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THE EFFECTS OF POOR INSTITUTIONAL QUALITY ON ECONOMIC GROWTH – INVESTIGATING THE CASE OF SUB-SAHARAN AND LATIN AMERICAN ECONOMIES PRIOR TO THE WORLD ECONOMIC DOWNTURN

Current empiricism does not reveal much how low quality institutions hamper economic growth in developing countries, and which particular form of institutional failures harms more. This paper fills up this gap by experimenting with a broad new data set on institutional quality comprising 42 economies pertaining to 30 Sub-Saharan Africa and 12 Latin America. Six indicators of institutional quality from Kaufmann et al. (2005 and 2007 databases) are used in several endogenous growth equations prior to the downturn of the world economy. After performing a battery of econometric tests, our major findings unravel that, besides improving institutional capital, developing countries must imperatively adopt drastic public sector reforms to foster economic growth. Moreover, a more vibrant public sector, free from corruption, which adopts market friendly policies, and ensures a more effective delivery of public services would indeed be growth perpetuating.

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To a large extent, conventional growth models have put in the forefront factors such as physical and human capital to explain the growth performance of economies across time and nations. Equally, there has been a large-scale discussion in the literature on 'catching up' theories and unexplained residuals along with their significance (for instance, see Barro (1991) which greatly reviewed these discussions). However, in recent years, researchers have found that there are country-specific elements that have to be taken into account while addressing economic growth performance. These elements are often termed as idiosyncrasies that may hamper the performance of the institutions for economic progress. Indeed, North (1990) and Williamson (1995) have been among the earliest groups of researchers highlighting the vital role of institutions and good governance in shaping countries' path of success with particular reference to the developing world. As such, institutional quality relates to the economic and political enabling environment or framework in place within which a country must operate while effectively managing the affairs of the country. Actually, this framework may involve sound democracy, recognition of civilian rights and liberties, freedom of the media, market-friendly policies, good public governance and a sound and vibrant public

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service ensuring effective delivery of public goods and welfare. To better understand what the term good institutional quality means, one may consider its opposite meaning instead. Poor institutional quality reflects political instability, infringements of civilian rights, unfair elections and electoral processes, lack of freedom for the media, corruption and, amongst others, poorly managed governmental organisations. When institutional quality is compromised, there may be several adverse effects menacing the economy and society, such as, keeping the very high and prohibitive cost of doing business, that would frustrate both local as well as foreign investors; erosion of the country's comparative advantage; putting the then MDGs (Millennium Development Goals) in jeopardy; instigating the collapse of good democracy and, all in all, creating overall macroeconomic instability for decades.

Since the pioneering works by North (1990) and Williamson (1995), several applied researchers have investigated the ways and means institutions or their functionality could hinder the economic progress of an economy. Papers published, for instance, by Collier (2006) and Ndulu (2006) as well as international institutions such as IMF (2003) World Bank (2007) and Hodge et al. (2011) have clearly attributed the poor economic performance of African States to corruption and low institutional quality. Stiglitz (2012) provides a good brief on the collapse of democracy and the corresponding rise in income inequality in several Northern African States characterising the so called 'Arab Spring'. Sobhee (2011) has investigated the role of poor institutions in influencing the size of government sector in 42 Sub-Saharan countries and came to the conclusion that indeed political instability and public sector regulatory policies influence public expenditure. As opposed to low institutional quality, as an upper middle income Sub-Saharan economy, Mauritius has proven to have achieved an impressive track record of good performance due to its reasonably high quality of institutions (see Subramanian and Roy, 2001; Sobhee, 2009). Another country which is worth mentioning in the same region is Botswana, which has been successful to achieve a very high per capita income as an Upper Middle Income country with very reliable institutions (see Martin, 2008). While the term institutions, by and large, may have very vast connotations, it has been given a more concise and quantifiable definition in recent years. The concise definition refers to specific elements that have to be in place to encourage an enabling macroeconomic business environment and stability. In an empirical context, therefore, it would encompass contract enforcement, property rights and investor protection, the political system, public sector imperfections, the degree to which laws and regulations is fairly applied and the extent of corruption. It could thus be assumed that reliable institutions should be able to provide the very conducive economic environment for local and private investors and social environment for the people, in terms of security, reduced political risks, low cost of business management, protection of property rights and freedom of expression (see again the works of North, 1990; Williamson, 1995; Acemoglu and Johnson, 2003).

