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Empirical Study of the Impact of Governance on Economic Structural Change: Evidence from Sub-Saharan African Countries

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Abstract:
In this paper, we attempted to test whether the governance has a positive impact on the structural change in SSA or not. For the cause, we used the six indexes of the Institutional Quality namely Government Effectiveness, Rule of Law, Control of Corruption, Political Stability and Absence of Violence/Terrorism, Regulatory Quality, Voice of Accountability to see their impact on the structural change in SSA. We use 46 SSA countries from worldwide governance indicator of World Bank from 1996 to 2016 in a Generalized Method of Moment and Generalized Least Square regressions. The results show that only the Government Effectiveness is positively affecting the value added (proxy of structural change) of three sectors (agriculture, industry and service) of the SSA economies. Some affect positively one sector and negatively another sector, while the rest are insignificant for one sector and negative for other as example. Our results show that more efforts need to be done for the betterment of the institutional quality considering each sector's particularity.

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1. Introduction

With all the inopportune happening in Africa one way or other slowing the economy of countries, government and economic actors are looking for solutions. Africa appears to be degraded as seen from international media. Recently an entitled was giving in the New York Times about the Ebola diseases in 2015 "Ebola ravages economies in West and Central Africa". For decades African economies are seen as a lost because of their low performance, way behind many economies. The situation in Africa these recent years is improving since most of economies are emerging. Some economic regions in Africa such as East Africa according to Economist &IMF in 2014 are enjoying a rapid and high GDP growth rates. And the others are still low-income countries with relatively low exposure to globalization due to the direction and the governance of each political regime.

The rationality behind the taking-off of many economies can be the improvement of the institution. These are seen through business environment, doing business and so on. For a country to have a sustainable growth it needs not only the economic agent to add on the principal aggregates but also a following up of good governance. The concept of institutions is widely used in economics to analyze the development of African economies. What are the performances of the institutions of the economies that are doing well? The debates about the role of institutions versus other factors are still topicality. Since there is some improvement in the institutions and we are noticing the positive changes in economies of countries in Africa, can we affirm that the particular growth pattern of African countries might be caused by the role of institutions?

2. Literature Review

Rodrik (2013) in his new paper with title The Past, Present, and Future of Economic Growth has distinguished growth that is function of fundamental capabilities known as human capital and institutions and the growth from the structural transformation (the move to higher-productivity industries). He argues that the structural transformation causes the periods of extraordinarily high growth. Increases in fundamental capabilities exhibit important complementarities, compared to developed countries the fundamental capabilities are slower in the develop countries. In the sense it urged an improvement

Robinson et al.,(2012) have identified the institution as a key factor to understand the economic performance aligned with those studies). In 2005, Acemoglu in his research "Institution as a fundamental cause of long run" he developed an empirical and theoretical case that differences in economic institutions are the fundamental cause of differences in economic development. To do so, he firstly reviewed the evidence that institution lead to growth. Secondly he wanted to understand the reason why institutions vary across countries and lastly he highlighted areas of improvement. The institutions are the cause of influences of the economic incentives structures in the society, for example the property rights incentivize people to invest in human or physical capital, revenues and residual rights control, help to allocate efficiently resources and to determine who gets profits. Accordingly the economic growth can be stimulated if the political institutions can allocate power to groups that encourage property rights enforcement, create constraints on power holders and capture a few rents by power holders. He also compared the impact of geography, economic institutions and culture on the economic growth of a country and concluded later that institutions are the most important criteria for growth based on two case studies (Korea partition and colonization). With a large sample of 127 countries, Rodrik (2002) made a comparison between the impact of institutions, geography and trade openness on economic development with a separation of the general government policies from the trade openness. He found that

the quality of institutions measured by the Rule of Law and the property right has the greatest direct effect on income while the trade openness measure by the % of GDP by trade has no direct effect on income. The quality of institutions positively and significantly trade openness. He raised a main question later about the guidance provided by his results and the risks of a one-size-fits-all policy for institutions. Year 1990 had seen a lot of countries in Africa changing their political regime; many opted for democracy which is literally, rules by the people or a state of society characterized by formal equality of rights and privileges. Many thoughts nowadays are favorable for the democracy regime to be a key success for the economic boom. Studies are being conducted for this reason, among which, Sirowy and Inkeles (1990) in their review of the relationship between regime types and economic growth, argued that democratic processes and the exercise of civil liberties and political rights lead to social conditions that are most friendly to economic development. And, as Feng (2001) points out, political and economic freedom improves property rights and market competition, which in turn enhance economic growth. Others like Pennar et al. (2007) argued that the growth is the one that lead to democracy not the other way. With these two points we can clearly affirmed that there must be a challenge if the order of one is misplace.

