

**DOES INSTITUTIONAL QUALITY MATTER IN LIMITING THE GROWTH OF
GOVERNMENT IN SUB-SAHARAN AFRICA?**

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Abstract:

Sub-Saharan Africa has the dual characteristics of low institutional quality and large-sized government, both keeping the cost of doing business high. This paper revitalizes the literature on growth of governments by highlighting the essence of upgrading institutional quality in trimming government size in several sub-Saharan economies. It contributes to existing knowledge by showing that not controlling for idiosyncrasies would lead to serious biases in regressions that try to explain growth of governments. More particularly, this paper innovates the current literature by greatly challenging factors such as globalization and population dynamics, often perceived as major drivers, of the size of public sector in developing countries. Empirical findings based on 42 economies pertaining to this region clearly indicate that, besides level of development, the quality of institutions matters tremendously in reducing growth of governments. Contrary to previous studies, weak evidence is found of trade openness, urbanization and dependency ratio determining public sector growth once idiosyncratic factors are accounted for. Of the six indicators of institutional quality applied in this assessment, 'Control of Corruption' is found to be most significant that policy reforms should address to reduce the overwhelming sizes of government in sub-Saharan economies.

KEY WORDS: Public Expenditures, Public Policies, Globalisation, Openness, Wagner's Law, Institutions, sub-Saharan Africa, Highly Indebted Poor Countries

JEL CLASSIFICATION: H3, H11, H5, F41

I. Introduction

Sub-Saharan Africa is characterized by very low growth performance and huge public sector deficits, that are further compounded with extremely high level of indebtedness. Saddled with such burdens, these economies continue to remain in the limelight, and on the research agenda of several researchers. However, remote knowledge on developing countries, in particular, sub-Saharan Africa, exists that would allow one to understand any potential linkage between their public sector size and idiosyncratic factors under varying economic conditions. What specifically has been ignored by current empiricism is the need to consistently address the dual characteristics of high public expenditure levels and low institutional quality in the set of countries referred to in this paper. Research on economic growth in sub-Saharan economies has shown that there is a crying need to restore institutional quality in an attempt to improve growth performance of the relevant countries. Pillar works by North (1990) and Williamson (1995) provided a major breakthrough in the growth literature by exclusively emphasizing the role of institutional quality in promoting economic growth across nations. More recently, with respect to the African continent, Collier (2006), Ndulu (2006) and IMF (2003) have made parallel arguments that to give a big push to Africa's economic performance, it is vital that the quality of institutions should be made robust, reliable and sustainable.

Big government sizes have been viewed to be problematic, in general and more specifically, in developing economies for several reasons which we believe to understand. Ironically, it is basically a question of rhetoric discourses versus real action taken when it comes to combating fiscal deficits through well-thought fiscal discipline mechanisms. At the very onset, there is limited taxable capacity in low income countries corresponding to the limited scope for economic activity of both the private and public sectors. In addition, keen to promote the welfare of all, the public sector is committed to make better provision of education, health and public infrastructures. The latter tend to dictate an ever increasing trend in public

spending levels. Thus, uncontrolled spending by the state would have serious spill-over effects on the private sector in the forms of crowding-out of both private consumption and private investment expenditures. Unproductive public expenditures may displace productive investment plans and hamper economic growth in both the short and long runs. Besides, excessive spill-over effects through high fiscal deficits have proven to render many markets ineffective, in particular, by distorting the price level and exchange rates. Examples provided by empirical studies; Easterly and Hebbel (1993) and Rivera-Batiz and Rivera-Batiz (1992), clearly show how huge deficits in developing economies soar prices, lead to capital flight and generate exchange rate misalignments. Following the Ricardian Equivalence argument (see Barro (1974)), a debt today is identical to a postponed tax liability on the private agent. However, excessive spending today, as regards current spending, may defeat the purpose of shifting tax burdens from current to future generations. It does make sense to shift taxes whenever public expenditure levels today would equally benefit future generations as would certain relevant capital expenditure items. In the context of generational equity, tax smoothing, through shifting of future tax liabilities, is essential and this is how deficit financing may play a prominent role (see Auerbach et al (1994)). While the magnitude of public spending remains a matter of pertinence, its composition aspect too is no less. The different portfolios of government spending constitute sufficient guide to the most crucial needs of the society. Any mismanagement of these portfolios of spending would simply overstate the priority of a sector and could as well be to its detriment. More importantly, in recent years, it has been found that huge expenditures may either encourage or be the result of poor governance. In countries, where institutional quality is questionable, the degree of public spending may be abusive. Much more of this issue is, however, addressed in the forthcoming section.

