

Does Governance Impact on the Foreign Direct Investment-Growth Nexus in Sub-Saharan Africa?

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Abstract: The central question this paper sought to tackle was “does the quality of institutions matter for the relationship between Foreign Direct Investment (FDI) and economic growth?” Using macroeconomic data on 27 Sub Saharan African (SSA) economies and six distinct measures of governance the findings showed that control of corruption, political stability and government effectiveness matter for the influence of FDI on economic growth in SSA. This key finding was found to be robust even in models where these three governance indicators were interacted with FDI. Furthermore, the results from threshold-type sample splitting showed that in the sample containing countries with a higher level of governance, the positive impact of FDI on growth has larger magnitude vis-à-vis the comparator group with poorer governance indicators. This significant threshold effects remained robust across specifications.

Keywords: Economic growth; Direct foreign investment; Institutional quality; Sub-Saharan Africa

JEL Classification: F23; L13; O16; P20

Introduction

Foreign Direct Investment (FDI) is a major source of development finance required to drive sustained growth in developing countries. In these economies, reliance on FDI largely hinges on three considerations. One, the persistent financing gap occasioned by saving-investment divergences; two, the latent benefits FDI confers on the recipient economy¹ and three, the decline in official lending² and other financial aid

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to developing countries. As a consequence, there is growing demand for FDI by developing countries particularly within the sub-Saharan Africa (SSA) region.

In spite of the foregoing, divergence of opinions as to the growth impact of FDI still exists in the empirical literature. These divergences stem especially from what constitutes the main channels through which FDI transmits its impact on growth. Unarguably, the absorptive capacity of the recipient country lies at the heart of most channel discourses. More interesting though is the diversity of lenses through which domestic absorptive capacity has been viewed. These have traversed trade policy orientation (Balasubramanyam et al, 1996), human capital development (Borensztein et al, 1998), physical capital accumulation (De Mello, 1997) as well as complimentary opinions relating to natural resource endowment, market size, financial sector development (can we give some specific studies) *et cetera*.

The bulk of contemporary emphasis appears to have shifted in favour of the role of governance as a mediating link in the FDI-growth nexus. This relatively new focus has a number of merits. First, good governance seems well suited to higher FDI inflows (World Bank, 2002; Globerman, Shapiro and Tang, 2004). Second, poor governance increases the costs associated with uncertainty (Cuervo-Cazurra, 2008). Beyond these, there are interesting emerging views suggesting that poor governance is FDI-promoting (Globerman and Shapiro, 2003; Gani, 2007; Staats & Biglaiser, 2012). On this route also, two recent empirical works by Bellos and Subasat (2012a and 2013) lend credence to the assertion that corruption attracts multinational companies (MNCs) to selected transition and Latin American countries respectively, rather than dissuading their entry. That said, there remains a dearth of empirical investigation on the FDI-governance-growth relationship.

Thus far and to the best of our knowledge, Pgov (2008) appears to be the only study that has contributed to this tripartite relationship for different income groups in the developing countries.

Pgov (2008) examined the impacts of governance in attracting FDI and promoting domestic investment and growth performance using low, middle and high income groups in that order. Overall his results suggest that governance exerts a significant positive impact on both income growth and domestic investment particularly in his group of middle income countries. Taken his findings together, he somewhat suggests the independence of investment decisions from governance factors.

The African continent is notorious for her poor governance records and this has been opined to have constituted a major stumbling block to growth. This history of poor and bad governance is particularly appalling for SSA where dictatorial tendencies and *sit-tightism*³ syndrome seem more prevalent. Amid these developments, several cases of mis-governance remain the common feature of SSA's socio-economic and political landscape. Meanwhile, attracting substantial amounts of FDI hinges on good governance which is somewhat a luxury in the SSA region. It is against this

background that the study is interested in unraveling the tripartite relationship between governance and FDI-growth nexus for SSA.

The paper's motivation stems from the following standpoints: first, since SSA is noted for her poor record as far as governance is concerned, examining the extent to which governance mediates in the FDI-growth linkage becomes pertinent. Second, in spite of the phenomenal increase in world FDI inflows to the developing countries, the SSA region's share persistently remains meager⁴. Is this connected to the level of institutional quality in SSA? Answering this question is another thrust of this paper. Third, and most importantly, we craft a role for potential non-linearities in this tripartite relationship. No study, as far as we are aware, has attempted this threshold-type analysis for SSA. These are the key contributions of the present paper to the FDI-growth-governance literature in SSA.

