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SOCIO-ECONOMIC DETERMINANTS OF FOREIGN DIRECT INVESTMENT IN KENYA

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Abstract: *Foreign Direct Investments play important roles in growth and development processes of many economies in the world. Despite their importance in economic development, FDIs in Kenya have been fluctuating over the years. Studies conducted in Kenya have focused on the determinants of foreign direct investment inflows in Kenya. Studies covering human capital development, inflation, economic growth and cost of borrowing in regards to influencing foreign direct investments are lacking in Kenya. The general objective of this study was therefore to determine the socio-economic determinants of foreign direct investment inflows in Kenya. The study also sought to examine the effect of economic growth, human capita development, cost of borrowing and inflation rate on foreign direct investment inflows in Kenya. The study also hypothesized that there is no significant relationship between economic growth, human capital development, cost of borrowing and inflation rate and foreign direct investment inflows in Kenya. This study adopted a retrospective longitudinal study design. The study relied on data on economic growth, human capital development, cost of borrowing, inflation and foreign direct investment inflows in Kenya for the period ranging from 1980 to 2015. Secondary panel data was used in this study. Data on the economic growth (GDP), FDI, human capital index and lending interest rates was obtained from the World Bank and International Monetary Fund. Data on interest rates was obtained from the central bank of Kenya. Data on inflation was obtained from Kenya National bureau of statistics. The secondary data was quantitative in nature and was analyzed using descriptive as well as inferential statistics. Descriptive statistics included frequency distributions, mean, standard deviation and percentages. Inferential statistics include analysis of variance, correlation analysis and multivariate regression analysis. The inferential statistics were used to evaluate the relationship between the dependent and the independent variables. Data was analyzed by use of statistical software known as STATA (version 14). Of the four socioeconomic factors studies, which include economic growth, human capital development, cost of borrowing and inflation rate, its only inflation that influences foreign direct investment inflows. However, economic growth influences inflation. The study recommends that the government of Kenya should control and regulate inflation rate around levels that stimulate investment.*

Key Words: Foreign Direct Investment, Economic growth, Inflation, Cost of Borrowing

Introduction

The role of investment, especially foreign direct investment (FDI), in driving economic growth and development has been a contested one ever since the UN development decade of the 1960s. There have always been views in favor of FDI and against it (Portougal & Robb, 2000). According to Eden and Dai (2010), Foreign direct investment (FDI) can play an important role in an economy's development efforts, including: supplementing domestic savings, employment

generation and growth, integration into the global economy, transfer of modern technologies, enhancement of efficiency, development of local suppliers, and raising skills of local manpower (Wasseja & Mwenda, 2015). In developing countries, in particular, besides being a critical source of long-term capital for investment in infrastructure and other developmental initiatives, FDI can be a catalyst for economic diversification, helping these economies move beyond overdependence on natural resources. Some argue that FDI leads to economic growth and productivity increases in the economy as a whole and hence contributes to differences in economic growth and development performances across countries, but others stress the risk of FDI destroying local capabilities and extracting natural resources without adequately compensating poor countries.

In Haiti, Chen-Chang et al (2013) found that the determinants of foreign direct investment include economic growth, human capital, inflation rate and foreign exchange rate. In the Middle East and North Africa countries, Mosallamy (2016) found that determinants of FDI in flows include infrastructure, human capital and market openness. In China, Chan et al. (2014) found that growth in GDP directly influences FDI, while growth in local infrastructure and local investment provide indirect but not direct influence.

In Africa, Anyanwu (2008) found that market size, openness to trade, higher financial development and high government consumption expenditure have an impact on FDI inflows. Obida and Nurudeen (2010) argue that the market size of the host country, deregulation, political instability, and exchange rate depreciation are the main determinants of foreign direct investment in Nigeria. In West Africa, Anyanwu and Yameogo (2012) found that economic growth, level of economic development (real GDP per capita), and life expectancy are key determinants of foreign direct investment.

Kenya for a long time has been receiving many foreign investors and between the 1960s and 1970s it was one of the most attractive destinations for FDI in East Africa. However over the years, Kenya lost its magnetism to foreign investments a trend that has continued to the present. In 2008, Kenya launched vision 2030 which replaced Economic Recovery Strategy for Wealth and Employment of 2002, where the country hopes to achieve global competitiveness economically, socially and politically. As a percentage of the GDP, FDI in Kenya has been fluctuating over the years (Cadman, 2015). In 2007, Kenya attracted US$ 729 million on the back of privatizations and investment in the Mombasa to Kampala railway. It is not just the quantity of investment that is on a positive trend but Kenya is also succeeding in diversifying its FDI with significant flows now coming from China, India, the Middle East and South Africa. However, in 2011, Tanzania attracted FDIs worth $1 billion and Uganda received $792 million in investment, while Kenya only drew in $335 million (The World Bank, 2016).