3. Methodology and Results

3.1. Model specification

The foundation of our model is the traditional growth theories, particularly of Lewis (1954) and Chenery (1960), which emphasize the canonical transition in aggregate output and labor from the low technology based agrarian economy to a service based economy via an era of manufacturing. We will set up our empirical model within the framework of the neoclassical growth model where output of each sector (Yjit), that is, agriculture, industry and service sectors, is expressed as a function of inputs and a set of policy reform variables as shown in Equation. We will borrow the methodology used by *By* Jeffrey A. Frankel and David Romer in their paper "Does Trade Cause Growth?" The structural change is worldly defined as the reallocation of economic activity across the broad sectors agriculture, manufacturing and services or a transfer of resources from the primary to the secondary sector, then to the tertiary sector and it is synonym to the changes in the relative contributions of agriculture, industry, manufacturing and services to GDP, what we concord with. Our model was formed at first to explain the pattern of industrialization in Japan between industries, later reformulated to simulate the effects of alternative development policies. It helps to determine the effects of changing policies. It was used in 1914, 1935 also in 1950 and 1965. We summarized the concept with the following equation then we build ours.

The basic equation for an open Leontief system:

$$X_i + M_i = C_i + I_i + E_i + \Sigma a_{ij} X_j (i = 1 \dots n) \quad 1$$

The national accounts identity defining G.D.P. from the production side:

$$Y = \Sigma V_i = \Sigma v_i x_i \quad 2$$

The balance of payments constraint for an economy with a net inflow of capital:

$$\Sigma E_i + F = \Sigma M_i \quad 3$$

The standard solution for a Leontief model in which the exogenous elements are consolidated into two factors: internal demand (consumption plus investment) and net trade (exports minus imports). With assumption of the change over time of the input coefficients and the elements of the Leontief inverse are therefore dated.

$$X_i = \Sigma r_{ij} \big(D_j + T_j\big) (i = 1 \dots n) \quad 4$$

Where by:

Y=GDP F=Capital Inflow C_i= Public and Private Consumption I_i= Investment E_i=Export M_i= Import T_i=$X_i - M_i$ D_i= $C_i + I_i$ V_i= Value Added in sector i a_{ij}= input of commodity I per unit of output of commodity j

v_i= ratio of value added to production in sector i
From what follow we derive our model's structure as bellow:
Value Added = f (Institution quality Indexes, Control Variables).
Using the manufacturing share of GDP like of Rodrik (2016) did, as part of the explained variables and also for the other sectors, we use their value added. We start with a base line model whereby each of the components will be subject to a chapter that will follow.

$$Y_{it}^{j} = \alpha + \beta X_{it}^{j} + \delta Z_{it}^{j} + \gamma D_{it}^{j} + \emptyset State_{it}^{j} + \mu_{it}^{j} \quad (5)$$

The equation (1) is the baseline model which is a composited model with X_{it}^{j} is as a vector of country fundamentals and control variables, Z_{it}^{j} as the instrumental variables, D_{it}^{j} a vector of policy reform dummies and $State_{it}^{j}$ a vector of institutional quality, μ_{it}^{j} is the idiosyncratic error term, while i and t refers to country and time fixed effects; and j indicates the sector. The Institutional quality variables

$$Y_{it}^{j} = \emptyset_o + \emptyset_1 \text{GovEf}_i + \emptyset_2 \text{Rulaw}_i + \emptyset_3 \text{CCor}_i + \emptyset_4 \text{PolStab}_i + \emptyset_5 \text{RegQual}_i + \emptyset_6 \text{VAc}_i + \emptyset_i X_{it}^{j} + \mu_{it}^{j} \quad (6)$$

The correlation between the errors terms is likely to be high. For instance the institution will be potentially endogenous, which could hinder efficient identification of the true causal impact of institutions and reforms on structural transformation in SSA. Also, countries with good institution that promote competition and reliance on markets to allocate resources are likely to have high performance of economic growth. For the endogeneity problems, we will use the system generalized method of moments (GMM) for instance the institutional and structural reforms indices will be potentially endogenous, which could hinder efficient identification of the true causal impact of institutions and reforms on structural transformation in SSA. The data is collected from worldwide governance indicator of World Bank from 1996 to 2016.

3.2. Variable Description:

All these indicators defined as follow are from the worldwide governance indicator of World Bank and expressed in units of a standard normal distribution, i.e. ranging from approximately -2.5 to 2.5.

Government Effectiveness measures the quality of civil services, public services, formulation and implementation of government policies and the degree of it commitment from political pressures.

Rule of Law measures the perceptions of the extent to which agents trust and abide by the principles and rules of society, and in particular the quality of contract enforcement, the police, property rights, and the courts, as well as the possibility of crime and cruelty.

Control of Corruption captures how the public power is exercised for private gain, including the petty and the grand forms of corruption, as well as "capture" of the state by elites and private interests.