Beyond this introductory discussion the rest of the paper is structured as follows: Section 2 contains the literature review on governance, foreign direct investment and economic growth. Model, data and econometric issues are dealt with in Section 3. The presentation and discussion of empirical results is in section 4, while the conclusions of the study appear in Section 5.

Literature Review

In this section, we do not attempt to duplicate the vast literature on the impact of FDI on growth but present a general discourse on the strand that crafts a role for governance in the FDI-growth space.

Examining the impact of FDI on economic growth⁵ has attracted considerable research interests among economists, policy makers and researchers alike. In spite of this spurt in research efforts, the issue on FDI-growth nexus is largely contentious and somewhat inconclusive. The crux of the ensuing contention however, centres on the channels through which FDI impacts on growth. The core of this view is that spill-over effects of FDI on growth are conditional on additional factors within the FDI-receiving economy. This aligns with the positions of Balasubramanyam, et al (1996), Borensztein, et al (1998) and Carkovic and Levine (2003) that observed that FDI effects on growth are not necessarily positive. Thus, the initial level of development, existing stock of human capital, well developed financial markets and trade policy regime were suggested as factors that predispose the host country to reaping the growth related benefits of FDI

More recently, emphasis has been shifted to the role of institutions in attracting FDI into a country. The forerunner in this regard is Dunning (2002). He argued that institutional factors such as good governance and economic freedom have become increasingly important determinants of FDI since the motives of multinational com-

panies (MNCs) have shifted from market- and resource-seeking to efficiency-seeking. By implication, traditional determinants of FDI such as natural resources, low labour costs and good infrastructure are now becoming relatively less important while less traditional determinants such as governance and economic freedom have gained ascendancy (Loree and Guisinger, 1995; Noorbakhsh, Paloni and Youssef, 2001; Addison and Heshmati, 2003; Becchetti and Hasan, 2004). Though, Dunning blazed the trail in this respect, the strand of literature that specifically crafts a role for governance in FDI-growth nexus is still budding. However, Pgov's (2008) study is an important exception. The study examined the impacts of governance in attracting foreign direct investment and promoting domestic investment and growth performance using three income groupings for countries: low, middle and high respectively. Applying intra group regression method, he found that governance is positively correlated with per capita income growth rate in the middle and high income groups while no correlation was found in the low income group. Also, he established a positive relationship governance and total investment (domestic investment plus FDI) in low income countries but not with FDI inflow ratio. However, in the middle income countries, despite variations among governance elements, governance is generally found to have more influence on FDI inflow than on domestic investment. Finally, in high income countries, governance shows very limited impact on both domestic investment and FDI, suggesting the independence of investment decisions from governance factors.

In a somewhat similar study Raheem and Oyinlola (2013) used Ordinary Least Squares (OLS) and Threshold Auto Regressive (TAR) models to examine the impact of FDI and governance on growth for seven ECOWAS countries over the period spanning 1996 to 2010. They found that FDI and governance are positively related to growth in the linear regression (OLS). For the non-linear model (TAR), the result showed that the positive effect(s) of FDI would begin to manifest once governance reaches a threshold level of -1.2. They equally reported the significance of sound macroeconomic policies in conditioning the direct benefits of FDI

Summarily, the obvious scarcity of empirical studies on the tripartite relationship gives a clear indication of the gap filled by the present study. These are briskly reiterated for ease of appreciation. First, the FDI-growth-governance linkage is examined with specific reference to a group of SSA countries. To the best of our knowledge, empirical works on this tripartite relationship are scarcely available unique to this regional grouping. Second, the presence of non-linearities is probed via the inclusion of interaction terms. Third, both aggregate and disaggregated components of governance are employed for eventual model estimation with a view to enabling clear policy suggestions. Finally, sample splitting on the basis of all six indicators of governance to reflect the influence of potential non-linearities is yet another significant novelty that the present paper brings into the FDI-governance-growth debate in SSA.

