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Abstract

How do government policies and institutions affect stock market performance? As stock markets grow broader and deeper in developing countries, the question becomes more critical. Government quality dynamics of corruption-control, government-effectiveness, political-stability or no violence, voice and accountability, regulation quality and rule of law are instrumented with income-levels, religious-dominations, press-freedom degrees and legal origins to account for stock market performance dynamics of capitalization, value traded, turnover and number of listed companies. The results demonstrate a significant positive association between stock market performance measures and the quality of government institutions. These findings suggest countries with better developed government institutions would favor stock markets with higher market capitalization, better turnover ratios, higher value in shares traded and a greater number of listed companies.

JEL Classification: G10 ; G18; G28; P16; P43

Keywords: Financial Markets; Government Policy; Political Economy

1. Introduction

The emergence of London as a world financial center was made possible by the reputation of fairness that the English courts and common-law had acquired by the 20th century (Rosenberg & Birdzell, 1986). The Russian experience has shown that foreign investors are willing to provide funds and much needed managing expertise to newly privatized firms only if the legal and political infrastructure is adequate at curbing corruption among government officials and limiting the risks of expropriation.

The deepening and broadening of stock markets in developing countries presents an important concern of how government policies and institutions affect stock market performance. According to the IMF (2006) and Mosley (2008) stock market capitalization stood at $37.2 trillion, compared to global GDP of $41.3 trillion. Whereas this figure was slightly less than global commercial bank assets ($ 57.3 trillion), it markedly exceeded the total size of outstanding public securities, which stood at $ 23.1 trillion. The bulk of global stock market capitalization broadly represents developed-country equity markets, but less developed countries which accounted for 14% of total capitalization in 2004 are quickly gaining ground. For instance some emerging markets like those of Malaysia, Singapore and South Africa have total stock market capitalizations that exceed their respective Gross Domestic Products. The overall growth of developing financial markets has attracted attention from scholars and pundits. A large literature in economics, political science and public policy considers the ways in which the increased globalization in trade and finance affects national economic outcomes and government policy making (Helleiner, 1994; Strange, 1996; Friedman, 1999; Armijo, 1999; Obstfeld & Taylor, 2004). However, given the increasing importance of developing capital markets in the world economy, we currently know very little about how government quality influences financial

market dynamics. In this work we address this gap by exploring how government quality dynamics of corruption-control, government-effectiveness, political-stability or no violence, voice and accountability, regulation quality and rule of law affect stock market performance in African financial markets.

The rest of the paper is organized in the following manner. Section 2 reviews existing literature. Data and methodology are discussed and outlined respectively in Section 3. Empirical analysis and discussion of results are covered in Section 4. Section 5 concludes.

2. Literature Review

Democracy, Good Governance or Government Quality (hence GQ) have been subject to much attention in circles dealing with developing countries. GQ is now used by many national development agencies and international organizations such as the World Bank, International Monetary Fund (IMF) and the United Nations to assess the state of developing countries. In 1996, the concern of the IMF with development could be summarized in the following declaration: *"promoting good governance in all its aspects, including by ensuring the rule of law, improving the efficiency and accountability of the public sector, and tackling corruption, as essential elements of a framework within which economies can prosper*" (IMF, 2005). Elements of this definition would guide our conception of GQ through-out the paper.

As we have outlined earlier, this paper investigates how GQ dynamics affect the performance of stock markets in African countries. GQ describes the institutional arrangements that regulate financial markets. These institutions compose the legal, political and supervisory bodies that provide cohesion and order in business activities. The equitable functioning of the legal process, the degree of political stability, the level of systematic corruption, the height of voice and accountability, the rule of law and regulation quality are factors that define the quality

of these institutions and their ability to oversee financial markets. GQ has important implications on the dealings of firms and institutions and the cost associated with such interactions.

The capacity of the judiciary to enforce contractual rights of shareholders impinges on the possibility of managerial expropriation and ultimately on the profitability of firms. In this line of thought, La Porta et al. (1997, 1998) argue that improving corporate governance rules, their enforcements and the quality of accounting standards results in greater reliance on stock market financing by companies. More so, judicial factors directly infringe on the amount of corporate resources diverted by managers and allow shareholders the possibility of monitoring managers at lower cost. Legal systems supportive of investor protection tend to improve the amount of funds that risk-averse investors are willing to channel towards firms. Some authors have pointed to the importance of legal environments and corporate standards in fund manager investments (Aggarwal et al., 2002).

GQ environment can increase returns to shareholders by reducing both transaction and agency costs. The early literature on GQ is focused on firm-level agency cost arising from the ownership and control delineation structure of firms. The seminal work of Jensen & Meckling (1976) provided the conceptual framework for a growing body of studies. The pioneering work discovered that corporate governance mechanisms themselves are subject to varying interpretations and weak degrees of enforceability and that the level of investor protection which such mechanisms were designed to promote could deteriorate in the face of structurally flawless governance provisions. Thus the strength of such mechanisms rested solely on the ability of firms to adhere to them. Consequently, enforceability of contractual provisions became the first extension in the conception and understanding of the agency conflict between managers and shareholders. In recent literature however, the focus has been shifted from firm-specific

governance to country level governance environments (La Porta et al., 1997, 1998; Shleifer & Wolfenson, 2002; Asongu, 2011abcde; Agbor, 2011). Beyond the interaction between firms and institutions resulting from agency cost, transaction costs have been the neglect in many market-centered views of economic structure. North (1994) argued that tightly defined property rights and their cost effective enforcements are important requirements for low-cost transactions which are paramount to productive economies.