Political Stability and Absence of Violence/Terrorism : It captures the perceptions of the probability of political unsteadiness and/or politically-motivated violence, as well as terrorism.

Regulatory Quality: captures perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development.

Voice and Accountability: captures how a country's citizens are able to express their right and obligation by participating in the selection of their government, as well as freedom of expression, freedom of association, and a free media.

4. Result and Explanation

- **Agriculture Value Added**

Table 1: Descriptive Statistic

VARIABLES	(1) N	(2) mean	(3) Sd	(4) min	(5) Max	(6) Var	(7) Skewn	(8) Kurt
AgrVa	479	24.52205	15.69212	.8919954	65.59787	246.2428	.2346186	2.227039
IndVa	465	26.14498	14.82709	2.594866	84.28298	219.8425	1.694987	6.292493
SerVa	465	48.94244	12.8208	14.82502	84.03812	164.3728	.2158347	3.190733
GovEff	495	-.7492778	.603538	-1.848333	1.056994	.3642581	.6428418	3.044924
RuLaw	495	-.6667203	.6066339	-1.852296	.9962615	.3680047	.5113673	2.911746
CCor	495	-.6172284	.6260915	-1.805882	1.039068	.3919906	.7625785	2.996748
PolStab	495	-.4791816	.87892	-2.699193	1.200234	.7725004	-.3931192	2.468117
RegQual	495	-.6427397	.5553857	-2.156215	1.12727	.3084532	.3522418	3.505598
VAc	495	-.5207628	.7081702	-2.000251	.9755524	.5015051	.1282082	2.154694
Ex	483	34.09103	18.93804	6.053186	107.9944	358.6495	1.175205	4.311259
Im	479	109.2743	412.6541	10.49242	3285.732	170283.4	6.44689	43.1939
FDI	495	1.77e+07	1.07e+08	-7.38e+07	1.51e+09	1.14e+16	8.607614	97.16399
PopGr	495	2.814552	2.054832	-2.628656	17.7732	4.222335	4.815137	30.81133
Date	495	23.71	3.165477	1996	2016			

Source: Made by authors with World Bank Data

Table 2: Correlation Matrix

	agrva	indva	serva	govef	rulaw	corrup~n	polstab	regqual	voiceacc	ex	im	fdi	popgr
agrva	1.0000												
indva	-0.6467	1.0000											
serva	-0.4595	-0.3748	1.0000										
govef	-0.5025	-0.0506	0.6676	1.0000									
rulaw	-0.4441	-0.0794	0.6377	0.9190	1.0000								
corruption	-0.4212	-0.1115	0.6535	0.8613	0.8988	1.0000							
polstab	-0.5351	0.1656	0.4595	0.6516	0.7402	0.7012	1.0000						
regqual	-0.3657	-0.0790	0.5344	0.8889	0.8898	0.7764	0.6036	1.0000					
voiceacc	-0.2802	-0.1708	0.5454	0.7400	0.8143	0.7682	0.6371	0.7449	1.0000				
ex	-0.6215	0.6113	0.0473	0.1975	0.1997	0.2205	0.4358	0.0714	0.1022	1.0000			
im	-0.0280	0.0035	-0.0076	-0.0223	-0.0960	-0.1114	-0.0213	-0.0594	-0.1061	-0.0424	1.0000		
fdi	-0.0171	0.0963	-0.0900	-0.0605	-0.1121	-0.0634	-0.0997	-0.0570	-0.0654	-0.0151	-0.0218	1.0000	
popgr	0.1022	0.0605	-0.2422	-0.2208	-0.2638	-0.3289	-0.1354	-0.1863	-0.2859	-0.1240	0.8958	-0.0288	1.0000

Source: Made by authors with World Bank Data

The mean value for Agriculture Value Added is 24.52, the deviation from the sample mean is 15.69, the least value or the minimum in this series is 0.89 while the maximum value is 65.59, and the dispersion among the observation in this series which is the variance is 246.24. The skewness value is 0.23 and we know that the skewness measures the value of the degree of asymmetric of this particular series. For a normal skewness the value is 0, so we can easily say that the Agriculture Value Added mirrors a normal distribution. The Kurtosis is 2.22, and we know for a data should be normally distributed, the value of Kurtosis must be 3, so as 2.22 we can say that Agriculture Value Added is platykurtic, is having more lower value bellow the sample mean for this particular series, so it is going to have a flat suffix and because 2.22 is

lower than 3. Though Agriculture Value Added resemble a normally distributed curve is going to be platykurtic. The same explanation goes for all the variables.