Theoretical postulates that characterize the literature on growth of governments stem from Keynesian demand management policies through Wagner's law to Rodrik's hypothesis of globalisation. In the Keynesian scenario, discretionary

measures are adopted to boost up the level of economic activity; while in the Wagnerian case, public expenditures would grow endogenously along the line of growth of income. More recently, it has been postulated that globalization, captured through trade openness, (see Rodrik (1996) and Lewis (1995)), could also influence to a great extent the size of government. In the early 1960s through the 1970s, much emphasis was laid, in less developed economies, on the benefits that growing public expenditure could have in terms of income and employment generation. Assuming the availability of resources, many governments have tried to achieve multiplier effects by expanding public expenditure levels. Some have gone too far, however, generating at the same time huge fiscal deficits and debts. Worse, these imbalances have become highly unsustainable especially in those poor performing economies with very constrained tax bases and in which a large segment of economic activity remains informal (see for instance Easterly and Hebbel (1993)). Analysis of public expenditure growth in developing countries might also be explained by the Wagnerian hypothesis which establishes a reverse causal link between economic development, basically per capita income, and public expenditure outlays. Strict Wagnerian hypothesis would indicate an income elasticity of public spending exceeding unity implying that public expenditure increases faster than income. In particular, when the level of development is low, an increase in per capita income would lead to a more than proportionate increase in public spending that allows for greater provision of public and social goods. But, as the level of development improves and higher per capita income thresholds are crossed, it would be observed that public goods by then would have become necessities. Consequently, the proportionate response of public expenditure tends to be lower than one as income varies. Empirical studies on this issue have been numerous but all leading to mixed findings, namely, Sahni and Singh (1984), Ram (1986), Murthy (1993,1996), Henrekson (1993), Ashworth (1994), Hayo (1994), Lin (1995), Park (1996), Bohl (1996), Demirbas (1999), Peacock and Scott (2000) and Borcharding (1985). Needless to add, these studies are highly sensitive to methodological issues and sample data sets applied. In the

very recent past, economists have largely attributed the growth of public spending to globalization. Given the belief that globalization may engender greater vulnerability of developing economies as and when they become more open and adaptable to world economic conditions, it is anticipated that correspondingly their public sector would have a more crucial role to play. Apprehensions with respect to income and employment volatilities may urge for more robust governments in low-income economies to develop reliable safety nets and compensation mechanisms to hedge these global risks (Rodrik (1996) and Lewis (1995)). More precisely, it is believed that government expenditures would rise whenever economies try to open up. However, research findings based on further works by Alesina and Perotti (1997), Alesina and Wacziarg (1997), Garrett (1999), Molana et al (1999), Sobhee and Joysuree (2004) and Ancharaz and Sobhee (2005) on this particular aspect of globalization have not exclusively illustrated whether globalization leads to bigger governments.

