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Foreign Direct Investment and Economic Growth in Somalia

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Abstract
The purpose of this paper is to examine the influence of foreign direct investment for economic growth in Somalia. This paper was used Ordinary Least Squares (OLS) to make econometrics test. And consider using neoclassical growth theory. This paper was found that foreign direct investment in an economy shows that there is a good trend of investment which ultimately results in increasing the GDP in Somalia. The paper was found that FDI, Export and standard of living has direct and significant impact on the Somalia economic output. While Import has inverse and significant impact on the Somalia economic output. The paper recommended there is need for the government to retain right monetary and fiscal policies and train the somali employee in order to attract in the Somalia economy.
Keywords: Gross domestic product, foreign direct investment, export.

1. Introduction

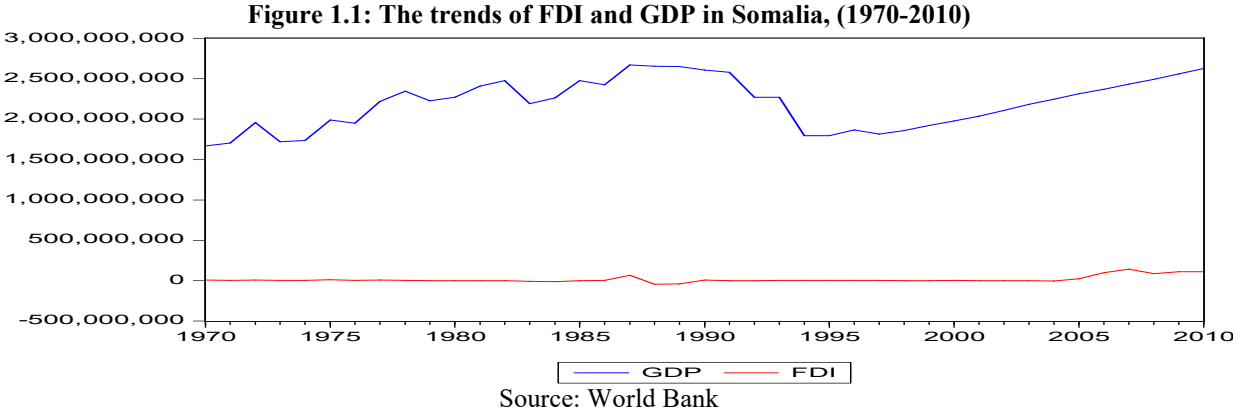
The role of foreign direct investment (FDI) has been recognized as a catalyst in the growth of developing nations. So that it brings additional source of capital investment and foreign saving. In addition to its primary aim as a source of capital formation, FDI also bring productivity benefit which includes employment creation, technology transfer and associated spillover effect, skill development, trade, competitiveness and access to foreign market. There is critical relation between foreign direct investment and economic growth, these linkages include: market size, real gross domestic (GDP), trade openness, real output, domestic capital stock and foreign capital (Elizabeth Versey, 2012).

Two and a half decades of conflict, concerted mainly in southern Somalia, and damaged much of the country's governance structure, economic infrastructure and institutions. The fall down of the Siad Barre administration, in January 1991, Somalia experienced deep cycle of internal variance that split the country, destabilized legitimate institutions, and created widespread vulnerability (World Bank, Economic Development, 2016).

Foreign direct investment is very factor that influence world economic growth and especially Somalia hat is in effort to control for economic growth stability of foreign direct investment.

Last thirty years fluctuated FDI inflow of Somalia. In Somlia one of the most Africans full who need more investment because having more natural resources. Below figure show FDI trend of Somalia in the last 5 years.

Figure 1.1: The trends of FDI and GDP in Somalia, (1970-2010)



Source: World Bank

Figure 1.1 this shows the trend of FDI and GDP over years. It shows that FDI has been low than GDP, in GDP has fluctuations in 1975 to 1991, after 1991 was declined until 2000 which begins to increase, in FDI was stable until 2005 was little increased but 2008 up to 2010 was increased in same level on the FDI of the country.

