

FOREIGN DIRECT INVESTMENT INFLOWS AND ECONOMIC GROWTH IN UGANDA.

¹Ruth Atuhaire, ¹Will Kaberuka, ²Smartson Ainomugisha

¹Makerere University Business School

²Kyambogo University.

ABSTRACT

The study set out to establish the effect of foreign direct investment inflows on Economic growth in Uganda. This study used data from World Bank Database covering the period between 2000 and 2013. Line plots were used to establish the trend of Exports, inflation, FDI inflows and GDP. Unit root test was undertaken using the Augmented Dickey Fuller (ADF) tests to find out if the variables were stationary. A linear regression model was fitted to determine the effect of FDI inflows, exports and inflation on GDP.

The line plots indicated that the Exports, inflation, FDI inflows and GDP had competing upward and downward trends thus not stationary. The variables were subjected to a unit root test and found to be stationary at first difference. A regression model then was fitted to determine the effect of Foreign Direct Investment Inflows on economic growth in Uganda. The results indicated that FDI inflows had a positive effect on Economic growth though not statistically significant. The null hypotheses of Exports not granger causing GDP was accepted at 5% level of significance and Johansen's Cointegration approach showed the presence of a long run equilibrium relationship between FDI inflows and GDP.

To increase economic growth in Uganda, the study recommends that the Country should Increase Foreign Direct Investment in the areas such as energy, oil and gas, transportation, information and communication technology and setting up of export promotion industries to add on the value on primary exports thus realizing high foreign exchange earnings.

Keywords: FDI, GDP, Economic growth in uganda.

CHAPTER ONE: INTRODUCTION

1. Back ground to the study

Foreign Direct Investment (FDI) refers to the investment that is made by a financier in a foreign country different from the financier's domicile country. Foreign direct investment enables the foreigner to own physical productive assets which he/she operates directly (Feenstra, 2003). Economic growth refers to increase in the output that an economy produces over a period of time usually a year. Economic growth is reflected by increase in the country's gross domestic product (GDP). GDP refers to the total monetary value of final goods and services produced by a country over a specific period of time usually one year (Obwona, 1998).

Since the end of the World War II, foreign investment has been recognized as a very viable development path especially for the developing countries (Oyeranti, 2003). The contributions of foreign investment to Japan after the World War II and in South Korea after the Korean War were of great importance. The emerging economic 'Tigers' of Asia namely Thailand, Singapore, Malaysia, Taiwan, Hong Kong and Indonesia owe their successes to heavy inflows of FDI over the years. The economic growth of these countries has been enhanced by providing the local economy with a source of foreign skill, technology, management expertise and human resource development through international training and collaboration. FDI has also substantially increased the capacity of these economies to sustain further developments from their own resources.

Having foreign direct investment in a developing country enables employment and exploitation of natural and human resources to implement innovative businesses practices in terms of management, marketing and facilitates in reduction of budget deficit. FDI inflows enable a country to reduce the risks, to regulate external debt and to add value to its human capital through provision of on the job training. Countries that face scarcity of capital and technological expertise usually experience slower growth than those that do not. Studies have shown that, foreign direct investment serves as a means of transfer of technology and knowledge (Dunning & Hamdani 1997).

In Uganda, Foreign Direct Investments (FDI) declined from their peak of 16 percent of market price GDP in 1971 to an average 7.8 percent in the period 1972 to 1986 (World Bank, 2007).

Economic Recovery Programme (ERP) was initiated in 1987 to stabilize the economy and to attain a sustainable balance of payments position. Three years that followed the introduction of the Economic Recovery Programme, success was achieved in economic growth due to increased donor assistance. However this growth was not sustained as Export earnings fell due to the

collapse of coffee prices in the late 1980s, tight credit policies hampered business expansion and scared away foreign direct investments (Mugerwa & Bigsten, 1999).