Model and Data

Coming on the heels of prior arguments, in this paper, on the FDI-growth linkage via governance

the empirical model for this study is specified as:

$$GROWTH_{it} = f(CAP_{it}, GOV_{it}, FDI_{it}, GOV * FDI_{it}, CONTROLS_{it}) \quad (1)$$

Where $GROWTH_{it}$ is real per capita GDP, CAP_{it} is the gross fixed capital formation expressed as a percentage of GDP, FDI_{it} proxies for foreign direct investment, GOV_{it} represents governance and $GOV_{it} * FDI_{it}$ is the interaction term between the latter two variables. In the same vein, $CONTROLS_{it}$ in line with the literature on growth regressions covers conditioning factors such as inflation (INF), official exchange rate (EXR) and a measure of trade openness (OPEN).

In equation (1) above, GOV_{it} is the composite index for governance. This is further decomposed into its six components thus:

$$GOV_{it} = \{ (CC_{it}, GE_{it}, PS_{it}, RQ_{it}, RL_{it}, VA_{it}) \} \quad (2)$$

Control of Corruption (CC) captures perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as “capture” of the state by the elite and private interests. *Political Stability and Absence of Violence* (PS) measures the perceptions of the likelihood that the government will be destabilized or overthrown by unconstitutional or violent means, including domestic violence and terrorism. *Government Effectiveness* (GE) captures perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government’s commitment to such policies. *Regulatory Quality* (RQ) captures perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development. *Rule of Law* (RL) captures perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence. *Voice and Accountability* (VA) captures perceptions of the extent to which a country’s citizens are able to participate in selecting their government, as well as freedom of expression, freedom of association, and a free media. The composite index of *governance* (GOV) will be obtained using principal component analysis (PCA), an approach we tersely detail subsequently.

Annual data spanning the period 2002-2010 was used in the study. All data were obtained from the World Bank’s *World Development Indicators*, 2012 and World

Governance Indicators (WGI) provided by the World Bank on the governance quality of countries (Kaufmann et al., 2012).

Empirical Results

Table 1 presents the descriptive statistics. Summarily, it shows that the mean values for FDI and economic growth are 3.5% and 4.1% respectively, while the interactive term between the two variables carries the value of 28.5. All the governance indicators have negative values with political stability carrying the highest value of -0.183, followed by regulatory quality and control of corruption respectively.

Table 1: Descriptive statistics

Variable	Mean	Median	Max	Min	Std. Dev.
CAP	20.180	19.900	46.815	-1.401	7.399
INF	7.878	5.964	108.879	-3.100	11.033
FDI	3.592	2.273	25.112	-4.618	3.978
PGDP	4.128	6.0962	27.158	4.823	3.987
FDI*PGDP	28.542	15.506	340.516	-30.729	46.285
EXR	4.652	5.560	7.685	-0.232	2.151
OPEN	22.290	15.937	16.980	4.670	25.142
CC	-0.395	-0.476	1.250	-1.439	0.542
GE	-0.480	-0.524	0.727	-1.605	0.480
PS	-0.183	-0.042	1.186	-2.305	0.742
RL	-0.440	-0.437	0.668	-1.606	0.492
RQ	-0.397	1.438	0.791	-1.487	0.409
VA	-0.357	-0.286	0.932	-1.476	0.640

Source: Authors' Computation with underlining data from World Development Indicator (2012) and World Governance Indicator (2012)

Table 2 presents the estimated results of baseline regression equation. It shows a positive association in the FDI-growth nexus. This relationship is positive and significant across all board. This relationship can be said to be stable in all our regression. Hence, the study lends support to the argument that FDI leads to growth as it provides the much needed capital for investment, increases competition in the host country industries, and aids local firms to become more productive by adopting more efficient technology or by investing in human and/or physical capital (Raheem and Oyinlola, 2013; Asiedu, 2004).

For governance indices, it is only control of corruption, political stability and government effectiveness that serve as ingredient to economic growth. Although insignificant, rule of law, regulatory quality and voice and accountability retard the eco-

conomic growth process of the FDI recipient's country. This shows that these measures of governance are weak and thus, inhibits growth. On the main objective of the study, the interactive term between FDI inflow and growth supports the result stated above, i.e. when FDI is interacted with the indices of governance, it produces a positive and significant coefficient with the exception of rule of law and voice and accountability.

