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Does Quality of Host Regulation Matter in Multinational Investment Attraction? Evidence from Sub-Sahara Africa

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Abstract:
The study examined whether the regulatory quality matter in multinational investment inflows into the SSA region. The study utilized System GMM in investigating the relationship using a total enumeration of 48 SSA countries from 2004 to 2018. The results showed that regulatory infrastructure is weak across SSA, specifically the rule of law, control of corruption and quality of government policies formulation. The study also finds that regulatory variables individually show diverse patterns but jointly exert a significant impact on multinational investment inflow. This partly elucidates why SSA is lagging in attracting foreign investments as compared to other regional blocs in the developing countries. The policy implication of this study is for policymakers to strengthen regulations further, making policies that would promote and attract the inflows of multinational investments into SSA through strengthening the various government agencies responsible for upholding the regulatory institutions. This means that SSA governments should enhance their regulatory structures through reforms to attract more multinational inflows into the sub-region.

Keywords: Multinational investment inflow, Sub-Sahara Africa, Regulatory quality, Institution, Systems Generalized Method of Moment (SGMM)

1. Introduction

With the increase in globalization, there has been an enhanced discussion on cross-border flows of capital between nations around the world. Multinational firms' serves as the channel through which these funds find their way around the globe — these multinationals sources for an efficient economy with working institution and system to invest and operate. System is crucial in every human organization regardless of its objectives, structure, size, and endowment or complexity. This provides the platform for the exceptional discharge of duties, professional competencies and efficiency to perform, flourish and prosper. Economies with an efficient system, though not necessarily endowed with abundant natural resources are creative and innovative because of their efficient use and management of most intangible resources – human and quality institution supporting the human endeavour. Modern theories of globalization from the perspective of economics postulate that institutional conditions can facilitate or hinder the chance of an economy to function well and drive investors. (Acs et al., 2008, 2009, 2013).

Consequently, variations in the nature and structure of host institution can be detrimental or provide an opportunity for prosperity in attracting foreign capital (Acs et al., 2008; Stenholm et al., 2013). Despite a large number of studies investigating the relationship between institutions and foreign investments, large dispersion still exists among empirical findings, especially in developing economies (Herrera-Echeverri et al., 2014). Although the literature on foreign investment pointed out a range of potential benefits to economies, these benefits include its role in facilitating technology transfer and skill (human capital) upgrading, its spillover effect on domestic investment, and improvements in institutions. However, the successful reaping of these benefits depends on the prevailing conditions of the host economy regulatory quality. These conditions include the rule of law, control of corruption and quality of policies to translate to economic prosperity.

SSA is faced with enormous challenges, and these challenges make foreign capital very crucial to Africa as a continent due to the need for revenue to meet with the challenges as governments are saddled with the responsibility of

providing basic infrastructures to the citizenry. In performing her traditional roles and functions, the government needs resources. This has further cause strives among governments to attract resources required both domestic and foreign capital to be able to meet up with their roles, functions and responsibilities. Reliance on internally resources through the local firms for development has proved insufficient for many countries of Sub-Sahara over the years. However, despite the efforts of Sub-Sahara Africa to attract and encourage Multinational inflows and the vast investment opportunities in the global economy through fiscal instruments, using taxation such as tax holiday, pioneer status and other means, have not proved very successful. Data shows that there is a general marginalization of the region as demonstrated by the slow growth of foreign investment inflows to the region. The continent is generally lagging in FDI participation compared with the developing economies in Asia and other continents. Previously, developing economies in Africa and Asia received an almost similar amount of FDI in the early 70s and mid-1980. However, by 1990, emerging economies in Asia were receiving nearly eight times as much as those in Africa. By 2004, developing economies in Asia received 21.57 per cent of world total FDI compared to 2.64 per cent to developing economies of Africa.
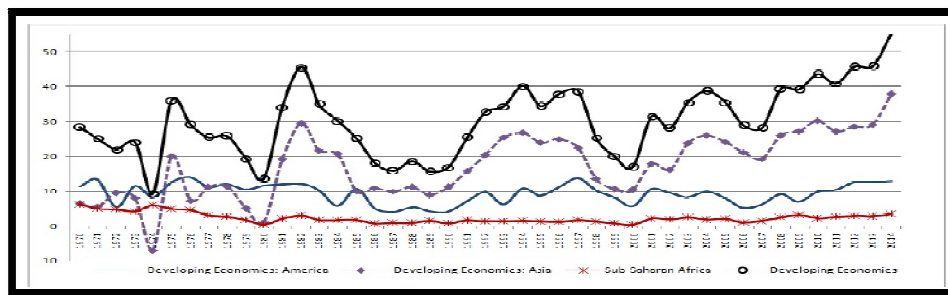

