticity

P- Value	Chi- Square
0.05	0.678

Table9: the results of heteroscedasticity for related variables

The result of the relevant test, p-value is 0.678 which can be concluded, as fail to reject the null hypothesis, thus the result is no presence of heteroscedasticity and shows that is a viable model.

5.3. Testing for Autocorrelation (Serial Correlation)

One of the most important hypotheses of an appropriate model of linear regression is the absence of a serial-correlation between residuals and for the measurement of Serial Correlation we used the Durbin Watson test.

The hypothesis being use is:

H_0 : There is no serial correlation between residuals

H_1 : There is serial correlation between residuals

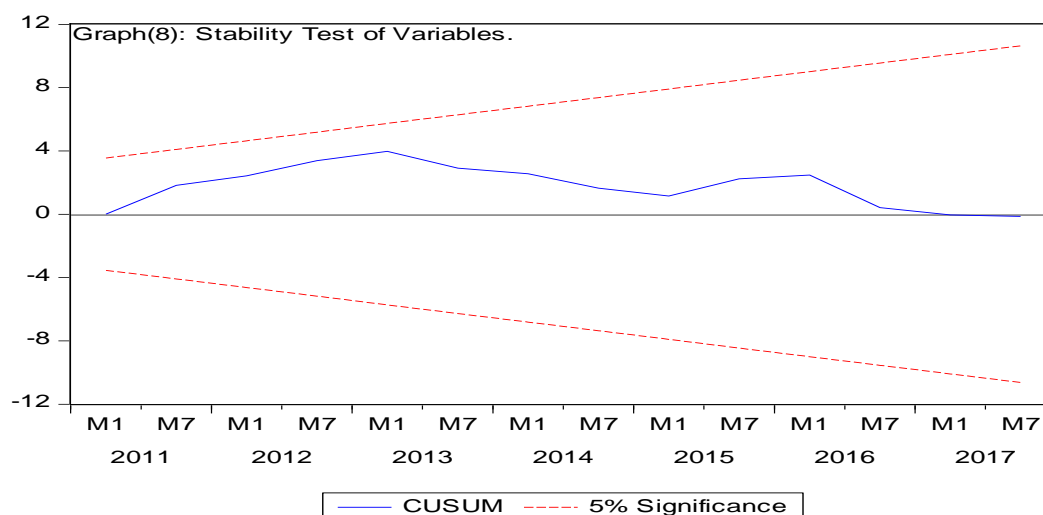
Table10: the results of Autocorrelation

P- Value	Chi- Square
0.05	0.343

The result of the relevant test, p-value is 0.343 which is greater than .05 so it can be concluded, that null hypothesis is accepted., thus the result is no Serial correlation between the residual and shows that is a viable model.

5.4. Cusum Test

One of the most important hypotheses of the appropriate model of linear regression is the stability of the regression model and we used for the stability of regression cusum test. The following graph shows the results of Cusum test



5.5. Regression results

TABLE11: The result of regression model is stated in the following table

<i>Variables</i>	<i>β values</i>	<i>Standard Error</i>	<i>t statistics</i>	<i>P statistics</i>

Y intercept	0.2278-	0.1186	1.9202	0.0718
FDI/GDP(-2)	0.5318	0.1275	4.1705	0.0006
INF(-1)	0.0004 -	0.0001	2.4479	0.0255
UNE(-1)	0.0417	0.0182	2.2920	0.0349
G E(-1)	0.3758 -	0.1284	2.9260	0.0094
EG(-1)	0.0001	0.0001	0.6249	0.5403
EXR(-1)	0.0013 -	0.0005	2.2426	0.0385
HIC	7.7324			
AIC	7.8236			
SIC	7.4800			
D W-STAT	2.2788			
r-square	0.90			
Adjusted r-square	0.86			
F-statistic	25.64			

keeping in mind the regression result in above table and incorporating values of β 's in regression model the estimated equation for FDI with corresponding values of multipliers looks like below:

$$\text{FDI/GDP} (-1) = -2.2278 + 0.5318\text{FDI/GDP} (-2) - 0.3758 \text{GE/GDP} (-1) - 0.0013 \text{EXR} (-2) - 0.0004 \text{INF} (-1) + 0.0417 \text{UNE} (-1) + 0.0001 \text{ECG} (-1) + \text{UI}$$