In the early 1990s, Uganda's Economy grew at an average rate of about 7%, with the greatest contribution coming from exports particularly coffee, Foreign Direct investments and imports. However the increased economic growth which came as a result of an impressive contribution of exports and foreign direct investments to economic growth with stable foreign exchange policies that helped government regulate imports suffered a setback at the whelm of the global financial crisis in 2008.

Ugandan government in recognizing the strategic importance of FDI in economic growth, the Uganda government since 1990s has pursued strategies involving incentive policies and regulatory measures geared towards the promotion of FDI inflows into the country. This study therefore seeks to assess the effect of FDI on economic growth in Uganda for the period 2000-2013.

It is widely believed that economic growth depends critically on both domestic and foreign investments (Andenyangtso, 2005). Equally, the rate of inflow of foreign investment depends on the rate of economic growth Osaghale and Amenkhieman (1987), Ohiorheman (1993), Fabayo (2003) and Aremu (2005). However, empirical studies of the effect of FDI on growth are concerned with either the overall effect on growth or with specific aspects of the FDI impact on employment, technology, trade, entrepreneurship and other areas of the economy such as infrastructures, education and health. The impact of FDI on economic growth remains unclear.

2. LITERATURE REVIEW

Economic growth in Uganda

Economic growth in Uganda has evolved over time with cotton as a major export during colonial times replaced by coffee in the 1950's. During this period the economy registered substantial growth mostly in agriculture with a contribution from the fledgling industrial sector which emphasized food processing for export (Okidi et al., 2004). This growth slowed in the late 1950s as fluctuating world market conditions reduced export earnings and Uganda experienced the political pressures of growing nationalist movements that swept much of Africa as the countries fought for independence. According to Odaet (1990), for the first five years following independence in 1962, Uganda's economy achieved rapid growth with GDP, including subsistence agriculture expanding by approximately 6.7 percent per year. By the end of the 1960s, commercial agriculture accounted for more than one-third of GDP, Industrial output had increased to nearly 9 percent of GDP primarily as a result of new food processing industries.

Tourism, transportation, telecommunications and wholesale and retail trade still contributed nearly one-half of total output (Odaet, 1990).

Although the government envisioned annual economic growth rates of about 6 percent in the early 1970s, civil war and political instability almost destroyed Uganda's economy. GDP declined each year from 1972 to 1976 and registered only slight improvement in 1977 when world coffee prices increased. The negative growth resumed largely because the government continued to expropriate business assets, decline foreign direct investments, inefficiency in public services and the parastatals, expropriation of Asian property and erosion of the stock of professional and skilled manpower. Terms of trade deteriorated which led to the fall of monetary GDP estimated at 3.1 percent per year between 1971 and 1981.

Foreign direct investment and economic growth

Agarwal (2000) in a study on the impact of foreign direct investment inflows on GDP Growth in South Africa indicated that foreign direct investment in these countries was linked with national investors and existence of complementarity between the two was also confirmed. His results first indicated negative impact of foreign direct investment inflows on GDP growth rate before 1980, and then the study indicated a positive impact thereafter. The reasons for these observations were not clear.

Ghatak and Halicioglu (2006) found a positive and statistically significant relation between the real per-capita GDP and FDI in the case of many countries but the correlation coefficient between exports-GDP ratio and percentage FDI inflow was found to be insignificant.

Sackey et al. (2012) investigated the effect of FDI on economic growth in Ghana and tested for the presence of the long run linear relationship between FDI inflows and economic growth. Their findings revealed a long run relationship between the variables. They further concluded that there existed a positive relationship between FDI and economic growth. Examining causality between FDI and economic growth for the same economy, Frimpong and Oteng-Abayie (2006) found that there was no causality between FDI and growth for economic period, the pre-Structural Adjustment Programme (SAP) period and unidirectional relationship from FDI to Gross Domestic Product (GDP) growth during the post-SAP period.