Figure 1: Adopted from Hassen (2018)

Although this situation improved marginally between 2004-2018 as the continent account for about 3.4% of the global flow of multinational investment inflows (Joseph, 2019) While this is better than what was the case in the 80s, 90s and early millennium which stood at 2%, 3.4% peak, this proportion is still considered very low for a continent accounting for about 1.3 billion of the world population. This is important because foreign direct investment is measured as one of the most secured elements of investment flows to developing countries (Bénassy Quéré, Coupet & Mayer, 2007). Therefore, the study tested the following hypothesis:

- H_0: Regulatory quality does not have statistically significant effect on multinational investment inflows in Sub-Sahara Africa.

2. Gaps That Necessitate This Study

Enormous literature exists on foreign investment determinants and causal associations between FDI and growth, as well as on how each of the determining variables influences the inflows of foreign investments. There is no denying the fact that a lot has been written on these issues. Therefore, we cannot say we are researching in a novel area. The study, however, intends to bridge the identified gaps in the literature in this area. The number of studies examining the effect of regulatory quality in SSA is minimal. Moreover, most of the studies which have taken up this issue either utilize cross-sectional data (Kwok and Tadesse, 2006; Dang, 2013; Long et al., 2015) or qualitative case studies (Lee, 2014) or have focused on the developed economics (Olney, 2013).

Exceptions are Hassen, 2013 and Ali et al. (2011) using property rights in 70 developing countries and Demir (2016) using International Country Risk Guide (ICRG) of 133 countries, both using panel data in which about 28 SSA countries are represented. The findings of these studies are mixed, ranging from negative (Olney, 2013; Lee, 2014) insignificant (Demir, 2016) to positive (Kwok and Tadesse, 2006; Ali et al., 2011; Dang, 2013; Long et al., 2015). Generally, the larger portion of studies on foreign investments focuses on growth narrative. Therefore, this study provides recent data to cover time gaps in many of the studies reviewed. The study also covered methodological gap by adopting system GMM to take care of endogenous issue neglected by many previous studies which could be responsible for bias or prejudice in findings. Importantely, to consider a new theoretical dimension to provide an alternative theoretical view to this area which has not been previously considered by other studies in this area of research. Lastly, the focus of the study is on SSA which for many decades have only experienced marginal growth in multinational investment inflow to provide empirical suggestion to this phenomenon.

3. Review of Literature

Weak institutions impede foreign investment and thus increasing the cost to investors (Buchanan et al. 2012). Investors are unwilling to invest in countries where institutions encourage corruption and inefficiency of public service because these factors increase the cost of doing business (Mengistu & Adhikary, 2011). Gani (2007) carried out a study in Asia, Latin America and Central Asian countries, and Ullah and Khan (2017) in the ASEAN region with the institution having a positive interaction with foreign investment Lucke and Eichler (2016). find a positive association between institutions and FDI in developing countries and that foreign investors prefer to invest in countries that are politically unstable and have less diverse societies. Peres et al. (2018) find that corruption and the rule of law have an insignificant impact on FDI in developing countries due to the weak structure of institutions. Moreover, institutional quality has a positive and significant impact on FDI in developed countries.