IMF (2003) also provides empirical evidence on the key role that institutions play in determining economic outcomes. Efficient protection of civil and property

rights, extended economic and political freedom and low level of corruption have, in particular, shown to be associated with higher prosperity. In addition, papers by Williamson (1995), Acemoglu and Johnson (2003), Aron (2000), Rodrik (1996, 2000) and Collier (2006) all develop the empirical and theoretical bases that differences in economic institutions are the fundamental elements explaining differences in economic development. Other papers in line with this concept, tending more towards the role of political institutions, are those of Johnson et al. (2004), (Rodrik, (2000) and Glaeser and Saks (2004). However, the original work by Kaufmann et al. (2005) contributes to and consolidates substantially the debate on the importance of institutions by quantifying certain measures of institutional quality. In fact, this work provides a range that could be used to track these measures from a comparative perspective across time and countries.

In this article, we investigate whether institutional quality has affected the economic performance of developing countries and, particularly, economic growth through cross-section (country) regression technique. We also distinguish among the different effects of alternative indicators of institutional quality highlighting those that deserve more pressing attention. We have checked other variables that are applicable in economic growth regressions.[1] Worldwide Governance Indicators as developed by Kaufmann et al. (2005, 2007) to quantify institutional quality are applied to assess its impact on economic growth of the selected countries. The latest dataset on institutions when drafting this paper relates to the 2007 and this has also formulated the period of investigation, coinciding with that preceding the onset of the global financial crisis. The sample of countries selected in this analysis comprises 42 economies from 30 Sub-Saharan Africa and 12 Latin America. The choice of these two groups provides an ideal blend in terms of varying idiosyncrasies, per capita income levels and population structure but both sharing the common aspects of big government sizes, acute income inequality, polarisation of policies and low institutional quality (as will be presented later).

Economic and governance situation in the regions of Sub-Saharan Africa and Latin America

Throughout the 1980's Africa's growth performance has been to a large extent irregular and seriously adverse before picking up in the 1990's and in 2003 Africa was the second fastest growing developing region with real GDP growth of 3.8 percent while the overall growth was further expected to rise in future years. Economic growth in Sub-Saharan Africa in 2006 remained robust at 5.4 percent, after growth of 6 percent in 2004 and 2005 (IMF, 2007). It should be mentioned that most of the countries which have registered negative growth in the past few years are Sub-Saharan African countries and the region is still far from achieving the 7 percent annual

[1] Since these regressions are run using cross-country data and refer to one year 2007, non-stationarity tests do not apply. These unit root tests are more relevant for panel and time series data sets.

growth rate that is required to meet the principal Millennium Development Goal (MDG) of halving poverty by the year 2015 (World Bank, 2006).

On the other hand, the average GDP per capita in the Latin American region has not varied significantly over the previous two decades. In 1980, average GDP per capita was USD 3,734 and in the year 2000, average GDP per capita was at USD 3,920. However, by 2007, the average regional GDP per capita has exceeded USD 5,000. In 2004, the region experienced the strongest growth performance in 24 years, with an increase of 6.3 percent up from 1.9 percent in 2003, due to international trade and capital flows. As a result, income per capita rose by about 4.1 percent in 2004 and was projected to rise by 2.8 percent in 2005. In line with global output and trade however, growth in the region was expected to slow moderately to around 4.3 percent in 2005 and 3.8 percent in 2006 (World Bank, 2006). Overall, the IMF (2007) predicted that growth in the region would be about 5 percent in 2007.

To capture institutional quality, the six indicators pertaining to the seminal work by Kaufmann et al. (2005), namely, Voice and Accountability, Political Stability, Government Effectiveness, Regulatory Quality, Rule of Law and Control of Corruption. The indicators take values ranging from -2.5 to 2.5 inclusive, with an increase (and being positive) consistently implying better quality of institutions.