In the year 2013, Kenya received Sh16 billion ($188 million) FDIs in the 12 months ending June, while data from the Uganda and Tanzania central banks shows the two attracted total FDIs of Sh155 billion ($1.8 billion) and Sh129 billion ($1.5 billion) respectively. The World Bank recently warned that the fall in Doing Business rankings for Kenya was a factor in FDI inflows, noting that Rwanda had stronger indicators. Kenya is now ranked 129, down from 72 in 2008, in the annual global Doing Business rankings.

Despite their importance in economic development, FDIs in Kenya have been fluctuating over the years. In terms of foreign direct investment, Kenya received between 1997 and 2002 an annual average of USD 59 million in FDI or 25.7% of what was received by Uganda or 18.7% that went to Tanzania during that period. Kenya's FDI inflows in 1996-2003 averaged $39 million a year, a sharp decline compared to inflows to Tanzania and Uganda that rose to $280 million and $220 million, respectively, from negligible levels in the 1980s (The World Bank, 2016). In the end of 2010, Kenya attracted only 12.9 percent of FDI in the EAC region while Tanzania and Uganda attracted 30.1 percent and 56.9 percent respectively. In the year 2012, Uganda's FDI jumped by 92.51 per cent to $1.721 billion from $894 million in 2011, while Tanzania attracted $1.706 billion in 2012, a 38.81 per cent increase from the previous year's $1.229 billion. Meanwhile, Kenya's FDIs dropped by 27.04 per cent to $259 million from $355 million. Rwanda's rose by 50.94 per cent to $160 million in 2012 from $106 million (UNCTAD, 2015).

Studies conducted in Kenya have focused on the determinants of foreign direct investment inflows in Kenya. For instance, Karagu (2003) conducted a study on the determinants of foreign direct investment in Kenya, which was limited to a period ranging from 1970 to 1999 and Rhodah (2010) conducted a study on the determinants of foreign direct investment in Kenya, which was limited to period ranging from 1970 to 2009. Studies covering human capital development, inflation, economic growth and cost of borrowing and in regards to influencing foreign direct investments are lacking in Kenya. It is therefore based on this knowledge gap that this study seeks to identify and understand more on how significant these factors are in determining foreign direct investment and recommend policy changes and implementation measures that increase on a sustainable basis for the flow of FDI into Kenya.

The following were the hypothesized relationship;

$H_0$1: There is no significant effect between economic growth and foreign direct investment inflows in Kenya.
$H_0$2: There is no significant effect between human capital development and foreign direct investment inflows in Kenya.
$H_0$3: There is no significant effect between cost of borrowing and foreign direct investment inflows in Kenya.
$H_0$4: There is no significant effect between inflation and foreign direct investment inflows in Kenya.

Literature Review

Theoretical Review

There is a variety of theoretical models explaining FDI and a wide range of factors that has been experimented within empirical studies in order to find the determinants of FDI. However, this study focused on three theories; internationalization theory, eclectic paradigm of dunning and production cycle theory.

Internationalization theory

Internalization theory was conceptualized by Buckley and Casson (1976) by extending Coase's (1937) explanation as to why multinationals internalize intermediate markets; they argued that internalizing intermediate production processes reduces uncertainty by circumventing market imperfections. According to Persson, Mattsson and Öberg (2015), the internalization theory is founded on transaction cost economies. Thus the company would incline towards internalization forms which involve a high degree of control, that is, it would prefer internalizing international activities through FDI rather than exporting or licensing. According to Chiarvesio, De Marchi and Di Maria (2015) internalization as an efficiency-based approach adopted by firms, can help to offset the hidden economic costs of protection and discriminatory regulations. The new internalization theory explained by Rugman (2010) makes explicit the need to model the MNE's internal organization, and its network capabilities, in addition to focusing on stand-alone FSAs such as strengths in R&D, manufacturing and branding. A great strength of internalization theory is that it provides clear conditions for the choice of entry mode.

FDI determinants are based on the transaction cost internalization, due to imperfection of intermediate product markets with high transaction costs, integrating these markets by MNEs minimizes costs. Internalization includes factors affecting availability of inputs like inflation, the position of the economy, human capital and cost of borrowing, these are some of the variables that this study hypothesized.