The study also found out that private investment in the form of Gross Fixed Capital Formation is helpful in propelling economic growth rate of the recipient countries. In most cases, this positive relationship is significant. It is expected that depreciation of domestic currencies against American Dollar would lead to expansion of export volumes, which would later translate to economic growth in the long run. Our results support this intuition. Current account balance has been helpful in economic growth process of SSA countries. The exact effect of inflationary pressure on growth is uncertain, as it produces mixed results.

Two robustness tests were conducted that relates to sample splitting. First, the countries under investigation are divided into two groups. Countries whose governance indices are greater than or equal to the mean values are grouped together, while countries whose indices are lower than the mean values are equally grouped together. The second test is the use of an exogenous approach to sample splitting is the adoption of Threshold Auto Regression which was proposed by Hansen (2000). It involves regressing equation 1 with different values for the proxies of financial development. The threshold value is obtained with the value that produces the highest Sum of Square Residual and the least R^2 . The conventional classical test such as t-statistics is not valid to test for the level of significance. This is due to the reasoning that TAR technique is non linear. Rather, the level of significance can be determined through likelihood ratio test (confidence interval).

The results of the robustness tests are presented in Tables 3 and 4. In our first test, we found that growth is higher in countries with high developed level of control of corruption, government effectiveness, political stability and regulatory quality. The result of the TAR model indicates that the threshold values of the governance indices are quite similar to the mean value. Above the mean values of governance indices, there would be increase in economic growth via FDI and vice versa. Hence, for FDI to impact positively on growth, level of governance must be developed to the value of the mean.

Table 2: Panel regression results for interaction models

Variable	1	2	3	4	5	6
FDI	0.304** (0.142)	0.470* (0.172)	0.333** (0.139)	0.414* (0.143)	0.816* (0.230)	0.349** (0.139)
OPEN	0.114* (0.042)	0.098** (0.043)	0.104** (0.043)	0.091** (0.040)	0.072*** (0.042)	0.094** (0.040)
CAP	0.020 (0.058)	0.059 (0.057)	0.100*** (0.056)	0.125** (0.057)	0.067 (0.055)	0.130** (0.055)
INF	0.089** (0.034)	0.066*** (0.035)	0.081** (0.037)	-0.060 (0.058)	0.148** (0.066)	-0.037 (0.054)
EXR	-1.537* (0.203)	-1.446* (0.218)	-1.356* (0.249)	-0.634* (0.175)	-0.807* (0.170)	-0.600* (0.614)
CC	3.121* (0.988)					
GE		1.710* (0.692)				
PS			0.981* (0.362)			
RL				-0.676 (0.996)		
RQ					-1.544 (1.528)	
VA						-0.068 (0.722)
FDI*CC	0.255* (0.094)					
FDI*GE		0.219* (0.072)				
FDI*PS			0.387* (0.172)			
FDI*RL				0.145 (0.155)		
FDI*RQ					0.822** (0.352)	
FDI*VA						0.022 (0.159)
R²	0.74	0.82	0.84	0.69	0.79	0.81
DW	1.96	1.85	1.79	1.85	2.01	1.93
No of Obs	224	224	224	224	224	224

Source: Authors' Computation with underlining data from World Development Indicator (2012) and World Governance Indicator (2012)

Table 3: Estimation Results for Alternative Samples on the basis of Governance Indicators