The Voice and Accountability index measures whether the citizens can choose their government and the extent to which political rights and civil liberties are respected along with the degree of freedom of the press, so that all groups have their rights respected such that these are well reflected in policy making.

The Political Stability index measures perceptions of the likelihood that the government will be overthrown by unconstitutional and/or violent means. The political stability index along with the Voice and Accountability index can be used as a proxy for democracy. The more democratic a country, the more will due processes be adhered to, thus ensuring greater meritocracy. Empirical studies also prove indicate that more democratic countries tend to grow faster and are characterised by higher income levels (Williamson, 1995; Acemoglu et al., 2001; Aron, 2000).

The Government Effectiveness measures the quality of public service, the competence and independence of civil service and the credibility of the government's policies. Government effectiveness refers to the soundness of the policies implemented as well as the quality of the services provided to the population such as education and health care facilities. The educational and health status are important determinants of the human capital of a country. The human capital endowment is in turn important for the growth path of the country as a better educated and healthier labour force will be more productive.

The Regulatory Quality index refers to government controls on the goods market, banking system, international trade, and business development. An increase in the Regulatory Quality index theoretically implies a reduction of market unfriendly policies and in the regulatory burden in terms of less bureaucracy and red-tapism and lower transaction costs. This indicator hence ensures the establishment of market-friendly practices to ensure efficiency in resource allocation.

The Rule of Law index measures the extent to which property rights are protected and the perceptions on the incidence of crime, the effectiveness of the judiciary and the enforceability of contracts. A high rating on the rule of law index translated by proper safeguarding of property rights and enforcement of contracts will create an optimistic and attractive business environment for local as well as foreign investors.

The Control of Corruption index measures the rent seeking behaviour of civil servants and all those involve in the delivery of public goods and services. In other words, Control of corruption identified by a decrease in the frequency of "irregular payments" made to officials and members of the judiciary might spur growth in the sense that efficiency and productivity will be enhanced with the reduction of rent seeking behaviour.

The simple mean of the six governance scores obtained by each Country in the sample has been calculated and displayed in Table 1A below for the year 2006. The table denotes the governance state of affairs for benchmarking purposes and an average indicator, which can be considered as representative of the current general situation prevailing in these two regions in terms of institutional quality.

Table 1a

Average Indicators of Institutional Quality in 2006

Country (Region)	Institutional Indicator	Value
Latin America (LA)	Political Stability	-0.31
	Voice and Accountability	-0.18
	Government Effectiveness	-0.19
	Regulatory Quality	-0.07
	Rule of Law	-0.44
	Control of Corruption	-0.23
	Average of All Indicators (LA)	*-0.23*
Sub-Saharan Africa (SSA)	Political Stability	-0.41
	Voice and Accountability	-0.35
	Government Effectiveness	-0.57
	Regulatory Quality	-0.48
	Rule of Law	-0.58
	Control of Corruption	-0.53
	Average of All Indicators for SSA	*-0.49*
All Countries	*Average of All Indicators*	*-0.36*

Source. Computed Data Base from Kaufmann et al., 2007.

The above table compares institutional quality indicators of Latin America with those of Sub-Saharan Africa and reveals one major fact that the former fares better than the latter, while both sets of economies suffer from very low institutional

quality standards. The overall index of institutional quality for LA, SSA and both sets of economies are -0.23, -0.49 and -0.36 respectively.

As a comparison to the post financial crisis period, it is worth noting that as per 2015 statistics, there has not been much improvement in terms of average of institutional quality as indicated in the table below:

Table 1b

Average Indicators of Institutional Quality in 2015

Country (Region)	Institutional Indicator	Value
Latin America (LA)	Political Stability	-0.17
	Voice and Accountability	+0.19
	Government Effectiveness	-0.14
	Regulatory Quality	0.02
	Rule of Law	-0.35
	Control of Corruption	-0.34
	Average of All Indicators (LA)	*-0.16*
Sub-Saharan Africa (SSA)	Political Stability	-0.53
	Voice and Accountability	-0.39
	Government Effectiveness	-0.62
	Regulatory Quality	-0.46
	Rule of Law	-0.58
	Control of Corruption	-0.52
	Average of All Indicators for SSA	*-0.50*
All Countries	*Average of All Indicators*	*-0.33*

Source. Computed Data Base from Kaufmann et al., 2016.