Mansfield & Romeo (1980), Adeniyi et al. (2012) examined the causal linkage between Foreign Direct Investment (FDI) and economic growth in selected West African countries. They found that the extent of financial sophistication was necessary for foreign direct investment to register on economic growth.

Wang and Wong (2009) tested the robustness of the relationship between FDI and economic growth using data from 69 countries over 1970–1989 under two economic conditions; a sufficient level of human capital and well-developed financial markets. They noted that these two conditions provided fundamentally different catalysts for FDI to promote economic growth in a country. Specifically, FDI promotes capital growth only when a certain level of financial development is achieved. Also FDI promotes productivity growth only when the host country reaches a threshold level of human capital. Tian, et al (2004) investigated FDI inflows to regions of China. They noted that regions with higher FDI inflows experienced faster GDP per capita growth.

Inflation and economic growth

Barro (1995) examines the relationship between inflation and economic growth and finds a significant negative relationship between inflation and economic growth. Specifically he found that an increase in the average annual inflation by 10 percentage points per year lowered the real GDP growth by above 0.3 percentage points per year.

Mubarik (2005) estimated the threshold level of inflation in Pakistan using annual data for the period 1973 to 2000. Results from his study suggested 9 percent threshold level of inflation for the economy of Pakistan above which inflation is very unfavorable for economic growth. That study followed that of Khan and Senhadji (2001) in which they calculate threshold level for both the developing and developed economies. They had used panel data for 140 developing and developed economies for the period 1960 to 1998 and suggest threshold levels, 1-3 percent and 7-11 percent for developed and developing countries respectively.

Munir *et al.* (2009) analyze the non linear relationship between inflation level and economic growth for the period 1970-2005 in the economy of Malaysia and found significant effect of Inflation to domestic output, in contrast to the above mentioned studies of Muabrik (2005) and Khan & Senhadji (2001). Using annual data and applying new endogenous threshold autoregressive (TAR) models proposed by Hansen (2000), they find that an inflation threshold value existing for Malaysia and verify the view that the relationship between inflation rate and economic growth is nonlinear. The estimated threshold suggested 3.9 percent as the structural break point of inflation above which inflation significantly hurts growth rate of real GDP.

Exports and economic growth

Ahmed et al (2000) investigated the relationship between exports, economic growth and foreign debt for Bangladesh, India, Pakistan Sri Lanka and four South East Asian countries using a tri-

variate causality framework, their results rejected the export-led growth hypothesis for all the countries (except for Bangladesh).

Kemal et al (2002) investigated export-led economic growth hypothesis for five South Asian Countries including Pakistan. Their study found no evidence of causation between exports and GDP in the short run for Pakistan in either direction. However, they found a strong support for long-run causality from exports to GDP for Pakistan.

Miankhel, Thangavelu and Kalirajan (2009) examined the versatile relationship between GDP, foreign direct investment, export for six countries which included India, Chile, Pakistan, Mexico, Malaysia and Thailand. The results indicated that in South Asia, there exist an evidence of an export led growth. However, in the long run, the study identify GDP growth as the common factor that influence growth in exports in the case of Pakistan and FDI in the case of India but Mexico and Chile showed a different relationship in the short run but in the long run, exports affect the growth of FDI and output. The study also indicate bi-directional long run relationship among exports, FDI and GDP in Malaysia while there is a long run uni-directional relationship from GDP to export in case of Thailand.

Jung and Marshall (1985) using the standard Granger causality tests, analyzed the relationship between export growth and economic growth using time series data for 37 developing countries and found evidence for the export-led economic growth hypothesis in only 4 countries (Indonesia, Egypt, Costa Rica, and Ecuador) out of the 37 countries studied. Using causality test, Chow (1987) investigated the causal relationship between export growth and industrial development in eight Newly Industrialized Countries. It was found that in most NICs (except Argentina) there was strong bi-directional causality between the export growth and industrial development. Chow (1987) results were in contrast to those of Jung and Marshall (1985) for four out of six countries common in the two samples, namely Brazil, Korea, Mexico and Taiwan. More specifically, as opposed to Chow (1987) evidence of dual causality between exports and economic growth, Jung and Marshall found no significant causality in Brazil or Mexico, but established causality from output to exports in Korea and Taiwan. The contrast in empirical findings of the two studies was partly explained by the fact that Chow used output of the manufacturing sector as a measure of aggregate output as opposed to Jung and Marshall (1985), who utilized Gross Domestic Product.