The economic growth of Somalia is required to be highly due its production. Which leads to increase the GDP of Somalia. The Somalia economic growth is law, because of state collapse which the industries, social infrastructure and assets of the country were destroyed, Somalia's economy consists of both traditional and modern production, but it's more depends on customary which causes the economic to be law.

The economic growth in East African countries are much greater than Somalia. Because that most of many sectors are now becoming either stagnant or their growth is hindered due to the less of investment.

This study will benefit to Somalia and economic policy makers and planners which lead their decisions for the future toward concerning foreign direct investment. This research will also a good guide for monetary authorities and authorized players in the external sector as it will show as a look, the state of foreign investment

in Somalia.

This study will also beneficial for countries/multinational companies that be going to make investments in other countries as it will help to expose them to the potential benefits and as well as the challenge . They will encounter should invest in Somalia. The study encompasses into five sections structured as follows: Section two literature review, Section three given data and methodology, Section four gives results and discussion and Section five conclusion and policy implication.

2. Literature review

2.1 Theoretical Framework

The economic growth theories are doing a reasonable job of explaining the wide patterns of economic change across countries, by considering at it through the lens of an aggregate production function, there are many theories that related to economic growth like Solow model growth theory, New growth theory, Neoclassical growth theory, Endogenous growth, in this consider to use neoclassical growth theory.

Neoclassical growth theory is an economic theory that tells how a steady economic growth rate can be skilled with the appropriate amounts of the three driving forces: capital, technology and labor. The theory outlines that by changeable the amounts of labor and capital in the production function, the theory argues that technological change has a major impact on an economy, and that economic growth cannot keep on without advances in technology. The neoclassical growth theory is basically depends on the understanding that the increase of capital within an economy and the behavior in which people use that capital also it's important for economic growth. Additional, the relationship between the capital and labor of an economy influenced its output. Lastly, technology in consider to augment labor productivity in such a way that is rising the output capabilities of labor. Thus, the neoclassical growth theory of production function is used to calculate for the growth and equilibrium of an economy, and its depicting as: Y=F (K, L). "Y" denotes gross domestic product (GDP), "K" represents of capital, "L" tells the numbers of unskilled labor in an economy, and "A" represents a level of technology. On the other hand, due to the relationship between labor and technology the economy's production function is often re-written as Y=F (K, L).

In case of study, Somalia faced civil wars in 1991 in which the main institutional government have collapsed, so in the absence of main factors in Somalia and the main factors that relate neoclassical growth theory are absent in Somalia, so that will change the factors of the theory and change to other factors that important to economic growth in Somalia like export, import, Household consumption and lack of government.

2.2 Relationships between foreign direct investment and economic growth

Abulkhaliq and Ilan (2007), investigate the impact of foreign direct investment (FDI) on economic growth using exhaustive sectoral data for FDI inflows to Indonesia for the period 1997-2006. Their results appear to support the disagreement that extractive FDI might not enhance economic growth. And suggest that more attention should be paid to prepare policies that will maximize the benefits from FDI inflows through its suitable sectoral composition and creating the circumstances for a beneficial FDI in sectors in which no more benefit appears to exist within the current institutional framework. Also this study found a positive relationship, Xuan Vinh VO et al, (2006), used a panel data modeling technique, and examine what is the linkage between FDI and economic growth and how does this linkage transform under different institutional, educational, legal and economic conditions. They found that FDI has a significant stronger positive impact on economic growth in countries with a higher level of openness to international trade, stock market development, education attainment and a lower rate of population growth and lower level of risk. They validate a number of existing theories. Firstly, poorer countries tend to take pleasure in a higher the rate economic growth. Secondly, the study found that domestic investment and education attainment apply a positive and strong impact on economic growth. And thirdly, a higher growth rate of population will likely delay the rate of economic growth, whilst countries with advanced degrees of openness to international trade and stock market development and lower levels of risk tend to grow faster. In other study Sajid Rahman Khattak *et al.*(2012), examine cointegration and causual relationship for both short and long run between FDI and economic output in Pakistan from the period 1972 to 2008. And the study was used various econometrics models such as ADF test, Enger-Granger, Cointegration test, Granger Causality test, Vector Error Correction Model. Their results point to that there is a short as well as long run relationship between FDI and the rate gross domestic product growth. Their results also assign that there is Uni-Directional relationship between FDI and Gross Domestic Product in Pakistan. Which means foreign direct investment caused economic productivity in Pakistan. They suggested that the government of Pakistan takes essential actions and changes those rules which create a problem for foreign investors to invest in Pakistan in such a method that they invest without any hesitations. This can also guide economy from all sides i.e. knowledge and increase in per capita per capita income, skills sharing, reduce unemployment, management skills, competitive environment etc.