In the above equation the value of Y intercept is (-2.2278) which means that in the absence of concerned variables there will be no inflow of FDI to the country, the FDI flow from the previous years may affect the volume of FDI in the current year and the estimated β for FDI/GDP with two lag period is 0.5318 and it shows that past years of FDI has significant impact of 53 percent on FDI flow of the current year. Government expenditure has negative and statistically significant impact on FDI flow with on lag period for which the estimated impact value is calculated 37 percent, exchange rate is estimated to have negative and statistically significant impact on FDI flow with two lag periods while having an impact of

0.13 percent on FDI. Inflation with having an impact level of 0.04 percent has significant and negative effect on FDI with one lag period, the result for unemployment shows that it has significant and positive impact on FDI in one lag period with an impact level of 0.41 percent but in case of economic growth the impact direction is positive with insignificant statistical result while the having 0.01 percent impact level with one lag period.

5.5.1. The AIC, SIC and HIC in regression model

For the model fitness we use HIC, AIC and SIC test, if they are all in one range then we can claim that the model is best so in case of our topic all are in one range so based on this test it can be claimed that our model is best fit model.

5.5.2. Coefficient of Determination Adjusted R-Square

Adjusted r-Squared is used to test the explanatory power of the predicted variables. Based on the regression analysis, adjusted r square= 0.86. This explains that 86% of the changes in inflow of FDI are explained by in government expenditure, exchange rate, inflation rate, unemployment rate and economic growth. The other 14% changes in inflow of FDI are explained by other factors.

5.5.3. F-Test

The first test to be performed here is the overall significance of the regression model.

In the above table the statistic value of F-test is 25.64, while for the F-test the p-value is equal to 0.00. Therefore we can not to accept the Ho (null hypothesis) at significance level of 5% and conclude for the FDI prediction with at least one predicating variable is useful. We need to determine which one of the independent variable does not have significance relationship with the dependent variable (FDI). To identify the relationship, exist between the dependent variable and independent variables, this following section will discuss the testing of the hypothesis results by using regression equation model.

5.5.4. T-Test

For the examine and determining of the relationship between dependent & independent variables we used the T-test. The following hypothesis we testing by it:

5.5.5. Hypothesis H1

The results of table 11 present that the statistic value of T (t-value) is 2.2426 for H1 with negative sign of 0.013, as 0.5(alpha) is more than statistic value of P, results are significant. Hence, the first hypothesis. H1: The exchange rate has a positive impact on the inflow of FDI in Afghanistan, Is rejected. That means when the currency of our country depreciates it reduces the return on investment for foreign investor.

These results are the same as exhibit with the finding of Tahseen Ahmed and siafullah malik(2012) in Pakistan; Eleonora Sofilda, Ria Amilia and Muhammad Zilal Hamzah(2015)also found that exchange rate has a negative relation with FDI attraction.

5.5.6. Hypothesis H2

The results table 11 about the H2 show that the statistic value of T (t- value) is equal to 2.4479 with negative sign of .0004 as 0.5(alpha) is more than statistic value of P(p-value), so it can be concluded that results are significant. Thus our second hypothesis. H2: Inflation has a negative Impact on the attraction of foreign direct investment in Afghanistan, is accepted. The negative relation is because when the higher inflation in host country decrease the FDI. In line with Kunofiwa Tsaurai(2018) in Southern Africa ;enhance Alex Ehimare Omankhanlen (2011) found that FDI is not affected by inflation in Nigeria; Obaida Gobna Wafure and Abu Nurudeen(2010) found while FDI attraction positively affected by inflation in Nigeria.