Eclectic paradigm of dunning

Dunning (1980) by bringing together the structural market imperfections, transaction-cost market imperfections, and location theory, developed the eclectic paradigm of international production. The theory considers the nature of a country's involvement in international relations by analyzing two types of involvement. The first involvement is concerned with economic activities taking place within the boundaries, and thus using national resources, but concerning goods and services directed to foreign market (Eden & Dai, 2010). The second involvement is concerned with activities of national economic agents using resources located in various countries to produce goods and services for foreign market. Dunning (1980) argues that the first involvement falls within the conventional international trade theory. The second involvement falls within the domain of international production and FDI. He further argues that the two are part of the same process. He asserts that in terms of a country's involvement, one has to explain why and when foreign markets are sourced through FDI and international production rather than production and exports. This approach is an attempt to analyze why and where decisions in terms of ownership, locational and internalization advantages (known as OLl advantages) (Rugman, 2010).

The essence of electric approach is in considering those advantages altogether and in applying them to both international trade and production. Ownership advantages (0) are specific to a particular enterprise (such as technology, marketing and production skills). If this advantage is exploited optimally, a firm can overcome and can be compensated for additional costs of establishing production facilities abroad (Dunning, 1980). This advantage also gives the firm the ability for additional costs of establishing production facilities abroad. Locational advantages (L) are specific to countries likely to attract foreign investors. Under these factors such as large

markets, government policies, the country's trade policy and superior infrastructure are included. Finally the firm gets greater benefits by exploiting both ownership and locational advantages by internalization (I). Firms do internalization due to the fact that markets for assets and product such as technology and knowledge are imperfect. The ownership and Internationalization are specific to a particular firm but the location advantages are specific to the host country and have a crucial influence on a host country's inflow of FDI. The advantages must occur jointly for FDI to occur (Rugman, 2010).

Dunning's eclectic paradigm suggests that, when ownership, location and internalization advantages are high, firms will prefer an integrated entry mode for example FDI or joint ventures, versus export or licensing. Dunning (1998) argues that, in the former case strategic asset-seeking investments take place, in which FDI is used in mergers and acquisitions, seeking horizontal efficiency. In the second case, investments are characterized by the search for markets, and resources, thus being of vertical efficiency. The relevance of internalization advantages informs this research. Despite the criticism, the OLI paradigm is dynamic in understanding the determinants of FDI and their level of influence and therefore useful and relevant. This study considers OLI framework in hypothesizing the socioeconomic determinants of FDI inflows in Kenya.

Empirical Review

Economic growth and foreign direct investment

The performance of the host country in terms of its GDP is an important factor that boosts investor confidence and the government should find ways to promote local production. Many local companies are currently operating below capacity because of the decaying state of machines and equipment and therefore the government can intervene to boost production of those companies. The government can also help to promote local production through research and gathering of essential information that can affect the performance of industries. This can also help to reduce research and information cost to local companies. Studies carried out by Dritsaki, Dritsaki and Adamopoulos (2004) on the analysis of how FDI, export and economic growth relate to each other in Greece for the years between of 1960-2002 have shown that the there is existence of a long run equilibrium relationship among the variables analyzed using the co integration test while Granger causality results showed a causal relationship existed on those variables the other hand Miankhel, Thangavelu and Kalirajan (2009) did the causality test between FDI, export and GDP represented by economic growth for Pakistan, India, Malaysia, Mexico, Thailand and chile where their findings were different for all the six nations. Their findings specifically reveal that economic growth attracts FDI in India in the long run that while GDP influence export in Pakistan. The study shows that Thailand had a bidirectional relationship between FDI and GDP implying that FDI leads to GDP and hence GDP attracts FDI. Dasgupta (2007) examined the long run impact of export, imports and FDI inflows on the outflows of FDI in India and his empirical results suggested the presence of Unidirectional causality running from the export and import to FDI out flows. The results found no causality existed from FDI inflows to the outflows.

In Kenya, Cadman (2015) carried out a study on the effect of economic growth on foreign direct investment in Kenya. The study adopted a descriptive research design. The study established that

a relationship exists between economic growth and foreign direct investments. A positive relationship exists between the GDP growth, exchange rates with the foreign direct investments. Therefore, increments of these macroeconomic variables boost foreign direct investments in the country. The study recommended that policymakers should formulate policies and strategies that are geared towards achieving better economic growth in Kenya. Small and emerging sectors such as Jua kali and other small and medium enterprises should be accorded the necessary support since they employ a majority of the Kenyan population thus making important contributions towards GDP growth.