In fact, the above discussions pertain to welfare maximizing theories of government. Such theories view the government as a benevolent institution that aims at maximizing the welfare of the society. As a result, they may fail to capture political economy issues which the public choice school advocates. Once encompassed in the analysis, a more comprehensive investigation can be made to understand the path of public spending having relevance to institutional aspects of government decision-making. Indeed, public choice schools emphasize that governments could generate imperfections through their rent seeking behavior. The famous theories by Niskanen (1971) and Brennan and Buchanan (1980) provide avenues through which the public sector would grow due to bureaucracies, corruption, principal-agent-sponsor strategies and lobbies. In addition, there have been macroeconomic theories that extend conventional approaches such as Nordhaus (1975), Hibbs (1977) and Alesina (1989,1992), Alesina et al (1993) and Alesina and Sachs (1988) on how governments could create political instability through their vote maximizing behavior. It is important to highlight the paucity of research to date that has tried to investigate whether

weak institutional quality might be blamed for irresponsibly high public spending and large government sizes. In his paper on the 'Economic Role of the State in the 21st Century', Tanzi (2005), for instance, has pinpointed the various areas in which a government should either retreat or assume a more substantive role. Similarly, works by Olson (1996), Acemoglu et al (2001) and Acemoglu (2002) emphasize the role of government effectiveness for economic advancement. Put differently, bad public administration may lead to high transaction costs that would simply constrain markets from functioning efficiently. Thus, governments should simply play their part as being a facilitator, as they have been in many Scandinavian countries (see Tanzi (2005) on this) and some emerging markets such as Singapore and Mauritius. However, it gets more complex when there is high ethno - fractionalization of the population which is simply the case with countries of the African continent. Plural societies may create more political lobbies and rent seeking strategies among political parties (see for instance Easterly and Levine (1997) for a more elaborated discussion on this issue) that exacerbate the effectiveness of government on the one hand, and size and growth of public spending on the other.

Pioneering works by North (1990) and Williamson (1990, 1995) in general, and Aron (2000), Ndulu (2007), Collier (2007) and the IMF (2003), particularly on Africa, have all indicated the essence of establishing good quality of institutions in building robust economies. Through better perceptions and reduction of the average cost of doing business, it would make it much easier to trigger greater inflows of Foreign Direct Investments (FDIs), strengthen the market mechanism, encourage greater accountability of civil servants, facilitate better uses and applications of external financial assistance. The counterfactual dictates that, by restoring law and order, which remains problematic in many sub-Saharan economies, one could imagine how this would be a catalyst to business affairs and proliferation of efficient markets which have long been suppressed. Establishment of property rights, reduction of expropriation risks and improvements in public sector effectiveness would all be in line with promoting

trust in the world of business and commercialization of products (see for example Shleifer (1995)). In this respect, international partners may feel more secure to venture their capital. Public expenditure patterns would take a different turn with the eventual expansion of the tax base and the need to rethink public expenditure levels following greater expansion of private domestic economic activity. As can be deduced, political economy models might be concerned with idiosyncrasies impacting significantly on the quality of institutions and public spending tendencies.

Hence, in this paper we try to fill up a major gap by investigating to what extent institutional quality would help to encourage greater fiscal discipline thereby reducing the sizes of governments. Also, we would go further to track which particular aspect or area of institutional quality would be most effective in achieving these ends. This endeavor pertains to a study encompassing 42 countries over the period 2000-2006 of sub-Saharan Africa, drawing data sources from International Financial Statistics (2006), UNCTAD (2005) and Kaufman *et al.* (2005). Thus, the remainder of the paper is organized as follows: section 2 addresses the statuses of public spending and quality of institutions in sub-Saharan Africa, section 3 deals with the methodological and empirical issues, including findings, while the last section concludes and addresses some policy elements.

2. The Status of Institutional Quality and Government Size in sub-Saharan African Economies

This section provides stylized facts pertaining to public expenditures and the quality of institutions in the sub-Saharan region. While it is quite essentially an established indicator to measure the size of government through public consumption expenditure, it is not very easy to choose a relevant measure of institutional quality. For the latter, we apply a definition provided by Kaufmann *et*

al. (2005) who emphasize six dimensions of institutional quality namely Voice and Accountability, Political Instability and Violence, Government Effectiveness, Regulatory Quality, Rule of Law and Control of Corruption. These indicators assume values over the range -2.5 (as the weakest quality) to 2.5 (as the strongest quality). These indicators are indeed considered to be robust and reliable enough to reflect the problems that would, by and large, characterize such economies, their government sector and correspondingly policy making.