Khalafalla and Webb (2001) studied the relationship between exports and economic growth for Malaysia in the period between 1965 until 1996. Their study was carried out for the whole period and for two sub-periods i.e. 1965 until 1980 and 1981 to 1996. The reason for dividing the period

was that in 1981, the industrialization policy was launched by the government. The result confirmed that the export led economic growth hypothesis was valid for the full period as well as for the 1965-1980 sub-period. However, the test on the sub-period 1981-1996 proved that economic growth caused exports.

3. METHODOLOGY

Data type and source

This study assessed secondary data for the period 2000 to 2013 collected from World Bank data base. The variables covered are economic growth (GDP), foreign direct investment, Foreign Direct Investments, inflation (CPI) and export growth (EX).

Data Analysis

Data was analyzed using both STATA and the E-Views 7.0 software. The results of the findings are presented in graphs and tables.

Model specification.

To examine the relationship between Uganda's GDP , FDI, inflation (CPI) and Exports. The following model is used:

$$Y = \gamma + \alpha (FDI) + \beta (CPI) + \lambda (EX) + \mu$$

Where;

Y = Gross domestic product

FDI= Foreign direct investment

CPI= Inflation rate

EX= export growth

μ = error term

Level of Significance: 5 to 10 percent

Unit root test

As clearly put forward by Gujarati (2003), the unit root test is done using the Augmented Dickey Fuller (ADF) test by Dickey and Fuller (1979) to establish the series is non-stationary. If a unit root exists, then differencing is carried out until the series become stationary.

The null hypothesis $\rho = 1$ is tested against the alternative hypothesis $\rho \neq 1$. If the null hypothesis was accepted then there was presence of a unit root which means that the series is non stationary.

A variable would be considered to be stationary if the computed ADF test statistic was greater than the critical value in absolute terms at 1%, 5% and 10% levels of significance. In case we fail to reject the null hypothesis then differencing was adopted to induce Stationarity, the order of integration of the series was considered i.e. $I(d)$ where d was an integer representing the number of times the series had to be differenced in order to achieve Stationarity

Cointegration test

If two or more series are individually integrated (in the time series sense) but some linear combination of them has a lower order of integration, then the series are said to be co integrated.

The long run relationship between the macroeconomic indicators (exports, Inflation and foreign direct investments) and economic growth was tested for cointegration using the Johansen (1991) approach.

4. PRESENTATION AND DISCUSSION OF THE RESULTS

The descriptive results are presented using graphs.

The line plot of exports from the year 2000 to 2013 is processed in figure 1.

Figure 1: Line Plot of Exports



Figure 1 shows increasing trend in Uganda's exports since 2000 though the country experienced a slight decline in exports in 2010 and 2011. The decline can be explained by trade reform policies adopted post 2000 as explained by Development Network of Indigenous Voluntary Associations (2005).

Figure 2: Line Plot of FDI



Figure 2 shows a steady increase in foreign direct inflows up to 2009, around 2004 and between 2011 and 2013. The decline in 2010 was due to the global financial crisis. This increase in capital inflows has been attributed to government divestiture and increased remittances by non-resident Ugandans (UNCTAD, 2012). The upward and down ward trend indicated shows that the series of FDI is not stationary.

Figure 3 Line plot of GDP



Uganda has had a steady increase in GDP since 2000. This impressive growth in GDP over these years can be attributed to the restoration of the economic fundamentals, the return of the exiled community and the correction of state commercials adventures (UNCTAD, 2012).

