**TITLE: Overall Determinants of foreign direct investment Inflows in Kenya**

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# *ABSTRACT*

*Empirical literature on the determinants of FDI flows is extensive but controversial over some determinants of FDI in-flows in developing countries. The objective of this study therefore was to investigate the overall determinants of FDI inflows in Kenya. Dynamic macroeconomic theory and correlational study design provided theoretical framework for specification of a time series model. The study used data observed from 1970 to 2015 in World Development Indicators (WDI) data bank. The results show that annual growth rate of GDP, inflation rates and external debt as a proportion of GDP are significant determinants of FDI inflows in Kenya and are therefore important macroeconomic parameters for policy formulation for promotion of FDI inflows in Kenya.*

***Key Words: Foreign Direct Investments, Determinants, Inflows, Kenya***

**Introduction**

Foreign Direct Investments (FDI) are capital investments provided by Multi-National Corporations (MNCs) between countries for mutual economic benefits. From empirical literature FDIs are encouraged by most governments through bilateral and or multilateral agreements to promote macro-economic growth. From the beginning the 21st century, developing countries Kenya alike, have focused on providing an enabling macroeconomic environment to attract more FDIs to spur macro-economic growth. The focus of most developing economies however, has been on quantifiable macroeconomic variables. Popular among the quantifiable variables are; Annual Growth Rate of GDP (GDPGR), Trade Account Balance (TB), Inflation Rate(INF), External Debt Service as a proportion of GDP (EDSGDP), rate of growth of real exports (EXGR), Current account balance (CA) and previous FDI inflows into the country.

The empirical literature on the determinants of FDI flows is large, but is characterized by a divergent view concerning some determinants of FDI inflows in developing countries. According to Chakraborty (2002), the literature is not only extensive but controversial as well. Domestic market size proxied by GDP per capita for example is the most controversial determinant of FDI inflows in most developing countries. Studies by; Campos and Kinoshita., (2003); Akinkugbe.,(2003); Obwona.,(2006); found a positive relationship host country market and FDI inflows but Edwards,. (1990) and Jasperson et.al (2000) found a negative relationship.

More studies reveal contemporaneous variables of openness of the economy, exchange rate, quality of institutions and effects of agglomerations. However, the divergent views on these determinants concealed the fact that other contemporaneous variables are also significant. The purpose of this study therefore was to investigate the overall determinants of FDI inflows in Kenya. The study was to provide scientific knowledge to policy makers on macro-economic determinants significant to maximize FDI inflows. The study tested the hypothesis that; : No significant quantifiable determinants of FDI inflows in Kenya

The quantifiable determinants of FDI inflows were investigated using the revised Moosa and Cardack (2006) regression model (Eq. 1.1). The revision of the model made it possible to capture many macro-economic variables as opposed to its original application on analysis of countries.

 (1.1)

Where:

 - Foreign Direct investment at time ‘t’

 - exogeneous variable ‘i’ at time‘t’

 - The constant

 - The parameters to be estimated

 - The error term assumed to be 

For estimation purposes the equation utilized linearity for ease of analysis.

**Methodology**

This study used correlation research design to establish the determinants of FDI inflows in Kenya. According toGottman *et al*., (1969) as cited in Chakraborty, (2002

), correlational research design analysis involves successive observations throughout a programmed intervention and assesses the characteristics of the change process. It is truly the mainstay of the proposed design package because it serves several simultaneous functions.

According to Obuona., (2006) there are non-economic, qualitative factors such as political stability and incentive policies that are of vital importance in determining FDI. The difficulties and controversies in defining and quantifying these variables prevented the study from including them in the analysis.

Popular among the quantifiable variables are; Annual Growth Rate of GDP (GDPGR), Trade Account Balance (TB), Inflation Rate(INF), External Debt Service as a proportion of GDP (EDSGDP), rate of growth of real exports (EXGR), Current account balance (CA) and previous FDI inflows into the country. The following model specifies the quantifiable determinants of FDI inflows in Kenya based on the priori expectation of the study.

 1.2

Where:

FDIt = Foreign Direct Investment inflow at time t

GDPGRt = Annual Growth Rate of GDP at time t

TBt = Trade Account Balance at time t

INFt = Inflation Rate at time t

EDSGDPt = External Debt Service as a proportion of GDP at time t

EXGRt =rate of growth of real exports at time t,

FDIt-n =previous FDI inflows at time t up to n.