Human Development and foreign direct investment inflow

According to Abbas and Mosallamy (2016), human capital development is a very broad concept including attention to income, education and literacy, health care, employment, human rights, nutrition, gender equality, democracy etc. Yet, economic growth, poverty and inequality remain essential components of human development and their economic measures are strongly correlated with the Human Development Index (HDI), developed by the United Nations UNDP in 1996. FDI can contribute to the formation of human capital resulting in spillover effects to the rest of the economy. A large share of FDI to developing countries is attracted by the relatively low wages in these countries. Nevertheless multinational firms are generally more skill-intensive than local firms and tend to have a higher demand for relatively skilled labor.

Muhammad (2013) carried out a study on the role of human capital in attracting foreign direct investment in South Asia. The author argued that the neglected skills and technological base are increasingly affecting capacities of the regional countries to compete in the world market, achieve sustainable growth output, move from primary goods exports to high value added exports, create a labour force which is knowledgeable and properly trained in demand driven skills and attract foreign private investment. Analysis of foreign direct investment (FDI) indicates that countries with developed human resources have attracted large FDI inflows. In Commonwealth of Independent States (CIS), Muhammad and Ather (2015) conducted a study on the role of human capital and foreign direct investment in promoting economic growth. The results support the hypothesis of the study by confirming that human capital development is critical for economic growth. Similarly, FDI has been found to have a facilitating role in promoting growth in the former Soviet Republics now comprising Central Asian independent economies. This is despite of the fact that there are country-specific differences across CIS.

Cost of borrowing and foreign direct investment inflow

FDI is primarily financed in the home country. If the cost of borrowing in the host country is higher than in the home country, foreign firms will have cost advantage over the host country competitors and are in a better position to enter the host country (Karagu, 2003). The lending rate is the rate which is charged or paid for the use of money or more precisely the cost of borrowing. According to Grosse and Trevino (1996) a relatively high lending rate in a host country has a positive impact on inward FDI. However the direction of the impact could be in a reverse if the foreign investors depend on host countries capital market for raising FDI fund. Most studies have used general interest rates while the researcher has used real lending rates because investors are lenders and borrowers to determine whether lending interest rates can influence the flow of FDIs into the economy.

In Zimbabwe, Chingarande (2012) carried out a study on the impact of interest rates on foreign direct investment. Secondary data was collected from various institutions like Reserve Bank of Zimbabwe, International Monetary Fund reports, World Bank reports, Ministry of Finance, Failed Nations. Monthly data was used to make a total of 29 observations. Data was analysed using the classical linear regression model, ordinary least squares approach. The results indicated that found that interest rates had no significant impact on FDI inflows and hence cannot be used for policy making purposes. In Kenya, Kangogo (2015) conducted a study on the effect of macro-economic factors on performance of foreign direct investment and found out that money supply and interest rate are the ideal factors that affect foreign direct investment.

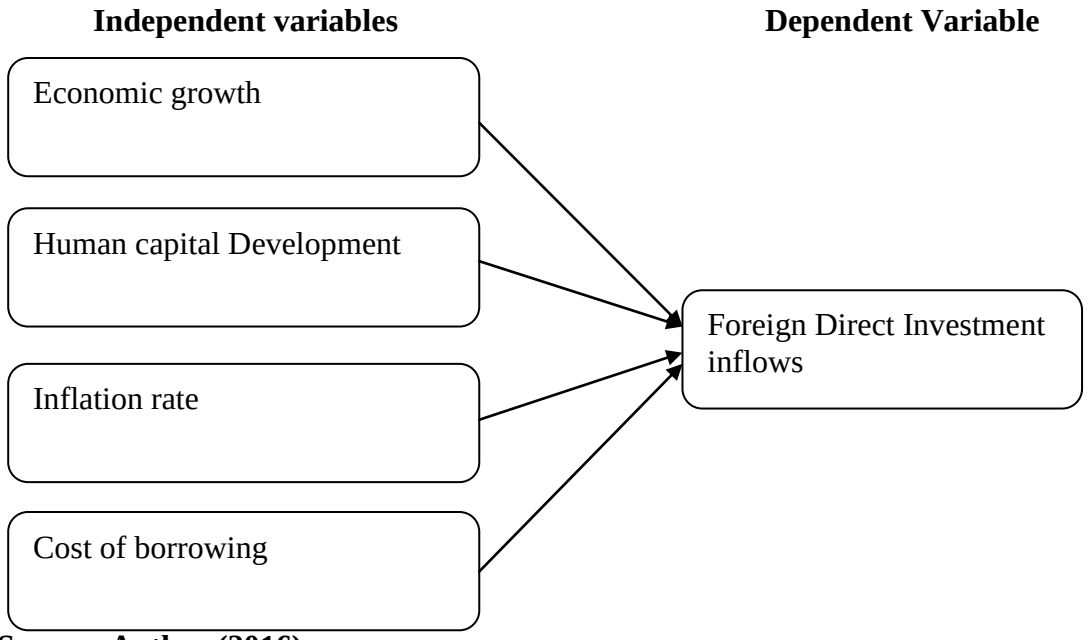
Inflation Rate and foreign direct investment inflow