While Voice and Accountability provides an indicator of the status of civilian, political and human rights, this index captures the equality of rights of all citizens, ensuring that they are correctly represented politically and that they are not marginalized in terms of having equal access and opportunity to basic social goods. The other indicator which is used and that complements the first aggregate proposed is Political Instability and Violence that focuses directly on the sustainability of governments or turnovers of regimes. Its computation would as well encompass military coups, regularity of elections and armed conflicts. In plural societies, greater political instability and incorrect representation of all segments of the population may unfortunately engender greater scope for rent and vote seeking through lobbies, corruption and poor accountability of budgetary spending.

The other three indicators that are proposed are Government Effectiveness, Regulatory Quality and Control of Corruption. These three indicators are linked directly or indirectly to the system in place to capture public sector imperfections that do act as hurdles to sound market-friendly policies. The first indicator here relates to the extent of bureaucratic decision-making process that exists within the public sector and which would help tracking sluggish and time inconsistent policy making. Regulatory Quality deals with public sector imperfections that directly influence the smooth operation of markets, for instance, distortionary taxes or market-unfriendly laws and regulations that simply prevent efficient allocation of resources. The last component among these three is corruption. The

latter is another impediment to economic growth because it results in lost of confidence, it frustrates private investment from domestic and external sources and hence negatively impact on economic growth by creating artificially high transactions costs. Lack of fiscal decentralization might as well add up to explain the absence of delegation of effective public administration, lobbies and log-rolling at the central level that further inflate public spending.

There is yet another closely related variable that addresses civilian rights which also influences the level of economic activity. This is the Rule of Law variable which is linked to property rights issues and the efficacy of court rulings. These attributes of law would throw light on the extent to which there are fair judgments in the society for both people and organizations or private agents in general. This indicator is also very important in attracting foreign direct investments. If investors are not convinced of the efficacy of the legal framework in place and instead find that there are heavy transactions costs along with high expropriation risks they may simply turned their backs away. Shleifer (1995) and Elster (1995) have amply discussed how significant benefits would be reaped at macroeconomic level with improvements in property rights and constitutions as well as the structure of government.

Needless to add, these are strong indicators that would help in offering a reasonable assessment of the institutional quality that prevail in the sample of countries being surveyed.

Over the period 1996 to 2005, there has been a declining trend in the institutional quality indices that have been mentioned above and indicated in Table 1. This obviously reflects that there has been degeneration of the quality of institutions, adversely adding to the cost of doing business in these countries. These indicators have moved away from -1, that is, have approached the worst indicator level of -2.5, albeit not even positive. This means that sub-Saharan countries

have a long way to go to improve these indicators and getting the institutional fundamentals right in the near future.

Table 1: Average Index of Institutional Quality, sub-Saharan Africa in 2003-04

Indicator	Value
Voice and Accountability	-0.5
Political Instability	-0.55
Government Effectiveness	-0.6
Regulatory Quality	-0.56
Rule of Law	-0.67
Control of Corruption	-0.55

Source: Computed from Kaufman *et al.* (2005) database

With the exception of Botswana, Mauritius and South Africa, which have relatively high level of per capita income coupled with reasonably reliable quality of institutions, all remaining countries have got very poor rating inasmuch as quality of institutions are concerned. Such status would inevitably create huge barriers to economic growth and development.