The second part that support a negative relationship between FDI and Economic growth, so studies found

that a negative that mentioned above of the introduction of this chapter, Laura Alfaro, (2013), shows that the benefits of FDI very much across sectors by investigative the effect of FDI on growth in the primarily, manufacturing, and services sectors. An experimental analysis using cross-country data for the period between to 1981-1999, and suggests that total foreign direct investment exerts an uncertain effect on growth. The study found that FDI flows into the different sectors of the economy exert diverse effects on economic growth. Whilst foreign direct investment inflows into the primary part are liable to have a negative effect on growth, whereas FDI inflows in the manufacturing sector a positive one. The study suggests this that not all forms of foreign investment seem to be beneficial to host economies. In another author Afzalur Rahman, (2015), evaluates the impact of foreign direct investment (FDI) on the economic development of Bangladesh. This study used time series data over a period of fifteen years; from 1999 to 2013 and also used Multiple Regression Analyses and considered utilize to determine the relationship between foreign direct investment and economic growth. Their results obtained in this research indicate a negative correlation between FDI and economic growth and may be a concern for the government of Bangladesh. The study was concluded that the government force focus on required reforms and policy implication to make foreign investment more beneficial.

Finally, some studies found a causality relationship between FDI and Economic growth, Okon J. Umah *et al*, (2012), studies the relationship between foreign direct investment and economic growth in Nigeria between 1970 and 2008. The study used single and instantaneous equation systems are employed to observe if there is any kind of reaction relationship between foreign direct investment and economic growth in Nigeria. They study results obtained show that foreign direct investment and economic growth are both determined in Nigeria and there is positive feedback from FDI to growth. The generally policy suggestion of the results in that policies that attract more FDIs to the economically, greater trade openness and rises private contribution will need to be pursued and resistant to make sure that the local economy captures bigger spillovers from foreign direct investment inflows and attains upper economic growth rates.

This raise in real GDP means there is a raise in the value of national output or national expenditure. The benefits of economic growth include: upper standard incomes, this allowed consumers to enjoy more goods and services and enjoy better standard of living; given these significant roles of economic growth in developing economies there have been numerous studies that tried to determine the factors that influence economic growth into these economies many features like population size, level of infrastructure, human capita, natural resource etc.

The previous literatures that reviewed mostly are in the positive relationship by selecting variable which is suitable to their study, and this study considers some variables that suit to in this study includes foreign direct investment, lack of government, domestic investment, import, export, and standard of living.

3. Data and Methodology

Econometric Technique using a time series data covering the period from 1970-2010 has been used which were obtained from SESRIC and World Bank. Data include the annual series data on variables of gross domestic product, foreign direct investment, lack of government, domestic investment, import, export, and household consumption. In Somali collected from 1970 up to 2010 and Balanced data.

3.1 Data and Measurement

GDP	**Goods and service producing in Somalia country by using date from 1970 up to 2010 the data obtaining from SESRIC.**
Foreign Direct Investment	Foreign Direct Investment inflow as Dependent variable using data from Somalia reported by SESRIC from 1970 up to 2010.
Export	Export of goods and services in Somalia country by using date from 1970 up to 2010 the data obtaining from SESRIC
Domestic Investment	Gross capital Formation constant Somalia country by using date from 1970 up to 2010 the data obtaining from SESRIC
Lack of Government	This variable indicates lack of financial institutions or weak government by using Dummy Variable.
Standard of living	Household consumption in Somalia country by using date from 1970 up to 2010 the data obtaining from SESRIC
Import	Import of goods and services in Somalia country by using date from 1970 up to 2010 the data obtaining from SESRIC