Also, Dunning (2002) argued that institutional factors, such as quality of regulation and economic freedom, are becoming highly popular determinants of foreign capital, as the priorities of multinational companies (MNCs) are shifting from market and resource seeking to efficiency-seeking. Traditional determinants of foreign investments, such as natural resources and low labour costs, are relatively becoming less important, while less traditional factors, such as quality of regulation, are becoming more popular (Addison & Heshmati, 2003; Becchetti & Hasan, 2004; Noorbakhsh, Paloni, & Youssef, 2001). Ali et al. (2010) concluded that property rights were among important determinants of FDI; specifically, that other institutional factors affect FDI indirectly through property rights. Law and order become a serious issue for MNCs when courts fail to enforce contracts, and when the government influences court decisions for political motives (Drabek & Payne, 2002). Law and order instability lead to corruption (Johnson & Dahlström, 2004).

Many investor surveys also suggest that one of the most important institutional factors that deter FDI inflows is corruption (Asiedu & Villamil, 2000; Hassen, 2013 Gastanaga, Nugent, Wei, 2000). In general, more corrupt countries receive fewer FDI inflows. Lower corruption index scores in the host country have positive associations with investment inflows, as perceived corruption levels would be lower (Cuervo-Cazurra, 2006, 2008; Wei, 2000).

4. Theoretical Framework

Several theories have been postulated as relating to internalization of which eclectic theory of Dunning stands out which is also known as OLI. However, these theories focus more around factors that push firms for internationalization and little connection or link have been established around factors that attract these scare capitals. Therefore, this study focuses on a theory that concentrates in filling this gap. Although many scholars have used this theory to provide a micro relationship between firms and investors which posited that the more positive signs investors perceive from firms, the higher the likelihood of investing in such firms, taking this a bit further on a county level. Signaling theory popularized by Michael Spencer (1973) can be used to explain visible signals in terms of policies, governance structure and institutional quality, efficiency, practices, growth, resources which serve as an attraction or a signal to the investor to locate in the host economy. Investees reduces negative signals that can inhibit investors' interest, and putting policies and practices in place which serve as a visible sign to the investor on the basses upon which they can base their investment decisions. Foreign investors take investment decisions considering several factors as to where to direct their capital for optimization. In doing this, multinationals look for signals, signs, attractors that will signal either to invest in a particular location or the other. Such information includes the quality of institution, governance and efficiency if such firm is efficiency-seeking firm. Resources richness serves as a signal if its a recourse seeking entity. Also, availability of quality, efficient institutions, ease of doing business, and transparent government policies will give a positive signal to the investing community as a choice location for investment.

Explaining multinational investment inflow according to this theory, the more positive signals investor received and observed as regard to those areas of interest such as peace and absence of violence, the rule of law and protection of property right voluntarily increase investors' confidence. Also, this may lead to increase in demand for the country as investment destination which then leads to employment, revenue to the government, spillover to local industry in the area of learning and technology transfer and generally to sustainable growth and development. Some study lends support to this theory on a micro level; however, this study is first to adapt the theory to explain location drive for multinational investment inflow.

5. Methodology

The study employed ex-post facto research design in investigating the relationship between regulatory quality and multination investment inflow into Sub-Sahara Africa. The ex-post facto research design was adopted because it allows a post review of how regulatory quality impacts multinational investment inflow prior to this study. The decision to adopt ex-post facto research design was further supported by the availability of un-manipulative data from secondary sources in analyzing the relationship between the dependent variable, independent variables and the moderating variables. This type of design is one that is non-experimental in which pre-existing groups are compared to some dependent's variables (Lammer & Badia, 2005). Both descriptive and inferential statistics were adopted.

The population of the study is made up of forty-eight (48) Sub-Sahara African countries identified by the United Nations Conference on Trade and Development (WBDI, 2018). The period coverage is 2004-2018. These countries represent all countries recognized by the United Nations as sovereign nations in Sub-Sahara Africa. The study adopted a total enumeration technique, which means that the entire population element was considered for the study, which is made up of forty-eight (48) countries of Sub-Sahara Africa. Panel data were collected. The panel data were sourced from the World Bank World-Wide Governance Index and World Bank Development Indicator database.

