CORRUPTION: A GRABBING-HAND OR A HELPING-HAND FOR FOREIGN DIRECT INVESTMENT: EVIDENCE FROM EAST AFRICAN COUNTRIES

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ABSTRACT

FDI is an integral part of globalization and global economy that generates employment, enhance technological and product development, and ultimately economic development and growth. Given its importance FDI is affected by various socio-economic and political factors such as corruption. But there is no conscience whether corruption plays a grabbing- hand role or a helping hand role for FDI inflow. The aim of the study is to examine the Corruption- FDI nexus in selected East African countries for the time span 1990 to 2019. The panel ARDL model was applied using the PMG estimation technique. Based on the PMG estimation results the short run and long run relationships between FDI inflow and its determinants was analysed.
The main findings showed that in long run COC positively and significantly (1%) influence FDI inflow in East African countries during the period 1990-2019. The other control variables that affect FDI inflow are INFR and TO. In the long run, INFR and TO positively and statistically significantly (1% and 5%, respectively) influence FDI inflow. Other variables such as MS and INFL have no significant impact on FDI inflow in long run. In the short run, COC, MS, INFR, INFL and TO are irrelevant to FDI inflow. Policy makers, investment bureaus, and other stake holders should work more on control of corruption (COC) to enhance the flow of FDI. Potential research can be conducted by considering other policy and investment variables using most recent data for more African countries.

Keyword: Corruption, FDI, panel ARDL

JEL Classification: C33, P45, E61

INTRODUCTION

FDI is essential for the economic growth of developing countries by filling at least three "development gaps": the "investment gap" by providing capital for investment; the "foreign exchange gap" by providing foreign currency through investments and export earnings; and the "tax revenue gap" by generating tax revenues through economic activities (Quazi, Vemuri & Soliman 2014; Kariuki, 2015). FDI brings with it economic development, access to managerial skills, financial resources, marketing expertise, and leads to increased employment (Kariuki, 2015). FDI can also generate domestic investment in matching funds, facilitate transfer of technology and managerial skills, increase local market competition, create modern job opportunities, boost global market access for export commodities (Quazi et. al, 2014 and Kariuki, 2015). FDI is an integral part of globalization and global economy that generates employment, enhance technological and product development, and ultimately economic development and growth (Anyanwu, 2011). FDI is concerned to directly impact growth through capital accumulation, and the incorporation of new inputs and foreign technologies in the production function of the host country (Almfraji & Almsafi, 2014).

Global flows of FDI will be under severe pressure this year (2020) as a result of the COVID-19 pandemic. FDI is expected to fall sharply from 2019 levels of $1.5 trillion, dropping well below the trough reached during the global financial crisis and undoing the already lackluster growth in international investment over the past decade. Flows to developing countries will be hit especially hard, as export-oriented and commodity-linked investments are among the most seriously affected (UNCTAD's World Investment Report, 2020). FDI flows fell by 23 per cent in 2017, to $1.43 trillion from a revised $1.87 trillion in 2016. However, the global FDI share of developing economies for 2016 and 2017 was reported as 36 % and 47%, respectively, which shows 11% increase (World Investment Report, 2018). The FDI stock in Africa

doubled between 1985 and 1995. Inflows to Africa, however, have not been rising as rapidly as inflows to other regions (UNCTAD's World Investment Report, 1996).

Given its importance FDI is affected by various socio-economic and political factors such as corruption. Corruption is one of the determining factors of foreign direct investment (FDI) and negatively correlates with FDI (Habib & Zurawicki, 2004; Rose-Ackerman, 1997). Corruption also discourages FDI (Rose-Ackerman, 1997). Paolo (1995) revealed that corruption is negatively associated with private investment and growth. Ades and Di Tella (1990) concluded that corruption is higher in countries where domestic firms are sheltered from foreign competition by natural or policy induced barriers to trade, with economies dominated by a few number of firms, or where antitrust regulations are not effective in preventing anticompetitive practices. High levels of corruption combined with weak institutions are drivers of illicit flows, and these are often symptoms of deeper governance failures (OECD 2014).