3.2 Model Specification

The statistical technique in used in this study is Ordinary Least Squares (OLS) to make econometrics test and hypothesis to specify the model used by this cited a variety of the models has been precise to make possible for the test of hypothesis that whether explanatory variables determine economic growth.

$$GDP = \beta_t + \beta_t FDI + \beta_t X + \beta_t HC + \beta_t LG + \beta_t GCF + \beta_t M + \varepsilon_t$$

Where:

GDP: Gross Capital Formation
FDI: Foreign Direct Investment
X: Export
LG: Lack of Government
GCF: Gross Capital Formation
HC: Household Consumption
M: Import
ε_t : Error Term

4. Results and Discussion

4.1 Descriptive Statistics

In the following table Descriptive analysis shows the Maximum, Minimum and Mean average, mean, value stands highest average and Standard deviation.

With the dependent variable, the descriptive results in Table 4.1 show that average of GDP is (1,120,000,000) unit, and its standard deviation is (647,000,000) and the highest of GDP is (2,600,000,000) unit. With the independent variables include foreign direct investment, gross capital formation, lack of government, import, standard of living and export. The average of the FDI is (13,809,476) unit, and its standard deviation is (39,358,153) and the highest FDI is (39,358,153) unit. The average of GCF is (522,000,000) unit and its standard deviation is (116,000,000) and the highest of GCF is (895,000,000) unit. The average of LG is (0) unit. And its standard of deviation is (0) and the highest of LG is (1) unit. The average of HC is (851,000,000) unit. And its standard deviation is (30,716,260) and the highest of HC is (1,890,000,000) unit. The average of X is (26,549,268) unit. And its standard deviation is (30,716,260) and the highest of X is (121,000,000,000) unit. The average of M is (82,797,319) unit. And its standard deviation is (68,154,432) and the highest of M is (249,000,000) unit.

GDP has the highest average number were 1,120,000,000 while LG has the lowest average number was (0), Highest standard deviation variable is GDP (647,000,000), while LG has the lowest standard deviation is (1).

Table: 4.1: Descriptive statistics

	GDP	FDI	GCF	HC	LG	M	X
Mean	1,120,000,000	13,809,476	522,000,000	851,000,000	0	82,797,317	26,549,268
Median	939,000,000	700,000	499,000,000	724,000,000	-	57,130,000	8,460,000
Maximum	2,600,000,000	141,000,000	895,000,000	1,890,000,000	1	249,000,000	121,000,000
Minimum	341,000,000	(43,390,000)	380,000,000	275,000,000	-	17,960,000	3,170,000
Std. Dev.	647,000,000	39,358,153	116,000,000	449,000,000	1	68,154,432	30,716,260
Skewness	1	2	1	1	0	1	2
Kurtosis	3	6	5	3	1	3	5
Jarque-Bera	6	36	17	5	7	7	26

4.2 Correlation

Table 4.2: Correlation Matrix

	GDP	FDI	GCF	HC	LG	M	X
GDP	1						
FDI	0.536	1					
GCF	-0.12	0.04	1				
HC	0.99	0.54	-0.08	1			
LG	0.77	0.39	-0.31	0.73	1		
M	-0.47	-0.18	0.30	-0.42	-0.75	1	
X	-0.50	-0.15	-0.09	-0.49	-0.65	0.85	1

4.3 Unit root Test

To test the stationary of the data, the paper tests ADF (Augmented Dickey Fuller) were conducted. The presences of non- stationary variables might produce false regression results.

The results shows that the null hypothesis of non-stationary at level for all the time series fails to be accepted. However, all null hypothesis were rejected for every test at first difference. It indicates cleary that all variables are stationary at (first difference).