Table3: Result for Agriculture sector: Agriculture Value Added (AgrVa)

VARIABLES	GMM	GMM	GMM VCE(R)	GLS
lnGovEf	0.103**	-.0264**	0.103**	0.103**
	(0.0438)	(.01319)	(0.0467)	(0.0438)
lnRulaw	0.0769**	.0037	0.0769**	0.0769**
	(0.0299)	(.0084)	(0.0339)	(0.0299)
lnCCor	0.108***	-.0014	0.108***	0.108***
	(0.0375)	(.0107)	(0.0371)	(0.0375)
lnPolStab	0.0130	-.0031	0.0130	0.0130
	(0.0250)	(.0071)	(0.0234)	(0.0250)
lnRegQual	0.135***	-.0192	0.135***	0.135***
	(0.0505)	(.0139)	(0.0480)	(0.0505)
lnVAc	-0.0182	.0200**	-0.0182	-0.0182
	(0.0334)	(.0106)	(0.0289)	(0.0334)
lnEx	-0.928***	.01035	-0.928***	-0.928***
	(0.0426)	(.0217)	(0.0544)	(0.0426)
lnIm	-0.0377	.154***	-0.0377	-0.0377
	(0.0340)	(.0244)	(0.0334)	(0.0340)
lnFdi	0.0242***	.0010266	0.0242***	0.0242***
	(0.00503)	(.0052)	(0.00306)	(0.00503)
lnPopGr	0.174***	.0031493	0.174***	0.174***
	(0.0463)	(.0192)	(0.0492)	(0.0463)
Time FE	YES	YES	YES	YES
Country FE	NO	YES	NO	YES
Constant	7.452***	2.203***	7.452***	7.452***
	(0.219)	(0.127)	(0.258)	(0.219)
Hansen's	**J chi2(0)= 6.4e-29 (p =0.0)**			
Wooldridge test for autocorrelation	**F(1, 43) =94.030**		**Prob > F=0.0000**	
Observations	900	900	900	900

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Test of Correlation

Wooldridge test for autocorrelation in panel data

H0: no first-order autocorrelation

F(1, 43) = 94.030

Prob > F = 0.0000

For the correction of the Multicollinearity and heteroskedasticity with VCE (Robust).

The table (Table 3) presents the different results we have from the different tests and regression we performed. The First column obviously is for the variables, the second is the GMM regression with only the control of Country Fixed Effect, the third is the GMM regression with the control of Time and Country specific. In the fourth column, we control the Time Fixed Effect with the robustness check (VCE) and in the last column (column 5), we performed a Generalized Least Squared (GLS) to test the consistency of our previous results. Same logic is applied throughout this paper in the presentation of the result. However, we will mainly focus on the explanation of the column fourth (GMM with VCE(R)) since the rest are used as test regressions. After accounting for the possible impacts of the governance on the output the above table shows in the column fourth (GMM with VCE(R)) some of our main variables (Government Effectiveness, Rule of Law, Control of Corruption and Regulatory Quality) are positively significant at different level and some of the control variables (Export, FDI, Population growth) are significant but different direction and levels. While the rest of our

main variables (Political Stability and Absence of Violence/Terrorism and Voice and Accountability) are not significant with the rest of the control variables (Import) is not significant.

The Government Effectiveness and the Rule of Law are statistically significant at 5%. As interpretation, if the Government in all the SSA countries can be at one percent more effective, the overall agriculture value added in the SSA countries will increase by about 0.10 % in the short run, and if the agents can trust and abide by the rules of society in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence holding other factors constant, the SSA agriculture value added will improve by about 0.08%. Hence, Government Effectiveness and the agriculture value added at one hand and the Rule of Law and Agriculture Value Added in another hand exhibit an inelastic relationship. Our result reinforces what Lio and Liu (2008) had found while they investigated the relationship between agricultural productivity and the governance efficiency the years 1996 with 118 countries for 1998, 2000 and 2002. They stated that when independent variables included in the model separately, government effectiveness, the rule of law and control of corruption increase agricultural productivity. Also Me´on and Weill (2005) used the stochastic frontier method with the same goal which is to find the relationship between governance and agricultural sector improvement, measured by the six governance indicators on a sample of 62 countries. They found that governance indicator is positively and significantly associated with the efficiency.

The Control of Corruption and the Regulatory Quality are statistically significant at 1%. Holding other factors constant the Control of Corruption and the Regulatory Quality go in the same direction with the Agriculture Value Added. Meaning a percentage increase in the Control of Corruption, will also see the Agriculture Value Added increase by about 0.11% (0.108%), while a percentage increase in the Regulatory Quality will make the Agriculture Value Added increase by about 0.13% (0.135%) on average in the short run. These results are strengthened by Nizamettin Bayyurt and Senem Yilmaz in their research: *The Impacts of Governance and Education on Agricultural Efficiency: An International Analysis* whereby they found a positive effect of the Regulatory quality on agricultural efficiency and a negative relationship between education and agriculture efficiency. Hence when the education level becomes high, educated people tend on their own fields and to be away from agricultural activities. However a positive relationship exists between efficiency and development level of a country. It is obvious that the agricultural productivity in emergent countries is lagging far following the industrialized countries. So Godson-Ibeji, C. C., Anyoha, N.O., Chikaire, J. U. and Ani, A. O (2016) in their paper *Corruption and Sharp Practices: Impediments to Agriculture and Rural Development in Nigeria* proved that the effectively control corruption facilitates agricultural practices in Nigeria. The adherence to ethical standards in decision making must be the foundation of the nation's policies after finding that the more the control of corruption is decreasing the less the agricultural sector is performing in Nigeria.