6. Measurement of Research Variables

6.1. Multinational Investment Flow

Multinational Investment Flow is the foreign investment flow in the country "i" at time "t". The definition of Foreign Direct Investment as given by UNCTAD, meet the conceptual intent of this study for multination investment inflows as an investment through Multinational Enterprises (MNE). Multinational Enterprises (MNE) is a non-resident enterprise in one economy (direct investor or parent enterprise) to establish a lasting interest in an enterprise that is resident in another economy (direct investment enterprise or foreign affiliate). The lasting interest implies the existence of a long-term relationship between the investor and investee with a significant degree of control on the management of the

enterprise. The ownership of 10% or more of the voting power of a direct investment enterprise by a direct investor is evidence of such a relationship. This definition is suitable and so adopted for multinational investment inflows. The direct investment consists of investment with control; i.e., the foreign investor/parent firm takes real decisions in the day-to-day running of the foreign affiliate. The origin of the investment does not impact the definition, as a foreign investment: the investment may be made either "inorganically" by buying a company in the target country or "organically" by expanding the operations of an existing business in that country.

Variable	Definition	Measures	Source
Regulatory Quality (X)	Index of Regulation, Rule of Law, Control of corruption	Regulatory quality is the index of Rule of Law and Control of corruption Each index ranges from -2.5 to +2.5. Lowest measure is -2.5 and highest is +2.5 for each index.	Worldwide Governance Indicators (WDI) database published by World Bank
Multinational Investment (Y)	This is an investment made by a nonresident enterprise in an economy (direct investor or parent enterprise) with the objective of establishing a lasting interest in an enterprise that is resident in another economy (direct investment enterprise or foreign affiliate). The ownership of 10% or more of the voting power of a direct investment enterprise by a direct investor is evidence of such a relationship.	FDI inflow from all over the world into the host economy	WBDI

Table 1: Variables Measurement
Source: Researcher's Study, 2020

The study adopts dynamic panel Systems Generalized Method of Moment (SGMM) estimator together with the standard error and orthogonal deviations thereby accounting for the possibility of previous inflows influencing future flows and disinvestment, and it also addresses possible endogenous concerns.

With panel data, pooled OLS will ordinarily be appropriate when there is neither significant country nor significant time effects, as it assumes that both the slope and intercept are constant. However, this assumption is very restrictive when there are considerable differences across countries which could result in omitted variable bias (Thorpe, Gold & Lawler, 2011). Therefore, to control for heterogeneity in countries, the fixed effects model or random effects model is appropriate for studies such as this with large N and small T. However, dynamic models of this type that has been specified for this study suffer from two sources of persistence over time. They are: (i) Autocorrelation that results from the inclusion of a lagged dependent variable as a regressor in the model and (ii) Unobserved heterogeneity among units (Olubusoye, Salisu and Olofin, 2016). To solve these problems requires an estimator of the General Method of Moment (GMM) class that will utilize some sets of instruments to deal with the potential problem of correlation between the lagged dependent variable and the disturbance term. To solve this problem, this study adopted the Blundell and Bond (1998) System GMM (SGMM) estimator because it is more efficient as it uses instruments in both the levels and first differences in the estimation process. In using the SGMM, the study will employ the two-step estimation.

Although Arellano and Bond (1991) and Blundell and Bond (1998) had reported that the two-step standard errors tend to be severely downward biased, the bias can be compensated for by the finite-sample correction to the two-step covariance matrix derived by Windmeijer (2005) making a two-step robust option more efficient than the one-step robust in system GMM (Olubusoye, Salisu and Olofin, 2016).

In achieving the set objectives of the study, both descriptive and inferential statistics were used in analyzing the data that was collected for this study. Descriptive statistics shows the data characteristics, such as the mean, minimum, maximum, standard deviation. The inferential statistics helps in testing hypotheses formulated and answer research questions. Since the data is a panel data and cut across different countries in several years, a dynamic panel data approach was appropriate.

The methodology adopted for this study is most suitable for analysis that involves space and time dimensions. In this study, the data for 48 Africa Countries were collected for 15 years (2004 to 2018) for analysis. Also, panel data are repeated observations on the same cross-section, typically of individual variables that are observed for several periods. Wooldvidge, (2003); Baum, & Christopher (2006); Uwuigbe 2011).