While there has been some improvement in the overall performance of Latin American countries used in the sample from -0.23 (in 2006) to -0.16 (in 2015), the performance is still negative. On the other hand, there has not been much change in the case of SSA countries. Very insignificant improvements were found in the Regulatory Quality and Control of Corruption indicators. Hence, in fact, for both groups of countries, institutions remain weak.

Proposed framework, data analysis and empirical findings

We postulate a growth model in the form of an augmented New Classical production function:

$$Y_i = F(V_i, Z_i),$$

Where Y stands for income per capita in real terms, V is a vector of the usual growth ingredients, covering aspects of human capital and physical capital, amongst

others, that will be further explained below; while Z is a vector of Kaufmann et al. (2007) measures of institutional quality. Thus V represents the set of control arguments in the above specification.

More specifically, our empirical framework is:

$$(1) \qquad Y_i = \beta_0 + \beta_1 K_i + \beta_2 G_i + \beta_3 L_i + \beta_4 N_i + \beta_5 Z_i + \Phi ,$$

Where each variable is defined as follows for each country i:

Y_i - GDP per capita (at constant prices);

K - Gross fixed capital formation (in real terms);

G - Government consumption expenditure (in real terms);

L - Net secondary enrolment rate;

N - Value of exports and imports as a proportion of GDP;

Z - Index of institutional quality;

Φ - Error term.

World Development Reports are used for the macroeconomic and other control variables while data from Kaufmann's *et al.* database have been used for variable Z. In Equation (1), the control variables include the real GDP per capita, the gross fixed capital formation in the country as a proxy for the level of investment both public and private, the general government consumption expenditure level as a measure of government expenditure, the net secondary enrolment ratio to represent the level of involvement in the educational system and the literacy rate and the value of imports and exports as a proportion of GDP to express the degree of openness of the countries and can also be considered here as measure of being globalised. All data relate to the year 2007.

The empirical investigation relates to various scenarios that have been performed to test different hypotheses altogether improving the sustainability of the results as displayed in Table 2. In the first instance, we proceeded with a framework that relates to the methodology developed by Knack and Keefer (1995). This consists of nesting all the six governance indicators as one aggregate or composite indicator. The latter index is denoted as 'Overall Governance' in the last column of Table 2 and was found to be highly significant in influencing economic performance positively. In other words, better institutions as captured by this composite index would by and large lead to an increase in per capita income. In this regression all the variables were found to have the relevant sign and are important with the exception of the 'Openness' variable. Further investigation is carried out subsequently whereby the overall index of governance is unbundled to track the effects of individual measures of institutional quality on economic growth. This is done in Regression (2), where all these measures are included in addition to the control variables. However, it is found that only three measures of institutional quality, namely, 'Political

Stability', 'Government Effectiveness' and 'Control of Corruption' are significant albeit at 10%. The variable 'Openness' also reasserts a new level of significance and is now found to be significant at 10%. Correlation among the various indicators of institutional quality was performed and it was established that these measures, as one would expect, were found to be highly correlated; given that their computation as an indicator uses basically the same information and instruments.