Corruption is a "trans-systemic issue" that affects all societies, classes, age groups and sexes, regardless political regimes and state organizations, based on specific traditions, values, norms, and institutions (Alatas, 1990). Corruption influences investments, entrepreneurial activities, rules and regulations regarding accessing resources (Jain, 2001). In countries where corruption is high, the quantity and quality of health and educational services is lower (Jain, 2001). Corruption has a macroeconomic impact not limited to corruption specific transactions. Corruption and the way to combat it had attracted the attention of researchers, regional and international organizations (e.g. Transparency International (TI), Organizations for Economic Cooperation and Development (OECD), International Monetary Fund (IMF), the European Union (EU) and African Development Bank (ADB)). World Bank is also these organizations incorporate corruption as one of their political and economic agendas. Rose-Ackerman (1997) stated that WB and

IMF put corruption as part of their institutional and economic issue. The issue of corruption is central whether discussing about poverty reduction, democracy, or trade barriers (Andersson and Heywood, 2009). The TI Global Corruption report (2001) revealed that corruption lacks national boundary and grow deeper poverty by distorting the socio-economic and political life of the society. According to the report corruption gets media attention and public discussion. Following this political leaders, business, civil society groups, and the international community show commitment to anti-corruption reforms and fight against it (Global Corruption Report, 2001).

There two views about impact of corruption on economy. One view sees corruption (bribe and grease payments) as the means to add capital efficiency of the nation and reduce rad tape. Corruption is an aid to capital formation (Goldsmith, 1999). The other perspective observes corruption as if it suppresses economic efficiency and public deceitfulness (Goldsmith, 1999). Corruption is conceived as unacceptable and wrong act in itself (Rose-Ackerman, 1997). Quality legal and government institutions and low level of corruption has positive impacts on economic growth. Unfortunately, in developing countries corruption in collaboration with the political instability becomes the worst because of poor institutional performance. A wide range of literature has documented the impact of corruption on FDI in both developed and developing countries. However, there is no general consensus about the direction of the relationship between corruption and FDI. (Barassi and Zhou, 2012; Gossel, 2018; Quazi, 2014) found positive and statistically significant relationship between corruption and FDI (helping hand role). Zakharov, 2018; Habib & Zurawicki, 2004; Rose-Ackerman, 1997 and Paolo, 1995) argued that corruption hinders FDI (grabbing hand role). Given these lack of agreement in general little is known about the Corruption- FDI nexus in East African countries specifically though there are some exceptions (Mohapatra, 2014;

Henok, 2014; Amanuel, 2014; Getinet and Hirut, 2006). Unfortunately, none of the above studies investigated the impact of Corruption on FDI. Hence, the study will fill that gap by examining the influence of corruption on FDI in East African countries. To the best of my knowledge this is the first to analyze the Corruption- FDI nexus in East African countries. The purpose of the study is to examine the corruption-FDI nexus in East African countries, controlling other determinants of FDI. The outcome of the study will initiate international organizations, policy makers, anti-corruption institutions and investors to better understand the Corruption- FDI nexus in East African countries. The rest of the study is organized as follows: section 2 presents review of literature, Section 3 outlines research methodology, section 4 reveals results and section 5 concludes.

LITERATURE REVIEW

Definition and Theories of FDI

In this section the definition of foreign direct investment (FDI) and Corruption and the theoretical perspectives are presented. Although FDI is defined by various stockholders, the definitions given by OECD, IMF and UNCTAD are used in the current study. FDI reflects the objective of establishing a lasting interest by a resident enterprise in one economy (direct investor) in an enterprise (direct investment enterprise) that is resident in an economy other than that of the direct investor (OECD, 2008). International Monetary Fund (IMF) defined FDI as "an enterprise in the financial or non-financial corporate sectors of the economy in which a non-resident investor owns 10 per cent or more of the voting power of an incorporated enterprise or has the equivalent ownership in an enterprise operating under another legal structure. According to the UNCTAD 's World Investment Report (2020) Foreign direct investment (FDI) is defined as '' an investment involving a long-term relationship and reflecting a lasting interest and control by a resident entity in one economy (foreign direct investor or parent enterprise) in an

enterprise resident in an economy other than that of the foreign direct investor''.