The Political Stability and Absence of Violence/Terrorism and Voice and Accountability are not significant because of the agrarian state of the SSA agriculture sector. The structure of the entire economy continues to be dominated by agriculture in term of the labor share hence has a lower contribution in the gross domestic product (GDP), except in a few more industrialized and mineral-rich countries. The economically dynamic population in agriculture has doubled during the period 1980 to 2013 from 100 million people 212 million, regardless of the drop in the amount of the working population in agriculture from 71.8 per cent to 57.2 per cent during the same period (ILO 2014). In this sector, family farms own most of the land but are

increasingly tied into commodity production circuits. The agriculture is so subsistence that making its productivity low leading to almost no impact or neglected shock for the surplus of labor. As consequence the presence or the absence of additional political stability measures doesn't influence the production trend.

Export, FDI and Population growth are significant at direction level and different direction with the Agricultural Value Added. The coefficient of Export is statistically significant at 1% and equal to (0.928), showing that a percentage increase in the total Export will decrease the Agriculture Value Added on average of 0.92%. This can be explained by the fact that the Export's effect is more overall meaning it is on the general economy not by sector precisely the agricultural one. Also the SSA agricultural sector is not yet competitive for global market competitiveness, which explained the opposite causality between the Export and Agriculture Value Added on one side and the insignificance impact of Import on the Agriculture Value Added on another side. Our result is confirmed by Nahanga Verter, Věra Bečvářová (2016) in their research titled *The Impact Of Agricultural Exports On Economic Growth In Nigeria* with OLS regression, Granger causality, Impulse Response Function and Variance Decomposition approaches. They found that agricultural exports- led economic growth in Nigeria with an inverse relationship between the agricultural degree of openness and economic growth in the country.

The Net Inward FDI is statistically significant at 1%, showing a positive relationship between Investment and Agriculture Value Added. Its impact on Agriculture Value Added, holding other factors constant is 0.0242% meaning a percentage increase in the Net Inward FDI is associated with about 0.02% increase of Agriculture Value Added in the short run at the 1% significant level on average ceteris paribus. This leads to an encouragement to the overall SSA country to seek for specifically foreign direct investment either trough transfer technology or cooperation in a way to development the agriculture sector.

At 1% statistically significant, a percentage increase in the SSA population will affect the agriculture on average 0.174 by increasing it. With a well trained population this impact can be tremendous. The Population Growth in the SSA can't hinder the development of its agricultural sector. The right battle should be directed to how the agriculture can be mechanized counting on the available labor force that SSA has in order to fight poverty.

- **Industry Value Added**

Test of Correlation

Wooldridge test for autocorrelation in panel data
H0: no first-order autocorrelation
F (1, 43) = 82.292
Prob > F = 0.00

For the correction of the Multicollinearity and heteroskedasticity with VCE (Robust)
After accounting for the possible impacts of the governance on the output the above (table 4) shows considering the column fourth (GMM with VCE(R)) some of our main variables (Government Effectiveness, Control of Corruption and Regulatory Quality) three out of six are significant at different level in different direction with our output and all our control variables (Export, Import, FDI and Population growth) are different direction and levels significant with the Agriculture Value Added, while the rest of the main variables (Rule of Law, Political Stability and Absence of Violence/Terrorism) are insignificant.

Table 4: Result for Industrial sector: Industrial Value Added (IndVa)