The inferential statistics help in explaining and predicting the linkage between the variables. These methods are also used to test the hypothesis, solve research questions and to determine the relationships among variables; the effect of tax systems, institutional quality exert on multinational investment inflows in Africa. These estimation techniques were applied to ensure robust results. The System Generalized Method of Moments (SGMM) estimation technique, was used to estimate dynamic empirical relations. Developed by Arellano and Bond (1991); Blundell and Bond (1998), the SGMM estimators have been used increasingly due to its superior advantage as an estimation technique. The SGMM estimator can adequately handle the problem of unobserved heterogeneity. It allows for a dynamic relationship of the dependent variable while also controlling for endogeneity biases (Wintoki, Linck, & Netter, 2012). Thus, the SGMM estimators avoid the dynamic panel bias besides handling critical modelling issues such as fixed effects and endogeneity of explanatory variables better (Roodman, 2006). Due to its inherent flexibility, the SGMM also accommodates unbalanced panels and controls heteroskedasticity and autocorrelation (Roodman, 2006).

Specifically, to this study, the SGMM technique was employed for two reasons. First, the SGMM helps address the endogeneity concerns of all the potential endogenous variables in the study. Also, some of the study variables, such as multinational investment inflow, have been found to be theoretically endogenous (Busse and Hefeker, 2007).

Second, the dynamic panel SGMM estimator is appropriate for this study because it allows for the treatment of the dependent variable for the study (multinational investment inflows) as a dynamic variable. According to Roodman (2006), the SGMM estimator was designed for panel analysis whereby, past ones influence the current realization of the dependent variable. Existing empirical studies suggest that MNE investment flow in (t-1) can influence (t+1) i.e. past investment flow can reinforce future investment in the same location. This implies that past levels of investment influences current levels (Agbloyor et al., 2013; Asiedu & Lien, 2011; Busse & Hefeker, 2007). This method has also been successfully applied in a similar study by (Joseph, 2019).

6.2. Diagnostics Test

The Sargan and Hansen tests were conducted to examine the validity of the instruments used by testing for the over-identifying restrictions. Also, the AR (1) and AR (2) tests were conducted to examine if there is first and second-order autocorrelation in the error term.

6.2.1. Model Functional Relationship

Equation: $lnMNIVI = f(lnMNIVI_{t-1}\ lnMNIVI_{t-2}\ lnMNIVI_{t-3}\ ROL\ COC\ QOR)$

Equation: $logMNIVI_{it} = \beta_0 + logMNIVI_{it-1} + \beta_1 ROL_{it} + \beta_2 COC_{it} + \beta_3 QOP_{it} + \mu_{it}$

Stata code: xtabond2 lnMNIVI L.lnMNIVI L2.lnMNIVI L3.lnMNIVI ROL COC QOR, twostep robust iv(QOR COC ROL) gmm(L.(lnMNIVI), la> g(1 5) collapse)

7. Results and Interpretation

Variables	Mean	Median	Maximum	Minimum	Std. Dev.	Observations
MNIVI	4.356089	2.820412	65.16711	-6.057	6.171547	463
QOR	-0.605	-0.551	1.127270	-2.244	0.599542	463
ROL	-0.599	-0.586	0.996262	-1.855	0.620917	463
COC	-0.576	-0.658	1.039068	-1.826	0.658343	463

Table 2: Descriptive Statistics Result
Source: Researcher`s Computation (2020)

From Table 2, MNIVI has the mean value of 4.356 and standard deviation of 6.057 The mean value of 4.365 Billion Dollar investment inflow on average to SSA is small but positive which means that averagely SSA countries have been experiencing positive increase on the average in MNIVI. However, the level of growth is low. This implies that the effort of countries in sub-Sahara Africa to attract MNIVI is yielding positive increase yet at a very low and slow pace. Although, some countries still experience negative growth as regard to MNIVI as shown by the minimum value of -6.17 Billion Dollar negative investment inflow (divestment) which implies outflow of investment capital rather than an inflow. The highest investment or investment capital inflow received by any country on the Sub-Sahara in the periods covered in this study which is from 2004 to 2018, was 65.16 Billion Dollars in capital inflow. Also, there was about 6.171 Billion Dollars' worth of investment deviation from the midpoint.