Dunning (1993)'s, framework known as 'Eclectic Paradigm', identified three motives for FDI: '(1) Market seeking FDI (include market size of the host country, per capita income and growth potential of the market). (ii) Resource/asset seeking FDI (involves natural resources, availability of raw materials, and productivity and availability of skilled and unskilled labour). (iii) Efficiency seeking FDI include (gain from the common governance of geographically dispersed activities, especially in the presence of economics of scale and scope and diversification of risk)'. There are also two broad additional factors including host country FDI policy framework and business facilitation (Khrawish and Siam, 2010 and Getinet and Hirut, 2006). Business facilitation refers to the ease with which business can be conducted in the host country. The most important business facilitations include investment promotions and incentives, hassle costs related to corruption and administrative efficiency, development of financial institutions, enforceability of contracts and protection of property rights. The policy framework for FDI includes: economic, political and social stability, rules regulating entry and operation of FDI, standard of treatment of foreign affiliates, policies on functioning and structure of the markets, international agreement on FDI, privatization policy, trade policy and tax policy (Getinet and Hirut, 2006).

Definition and Theories of Corruption

The Merriam-Webster dictionary defines corruption as 'dishonest or illegal behavior especially by powerful people (such as government officials or police officers or inducement to wrong by improper or unlawful means'. International organizations also define corruption in different was. Transparency International (TI) defined it as 'the abuse of entrusted power for private gain'. 'Corruption refers receiving, asking for or giving any gratification to induce a person to do a favour with a corrupt intent' (WB, 2018). The functionalist

theory of corruption, developed by Samuel Huntington (1968), viewed corruption as a way to "grease the wheels" to get things done, especially for investors and companies (Marquette and Pfeiffer 2015; Manzetti and Wilson 2007). In this view, corruption is a way of quickly breaking through burdensome regulatory requirements, distributing resources, and generating economic growth. The institutional economic theory of corruption highlights the way corruption affects both the efficiency and the fairness of public sector actions, which are essential for running business in a given country (Rose-Ackerman, 2010). Inefficient and unfair institutions discourage (Grabbing/sanding role of corruption) investments. Principal-Agent theory stated that corruption constrains FDI by increasing transaction cost (e.g. bribe giving and grease payments) and information asymmetry.

Empirical Literature

Sichei & Kinyondo (2012) examined determinants FDI for a panel of 45 African countries over the period 1980 to 2009. They found that market size and economic stability, and trade openness have positive and significant impact on FDI. Using evidences from African Union, Kariuki (2015) highlighted that both gross fixed capital formation (infrastructure) and openness to trade are significant determinants of FDI. Mohapatra (2014) determinants FDI inflow to Ethiopia using data for 20-years covering 1992 to 2012. The outcome is Trade Openness, Official Exchange Rate, Gross Capital Formation, Gross National Expenditure and Transport Services found to be significant determinants of FDI inflows to Ethiopia during the period 1992 to 2012. However, GDP Growth, Cost of Starting Business, Gross Savings, Inflation, External Debt and GDP Per Capita found to be non-significant determinants of FDI inflows to Ethiopia. Amanuel (2014) examined the relationship between FDI and its determinants using time-series data covering a 21-year period (1990-2011). His analysis involved five independent variables including market size, level of trade openness, inflation rate,