Sajib et al. (2012) highlighted that low inflation is taken to be a sign of internal economic stability in the host country. Any form of instability introduces a form of uncertainty that distorts investor perception of the future profitability in the country. Andinuur (2013) supported the statement that a stable economy attracts more FDI thus a low inflation environment is desired in countries that promote FDI as a source of capital flow. Therefore the study expects a negative relationship in the regression analysis. Omankhanlen (2011) noted that inflation has a negative impact on investment only if it riches a certain threshold. Usually a certain level of inflation, particularly a single digit, is desirable to stimulate investment in an economy. Negative inflation rates will discourage investors due to lower rate of return in profits and hence the government should control and regulate inflation rate around levels that stimulate investment.

Udoh and Egwaikhide (2008) carried out a study to link up inflation and FDI where they used annual time series data covering the period 1970 to 2005 to examine the effect of exchange volatility and inflation uncertainty on FDI in Nigeria. They employed the GARCH model to estimate inflation uncertainty and exchange rate volatility. The findings indicated that inflation has a negative effect on FDI and it is statistically significant. In Kenya, Njenga (2009) conducted a study on the effects of Inflation on Foreign Direct Investment in Kenya. This study employs an econometric technique for analysis of various variables included in the model. The results indicated that inflation was found to be negatively influencing FDI inflows to Kenya and hence macroeconomic stabilizing policies should be put in place to attract more FDI inflows to the country.

Conceptual Framework

A conceptual framework is an analytical tool with several variations and contexts used to make conceptual distinctions and organize ideas. The conceptual framework shows the relationship of the independent variables and the dependent variable. The independent variables in this study were economic growth, human capital development, inflation and cost of borrowing. The dependent variable was foreign direct investment inflows.



Source: Author (2016)

Figure 1: Conceptual Framework

Source: Author (2016)

Research Methodology

This study adopted a retrospective longitudinal study design. This research study sought to utilize data covering a period starting 1980 to 2015. The study relied on data on economic growth, human capital development, cost of borrowing, inflation and foreign direct investment inflows in Kenya for the period ranging from 1980 to 2015. This study used secondary time-series data, is a dataset in which the behavior of entities is observed across time. In this study, secondary data covered a period starting 1980 to 2015. This data was obtained from the Central bank of Kenya, the Kenya National bureau of statistics, International Monetary Fund (World Economic Outlook Database) and the World Bank). More specifically, data on the economic growth (GDP), FDI and human capital index was obtained from the World Bank and International Monetary Fund. Data on interest rates was obtained from the central bank of Kenya. Data on Inflation was obtained from Kenya National bureau of statistics. Data obtained from these sources was considered genuine and can therefore be relied upon in coming up with conclusions. A check list was used as the data collection instrument.

The secondary data was quantitative in nature and was analyzed using descriptive as well as inferential statistics. Descriptive statistics will include frequency distributions, mean, standard deviation and percentages. Inferential statistics included analysis of variance, correlation analysis and multivariate regression analysis. The inferential statistics were used to evaluate the relationship between the dependent and the independent variables. Data was analyzed by use of statistical software known as STATA (version 14).

The model of this study is as specified below

$$FDI_t = \alpha_0 + \alpha_1 HDI_{t+} \alpha_2 IN_{t+} \alpha_3 EGR_{t+} \alpha_4 LINTR_{t+} \varepsilon_t$$

Where FDI denotes net foreign direct investment inflows, HDI denotes human development index, IN denotes inflation rate, EGR denotes economic growth rate, LINT denotes Lending interest rates and ε is the error term which represents other factors that influence FDI but not in the model. $\alpha_0, \alpha_1, \alpha_2, \alpha_3, \alpha_4$ are the coefficients while *t* subscript represents time.

Results and Discussions

The study covered a period of 36 years (1980 to 2015). The results were presented in line graphs and tables. The diagnostic tests in this study included Shapiro-Wilk Test to test for normality of data, Durbin Watson test for autocorrelation, Pearson correlation for multicollinearity and Augmented Dickey Fuller test for stationary of data.