QOP: The mean value of Quality of Policy (QOP) is -0.605 which measures the average perception on the ability of government to formulate and implement sound policies and regulations that permit and promote private sector development. The maximum and minimum values are 1.12 and -2.244 respectively while the standard deviation is 0.599 from 2004 to 2018

ROL: The mean value of the rule of law (ROL) is -0.599. The Rule of Law (ROL) the perception of the extent to which government and its agents abide by rules, regulations and laws and the confidence the investors have that the government will honour their commitments to the rule of law. It also measures the perceptions regarding the quality of contract enforcement, property rights, police and judicial system. Base on the mean value, which is lower than the indices average of 1.25, this figure suggests the countries of SSA have weak rule of law. Also, the maximum value for the rule of law in this period was 0.996 and the least value of -1.826 and dispersion of 0.620 from the mean value which show the range

of performance between the highest performed country and the least performed country in SSA as it relates to the rule of law with in the period covered.

COC: Control of Corruption (COC) these indices have a mean of -0.576 the indices are an indicator examining the perception of the extent to which public power and resources are utilized for personal gains. The range of measurement for the index ranges from 2.5 to -2.5. The mean result indicates the average performance of SSA countries regarding this measure. The mean result in this study is below the mean/average rang of 1.25. This indicates that the average performance of SSA countries is below average. On the other hand, the least indices score is -1.855, and the best score was 1.0390 with a dispersion of 0.658 from the mean point.

7.1. Research Objective
Determine the effect of regulatory quality on multinational investment inflows in Sub-Sahara Africa

7.2. Research Question
How does regulatory quality influence multinational investment inflows in Sub-Sahara Africa?

7.3. Research Hypothesis
- H_0:Regulatory quality does not have statistically significant effect on multinational investment inflows in Sub-Sahara Africa.
- H_1:Regulatory quality has a statistically significant impact on multinational investment inflows in Sub-Sahara Africa

VARIABLES	(1) System GMM
L.lnMNIVI	0.353***
	(0.074)
L2.lnMNIVI	0.215**
	(0.091)
L3.lnMNIVI	-0.072
	(0.064)
ROL	0.486
	(0.418)
COC	0.034
	(0.178)
QOP	-0.387
	(0.264)
Constant	0.619***
	(0.196)
Observations	486
Number of crossed	46
Wald chi2	68.25
W_t P-Value	0.000
AR1p	0.00280
AR2p	0.330
Hansenp	0.485
Sarganp	0.0679

Table 3: SGMM Result for the Tested Hypothesis

Notes: The First Value of Each Variable Represents Their Coefficients While Standard Errors in Parentheses *** P<0.01, ** P<0.05, *P<0.1. Table 3 Reports the System General Method of Moment SGMM Results of the Effect of Governance Quality on Multinational Investment Inflows in Sub-Sahara Africa. The Dependent Variable is Multinational Investment Inflows. The Independent Variables are: Voice and Accountability (VOA), Government Effectiveness (GEF) and Political Stability and Absence of Violence (PSAV).
Source: Researcher's Computation (2020)