VARIABLES	GMM	GMM	GMM VCE(R)	GLS
lnGovEf	0.0485	0.000735	0.0485**	0.0476
	(0.0312)	(0.0140)	(0.0197)	(0.0310)
lnRulaw	0.00769	0.0171*	0.00769	0.00696
	(0.0213)	(0.0103)	(0.0133)	(0.0211)
lnCCor	-0.0645**	0.00670	-0.0645***	-0.0630**
	(0.0267)	(0.00770)	(0.0153)	(0.0266)
lnPolStab	-0.0156	0.0185	-0.0156	-0.0164
	(0.0178)	(0.0166)	(0.0192)	(0.0176)
lnRegQual	-0.0912**	-0.0119	-0.0912***	-0.0888**
	(0.0360)	(0.0125)	(0.0197)	(0.0356)
lnVAc	0.00912	-0.00161	0.00912	0.00856
	(0.0238)	(0.00837)	(0.0194)	(0.0238)
lnEx	0.493***	0.0545	0.493***	0.494***
	(0.0304)	(0.0409)	(0.0373)	(0.0303)
lnIm	-0.0458*	0.182***	-0.0458*	-0.0466*
	(0.0243)	(0.0386)	(0.0253)	(0.0242)
lnFdi	-0.0161***	0.00515	-0.0161***	-0.0162***
	(0.00358)	(0.00709)	(0.00622)	(0.00358)
lnPopGr	0.0816**	-0.0867*	0.0816***	0.0818**
	(0.0330)	(0.0462)	(0.0308)	(0.0329)
Time FE	YES	YES	YES	YES
Country FE	NO	YES	NO	YES
Constant	2.107***	3.848***	2.107***	2.106***
	(0.156)	(0.238)	(0.196)	(0.141)
Hansen's J chi2(0)= 1.0e-28 (p =0.0)				
Wooldridge test for autocorrelation F(1, 43) =82.292 Prob > F=0.0000				
Observations	900	900	900	900
Number of id				46

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

The Government Effectiveness is statistically significant at 5%. As interpretation, if the Government in all the SSA countries can be at one percent more effective, the overall industrial value added in the SSA countries will increase by about 0.05% (0.048%) in the short run holding other factors constant. The Government Effectiveness and the Industrial Value Added exhibit an inelastic relationship. Rohan Best and Paul J. Burke (2017) in their research *The Importance of Government Effectiveness for Transitions toward Greater Electrification in Developing Countries* emphasized the important of the presence of a government in the process of industrial development after finding that government effectiveness is important for electricity transitions in developing countries. In the same perspective Md Rafayet Alam, Erick Kitenge and OH Bizuayehu Bedane (2017) in *Government Effectiveness and Economic Growth,* have used GMM technique with a panel of 81 countries to inspect the impact of government effectiveness on the economic growth. They discovered a significantly positive effect of the Government Effectiveness on the economic growth. Moreover, governance is a decisive factor in the allocation of foreign aid by many multilateral development banks such as World Bank and Asian Development Bank.

The Control of Corruption and the Regulatory Quality are statistically significant at 1%. Holding other factors constant the Control of Corruption and the Regulatory Quality are

asymmetric to the Industrial Value Added. Meaning a percentage increase in the Control of Corruption, will also see the Industrial Value Added decrease by about 0.064%, while a percentage increase in the Regulatory Quality will make the Industry Value Added decrease by about 0.09% on average ceteris paribus in the short run. This affect can be explained by the fact that high-quality institutions (and thus low incidence of corruption) are expensive, and only rich countries can afford them. In 2005 Svensson has summarized by has referred to various authors who have the same view. However the evidence against the reverse causality hypothesis is showed by the historical experience of Hong Kong, Singapore and Mainland China. Who introduced rigorous anticorruption policies (along with general public sector governance reforms and improvements) at low levels of development while the economic improvement and development have been quite amazing. We can bodily say that their per capita GDP exceeds that of the OECD average in today economy, while in the early 1950s it was the same as many African countries. At the mean time the question of causality remains a subject of discussion. In the case of the Regulatory Quality, the negative impact can be apprehended by the specificity of the country involve in our study. This is particularly of concern given that governance and the institutional framework mitigate the potential possible positive economic effects of regulation on the industrial sector.

Export, FDI and Population growth are significant at direction level and different direction with the Agricultural Value Added. The coefficient of Export is statistically significant at 1%, and equal to 0.493, showing that a percentage increase in the export will also increase the Industrial Value Added at average of about 0.5%. Our result is reinforced by Vera Songwe and Deborah Winkler in their research named *Exports and Export Diversification In Sub-Saharan Africa a Strategy For Post-Crisis Growth* who confirmed the relationship between export and Industrial Value Added and markets for our 30 SSA countries from 1995to 2008. They used the HHI of market and product concentration as an inverse measure of export diversification. They also found that the Export concentration and value added are negatively correlated, or, analogously, export diversification and value added have a positive relationship.

The Net Inward FDI is statistically significant at 1%, showing a negative relationship between investment and Industrial value added. His impact on Industrial value added holding other factors constant is 0.016% meaning a percentage increase in the Net Inward FDI is associated with about 0.02% decrease in the Industrial value added in the short run at the 1% significant level on average ceteris paribus. At 1% statistically significant, a percentage increase in the SSA population will affect the Industry on average 0.0816% by increasing it. With a well trained population this impact can be tremendous. The population growth in the SSA can't hinder the development of its Industrial sector. The right battle should be directed to how the Industry can be mechanized counting on the available labor force that SSA has in order to fight poverty. The Import is statistically significant at 10% and its effect is negative on the Industrial Value Added, what was not the case with the agriculture sector whereby it was insignificant. Holding other factor constant, a percentage change in the import will affect the industry value added by 0.046% in the opposite direction in the short run with an inelastic relationship. Our result is supported by Sylviane Guillaumont Jeanneney and Ping Hua (2015) with their paper titled *The Impact of Chinese Competition on Africa's manufacturing.* Their paper analyzed the impact of Chinese Competition on Africa's manufacturing value added hereby using a panel of 44 African countries from a period of 2000 to 2013 with the control for the usual determinants of industrialization namely the size of the domestic market, infrastructure quality and governance. The result showed that imported goods (manufactured goods) from China and other countries exerts a negative effect on African industries with a moderate real appreciation of African currencies toward Yuan positively