CAt =current account balance at time,t.

 =Error term assumed to invariant

α1 = constant

α2---α7 =parameters to be estimated

The economic growth hypothesis postulate a positive relationship between FDI ,GDPGP, PPEGDP and DSR. According to the theories of FDI, development nations will tend to invest in poorer countries that have a higher rate of return. In Kenya, the capital market is not well developed hence the return on capital was proxied by GDPGR. The argument is that a rapid growth economic provides relatively better opportunities for making profits than the ones growing slowly or not at all. Thus, an impressive rate of economic growth will be taken as a favorable signal by international investors when making investment decisions.

The relationship between trade balance (TB) and FDI is rather complex and there are diverse predictions about this relationship (see, for example, Torrisi, 1985; Tasai, 1994) following fry’s (1983) view, along with the argument of the two gap model that foreign exchange is one of the key constraints on economic growth in developing countries, it is not difficult to understand the relation between trade balance and FDI. When a country faces growing trade deficits, it is expected to adopt more favorable policies to facilitate inflows of FDI.

**Results and discussion**

The objective was to investigate the determinants of FDI inflows in Kenya based on time series data. A regression of FDI data against quantifiable variables specified in model 1.2 was run to estimate the parameters. Using the Akaike Information Criterion (AIC), the lag length were obtained for FDI,TB,INF,EXGR and CA as shown in the output table below:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Dependent Variable: FDI | | |  |  |
| Method: Least Squares | | |  |  |
| Date: 02/14/17 Time: 14:12 | | |  |  |
| Sample (adjusted): 1973 2014 | | |  |  |
| Included observations: 42 after adjustments | | | |  |
|  |  |  |  |  |
|  |  |  |  |  |
| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|  |  |  |  |  |
|  |  |  |  |  |
| C | 0.037345 | 0.214377 | 0.174203 | 0.8628 |
| FDI(-2) | -0.216081 | 0.152477 | -1.417142 | 0.1658 |
| GDPGR | 0.062175 | 0.030237 | 2.056258 | 0.0477 |
| DTB(-2) | -0.003403 | 0.020937 | -0.162529 | 0.8719 |
| INF(-2) | 0.022130 | 0.009844 | 2.248177 | 0.0314 |
| DEDSGDP | 0.034731 | 0.007874 | 4.410781 | 0.0001 |
| DEXGR(-2) | 0.006258 | 0.006740 | 0.928414 | 0.3599 |
| CA(-1) | -0.024378 | 0.015621 | -1.560652 | 0.1281 |
| ECM(-1) | 0.284670 | 0.189745 | 1.500277 | 0.1431 |
|  |  |  |  |  |
|  |  |  |  |  |
| R-squared | 0.424741 | Mean dependent var | | 0.603212 |
| Adjusted R-squared | 0.285284 | S.D. dependent var | | 0.555424 |
| S.E. of regression | 0.469561 | Akaike info criterion | | 1.513371 |
| Sum squared resid | 7.276080 | Schwarz criterion | | 1.885729 |
| Log likelihood | -22.78079 | Hannan-Quinn criter. | | 1.649855 |
| F-statistic | 3.045680 | Durbin-Watson stat | | 1.913934 |
| Prob(F-statistic) | 0.011156 |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

From the table above, signs of the parameters show that there is positive relationship between FDI inflows and annual growth rate of GDP (GDPGR), Inflation rate (INF) lagged two, External debt service as a proportion of GDP (EDSGDP) and Rate of growth of real exports (EXGR) lagged two. On the other hand, there is a negative relationship between, FDI inflows lagged two years, Trade account balance (TB) lagged two years and the current account balance (CA) lagged one year.

Based on the magnitude of the parameters, *certeris peribus*, expected value of FDI inflows in Kenya would increase by 0.037345. This could be attributed to the effect of other variables not accounted for in this model.