7.4. Interpretation

The validity of the obtained results in the SGMM depends on the statistical diagnostics; hence, the analysis will begin by interpreting the model diagnostics. Compared to the OLS model, SGMM does not assume normality, and it allows for heteroskedasticity in the data. Dynamic panel models are known for having a common problem with the heteroskedasticity of data, which, fortunately, they can control (Baltagi, 2008). Accordingly, the study reported two-step estimates that yield theoretically robust results (Roodman, 2006). Moreover, the study applies the two-step estimator to obtain the robust Sargan test, i.e., the (robust) Hansen J-test, which is not available in one-step estimation. The SGMM assumes that the twice-lagged residuals are not autocorrelated; hence the study tested for autocorrelation in the error terms, which is also a test for the validity of instruments. The AR1 and AR2 procedure tests, respectively, first and second-order residual autocorrelation (Arrelano & Bond, 1991). The GMM estimator requires that there is a first-order serial correlation (AR1 test 0.003) but that there is no second-order serial correlation (AR2 test) in the residuals. Since the null hypotheses are that there is no first-order (AR1 test), second-order serial correlation (AR2 test 0.330), it means that one needs to reject the null hypothesis in the AR1 test but not to reject it in the AR2 test to get appropriate diagnostics.

Data provided in Table 3 shows that the model specification passes the tests. The Hansen J-statistic tests the null hypothesis of correct model specification and valid overidentifying restrictions, i.e. the validity of instruments (Baum, 2006). The Hansen test of overidentifying restrictions does not reject the null at a 5% significance level; hence, it is an indication that the model has valid instrumentation. The Hansen J-test evaluates the entire set of overidentifying restrictions instruments. It is also important to test the validity of subsets of instruments (i.e. levels, differenced, and standard IV instruments). For this purpose, the study used the difference in Sargan/Hansen test, also known as the C-test (Baum, 2006; Roodman, 2006). The null hypothesis of the Sargan/Hansen test is that the specified variables are proper instruments, i.e. that the set of examined instruments is exogenous. The result provides that there is not enough evidence to reject the null hypothesis of exogeneity of any GMM instruments used, i.e. levels and differenced instruments, as well as the validity of standard IV instruments. First of all, the number of instruments should not exceed the number of observations, which is the case here. Second, a telltale sign is a perfect Hansen J-statistic with the p-value equal to 1.00. At the same time, the p-value should have a higher value than the conventional 0.05 or 0.10 levels, at least 0.25 is suggested by Roodman (2007). In our model, the Hansen J-test reports a p-value within this range which satisfies both rules. Considering together the various post estimation tests that have been conducted, the study concludes that there is enough evidence to conclude that the examined statistical tests satisfy the key assumptions of SGMM estimation and that this model is an appropriate statistical generating mechanism.

The estimated equation showed that the two-time lags of Multinational Investment Flows (MNIVI) were positively related to its current value. An increase (decrease) by 1% in one period lag of MNIVI induced about 0.35% increase (decrease) in current MNIVI; a two-time lag induced about 0.22% rise (fall) in MNIVI. These relationships were equally significant at the 0.05 level of significance. However, moving further back into a third lag of MNIVI, the relationship with the current value became negative and statistically insignificant. A 1% rise (fall) in the third lag of MNIVI resulted in about 7% fall (rise) in current MNIVI. The relationship between Rule of Law (ROL) and MNIVI was positive. The estimate showed that an increase (decrease) in ROL by 1 index induces an increase (decrease) in MNIVI by 48%. This relationship was, however, not statistically significant, given that the p-value of the z-statistic of 0.245was greater than the 0.05 level of significance Control of Corruption (COC) was positively related to MNIVI. From the estimate, an increase (decrease) in COC by 1 index induced an increase (decrease) in MNIVI by about 3.4%. This was not statistically significant at the 0.05 level of significance given that the p-value of the z-statistic of 0.850 was greater than 0.05. Finally, Quality of Policy (QOP) was negatively related to MNIVI, implying that an increase (decrease) in QOP by 1 index induced a decrease (increase) in MNIVI by about 39%. This relationship was not statistically significant, given that the p-value of the z-statistic of 0.144was greater than 0.05 level of significance. The probability value of the chi-square at 0.0000 implied that the overall effects of the lags of MNIVI, ROL, COC and QOP exerted a statistically significant effect on MNIVI.

7.5. Decision Rule

The Prob.chi (square) of Wald Statistics is significant at 5% level of significance, which indicates that regulatory quality has statistically significant effect on multinational investment inflows in Sub-Sahara Africa. Thus, the study rejects the null hypothesis that Regulatory quality does not have statistically significant impact on multinational investment inflows in Sub-Sahara Africa. Therefore, accepting the alternative hypothesis that Regulatory quality exerts statistically significant effect on multinational investment inflows in Sub-Sahara Africa.