Figure 4.2.4 Line Plot of Inflation



Since 2000, Uganda has experienced an upward and down competing trends of inflation. The sharp rise in 2011 can be attributed to the increase in global prices by then. However since 2012, inflation has been dropping.

Unit root test

Unit root test for exports

Ho: Exports have a unit root

Ha: Exports do not have a unit root

Table 1: Results for Unit root test of exports

Null Hypothesis: D(EXPORTS__IN_MILLION_USD_) has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 1 (Automatic - based on SIC, maxlag=2)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-3.555939	0.0836
Test critical values:		
1% level	-5.124875	
5% level	-3.933364	
10% level	-3.420030	

Since the ADF test absolute value is less than the absolute of critical values, the null hypothesis is accepted thus exports have a unit root (non stationary).

Unit root test for FDI

Ho: FDI has a unit root

Ha: FDI does not have a unit root

Table 2: Results for Unit root test of FDI

Null Hypothesis: D(FDI__IN_MILLION_USD_) has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic - based on SIC, maxlag=2)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-3.713288	0.0631
Test critical values:		
1% level	-4.992279	
5% level	-3.875302	
10% level	-3.388330	

Since the ADF test absolute value is less than the absolute of critical values, the null hypothesis is accepted thus FDI has a unit root (non stationary).

Unit root test for GDP

Ho: GDP has a unit root

Ha: GDP does not have a unit root

Table 3: Results for Unit root test of GDP

Null Hypothesis: D(GDP__IN_MILLION_USD_) has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic - based on SIC, maxlag=2)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-4.527549	0.0194
Test critical values:		
1% level	-4.992279	
5% level	-3.875302	
10% level	-3.388330	

Since the ADF test absolute value is less than the absolute of critical values, the null hypothesis is accepted thus GDP has a unit root (non stationary)

Unit root test for inflation

Ho: inflation has a unit root

Ha: inflation does not have a unit root

Table 4: Results of Unit root test for Inflation

Null Hypothesis: D(INFLATION__CONSUMER_PRIC) has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 2 (Automatic - based on SIC, maxlag=2)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-3.898221	0.0579
Test critical values:		
1% level	-5.295384	
5% level	-4.008157	
10% level	-3.460791	

Since the ADF test absolute value is less than the absolute of critical values, the null hypothesis is accepted thus inflation has a unit root (non stationary)

Since the unit root existed in all variables, the first differences of the Exports, FDI, Inflation and GDP were taken to achieve Stationarity in the series and when a group unit root test was carried out, it showed that the series had become stationary.

Model specification

Table 5 presents the results of the fitted model and then the following hypothesis was tested.

Ho: FDI had no significant impact on Economic Growth

Ha: FDI had a significant impact on Economic Growth

Table 5 Output for the model

Dependent Variable: GDP__IN_MILLION_USD_

Method: Least Squares

Date: 07/05/15 Time: 15:42

Sample: 2000 2013

Included observations: 14

Variable	Coefficient	Std. Error	t-Statistic	Prob.
FDI__IN_MILLION_USD_	3.303742	1.617028	2.043096	0.0683
EXPORTS__IN_MILLION_USD_	2.729885	0.360268	7.577382	0.0000
INFLATION__CONSUMER_PRIC	-69874604	49452254	-1.412971	0.1880
C	4.20E+09	3.95E+08	10.63477	0.0000
R-squared	0.985194	Mean dependent var	1.18E+10	
Adjusted R-squared	0.980752	S.D. dependent var	5.29E+09	
S.E. of regression	7.33E+08	Akaike info criterion	43.89913	
Sum squared resid	5.38E+18	Schwarz criterion	44.08172	
Log likelihood	-303.2939	Hannan-Quinn criter.	43.88223	
F-statistic	221.7936	Durbin-Watson stat	1.758269	
Prob(F-statistic)	0.000000			

The R-squared value=0.985194 implying that 98.5% of the variations in the GDP can be explained by exports, inflation and FDI.