Test for Normality

Regression analysis assumes that variables have normal distributions. Non-normally distributed variables can distort relationships and significance tests. In this study normal distribution of data was tested by use of Shapiro Wilk Test. The Shapiro–Wilk test is a test of normality in frequentist statistics. The null-hypothesis of this test is that the population is normally distributed. Thus if the p-value is less than the chosen alpha level, then the null hypothesis is rejected and there is evidence that the data tested are not from a normally distributed population. In other words, the data are not normal. On the contrary, if the p-value is greater than the chosen alpha level, then the null hypothesis that the data came from a normally distributed population cannot be rejected.

Table 1: Shapiro-Wilk Test

	Shapiro-Wilk		
	Statistic	**df**	**Sig.**
Foreign Direct Investment	.744	36	.240
Economic growth	.968	36	.368
Human Development index	.841	36	.382
Inflation	.827	36	.000
Lending interest rates	.833	36	.245

The findings show that foreign direct investment (p-value=0.240), economic growth (p-value=0.368) and human development index (p-value=0.38268) and lending interest rates (0.245) were normally distributed. However, inflation was not normally distributed (p-value=0.245).

Pearson Correlation Analysis

Pearson correlation coefficient was used to show the relationship between various pairs of variables.

Table 2: Correlations Coefficients

		Foreign Direct Investment	Economic growth	Human Development index	Inflation	Lending interest rates
Foreign Direct Investment	Pearson Correlation	1	.140	.088	.242	.097
	Sig. (2-tailed)		.415	.610	.155	.575
	N	36	36	36	36	36
Economic growth	Pearson Correlation	.140	1	.228	-.480**	-.395*
	Sig. (2-tailed)	.415		.181	.003	.017
	N	36	36	36	36	36
Human Development index	Pearson Correlation	.088	.228	1	-.196	-.290
	Sig. (2-tailed)	.610	.181		.252	.086
	N	36	36	36	36	36
Inflation	Pearson Correlation	.242	-.480**	-.196	1	.252
	Sig. (2-tailed)	.155	.003	.252		.139
	N	36	36	36	36	36
Lending interest rates	Pearson Correlation	.097	-.395*	-.290	.252	1
	Sig. (2-tailed)	.575	.017	.086	.139	
	N	36	36	36	36	36

From the findings, there is collinearity between inflation and economic growth (r=-0.480, p-value=0.003). In addition, the results show that there is collinearity between economic growth and lending interest rates (r=-0.395, p-value=0.017). However, there was no multicollinearity between the other independent variables of the study. The variance inflation factor (VIF) quantifies the severity of multicollinearity in an ordinary least squares regression analysis. It provides an index that measures how much the variance (the square of the estimate's standard deviation) of an estimated regression coefficient is increased because of collinearity. A variable whose VIF value is greater than 10 may merit further investigation.

Table 3: Variance inflation factor

Variable	VIF	1/VIF
EG	1.46	0.684922
In	1.32	0.759700
LINTR	1.25	0.799145
HDI	1.12	0.893889
Mean VIF	1.29	

From the findings, the VIFs for the variables, economic growth (1.46), inflation (1.32), lending interest rates (1.25) and human development index (1.12) were less than 10 the multicollinearity was not severe.

Autocorrelation Test

Durbin-Watson *d* test was used to check for autocorrelation where the value of *d* lies between 0 and 4. If the value is 2 then we will conclude that no autocorrelation, when its 4 or close to 4 then there is negative autocorrelation while it's close to 1 and 0 then the is positive autocorrelation. In this study, Durbin Watson d-statistic (5, 36) was 2.3522, which indicates that there was no serial correlation between the variables. Breusch-Godfrey Langrage Multiplier test was also used to test for autocorrelation.

Table 4: Breusch-Godfrey Langrage Multiplier test

Breusch-Godfrey LM test for autocorrelation

lags(p)	chi2	df	Prob > chi2
1	1.937	1	0.1640

H0: no serial correlation

From the findings, the p-value (0.1640), which is less than the significance level (0.05), and hence we accept the null hypothesis that there is no serial correlation among the variables.

Heteroscedasticity Test

The study used Breusch-Pagan/Cook-Weisberg test for heteroscedasticity. Heteroscedasticity (the violation of homoscedasticity) is present when the size of the error term differs across values of an independent variable. The impact of violating the assumption of homoscedasticity is a matter of degree, increasing as heteroscedasticity increases.