Turning to public sector size, which is essentially captured by the proportion of government consumption to GDP ratio, it could be seen that on average in the sub-Saharan region in 2005, 16% of the countries in the sample have a share which was considered to be too high, for instance, Eritrea has an exceptionally high rate that attained 52% in 2003. The lowest ratio was for the Democratic Republic of Congo (DRC) amounting to 4%. This could be understood as the DRC is an economy which is under reconstruction after severe ethno-political conflict. Most of these economies run huge fiscal deficits compounded with big amounts of debt overhung. Besides, it could be argued that rising expenditures in general within sub-Saharan Africa have largely been driven by the growing establishments of public enterprises since the 1960s. In the table below, we have the average public expenditure size of different nations categorized accordingly

over the period 1990-2003. Not surprisingly, it can be observed that heavily indebted and sub-Saharan economies have larger public sector sizes.

Table 2: Government Size Across Different Countries by Groupings, 1990-2003

Region/ Country Classification	Percentage of Government Expenditure to GDP
High Income	14.0
Least Developed	15.2
Heavily Indebted	17.0
Developing Economies (Exclusive of China)	14.0
Sub-Saharan Africa	15.8

Source: Computed from UNCTAD (2005) database

The public sector remains the largest employer supporting substantial wage costs and altogether constituting a big chunk of overall public expenditures in the low income economies as well as sub-Saharan region. In addition, the need to support education, health and public infrastructure in their move to improve human and physical capital, governments have had to invest much more than what they used to. In more recent past, the need to fight against HIV/AIDS pandemic and tropical diseases in several countries has further exacerbated problems associated with public budgets besides increasing population and dependency ratios.

3. Methodological and Estimation Issues

We reckon a model of a social planner who optimizes the social welfare function, basically representing the society's preferences. This agent is assumed to achieve certain objectives set in line with respect to some macroeconomic variables in its optimization exercise. In particular, if the social planner deviates

from these objectives, this would result in disutility. In this context, it is further assumed that the decision-maker will minimize a quadratic loss function with respect to the objectives set and conditional on a specified level of social welfare. More precisely, the choice exercise is based on the optimal value of government expenditure $G \in X_j$. G here is treated as a policy variable which comes exclusively under the command and control of the decision-maker. As such, the quadratic loss function is minimized, subject to a given attainable level of social preferences level, say W^* to obtain optimal G (G^*). All in all, it should be highlighted that the decision-maker operates in an environment which encompasses institutional quality in addition to achieving other objectives; such as increasing per capita income, making the economy more open or achieving greater urbanization. Thus the X 's would entail such variables.

More formally, the optimization exercise can be thus represented as follows:

$$\{ \text{Min } L(X_j) = \text{Min} \left[\sum_{j=1}^n a_j (X_j - X_j^*)^2 \right] / W(X_j) \geq W^* \} \quad (1)$$

Where X_j is a composite of several control and non-control variables, namely, GDP per capita, government expenditure, degree of openness, population variables and institutional quality variables. Moreover, X_j^* represents the targeted level value for each variable of the loss function.

Optimisation of this relationship using the Lagrangean function would yield the optimal value of G as $G = F(X_j')$. In addition, this indicates that the optimal path of G is governed by factors that influence the objective function as laid down in the social preferences. Now X_j' would consist of both macroeconomic variables and institutional quality control variables. Therefore, our specific relationship that determines the size of government, G , for each country i is

$$G_i = F(Y_i, D_i, U_i, N_i, Z_i, V_i)$$

Where Y refers to the per capita income in real terms, D represents the dependency ratio, U represents the ratio of urban to total population, basically tracking fiscal decentralization initiatives and needs, N constitutes the overall population of the country. As suggested by Alesina and Wacziarg's (1997) this variable could play a critical role in influencing the relationship between trade openness and government size, Z captures the impact of openness on public expenditure particularly tracking the impact of globalization on government size, while V is a vector of controls for the quality of institutions in the sub-Saharan countries under study. As pointed out earlier, the growth of public expenditures is not only driven by the increases in per capita income over time that leads to higher tax revenues, but as well as the degree of openness and access to global markets. Most of the research works carried out, for instance Ancharaz and Sobhee (2005) and Sobhee and Joysuree (2004) have failed to control for the quality of institutions that would also be crucial in influencing size of government within a context of sub-Saharan Africa. It is no surprise that countries plagued with corruption among civil servants are entangled with very high cost of doing business, thereby restricting the flows of foreign investments and potentially impinging on growth of the economy. Altogether, it is observed that in those economic areas in which private agents or markets would have been more predominant, the government is instead present. Similarly, lack of effective public administration creates unnecessary public sector imperfections and dead-weight losses thereby exacerbating problems associated with public deficits. The lack of constitutional rights for all would give rise to political gifts favoring lobbies while segregating voters. It is the uneducated, deprived or vulnerable segments of the population that would ultimately have to bear the brunt.