8. Discussion of Findings

The objective of this study was to examine if quality regulations exert significant effect on multinational investment inflows in Sub-Sahara Africa, in line with the stated objective, this section discusses the findings of regulatory quality and on multinational investment inflows in Sub-Sahara Africa. From the a priori expectation, we expect that regulatory quality will exert a significant impact on the inflow of multinational investments to the Sub-Sahara. The empirical evidence as provided by the value of Prob.chi (square) shows that quality of regulation exerts significant statistical impact on the inflow of multinational investments to Sub-Sahara Africa. This implies that Sub-Sahara Africa quality of regulation is a crucial determining factor in attracting investments from multinationals, among other things. Therefore, it can be said that before a multinational chooses any location to do business, such firm would have assessed the key regulatory factors such as 1Rule of Law (ROL) which is the perception of the extent to which government and its agents abide by rules, regulations and laws and the confidence the investors have that the government will honour their

commitments to the rule of law. It also measures the perceptions regarding the quality of contract enforcement, property rights, police and judicial system. 2Control of Corruption (COC) this indicator examined the perception of the extent to which public power and resources are utilized for personal gains. 3Quality of Policy (QOP) measures the perception on the ability of government to formulate and implement sound policies and regulations, permit and promote private sector development which is responsible for investment inflow, i.e. direct investments from foreign investors, the nature of investment captured in the study followed the definition of United Nations conference trade and development: stated as "an investment made by a non-resident enterprise in one economy (direct investor or parent enterprise) with the objective of establishing a lasting interest in an enterprise that is resident in another economy (direct investment enterprise or foreign affiliate). The lasting interest implies the existence of a long-term relationship between the direct investor and the direct investment enterprise and a significant degree of control on the management of the enterprise with the ownership of 10% or more of the voting power of a direct investment enterprise by a direct investor.

The findings of this study are in line with Signaling postulation and can be concluded that quality of regulation severs as an attracting signal to multinational investment inflow. Also, the findings are in line with Dunning (2002), who argued that institutional factors, such as quality of regulation and economic freedom, are becoming highly popular determinants of foreign capital. He suggested that multinationals are shifting from market and resource seeking to efficiency-seeking. Traditional determinants of foreign investments, such as natural resources and low labour costs, are relatively becoming less important, while less traditional factors, such as quality of regulation, are becoming more popular (Addison & Heshmati, 2003; Becchetti & Hasan, 2004; Noorbakhsh, Paloni, & Youssef, 2001). Ali, Fiess and MacDonald (2010) concluded that property rights were more important determinants of FDI; specifically, that other institutional factors affect FDI indirectly through property rights. Law and order become a serious issue for MNCs when courts fail to enforce contracts, and when the government influences court decisions for political motives (Drabek & Payne, 2002). Law and order instability lead to corruption (Johnson & Dahlström, 2004). In the same vein, Asiedu and Villamil (2000) and Wei (2000) concluded that one of the most important factors that deter FDI inflows is corruption. Generally, the higher the corruption level of a country, the lesser FDI received. Lower corruption index scores in the host country have positive associations with investment inflows.

9. Conclusion and Recommendations

The study set out to examine if regulatory quality matters in multinational investment inflows into the SSA region. It utilized System GMM in investigating the interrelationship. The results showed that regulatory infrastructure is weak, specifically the rule of law, control of corruption and quality of government policy formulation and implementation, which has not helped attract multinational investment inflows. This partly elucidates why SSA is lagging in attracting FDI as compared to other regional blocs in the developing countries. This result is robust to the decomposition of the regulatory indicators to the three aggregated indices. We, however, found that the regulatory variables individually show diverse patterns but jointly exert significant impact on multinational investment inflow. The policy implication of this study is for policymakers to strengthen further regulations and policies that would further promote and attract the inflows of multinational investments into SSA through strengthening the various government agencies responsible for upholding the regulatory institutions.

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