Table 5: Breusch-Pagan/Cook-Weisberg test for heteroscedasticity

```
Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
         Ho: Constant variance
         Variables: fitted values of FDI

         chi2(1)      =    16.82
         Prob > chi2  =   0.0000
```

From the findings, as shown in table 4.5, it was revealed that the p- value of 0.000 was less than than 0.05 significant levels implying that the study rejects the null hypothesis of homoscedasticity.

Augmented Dickey Fuller unit root test (ADF)

In order to check for stationarity of the data, the study employed Augmented Dickey Fuller unit root test (ADF); this was chosen because it is not affected by autocorrelation as opposed to other tests. If the data is found to contain unit root and require first difference in order to be stationary, then the variable in question will be deemed to have a long run relationship with the dependent variable and would therefore require a co-integration test to be conducted. If the exogenous data

is run through ADF test and happens to be stationary at level, the data would be assumed to be affecting the model in the short run. The null hypothesis is that the variables are not stationary or they got unit root.

Table 6: Augmented Dickey Fuller unit root test

Variable	Number of obs	Test Statistic	Interpolated Dickey-Fuller			Z(t) p-value
			1% critical value	5% critical value	10% Critical value	
Foreign Direct Investment	35	-6.313	-3.682	-2.972	-2.618	0.0000
Economic Growth	35	-3.430	-3.682	-2.972	-2.618	0.0100
Human development index	35	-2.985	-3.682	-2.972	-2.618	0.0363
Inflation	35	-3.360	-3.682	-2.972	-2.618	0.0124
Lending Interest Rates	35	-1.716	-3.682	-2.972	-2.618	0.4230

The null hypothesis is that the foreign direct investment has no unit root. The results show that foreign direct investment has no unit root. This is because the p-value (0.000) was less than the significance level (0.05). The null hypothesis is that economic growth has no unit root. The results show that economic growth has no unit root. This is shown by a p-value of 0.010, which less than the significance level (0.05). The null hypothesis is that human development index has no unit root. According to the findings, the p-value (0.0363) is less than the significance level (0.05), which implies that human development index has no unit root. The null hypothesis is that inflation has got unit root. From the findings, the p-value (0.0124) is less than the significance level (0.05). These findings imply that inflation has no unit root or it is stationary. The null hypothesis indicated that lending interest rates had got unit root or are not stationary. According to the findings, the p-value (0.423) is more than the significance level (0.05). This implies that lending interest rates has unit root or is not stationary.

These findings show that foreign direct investment, economic growth, human development index and inflation have no unit root, which means they are stationary. However, lending interest rates was found to have unit root.

Co-integration

Since some of the data was found to have a unit root, the Engel Granger test was used to test for co-integration.

Table 7: Engel Granger test

Equation	Excluded	Chi^2	df	$Prob>chi^2$
FDI	EG	3.2188	2	0.200
EG	FDI	1.8602	2	0.395
FDI	HDI	3.6978	2	0.157
HDI	FDI	1.8602	2	0.395
FDI	In	3.3824	2	0.292
In	FDI	12.593	2	0.002
FDI	LINTR	2.4647	2	0.393
LINTR	FDI	18.429	2	0.000
FDI	All	8.4295	2	0.393

In the first equation, the null hypothesis indicates that economic growth does not Granger-cause foreign direct investment. Since the p-value (0.200) is more than the significance level (0.05) the null hypothesis cannot be rejected. In addition, foreign direct investment does not granger cause economic growth. This is because the p-value (0.395) is greater than the significance level (0.05). In the second equation, we reject the null hypothesis that human development index does not granger cause foreign direct investment. This is because the p-value (0.157) is greater than the significance level (0.05). Further, foreign direct investment does not granger cause human development index as the p-value (0.395) is greater than the significance level (0.05).

In the third equation, we accept the null hypothesis that inflation does not Granger-cause foreign direct investment. This is because the p-value (0.292) is less than the significance level (0.05). However, foreign direct investment granger causes inflation. This is shown by a p-value of 0.002 which is less than the p-value (0.05). In the fourth equation, we can accept the null hypothesis that lending interest rates do not Granger-cause foreign direct investment. This is because the p-value (0.393) is greater than the significance level (0.05). However, foreign direct investment granger causes lending interest rates. This is shown by a p-value of 0.000, which is less than the significance level (0.05).

Regression Model

The regression model included all the independent variables, which include economic growth, human development index, inflation and lending interest rates. The model of this study is as specified below.

$$FDI_t = \alpha_0 + \alpha_1 HDI_{t+} \alpha_2 IN_{t} + \alpha_3 EGR_{t} + \alpha_4 LINTR_{t} + \varepsilon_t$$

Where FDI denotes net foreign direct investment inflows, HDI denotes human development index, IN denotes inflation rate, EGR denotes economic growth rate, LINT denotes Lending interest rates and ε is the error term which represents other factors that influence FDI but not in the model. $\alpha_0, \alpha_1, \alpha_2, \alpha_3, \alpha_4$ are the coefficients while *t* subscript will represents time.