Based on the theoretical underpinnings, the corresponding partial derivatives have the following postulated signs: $\frac{\partial G}{\partial Y} > 0$, $\frac{\partial G}{\partial D} > 0$, $\frac{\partial G}{\partial U} > 0$, $\frac{\partial G}{\partial N} > 0$ and

$\frac{\partial G}{\partial V} > 0$. Thus, it is anticipated that an increase in per capita income would be accompanied with an increase in government size and if the Wagnerian hypothesis is to hold then it is further expected that the corresponding partial derivative would be greater than unity. With respect to the dependency ratio, the latter captures the needs of young people (those less than 15) and those of the elderly (those above 65), it is but obvious that an increase in this ratio, would lead to an increase in public sector expenditure. The role of urbanization in sub-Saharan countries as in African economies is an interesting issue. Most of the economic activities are actually concentrated in the big cities. However, since the scope of fiscal decentralization is still limited, the burden of higher demand for public and social goods falls at large on the central government. This implies that urbanization is expected to be positively correlated with central government size.

From a globalization standpoint, Rodrik's hypothesis of openness (see Rodrik (1996) and Lewis (1995)) predicts that there would be a more significant role that African governments have to play when their economies try to open up. They have to provide enough safety valves to cushion unanticipated risks associated with opening up and external trade flows. Thus, it is postulated that openness measured by Z would be again positively related to government size.

With respect to the institutional quality variables, it is believed as indicated in the literature that an improvement in the quality of institutions would bring about significant reforms. The various indicators used to track the impacts of alterations in institutional quality on the size of government pertain to the work of Kaufman *et al.* (2005). Now V_i comprises of the following indicators; VA_i = Voice and Accountability, PI_i = Political Instability and Violence, GV_i = Government Effectiveness, RQ_i = Regulatory Quality, RL_i = Rule of Law and CC_i = Control of Corruption.

Now, we use data from sub-Saharan countries to show how these results differ from or converge to the theoretical predictions. The table below reports several regression results presented under different scenarios to ensure the robustness of given hypotheses.

Table 3: Regression Results Based on 42 sub-Saharan Economies

Independent Variables	Dependent Variables			
	$\text{Log } G_i$ (1)	$\text{Log } G_i$ (2)	$\text{Log } G_i$ (3)	$\text{Log } G_i$ (4)
<i>Constant</i>	-7.28** (3.09)	-2.92** (-2.66)	-2.91*** (-2.77)	-2.44*** (-3.73)
$\text{Log } Y_i$	1.23*** (12.34)	1.12*** (6.75)	1.12*** (7.12)	0.941*** (9.08)
$\text{Log } D_i$	0.66 (1.12)	-0.11 (-0.13)	-0.16 (-0.21)	0.33 (0.70)
$\text{Log } U_i$	-0.35** (2.23)	-0.17 (-1.05)	-0.18 (-1.35)	0.18 (1.31)
$\text{Log } N_i$	-	0.06 (0.61)	0.06 (0.649)	0.13* (1.81)
$\text{Log } Z_i$	0.47*** (2.79)	0.38** (2.08)	0.38** (2.38)	0.12 (0.68)
$\text{Log } VA_i$	-	-0.19 (-0.51)	-0.163 (-0.52)	-0.79** (-2.65)
$\text{Log } PI_i$	-	0.32 (1.32)	0.36* (1.75)	0.44** (2.16)
$\text{Log } GV_i$	-	0.19 (0.28)	0.25 (0.44)	-0.48 (-1.17)
$\text{Log } RQ_i$	-	-0.46* (-2.03)	-0.44** (-2.13)	-0.20 (-0.78)