5.5.7. Hypothesis 3

From the results obtained in above table, government expenditure is significant at 0.0094, which is less than 5% significant level. It means that the relationship between FDI and government expenditure is significant. Thus, the result can be used to accept the H1 (H1: There is significant relationship between government expenditure and foreign direct investment in Afghanistan) and reject the null hypothesis (H_0). This results is same with the Norashida Othan, Zulkornain Yusop, Gul Andaman and Mohd Monsor Ismail(2018) in ASEAN-5, China and India. Which found that in the long run FDI inflows positively affected by government expenditure.

5.5.8. Hypothesis 4

From the results obtained in above table, unemployment is significant at 0.0349, which is less than 5% significant level with positive coefficient. It means that the relationship between FDI and unemployment is positive and significant. Thus, the results can be used to accept the H1 (There is significant relationship between Unemployment and foreign direct investment in Afghanistan.) reject the null hypothesis. It is a like with the results of Dijana Grahovac and Senad Softic(2017) which found will there is significant negative relation between the unemployment and FDI in the West Balkan.

5.5.9. Hypothesis 5

The results from the above table about show economic growth is insignificant at 0.5403, which is more than 5% significant level with positive coefficient. It means that there is a positive relationship between unemployment and FDI, but it is insignificant. It is a like with the Kunofiwa Tsauraj(2018) which find the economic growth has a positive impact on the FDI in the Southern Africa.

Conclusion

Identifying determinants of FDI in Afghanistan is a broad and complex issue. This research has been done in order to study the factors that contribute to the impact on inflow of FDI which are government expenditure, exchange rate, unemployment, Inflation and Economic

Growth. Time series data for 13 years which commences from the year 2005 to 2017 has been employed in this study.

Multiple Linear Regression Analysis has been applied in the study and it shows that research objectives have been achieved. Based on the statistical results there are two of five independent variables (unemployment and economic growth) are positive effect on the FDI in Afghanistan. But, three other of five independent variables (exchange rate, inflation and government expenditure) are negative effect on the FDI attraction in Afghanistan. In multiple regression analysis for hypotheses testing, it shows those null hypotheses for inflation, unemployment, economic growth and government expenditure are rejected because all of those independent variables have significant relationships with the dependent variable i.e. flow of foreign direct investment (FDI). Thus, alternate hypotheses regarding those variable are accepted. But the null hypotheses for exchange rate is accepted.

Hence, we can conclude that all specified determinants and the dependent variable of inflow of foreign direct investment (FDI) have very strong associations. It means Government expenditure has negative and statistically significant impact on FDI flow with on lag period for which the estimated impact value is calculated 37 percent, exchange rate is estimated to have negative and statistically significant impact on FDI flow with two lag periods while having an impact of 0.13 percent on FDI. Inflation with having an impact level of 0.04 percent has significant and negative effect on FDI with one lag period, the result for unemployment shows that it has significant and positive impact on FDI in one lag period with an impact level of 0.41 percent but in case of economic growth the impact direction is positive with insignificant statistical result while the having 0.01 percent impact level with one lag period.

Policy Recommendations:

Based on our findings following policy recommendations are advised:

1. According to our finding unemployment has positive impact on FDI, as it make the labor force available with low compensation domestically, so it is recommended to the public officials that:
2. Before encouraging foreign investors to invest in potential areas, the labor force need to be equipped with required skills through conduction of different technical and vocational training programs to make them eligible for employment in concerned investment projects, otherwise the employment opportunities will open the door to the inflow of foreign skilled labors.
3. The impact of exchange rate is found to be negative, so it is recommended to the official in DAB to keep the exchange rate at satisfactory level in favor of FDI and it is needed to be low as it makes the investment more profitable to the foreign investors in term of foreign currency.
4. Government expenditure is realized to have negative impact on FDI, so in case of public investment in production sector the market become more competitive to the foreign

investment which is a discouraging factor, so it is recommended that instead of government investments foreign investment should be enhanced.

5. The inflation has negative impact on FDI so it is recommended to the central officials to take necessary measures for controlling inflation and keep inflation rate at an accepted rate to the foreign investors.

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