Previous FDI inflows are also expected to influence current FDI inflows hence the need to include them in the model. From the table above, holding other variables constant, a unit change in FDI inflows in the last two-year period is expected to lower the current FDI inflows by 0.216081 units in the current period. While this goes against economic theory, it is therefore important to consider the significance of the parameters. The p-value 0.1658 obtained is way above 0.05 and hence the parameter is considered insignificant and cannot therefore be used to explain FDI inflows in Kenya.

The effect of annual growth of GDP (GDPGR) on FDI inflows was also estimated. Holding other variables constant, a unit increase in GDPGR would increase FDI inflows by 0.062175. This supports economic theory that growth inspires foreign investors into the economy and this explains why the relationship is positive. An assessment of significance shows that the p-value for the t-statistic is 0.0477 which is lower than 0.05 significance level. The variable was thus significant in explaining FDI inflows over the study period. the null hypothesis of parameter estimate being equal to zero could thus be rejected.

The relationship between FDI inflows and Trade account balance was also explored. From the table above, there exist a negative relationship between FDI inflows and Trade account balance.A unit increase in Trade account balance in the previous two years would decrease the current FDI inflows by 0.003403 on average. Looking at the significance, the p-value was obtained as 0.8719 which is way above the 0.05 significance level and hence it was found to be insignificant. The null hypothesis of the parameter estimate being equal to zero could thus not be rejected. Trade account balance could therefore not be used to explain FDI inflows.

Analysis of the relationship between FDI inflows and inflation rates was also considered. From the table above, there exist a positive relationship between inflation rates lagged two and FDI inflows. However, a unit increase in inflation rates in the previous two periods would increase current FDI inflows by 0.022130. The probability value of t-statistic is given as 0.0314 which is below 0.05 significance level and therefore, inflation rates are significant in explaining FDI inflows. The null hypothesis of the parameter estimate for inflation being equal to zero could thus be rejected.

The study also examined the relationship between External service debt as a proportion of GDP (EDSGDP) and FDI inflows. The relationship was established to be positive suggesting a unit increase in EDSGDP would increase FDI inflows by 0.034731. The probability value of t-statistic was found to be 0.0001 which is lower than the 0.05 significance level. The null hypothesis that the parameter estimate is equal to zero could thus be rejected and conclude that EDSGDP was significant in explaining FDI inflows in Kenya in the study period.

An analysis of the relationship between Rate of growth of real exports (EXGR) and FDI inflows showed that there exists a positive relationship so that a one unit increase in EXGR in the previous two periods would increase FDI inflows by 0.006258. The probability value of the t-statistic was found to be 0.3599 which is way above the 0.05 significance level. In this respect, the null hypothesis that the parameter estimate for EXGR is equal to zero could not be rejected and conclude that EXGR is not significant in explaining FDI inflows in Kenya.

The effect of current account balance (CA) and FDI inflows was estimated and established that there exists a negative relationship between CA and FDI inflows such that a one unit increase in CA in the previous year would lower current FDI inflows by 0.024378. The p-value of the t-statistic was found to be 0.1281 and this is above the 0.05 significance level. The null hypothesis that the parameter estimate for CA is equal to zero could thus not be rejected. It can therefore be concluded that current account balance is insignificant in explaining FDI inflows in Kenya.

**Test of Significance**

The overall test of significance was done by performing the F-test which was obtained as 3.045680 in the output estimation table ……The p-value, Prob(F-statistic) was established to be 0.011156 which represents the marginal significance level of the F-test. At 5% significance level, the p-value was found to be less than 0.05 and therefore the null hypothesis that all slope coefficients are equal to zero could be rejected.

**Test of goodness of fit**

This test was performed to establish the percentage of total variation of the FDI inflows explained by growth in previous FDI inflows, annual growth rate of GDP, Trade account balance, inflation, external debt service as a proportion of GDP, rate of growth of real exports and current account balance. Adjusted in the model was obtained as 0.285284. It is therefore clear from table ……, that the variables explained 28.53% of FDI inflows in Kenya in the period under review. Since the remaining percentage could be accounted for by other determinants such as sectoral growth. It can therefore be concluded that the model not the best model to explain FDI inflows in Kenya due to the low adjusted coefficient of determination.

It can therefore be concluded that as pertains other determinants of FDI inflows in Kenya, factors to be considered include annual growth of GDP (GDPGR), Inflation and External service debt as a proportion of GDP.

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