Table 4.3: Stationary Test at level & at 1st difference

Variables	ADF		PP	
	At level	1st difference	At level	1st difference
LGDP	-3.760461	-4.401255	-2.175223	-4.219650
LFDI	-2.475783	-5.954076	-2.475783	-6.248175
LX	-2.555552	-5.344766	-2.443870	-5.342828
LGCF	-2.203211	-7.591735	-2.143165	-7.585806
LM	-3.110775	-4.072355	-2.602662	-4.072355
LHC	-3.705967	-3.934753	-2.276731	-3.476327
LG	-2.062649	-6.160805	-2.109829	-6.160753

4.4 Regression Results

After testing the unit root test and having established the presence of a unit root in the first difference of each variable, the next step is to test whether there is OLS among dependent variable and independent variable.

The result of the model shows that the coefficient of FDI (0.006687) is positive indicating that in this stage, the study accept the hypothesis which predicted that these variables have negative relationship with economic growth, it means that one percent increase (decrease) in each one of these variable will results in one percent increase (decrease) in while holding other variables constant. The model also shows that import (-0.2.84650) and lack of government dummy variable (-0.036010) has negative relationship with economic growth.

Table 4.4: Regression Results

Variable	Coefficient	Std. Error	t-Statistics	Prob.
D(LFDI)	0.006687	0.003359	1.990921	0.0548
D(LHC)	0.953726	0.080838	11.79795	0.0000
D(LM)	-0.284650	0.086734	-3.281883	0.0024
D(LX)	0.289484	0.064270	4.504194	0.0001
D(LGCF)	-0.073163	0.109988	-0.665195	0.5105
LG	-0.036010	0.025586	-1.407426	0.1687
C	0.030293	0.018262	1.658795	0.1066

The study shows that foreign direct investment has positive relationship and significant effect on Somalia economic growth, this results was in line agrees with the study of Heang and Moolio, (2013). Who found that all of the qualitative studies presented that FDI positively affects GDP. And most significantly to the opportunity of the employment generated for local people, which in the long run help unemployment and poverty reduction in Cambodia.

The study shows that export has positive relationship and significant effect on Somalia economic growth, this result was similarly found by those of Mofrad, (2012) who found the results that show a exist a positive and significant long term relationship between investment and export with gross domestic production.

The study shows that exchange rate has positive relationship and significant effect on Somalia economic growth, was in line with the result agrees with those of Betsay Stevenson and Justin Wolfers, (2008) who establishing a clear positive link between average levels of subjective well-being and GDP per capita across countries, well-being and income over time within countries, economic growth associated with rising happiness.

The study shows that import has negative relationship and significant effect on Somalia economic growth, this results was similarly in line with agrees by the study of Achchuthan, S and Velnampy. T, (2013). The results revealed that import have the significant negative relationship with each other, also the import have significant impact on the economic growth.

4.5 Diagnostic Tests

It is obvious from residual diagnosis that neither Hetroskedacity nor Serial correlation exist which means the model of choosing is good and fit. The R squared (R^2) value for this model is 91% implies that our independent variables explain about 91% systematic variation on the model over the observed year while the remaining variation is explained by other determinants variables outside the model counted in residual term e. the validity of the model is tested with comparing R^2 with Durbin-Watson test, if DW is greater than R^2 the model is valid otherwise not. Since DW= 2.141093 is greater than R^2= 91% and also F-statistic are significant, so that this model has validity

Table 4.5: Variance Inflation Factor

	Centered
Variable	VIF
D(LFDI)	1.122922
D(LHC)	2.177657
D(LM)	6.151894
D(LX)	5.188807
D(LGCF)	1.242015
LG	1.142228
C	NA