Variable	Voice & Accountability		Political Stability		Government Effe.		Regulatory Quality		Rule of Law		Control of Corruption	
	VA>M	VA<M	PS>M	PS<M	GE>M	GE<M	RQ>M	RQ<M	RL>M	RL<M	CC>M	CC<M
FDI	-0.586* (0.141)	0.127* (0.042)	0.835** (0.364)	0.040 (0.053)	0.528* (0.081)	0.355** (0.189)	0.904** (0.349)	0.244* (0.052)	0.854* (0.211)	-0.023 (0.098)	1.191** (0.529)	0.205* (0.047)
OPEN	0.264* (0.059)	0.119* (0.014)	0.404* (0.114)	0.105* (0.022)	-0.029 (0.042)	0.091 (0.074)	-0.002 (0.192)	0.123* (0.015)	0.232* (0.070)	-0.011 (0.034)	0.512** (0.196)	0.067* (0.014)
CAP	-0.009 (0.054)	-0.001 (0.019)	0.027 (0.134)	0.016 (0.017)	-0.020 (0.025)	0.325* (0.118)	-0.139 (0.130)	0.082* (0.016)	-0.195** (0.092)	-0.11 (0.040)	-0.063 (0.193)	0.106* (0.015)
INF	0.456* (0.114)	-0.031* (0.001)	1.261* (0.339)	0.009 (0.012)	-0.214 (0.138)	0.021 (0.065)	0.398** (0.445)	0.010 (0.016)	0.474* (0.138)	0.020 (0.023)	0.903** (0.393)	-0.025*** (0.015)
EXR	0.008* (0.000)	-0.079 (0.061)	2.276* (0.490)	0.202** (0.060)	0.224** (0.080)	0.744*** (0.380)	1.180* (0.445)	0.323* (0.059)	1.387* (0.331)	0.250* (0.067)	2.170* (0.480)	0.188** (0.068)
VA	-3.925* (1.242)	-0.133 (0.268)										
PS			3.716 (2.305)	0.371** (0.142)								
GE					3.613* (0.330)	3.043*** (1.489)						
RQ							1.852 (4.943)	-0.333 (0.348)				
RL									0.132 (2.225)	2.144* (0.409)		
CC											3.408 (0.290)	2.590* (0.476)
R²	0.771	0.700	0.699	0.793	0.690	0.69	0.640	1.923	0.718	0.791	0.732	0.849
DW	1.912	1.581	1.523	1.713	1.78	1.653	1.729	1.563	1.564	1.55	2.001	1.859
No of Obs	120	104	144	80	120	120	80	144	128	96	104	120

Source: Authors' Computation with underlining data from World Development Indicator (2012) and World Governance Indicator (2012)

Conclusion

The study examines the inter-relationship between governance and FDI-growth nexus. Using dataset for 27 countries in SSA namely Benin, Botswana, Burkina Faso, Burundi, Cameroon, Cape Verde, Central African Republic, Chad, Congo, Cote d'Ivoire, Ethiopia, Gabon, Ghana, Kenya, Madagascar, Malawi, Mali, Mauritius, Mozambique, Niger, Senegal, Sierra Leone, South Africa, Tanzania, Togo, Uganda and Zambia. The results obtained showed that control of corruption, political stability and government effective matter for growth. But the same cannot be said of other governance indices. This same result was produced with the inclusion of regulatory quality when indices of governance were alternatively interacted with FDI. These results are robust to the threshold analysis and sample splitting technique employed. The robustness tests show that countries with governance level that is higher than or equal to the mean value records higher positive impact of FDI inflows on growth and vice-versa. One limitation of the study is its inability to explain why improved regulatory quality, voice and accountability and rule and law did not increase the positive effect of the inflow of FDI on economic growth in SSA. Future studies might centre attention on unpacking this empirical puzzle.

NOTES

¹ These include benefits such as productivity gains, transfers of new technology, the introduction of new processes, management techniques, and technical know-how in the local market, employee training and international production networks and employment generation.

² Official lending to SSA region has declined substantially as a share of GNP from 6% in 1990 to 3.8% in 1998 while foreign aid per capita declined from an average of \$35 over 1989-92 to about \$28 over 1993-97 (World Bank, 2000b). In addition, remittances were reduced by 8.3% in 2009 in Sub-Saharan Africa (World Bank, 2009).

³ This term is coined to reflect the cursory statistic which clearly shows that as of 2011, twenty one African leaders had stayed in office for periods ranging from 11 years to 42 years. Also, an appreciable number of the lot transitioned from being military dictators into civilian rulers. This tendency, put together, is what we have termed *sit-tightism*.

⁴ Africa's flow of FDI is still less than 3% of global FDI inflows, the African share in global inflows fell from 3.1% to 2.7% and 2.9% in 2005 and 2007 respectively. Specifically, over 1980-89 and 1990-98, FDI to SSA grew by 59%. This compares with an increase of 5200% for Europe and Central Asia, 942% for East Asia and Pacific, 740% for South Asia, 455% for Latin America and Caribbean, and 672% for all developing countries (World Bank, 2000a).

⁵ See Buckley et al., (2002); De Mello (1997, 1999) and Borensztein et al (1998) for excellent surveys of the literature on the effect of foreign direct investment on growth.

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