$\text{Log } RL_i$	-	0.21 (0.27)	-	1.02* (1.72)
$\text{Log } CC_i$	-	-0.07 (-0.12)	-	1.44** (2.49)
<i>Diagnostic Tests</i>				
F	19.1	23.76	31.28	40.03
\overline{R}^2	0.89	0.87	0.88	0.92
Number of Observations	42	37	37	37

Source: Author's estimates

Notes: (1) T-ratios in parentheses; (2) ***, ** and * represent significance levels at 1%, 5% and 10% respectively; (3) Regression equations are based on homoscedastic consistent errors.

The first scenario is reported by equation (1) in which there is no control for institutional quality variables. Here, it can be discerned that per capita real income and ratio of urban to total population and openness are both significant at 1% and 5% respectively. In addition, the coefficient of income is greater than unity, implying that changes in income lead to more than proportionate changes in public spending levels. This finding corroborates the stricter version of Wagner's law. It is also to be observed that dependency ratio does not play a significant part in influencing the size of government. However, in the remaining scenarios, in which the quality of institutions is controlled for, income elasticity of public spending drops by 11 percentage points as reported in Equations (2) and (3), but it becomes inelastic in the last scenario, that is, in Equation (4). It is found that, with the exception of the real per capita income and openness variables, neither dependency ratio nor urban to overall population is found to be significant subsequently. Moreover, the control variables for institutional quality brought in Equations (2) and (3) do not show high statistical significance in influencing the size of government. For instance, in Equation (2), it is found that only Regulatory

Quality affects the size of government and that too at 10% level of significance. This would be due to the high multi-collinearity which exists among these control variables. But, when the suspect variables are dropped in a different scenario (Equation (3)), namely Rule of Law and Control of Corruption, it is found that Political Instability and Violence become significant at 10%, while Regulatory Quality assumes greater significance levels than in Equation (2). In the last equation, Equation (4), we use lagged values of the corruption indicators in explaining public expenditure size at a given point of time. The overall significance of the regression improves rather robustly with this scenario. One econometric rationale would be that the lagged values also act as instruments in dampening any reverse causal link between the independent variables and the dependent one. However, the economic rationale supports the contention that non-contemporaneous values fit better since the spill-over effects of poor institutional quality operate with a lag in terms of influencing the size of government. In other words, cumulative imperfections of quality would have more significant negative influences at a later stage than at a measured point in time. Hence, Equation (4) remains the best fit with better overall significance. Moreover, we also find some evidence (significance at 10%) that population level does have an impact on the size of public budgets, indicative of the Alesina and Wacziarg (2003) hypothesis. Both in terms of magnitude and statistical significance, this variable fares best compared to results reported in Equations (2) and (3).

Through the robustness checks and the various scenarios, it is worth noting that four out of the six indicators proposed by Kaufman et al. (1995) are significant. In fact, Voice and Accountability, Political instability and Control of Corruption are found to be significant at 5% while Rule of Law is significant at 10%. More importantly, it is found that with an improvement in each of these indicators, there would be a decline in the size of government across these countries. Besides, we observe the high impact of the Control of Corruption index on size of government. Essentially therefore, these results support the credence that both

weaknesses of constitutions and public sector imperfections tend to inflate the size of government in the sub-Saharan economies. At this stage, it is of essence to cite Collier (2006) who has shown that there are several areas in public spending plans across countries that encourage corruption, in particular, public investment in infrastructure, telecommunications and water supplies amongst others. The empirical finding on corruption lends credence to political economy issues linked to the theory of bureaucracy, in which politicians as the sponsors and bureaucrats as the policy-makers maximize the size of the budgets. Respectively, being vote-maximizers, on the one hand, and, rent seekers on the other, these two parties could form good alliances to optimize their own strategic utility functions. Hence, if reasonable standards of good governance and practices are administered and adhered to by these countries, it would be anticipated that public sector size would grow within limits, thereby reducing to a great extent unsustainable fiscal deficits and public debt.