influences manufacturing value added. This fact is probably due to the reduction of the cost of imported machine and transport equipment from China representing 36% of total African imports in 2013 at the same time the price reduction of imported consumption goods has increased the remuneration of underprivileged workers and as a result improving their productivity. Nevertheless, a strong real appreciation evaluated to more than 33% instead affects negatively the SSA industries as traditional theory predicts.

- **Service Value Added**

Table5: Result for Service sector: Service Value Added (SerVa)

VARIABLES	GMM	GMM	GMM VC(R)	GLS
lnGovEf	-0.0874***	0.00123	-0.0874***	-0.0899***
	(0.0245)	(0.0162)	(0.0211)	(0.0248)
lnRulaw	-0.0413**	-0.0180*	-0.0413***	-0.0355**
	(0.0167)	(0.0104)	(0.0118)	(0.0169)
lnCCor	-0.0513**	-0.0151	-0.0513***	-0.0448**
	(0.0209)	(0.0132)	(0.0152)	(0.0213)
lnPolStab	-0.0222	-0.00727	-0.0222**	-0.0255*
	(0.0140)	(0.00877)	(0.00944)	(0.0141)
lnRegQual	-0.0239	-0.00682	-0.0239	-0.0242
	(0.0282)	(0.0172)	(0.0173)	(0.0285)
lnVAc	-0.0675***	9.17e-06	-0.0675***	-0.0654***
	(0.0187)	(0.0130)	(0.0139)	(0.0190)
lnEx	-0.147***	-0.0394	-0.147***	-0.140***
	(0.0238)	(0.0267)	(0.0350)	(0.0243)
lnIm	0.0369*	-0.303***	0.0369	0.0464**
	(0.0190)	(0.0300)	(0.0247)	(0.0194)
lnFdi	0.00407	-0.0105	0.00407	0.00511*
	(0.00281)	(0.00642)	(0.00266)	(0.00286)
lnPopGr	-0.155***	0.0604**	-0.155***	-0.168***
	(0.0259)	(0.0236)	(0.0317)	(0.0263)
Time FE	YES	YES	YES	YES
Country FE	NO	YES	NO	YES
Constant	4.688***	4.944***	4.688***	4.771***
	(0.122)	(0.157)	(0.218)	(0.113)
Hansen's J chi2(2) = 4.2e-28 (p = 0.0)				
Wooldridge test for autocorrelation F(1, 43) = 21.432 Prob > F = 0.0				
Observations	900	900	900	900
Number of id				46

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Test of Correlation

Wooldridge test for autocorrelation in panel data
H0: no first-order autocorrelation
F(1, 43) = 21.432
Prob > F = 0.0000
For the correction of the Multicollinearity and heteroskedasticity with VCE(Robust).

After accounting for the possible impacts of the governance on the output the above table (Table 5) shows considering the column fourth (GMM with VCE(R)), five out of six of our main variables (Government Effectiveness, Rule of Law, Control of Corruption, Political Stability and Absence of Violence/Terrorism and Voice of Accountability) are significant at different

level in the opposite direction with our output and some control variables (Export and Population growth) are highly significant with the Service Value Added, while the Regulatory Quality is insignificant.

The Government Effectiveness is statistically significant at 1% with negative impact on the Service Value Added. A percentage increase in the Government Effectiveness in SSA will reduce Service value added by about 0.09% (0.0874%) in the short run holding other factors constant. The Government Effectiveness and the Service Value Added exhibit an inelastic relationship. Rohan Best and Paul J. Burke (2017) can be again referred to since the same paper cited above "*The Importance of Government Effectiveness for Transitions toward Greater Electrification in Developing Countries*". The negative impact can be due by the fact that the developing countries have a much smaller public sector and correspondingly a smaller financial imposition (such like tax burden) than richer countries making the economic performance less consequent. Explained by Puneet Arora and Alberto Chong in "*Government Effectiveness in the Provision of Public Goods: the role of institutional quality".* Theoretically the countries that have better quality of institutions record a lower negative impact on economic growth compared to their less progressive counterparts for similar increase in government size. Since the service sector's economic development is the single way of promoting economic structural regulation and speeding up the transformation of economic growth (Zhou, 2015) a closer and urgent attention need to be paid to how and why the Government Effectiveness.