Table 4.6: Normality Test

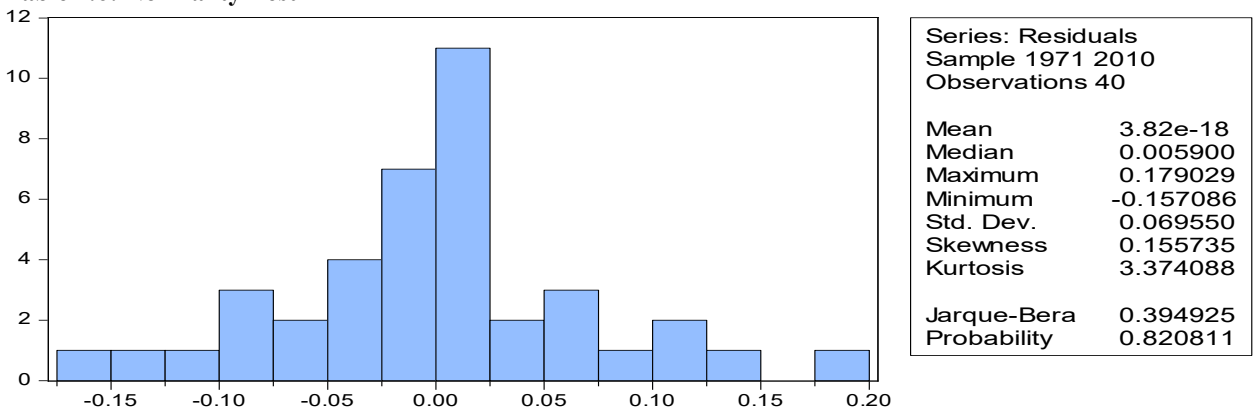


Table 4.7: Heteroskedasticity Test

Heteroskedasticity Test: ARCH			
F-statistic	1.908141	Prob. F(6,27)	0.1159
Obs* R-squared	10.12412	Prob. Chi-Square (6)	0.1195

Table 4.8: Serial Correlation Test

Breusch- Godfrey Serial Correlation LM Test:			
F-statistic	1.165251	Prob. F (6,27)	0.3536
Obs* R-squared	8.227358	Prob. Chi-Square (6)	0.2219

From the above, there is no serial correlation in the model due the probability of the observed Prob. Chi-Square (0.2219) is greater than 0.05 on the other hand, there is no Heteroskedasticity in the model owning to the fact that the probability of the observed R-square (0.1195) is less than 0.05 and all independent variable are in significant and there is normal distribution because the Jarque-Bera is greater than (0.394).

5. Conclusion and Policy Implication

This paper has investigated the affect foreign direct investment on economic growth in Somalia for the period which spanned between 1970 and 2010. An augmented neoclassical growth theory was estimated via the Ordinary Least Square (OLS) techniques to establish the relationship between different macroeconomic variable and output growth in Somalia. The variables were tested for stationary and ordinary least square (OLS) method. The paper also reveals that foreign direct investment, gross fixed capital formation, import, export, and standard of living and lack of government are the macroeconomic variables that effected Somalia economic growth

Based on the findings in this study and further to induce economic performance in Somalia, there is need for the government to retain tight monetary and fiscal policies and train the somali employee in order to attract in the Somalia economy the following policies are suggested:

There is need for government to consciously attract foreign direct investment by previous of necessary infrastructure, which will lower the cost of doing business in Somalia.

Furthermore, Growth of any country depends upon investments especial foreign investment, increasing assets and infrastructure. Foreign direct investment in an economy shows that there is a good quality trend of investment which ultimately results in increasing the GDP in Somalia.

Export has direct and significant impact on the Somalia economic output performance this may be connected with the high dependence of the Somalia economy on livestock export that increasing economic growth. Import has inverse and significant impact on the Somalia economic output; the imported goods are the intermediate goods have the great share comparing with consumer and investment goods. Particularly in the

intermediate goods, the textile related raw material has the major share that creates trade deficit and decline economic growth. Standard of living has positive and significant impact on the Somalia economic output, standard of living represents capital accumulation when increasing capital accumulation can cause to increasing economic growth.

The strength of this research lies in its time limit. The scope of this research was for the less than 50 years ending and including the 2010. It is not known whether the results would hold if a longer period would have been researched upon. Further it is not possible to tell whether the same findings will hold for the period after 2010.

Since there are no more studies in the field of foreign direct investment in Somalia only this Paper is not enough and further research is needed. Finally the government should support to stability in macroeconomic variables and employ such growth oriented and stabilization policies especially at macro level which will induce economic growth and development.

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