These result corroborate with the findings of IMF (2003) that improvements in institutional quality in sub-Saharan Africa would have significant positive effects elsewhere in the economy and in particular on the growth performance. Clearly, the existence of public sector imperfections would involve a high cost of doing business in the countries studied particularly frustrating inflows of foreign investments. Thus, in analyzing government size, it is clear that if controls for institutional quality are not brought in, there would be major biased results generated in reporting the impact of openness and other variables in influencing size of government. One such studies is, for instance, Ancharaz and Sobhee (2005) which did not control for the quality of institutions among the same set of countries and reported that size of government may be increasing in these countries due to globalization measured by the openness ratio. Necessarily therefore, the quality of institutions does matter in determining the size of government in sub-Saharan Africa.

4. Conclusion and Policy Implications

This paper argues the different channels through which the quality of institutions matters in limiting the size of public sector in sub-Saharan economies. Our framework consists of a representative agent optimising on behalf of the society and who chooses a given optimal amount of spending from a given choice exercise. Primarily, it is reckoned that the decision-maker sets targets for specific macroeconomic aggregates with a view to minimize transactions costs. This is done however by minimizing a quadratic loss function subject to a specific level of society's preferences. The reduced form equation encompasses both institutional quality as well as non-institutional aggregates that determine the optimal path of public spending in sub-Saharan Africa. We test this hypothesis by revisiting theories that have been put forward to explain the growth of governments across countries. Beyond openness and level of economic development, we introduce aspects of institutional quality as robust factors impacting on the public sector size. The introduction of such variables tracks rent - seeking behavior as emphasized by the public choice literature, framing the government as a vote maximizing agent. The presence of rent seekers would lead to rampant corruption, ineffective public administration, high level of bureaucracies, political instability and lobbies. Based on six robust indicators of institutional quality as developed by Kaufmann *et al.* (2005), it is revealed that throughout real per capita income remains a good driver of public expenditure growth, while openness is not. Moreover, we found through robustness checks that regression equations which include lagged values of the indicators of quality provide more insights into explaining public expenditure growth than their contemporaneous counterparts. In fact, it is uncovered that four out of the six indicators proposed by Kaufman *et al.* (2005) are significant in inflating government spending. The specific variables which are found to cause higher spending are Voice and Accountability, Political instability and Control of Corruption and Rule of Law. It goes without saying that if reforms are brought about to improve the quality of institutions in these areas, public expenditure

would be under much more control. Specific constitutional changes may be required to consolidate the quality of institutions and discipline the fiscal agent in its spending plans. Such reforms would help reshuffling the composition as well as the direction of public spending in these countries.

Control of corruption is found to be a highly significant variable with the highest marginal impact on public expenditure size. This variable makes it clear that corruption strongly contributes to bigger government sizes. As has been pointed out by previous studies, there exists high corruption in capital spending plans of governments, particularly, in telecommunications, public infrastructure network, public utilities budgets amongst others. It goes without saying that tightening up of existing public sector rules and regulations on corruption and the setting up of an independent anti-corruption commission would to a large extent reduce or at least deter corruption in these countries. Combating corruption is primordial to keep transactions costs low and to ease the cost of doing business.

Altogether, this study has shown that without controlling for institutional quality, there may be specification biases introduced. It has been shown that previous studies which have failed to control for institutional quality have led to different conclusions in trying to explain government size. Hence, we reckon that studies which try to explain public expenditure growth, without controlling for the low institutional quality in such countries, would lead to inconsistent findings.

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