Table 8: Model Summary

```
Number of obs =      36
F(  4,    31) =    1.69
Prob > F      =  0.1770
R-squared     =  0.1792
Adj R-squared =  0.0733
Root MSE      =  .54927
```

From the findings, the four independent variables (economic growth, human development index, inflation and lending interest rates) can explain 17.92% of foreign direct investment in Kenya. This implies that 82.08% of foreign direct investment can be explained by other variables or factors not included in this study.

Table 9: Regression Coefficients

FDI	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
EG	.091888	.048234	1.91	0.066	-.0064859	.190262
HDI	2.099851	2.694635	0.78	0.442	-3.395894	7.595595
In	.0261997	.012171	2.15	0.039	.0013767	.0510226
LINTR	.0161155	.0160678	1.00	0.324	-.016655	.048886
_cons	-1.413568	1.436659	-0.98	0.333	-4.343654	1.516518

From the findings, there is no significant relationship between economic growth and foreign direct investment in Kenya (α_1 =0.09188). The relationship was not significant because the p-value (0.066) was greater than the significance level (0.05). These findings are contrary to Dritsaki, Dritsaki and Adamopoulos (2004) findings that economic growth influences FDI in Greece. These findings also disagree with Miankhel, Thangavelu and Kalirajan (2009) findings specifically reveal that economic growth attracts FDI in India in the long run that while GDP influence export in Pakistan.

In addition, the results show that there is no significant relationship between human development index and foreign direct investment (α_2 =2.6946). The p-value (0.442) was greater that the significance level and hence the relationship was not significant. These findings are contrary to Bende-Nabende *et al,* (1998) argument that the development of human capital impacts on FDI. The findings are contrary to Agnieszka and Tomasz (2014) findings that human capital is an important factor, which attracts FDI to the region.

The results show that there is a positive relationship between inflation and foreign direct investment (α_1 = 0.02619). The p-value (0.039) was less than the significance level (0.05) and hence the relationship was significant. These findings agree with Udoh and Egwaikhide (2008) argument that inflation has a negative effect on FDI and it is statistically significant. Further, the study found that there is no significant relationship between lending interest rates and foreign direct investment (α_1=0.01611). The p-value (0.333) was more than the significance level and

hence the relationship was not significant. These findings agree with Faroh and Shen (2016) findings that those high interest rates in Sierra Leone were not significant in explaining the variability of FDI flows, which means that high interest rate is not a key factor to attract foreign firms and FDI in Sierra Leone.

Conclusion

This study concludes that economic growth has no significant influence on foreign direct investment inflows in Kenya. However, economic growth influences inflation. Therefore, policies which promote economic growth and development should be given sufficient attention in order to attract foreign direct investment. The study also concludes that human development index has no significant relationship between human development index and foreign direct investment inflows in Kenya. The study concludes that inflation influences foreign direct investment inflows in Kenya. Any form of instability introduces a form of uncertainty that distorts investor perception of the future profitability in the country. In addition, the study concludes that lending interest rates do not influence foreign direct investment inflows in Kenya. However, if the cost of borrowing in the host country is higher than in the home country, foreign firms will have cost advantage over the host country competitors and are in a better position to enter the host country.

Recommendations

The study recommends that;

1. The government of Kenya should come up with policies to curb inflation rate around levels that stimulate investment.
2. Host country's economic performance is an important factor that boosts investor confidence, though is not found to be significant in our study, it should not be neglected, and the government should find ways to promote local production, create more jobs as it would add to the economic growth.
3. Inflation is another key factor that impedes most countries FDI flow decision by investors. Therefore the government through the central bank and ministry of finance should try to maintain the inflation around single digit, as is desirable to stimulate investment in an economy.
4. Both fiscal and monetary policies geared towards encouraging FDI in Kenya would enable Kenya witness high and sustainable growth. A policy recommendation is to attract export oriented FDI into the industrial sector and more especially agricultural sector of the economy since agriculture is the backbone of the Kenyan economy.

Areas for Further Research

The study found that of all the four socio-economic factors only inflation influences FDI inflows. This study therefore suggests further studies should be conducted on other factors influencing foreign direct investment inflows in Kenya. The study also suggests further studies on relationship between foreign direct investment on the performance of organizations such as the banking industry and manufacturing industry.

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