The results show that FDI has a positive impact on GDP as a unit increase in FDI on average led to 3.30 increases in the GDP. However its effect is insignificant as the P-value(0.0683) $>$ 0.05.This is in line with Ghatak and Halicioglu (2006).

4.5 Cointegration test

Ho: FDI and GDP are not cointegrated

Ha: FDI and GDP are cointegrated

Table 6 Johansen Cointegration test results

Unrestricted Cointegration Rank Test (Trace)

Hypothesized		Trace	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.721755	18.68313	12.32090	0.0038
At most 1	0.242457	3.332107	4.129906	0.0805

Trace test indicates 1 cointegrating eqn(s) at the 0.05 level

The results in table 6 show that FDI and GDP are cointegrated. This in agreement with Sackey et al. (2012)who investigated the effect of FDI on economic growth in Ghana and tested for the presence of the long run linear relationship between FDI inflows and economic growth for Ghana. Their findings revealed a long run relationship between the variables as revealed for Uganda’s case

Granger Causality test

Ho: Foreign Direct Investment inflows did not granger cause Economic growth

Ha: Foreign Direct Investment inflows granger cause Economic growth

Table 7 Results for Granger Causality test

Pairwise Granger Causality Tests

Date: 07/05/15 Time: 15:49

Sample: 2000 2013

Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
<hr/>			
GDP__IN_MILLION_USD_ does not			
Granger Cause FDI inflows__IN_MILLION_USD_	12	11.3219	0.0064
FDI inflows__IN_MILLION_USD_ does not Granger Cause GDP__IN_MILLION_USD_		3.21201	0.0240

Since the P-value (0.0240) is less than 0.05(level of significance), the null hypothesis is rejected thus FDI inflows granger cause Economic growth of Uganda in this study period. This conclusion is similar to that of Agarwal (2000) who investigated FDI inflows-cause economic growth for five South Asian Countries and the results indicated FDI inflows in these countries was linked with national investors, and that of Ghatak and Halicioglu (2006) who found a statistically significant evidence of causation between FDI inflows and GDP in either direction.

5. SUMMARY OF THE FINDINGS, CONCLUSION AND RECOMMENDATIONS

Summary of the findings

The study shows that there is a positive relationship between export and economic growth though this relationship is not statistically significant. The study also shows that there is a long run equilibrium between FDI and economic growth.

Conclusion

The study results shows that FDI inflows granger cause Economic growth and is statistically significant.

There is a positive relationship between FDI inflows and economic growth but that relationship is not statistically significant.

Policy implications

Uganda has a potential to achieve increased economic growth from foreign direct investment. Therefore the study recommends the following policies;

Increasing foreign direct investments should be directed into strategic areas of the economy like: energy, oil and gas, transportation and information and communication technology to increase economic growth; and in setting up export promotion industries to increase the value of exports thus realizing high foreign exchange earnings to stimulate more economic growth.

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APPENDIX: DATA USED

years	Exports (in million USD)	FDI(in million USD)	GDP (in million USD)	Inflation, consumer prices (annual %)
2000	659668047.4	160700000.0	6193246632	3.392021585
2001	672714042.9	151496150.7	5840503703	1.865125241
2002	692819570	184648059.2	6178563467	-0.287508512
2003	721542170	202192593.6	6336696289	8.680476516
2004	1008178378	295416479.8	7940362663	3.72128744
2005	1278134687	379808340.7	9013834490	8.448726423
2006	1518772908	644262499.9	9942597753	7.310676136
2007	2055981532	792305780.9	12292813800	6.138510833
2008	3457255968	728860900.7	14239026768	12.05085555
2009	3577089362	841570802.7	14824492062	13.01725619
2010	3282585327	543872727.3	16030996179	3.976552885
2011	3330032152	894293858	15493320082	18.69290448
2012	4648628152	1205388488	20040545045	14.01605656
2013	5101101972	1194398346	21493615478	5.464401872