The Rule of Law and the Control of Corruption are statistically significant at 1%. Holding other factors constant the Rule of Law and the Control of Corruption are asymmetric to the Service Value Added. Meaning a percentage increase in the Rule of Law will see the Service Value Added decrease by about 0.04%, while a percentage increase in the and the Control of Corruption will make the Service Value Added decrease by about 0.05% on average ceteris paribus in the short run. This affect can be explained by the fact that high-quality institutions (and thus low incidence of corruption) are expensive, and only rich countries can afford them. This impact is the result of rigorous anticorruption policies at low levels of development while the economic improvement and development have been quite amazing. In the case of the Rule of Law, the negative impact can be apprehended by the specificity of the country involve in our study.

The Voice of Accountability and Political Stability and Absence of Violence/Terrorism are statistically significant respectively at 1 and 5% respectively. A unite increase in the Voice of Accountability will decrease the Service Value Added by about 0.07 unite but an unite increase in the Political Stability and Absence of Violence/Terrorism will decrease the Service Value Added by about 0.02 unite, holding all the factors constant.

Export and Population growth are significant and negatively affect the Service Value Added.
The coefficient of Export is statistically significant at 1% and equal to (0.147), showing that a percentage increase in the export will decrease the Service Value Added at average of about 0.14%. The Population growth is 1% statistically significant a percentage increase in the SSA population will reduce the Service Value Added on average 0.15%. The effect of the population growth in the service sector is quite different (meaning the opposite impact) this because of its sectoral impact also the fact that the surplus of labor in the service sector is unproductive. The population growth in the SSA can't hinder the development of its Industrial sector. The right battle should be aimed at how the Industry can be technologically programmed counting on the access of labor force that SSA has in order to clash deficiency or

poverty.

5. Conclusion

There is absolutely no doubt that improving the business climate and a following up of the economic entities is major factors for the attractiveness both national and foreign investors for a country as consequence will affect positively and will replicated in growing economic. Dynamic and efficient regime will certainly lead to keep up economic growth. The economic situation in SSA countries is reflection of how the governance is organized. Investors will be forced away from a politically unsteady, bureaucratic, exceedingly corrupted economy and anywhere if the environment is not safe and secured or where the government is not delivering its services with transparency and efficiency. A government that is socially responsible in conveying services and receptive to the requirements of its population will eventually generate a democratic surroundings leading to complete growth and human expansion.

The government effectiveness is significant in all the sectors (Agriculture, Industry and Service). However its application approaches in the Service Sector need to be revise for the betterment of the sector to pull the investors or entrepreneurs. The rule of law needs a close attention also in the Service Sector and the Industrial sector. The governments of the SSA countries need to be more involved in the daily life of the population in other to teach and educate thee for a better perception to which agents trust will be abided by the principles and rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence. The Control of Corruption is performing well only in the Agricultural Sector a strong signal for the Government to reconstruct or redefine a proper control of corruption rules and principles regarding to the size of the Industrial and Service sectors since high-quality institutions are expensive, and only rich countries and "rigorous" anticorruption policies along governance reforms are things that come gradually.

Political Stability and Absence of Violence/Terrorism is one of the factors that go along with the development of a country. The fact is that in SSA countries, this impact is either insignificant or negatively related to the sector development due to the fact that it has been proved that it is during the political instabilities that develop countries achieve their economic objectives in Africa. The instability observes in SSA may be indebted much of its cause to inside factors, though the interpenetration of internal and external factors particularly geopolitical or economic benefits of the international community regularly play a significant role in undermining the very methods and governments that are anticipated to care for democracy and to implant a sense of stability for collective development in SSA. In mixture to such factors as unstable development, disease, violence, poverty and the manipulative tendencies of intellectuals, political and economic stability in SSA is constantly under menace. The menace is however not emanating from inside the Africa continent but from external interests who's longing for SSA resources; go on shaping the dynamics in areas related to governance. The Congolese resources if well manages can nourish the entire population in Africa. In Africa Focus Bulletin (2006) the money stolen by the political privileged (Abacha of Nigeria, Mobutu of Zaire, and Moi of Kenya) are in banks in the western capitals.

As for the Regulatory Quality and the Voice of Accountability also less impact on one hand and negative impact on other hands testify the great work needed to be done in SSA. We need to admit that SSA countries are passing through challenges for several decades even after many countries in the continent passed through transitions from colonialism to

independence, is not a deniable fact. Some countries though officially are declared as democratic in fact are far away from the so called western democracy and they are measure with the same instruments and indexes that are used for the western countries who had the democracy centuries ago. The reality is roughly every country in Africa is still haunted by historical unfairness and tyrannical structures that were gave to the post colonial leadership at the same time imitating the western political systems.

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