Table 2

Regression Results

Independent Variables	Dependent Variable =Y (Real GDP per Capita)						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Constant	2.37 (14.02)***	1.68 (14.24)***	1.32 (11.76)***	1.14 (13.1)***	1.27 (11.08)***	1.78 (13.41)***	1.66 (14.67)***
Gross Fixed Capital Formation	3.68 (1.31)*	2.36 (3.12)***	0.43 (1.23)*	0.78 (2.84)***	1.02 (2.12)***	0.57 (1.22)*	0.46 (1.32)*
Government Consumption Expenditure	-0.87 (-2.13)**	-0.38 (-1.67)*	-0.12 (-0.43)	-0.22 (-2.02)**	-0.18 (-1.23)*	-0.13 (-1.31)*	-0.16 (-1.28)*
Net Secondary Enrolment Rate	13.26 (1.56)*	151.43 (2.04)**	131.13 (1.93)***	177.23 (3.56)***	156.12 (3.21)***	188.78 (3.12)***	206.51 (3.01)***
Openness	1.02 (0.14)	-0.18 (-1.69)*	-0.14 (-1.37)*	-0.18 (-1.89)**	-0.17 (-2.12)**	-0.17 (-1.09)*	-0.14 (-1.34)*
Voice & Accountability		432.34 (1.02)	718.21 (2.23)**		358.18 (2.76)**	643.76 (1.03)*	
Political Stability		227.44 (1.27)*	376.37 (3.13)***		765.44 (3.36)***		678.55 (3.69)***
Government Effectiveness		610.21 (1.23)*		742.87 (3.12)***	723.31 (3.10)***	678.23 (3.76)***	
Regulatory Quality		438.13 (0.71)		841.73 (3.79)***		778.66 (2.23)**	
Rule of Law		166.37 (0.17)	657.23 (3.47)***		724.76 (3.54)***		567.98 (3.02)***
Control of Corruption		471.31 (1.64)*		567.36 (3.46)***		641.62 (3.87)***	702.12 (2.06)**
Governance	866.38 (3.93)***						
R-Bar-Squared	*0.462*	*0.481*	*0.472*	*0.491*	*0.467*	*0.484*	*0.457*

Notes: (i) Test statistics are based on White's Heteroscedasticity adjusted S.E'; (ii) t-ratios are in parentheses; *** relates to 1% level of significance, ** 5% level and* 10% level.

Source. Author's estimation.

To select that regression scenario which best captures the effects of institutional quality on economic growth, it was thus necessary to apply Non-Nested tests as an empirical and objective method of selecting the best regression. These tests are based on joint-F tests of zero restrictions. The alternative scenarios are

displayed as well as their empirical results from Regression (3) to Regression (7). Regression (2) was used as the Encompassing or General Model based on Mizon and Richard (1986) and Thomas (1997). The best fit selected using encompassing test was found to be Regression Equation (4), which is also signified by the highest level of the adjusted coefficient of determination.

Hence, as a result of the above robust tests, the fourth equation - Equation (4), constitutes our main focus. In this regression, it is found that human capital and physical capital variables tracked by the variables 'Net Secondary Enrolment Rate' and 'Gross Fixed Capital Formation' are found to support conventional wisdom that any increase in these forms of capital would be growth-promoting. According to the regression results, an improvement in the secondary enrolment rate will lead to an increase of the GDP per capita in the selected sample of developing countries. Many growth models relate the rate of growth to the rate of capital formation, among other factors, and there is a widespread agreement among economists that large investments in fixed capital are strongly associated with rapid economic growth, at least in the long run.

However, when it refers to 'Openness' and 'Government Consumption Expenditure' variables, it is found that both of them adversely affect economic growth. Regarding the initial income level denoted by the GDP per capita in the year 1995, which is consistently significant at the 1 percent level. Generally, studies have demonstrated that a greater integration into the global economy is associated with faster economic growth and higher income level (Dollar & Kraay, 2003). In the above table, this does not appear to be the case in our equation of interest. The coefficient is negative as well as significant. This could be explained by the fact that our sample of countries consists of weak-performers as far as openness is concerned or becoming more globalised. A possible explanation is that most Sub-Saharan African and Latin America countries are major exporters of primary products especially of agricultural goods, whose prices have been declining on world markets. Moreover, the trade procedure has not changed much for most of these countries.