infrastructure, and human capital. The final result shows that trade openness (positively) and inflation rate (negatively) significantly affect FDI in Ethiopia in the study period. Market size, infrastructure, and human capital and are not statistically significant. Asiedu (2002) argued that openness to trade promotes FDI in developing countries. Habib and Zurawicki (2018) found negative and statistically significant correlation between Corruption and FDI based on empirical evidences from Belgium. According to Anyanwu (2011) market size, trade openness, financial development, macroeconomic stability, exchange rates, infrastructure is positively related with FDI in East and Southern Africa sub region. Gossel (2018) investigated the relationship between FDI, Democracy and Corruption using evidences for a sample of 30 SSA countries for the time span 1985–2014. The author found that trade openness and corruption positively and significantly affect with FDI. In the same study it is found that economic development and inflation has negatively and significantly influences FDI. Corruption has negative impact on FDI (Fahad& Ahmed, 2016). Jalil, Qureshi& Feridun (2016) analyzed the relationship between corruption and Foreign Direct Investment inflows in a panel of 42 countries from 1984 to 2012. They argued that corruption has positive impact on the FDI inflows. Jalil et al., (2016) found a positive and statistically significant correlation between trade openness, inflation, and external debt and FDI inflows. However, Government expenditure has a negative coefficient FDI. Control of corruption, GDP per capita, and trade openness, quality infrastructure, has positive influence on FDI in developing countries (Sabir, Rafique & Abbas, 2019). Sair et al. (2019) highlight that good infrastructure reduces transaction cost and attracts more FDI. The present study focuses on the Corruption- FDI nexus in East African countries controlling market size, trade openness, inflation, and infrastructure.

METHODOLOGY AND DATA

The purpose of the current study is to investigate the Corruption – FDI nexus in East African countries using Panel Autogressive Lag Differencing Model (panel ARDL here after). To this end researchers used annual data from World Bank. Data on corruption is obtained from annual World Governance Indicator report of World Bank (1990-2019) which is the longest possible openly accessible data. Hence, the panel of the study ranges from 1990-2019 for 9 East African Countries, which are selected based on the availability of data for all variables of interest in the study. The study involves Burundi, Comoros, Djibouti, Ethiopia, Madagascar, Malawi, Kenya, Tanzania and Uganda. The study follows a positivist world view and quantitative research approach. This study explains the relationship between variables considered. In this study the dependent variable is FDI, the independent variable is corruption, and the controlled variables are market size, trade openness, inflation, infrastructure, and external debt.

The panel ARDL approach is selected based on the nature of the data set. The data used in the study is a 30- years (T) data for 9- East African countries (N). This type of panel data (T> N) is heterogeneous panel data which is panel ARDL. The panel ARDL model can consistently estimate long run parameters (Pesaran and Shin, 1998). ARDL model is an ordinary least square (OLS) based model which is applicable for both non-stationary time series as well as for times series with mixed order of integration (Shrestha & Bhatta, 2018). In addition to that panel ARDL provides consistent and asymptotically normal estimates of the long-run coefficients irrespective of whether the underlying regressors are I (1) or I (0) (Pesaran, Shin and Smith (1999). With the panel ARDL approach, it is possible that different variables have different optimal numbers of lags (Pahlavani, Wilson& Worthington, 2005;). Panel ARDL model takes sufficient numbers of lags to capture the data generating process in a general to specific modeling framework and can capture both long-run and short-run relation of the co-integrated variables (Shrestha & Bhatta, 2018). Panel ARDL model significantly reduce the

probability of spurious regression in case of non-stationary series (Ghouse, Khan& Rehman, 2018). Hence, researchers applied panel ARDL model to examine the Corruption- FDI nexus using empirical evidences from East African countries for the time span 1990-2019.

Econometric model

Following Adeleye et al. (2018), the generalized autoregressive distributed lag (ARDL) ((p,q, [...],q)) is presented as:

$$yt = \alpha i + \sum_{i-1}^{p} \beta iFDIt - i + \sum_{i-1}^{q} \phi iCorrt - i + \sum_{i-1}^{q} \omega'iZt - i + \varepsilon t \ ......(1)$$

Where FDI is the annual foreign direct investment, CoC is the annual estimate of control of corruption, α and β are constant terms; φ and ω are parameters; i= is countries 1, 2…N; t= time, 1, 2 [...], T, Z, and ω are vectors of observed time-variant control variables and their regression coefficients. Control variables are market size (MS)-measured by annual GDP growth rate (%);INFl = Annual rate of inflation based on consumer price index; Infrastructure (INFR) measured by Gross Fixed Capital Formation (as percent of GDP); trade openness(TO)- measured by the sum of annual imports and exports as a percentage of GDP(%)

The dependent and explanatory variables are allowed to be purely I(0) or I(1) or co-integrated; p, q are optimal lag orders; et are vectors of the error terms – unobservable zero-mean white noise vector process (serially uncorrelated or independent).

ANALYSIS AND DISCUSSION

Table 1: Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
FDI	270	2.039241	3.113702	-1.302446	23.03889
COC	270	-.5686569	.5109574	-2.008117	.8964958
MS	270	3.596071	5.974434	-50.24807	35.22408
INFR	270	76.10234	219.1628	0	1299.315
INFL	270	76.75164	57.77772	2.095406	418.3443
TO	270	51.8765	50.83331	0	347.9965

Source: Authors' competition

Table 1 reports descriptive statistics involving mean, standard deviation, minimum and maximum values for the variables included in the current study. It revealed that the minimum, mean and maximum of FDI inflows for East African countries during the study period was (-1.302), 2.039 and 23.038 respectively. The minimum, mean and maximum estimated values of COC in East Africa was (-.5686569), (-2.008117), and 0.8964958, respectively. The standard deviation of COC was 0.510 in the study period. The minimum, mean, standard deviation and maximum values of MS were 3.596, 5.974, (-50.248), and 35.224, respectively. The minimum and maximum values for INFR are 0.000 and 1299.315, respectively. The mean and standard deviation of INFR were 76.10234 and 219.1628, respectively. The minimum, mean, standard deviation and maximum values of INFL and TO can be seen on Table 2.

Table 2: Correlation Coefficient

	FDI	COC	MS	INFR	INFL	TO
FDI	1.0000					
COC	0.1802	1.0000				
MS	0.1055	0.1186	1.0000			
INFR	0.0398	-0.0387	-0.3087	1.0000		
INFL	0.2832	-0.0001	0.1122	-0.0333	1.0000	
TO	0.2099	0.2501	0.1378	-0.2556	0.1810	1.0000

Source: Authors' competition

Table 2 revealed correlation among regressors. It showed that multicollinearity was not a problem of the current study. The rule of thumb is correlation coefficient (r) with greater than 0.80 (80%) shows multicollinearity. As one could see from Table 2 the (r) value for all variables was significantly lower than 0.08, which evidence absence of multicollinearity.

Unit root tests

Most macroeconomic variables are non-stationary or have a unit root; hence, their mean, variance and co-variance change over time (Shrestha & Bhatta, 2018). To decide on the stationarity of a given series unit root tests provide statistical evidence. The ADF unit root test works under the assumption that null hypothesis of a unit root/non-stationary is tested against the alternative hypothesis of no unit root/stationary (Zakari &Tawiah, 2019). There are various methods that can be used to test the stationarity of time series (Shrestha & Bhatta, 2018) such as, Augmented DickeyeFuller, PhillipsePerron and KPSS tests. Augmented Dickeye Fuller (ADF) is

most commonly used; KPSS tests is the classical testing framework is found sometimes to be biased towards accepting null hypothesis (Ho); and PhillipsePerron is an alternative model to test the presence of unit root in a time series (Shrestha & Bhatta, 2018).

Augmented DickeyeFuller (ADF) test

The model for ADF test is (following Shrestha & Bhatta, 2018):

$$\Delta FDIt = \alpha i + \beta i FDIt - 1 + \sum_{i-1}^{p} \Delta \delta i FDIt - i + \sum_{i-1}^{q} \phi i Corrt - i + \sum_{i-1}^{q} \omega' i Zt - i + \varepsilon t \ldots (2)$$

Where;

B= α-1; α= coefficient of FDI_{t-1}; ΔFDI_t= first difference of FDI_t; i.e. $FDI_t - FDI_{t-1;}$

The null hypothesis of ADF is B =0 against the alternative hypothesis of B < 0. If we do not reject null, the series is non-stationary whereas rejection means the series is stationary.