The negative estimated coefficient of the general government fixed consumption expenditure is consistent with Barro's conclusions (Barro, 1991), who found that in fact, government consumption has a negative impact in poor countries. A larger government is typically detrimental to efficiency, productivity and growth through crowding-out of private investment and resources. The basis being that the public sector is not responsive to market signals, that is, a heavy regulatory process entails higher production costs and distortions that arise both from fiscal and monetary policies. Given that institutional quality is left to be desired in the sample of countries, the quality of service delivery and public spending would not have positive impacts. In spite of so much being invested by governments, there is a strong need to improve the system, combat corruption, make the public sector effective and reduce the cost of business management for local and foreign firms. In that context, there would be a positive impact of government spending on

economic growth. Altogether, the composition of such spending matters as well as its direction; more productive expenditure, for instance, in promoting human and physical capital, might be necessary to enhance economic growth.[2]

After controlling for the usual growth ingredients, the relevant indicators and impacts of institutional quality, as illustrated by Equation (4), may be considered. It can be deduced that 'Government Effectiveness', 'Regulatory Quality' and 'Control of Corruption' have all got positive and significant signs clearly conveying that good institutions matter in improving economic growth in the sample of countries under study. Besides, the 'Government Effectiveness' index has the highest impact coefficient followed by that of 'Control of Corruption'. By and large, these three indices reflect the state of the public sector in these countries; particularly indicating the quality of service delivery of public goods and services, the nature and extent of regulation of the market and the perception and spread of corruption among public officials. All these are indicators that directly indicate the ease, if not the cost, of doing business in such countries. Given the very low quality of institutions and especially for these three indicators, it is not surprising to note that the lower this quality, the more adverse will its impact be on economic growth. In addition, the indices, in question, reflect the imperfections of the overall public sector and to what extent these could effectively jeopardize the economic performance of a developing nation.

Conclusion and policy implications

This paper has applied an improved growth model to track the impact of good institutional quality on the growth performance of a selected group of developing countries. A sample of 42 countries is selected from economic regions pertaining to Sub-Saharan Africa and Latin America. It is primarily observed that low or poor institutional quality adversely affects the growth performance of these countries. It is worth noting that we have carried out a battery of tests to improve the robustness of our fit through alternative regression scenarios. The usual control variables reflecting human capital and physical capital, tracked by access to education and greater capital formation, are found to have a positive relationship on the growth performance of these countries. Government consumption expenditure and the degree of openness are found to have an adverse effect on economic growth. Opening up their economies has actually made these countries more vulnerable to international shocks and global risks which they could hardly manoeuvre thereby adverse impacting economic growth. Regarding public consumption expenditure, we observe the presence of crowding-out effect on private spending. It is believed that high tax liabilities to support public spending tend to harm private sector's investment and consumption.

[2] See for instance Sobhee (2010) which explains the linkage between institutions and size of government in Sub-Saharan Africa.

In the regression of interest, it is also found that the better institutional quality captured by 'Government Effectiveness', 'Regulatory Quality' and 'Control of Corruption' would greatly contribute to higher economic growth in these countries. Conversely, if the state of public sector remains as it is, characterised by higher level of bureaucracy, corruption and excessive control over the market, economic performance will no doubt be jeopardized. Many of these countries (especially in the Sub-Saharan African region) have large government sizes basically trying to over-supply social goods in an attempt to combat inequality, but ending up displacing private expenditures, capital formation and output growth in the long run. Low institutional quality can also frustrate foreign direct investors as it may affect adversely the high cost of doing business.

The major recommendation due to the above findings is that while the public sector should continue to consolidate human and physical capital, it should ensure quality and effectiveness in the delivery of public goods and services, play a major role in regulating the private sector on a market friendly basis and solidify the entire system to reduce corruption and its perception.

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List of Countries in the Sample:

Botswana, Burkina Faso, Burundi, Cameroon, Central African Republic, Ethiopia, Gambia, Ghana, Guinea, Guinea-Bissau, Ivory Coast, Kenya, Lesotho, Madagascar, Malawi, Mali, Mauritania, Mauritius, Mozambique, Namibia, Niger, Nigeria, Rwanda, Senegal, Sierra Leone, South Africa, Swaziland, Tanzania, Uganda, Zambia, Argentina, Bolivia, Brazil, Chile, Columbia, Costa Rica, El Salvador, Guatemala, Mexico, Nicaragua, Panama, Paraguay.

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