Table 3: ADF test

Variables		Im-Pesaran-Shin unit-root (ADF) test	Decision
	Level	First Difference	
FDI	-1.9181	-	I(0)
COC	-0.7759	-6.4674	I(1)
MS	-6.4530	-	I(0)
INFR	-0.5968	-8.3561	I(1)
INFL	8.3012	-4.2472	I(1)
TO	0.0881	-10.5066	I(1)

Source: Authors competition

As it can be observed in Table 3, FDI and MS were stationary at level. The rest four variables such as COC, INFR, INFL and TO were stationary at first difference. Hence, the ARDL model was the appropriate approach for the current study to determine the long and short term relationships between FDI and COC and other controlled

variables. The panel ARDL is applied by using pooled mean group (PMG), mean group (MG) and dynamic fixed effects (DFE) estimators following (Durak & Eroğlu, 2019). But to identify the appropriate estimation technique, hausman test is conducted. The result is presented in the table 4 below.

Table 4: Hausman Test

	Chi-Square Value	P-Value
	30.97	0.1526

Source: Authors competition

As it can be observed from Table 4, the hausman model specification test supported that PMG is the better and efficient estimator. PMG likelihood estimators are used to estimate long-run coefficients, capturing the pooling behavior of homogeneity restrictions, and short-run coefficients, by the average across groups used to obtain means of the estimated error-correction coefficients and other short-run parameters (Pesaran et al, 1999). The alternative MG model is also not efficient when there is a small sample size. Hence, for these two reasons the more appropriate and efficient model is PMG and the estimation results are presented below in Table 5.

Empirical Analysis and Results

Table 5: Empirical Results PMG (Dependent variable: FDI)

Variables	Polled Mean Group (PMG)	
	Coefficients	Std. error
Long run		
COC	1.078***	0.178
MS	-0.016	0.010
INFR	0.002	0.004
INFL	0.014***	0.002
TO	0.021**	0.010
Short run		
d1.COC	2.015	2.340
d1.MS	0.132	0.121
d1.INFR	-0.021	0.039
d1.INFL	0.125	0.116
d1.TO	-0.002	0.016

Note: *, **, *** represents 10%, 5% & 1% level of significance, respectively.

Source: Authors competition

Table 5 reported both long run and short run empirical estimation results of PMG. The estimation result showed COC has positively affect FDI at 1% level of significance (P- value = 0.000) in long run. The study aimed to identify whether corruption is a Grabbing-Hand or a Helping-Hand for Foreign Direct Investment in East African Countries for the period 1990-2019. The result of the statistical analysis showed that in long run controlling corruption enhances FDI inflow. Therefore, corruption is a Grabbing-hand not a helping-hand for FDI. The result was consistent with institutional economic theory of corruption and the Principal-Agent theory. Both theories stated that corruption has the grabbing-hand role for FDI inflow. The result was similar with the findings of (Fahad & Ahmed, (2016), Barassi and Zhou, (2012), Quazi, (2014), and Sabir, Rafique & Abbas, (2019). But it was against the functionalist theory of corruption (helping-hand

role to FDI inflow). The result also contradicted with some previous empirical findings such as (Jalil, Qureshi& Feridun, 2016; Gossel, 2018). In long run, Infrastructure (INFR) and trade openness (TO) affect FDI inflows positively and significantly at 1% and 5% level of significance, respectively. The result showed that by increasing Infrastructure and trade openness East African countries can attract more FDIs. However, Market size (MS) and inflation (INFL) are not significant for FDI inflow in long run. The short run estimation result showed COC, MS, INFR, INFL and TO has no significant influence on FDI inflow in short run.

CONCLUSION

The study examined corruption- FDI nexus using evidences from selected East African countries for the period 1990-2019. The findings showed that COC, INFR and TO affect FDI inflow positively and significantly and the relationship is long run. Other

variables are insignificant both in long run and short run. Hence, East African countries can increase FDI inflows by improving COC, INFR and TO. Potential research can be conducted by considering other policy and investment variables using most recent data for more African countries.

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