The benefits of judicial improvements include not only stock market enlargement but also greater integration with world financial markets through the appeal to influx of capital. But increasing integration may turn to decrease the importance of the quality of securities regulation. According to Hooper et al. (2009) increasing market integration significantly lowers the cost of capital. Hail & Leuz (2003) investigate to what extent the effect of the legal institutions and securities regulation differs by market regulation and economic progress. Supposing investors can invest freely around the world, the quality of securities regulation of any particular country may become less important. From both theoretical and empirical evidence, country-specific factors become less important in asset pricing as markets become more integrated (Bekaert & Harvey, 1995; Stulz, 1999). However note should be taken of the fact that, the precedence of this increasing integration are the benefits of judicial enforcement and environmental GQ. Hail & Leuz(2003) assess international differences in the cost of equity for firms across 40 countries. They analyze if differences in countries' legal institutions (and in particular securities regulation) are systematically related to international cost of capital variations. Their findings reveal that firms in countries with strong legal institutions have on average lower cost of capital than those in countries with weak legal systems, after controlling for risk and country factors. In essence, cost of capital is systematically lower in countries with strong securities regulation which have

extensive disclosure rules and strong legal enforcement. Thus, effects are highest for institutions that mandate disclosure to investors and are also present for those institutions that facilitate the enforcement of financial contracts, either by lowering the burden of proof in securities litigation or by providing effective courts.

Rosenberg & Birdzell (1986) postulate the emergence of London as a world financial center was made possible by the reputation of fairness that the English courts and common-law had acquired by the 20th century. The experience of transitional economies and the central role that legal institutions play in the functioning of markets has been abundantly discussed (La Porta et al., 2000). The Russian experience has shown that foreign investors are willing to provide funds and much needed managing expertise to newly privatized firms only if the legal and political infrastructure is adequate at curbing corruption among government officials and limiting the risks of expropriation. Lombardo & Pagano(2002) join Johnson & Shleifer(1999) in underlining that, in order to reap the benefits from market-oriented reforms, policy makers in transition economies must make sure that a fair level playing field is established so that investors can concentrate on exploiting growth opportunities without fearing the abuse of their property rights.

Another important GQ dynamic developing countries must enforce is the control of corruption which is often the source of insider-dealing and a great many impediments to the smooth growth of financial markets. Bhattacharya & Daouk(1999) assess the impact on the cost of equity capital of insider trading regulation and discover that, while the mere existence of law prohibiting insider trading is ineffectual, their enforcement reduces the risk-adjusted expected return on equity. After controlling for risk factors, a liquidity factor and other legal determinants of the cost of equity, the assessment finds that the enforcement of insider trading laws reduces

the cost of equity by 5%. Himmelberg et al.(2004) hypothesize that lack of investor protection forces company insiders to hold greater fractions of the equity of the companies they manage. These high holdings subject insiders to a greater rate of idiosyncratic risk that in turn increase the risk premium and thus the marginal cost of capital. They postulate a negative link between the degree of investor protection and the fraction of equity held by insiders and a positive relationship between equity ownership and the marginal return to capital.

The deepening and broadening of stock markets in developing countries presents an important concern of how government policies and institutions affect stock market performance. In spite of the large chunk of work in the GQ-finance literature, very few studies have focused on developing countries, especially African countries owing to constraints in data availability. The few studies that have focused on the continent have been limited to financial intermediary (Asongu, 2011abde) and economic (Agbor, 2011) performances. This study contributes to the literature by assessing the relationship between the dynamics of GQ and the performance of African stock markets. GQ dynamics of corruption-control, government-effectiveness, political-stability, voice and accountability, rule of law and regulation quality are instrumented with legal-origins, income-levels, religious-dominations and press-freedoms to account for stock market performance dynamics of capitalization, turnover, value traded and number of listed companies. Many African countries especially those in French speaking sub-Sahara have stock markets that are taking too long to pick-up. Therefore findings could lead to some important policy implications.

3. Data and Methodology

3.1 Data

We investigate a panel of 14 African countries with data from African Development Indicators (ADI) of the World Bank (WB) ranging from 1990 to 2010. Corresponding variables and countries are presented in the appendices (Appendix 3 and Appendix 4 respectively). In accordance with Yang (2011), dependent variables are stock market capitalization, stock market value traded, stock market turnover, and number of listed companies. In line with the IMF (2005) definition; government quality independent variables include: corruption-control, government-effectiveness, voice and accountability, political stability or no violence, rule of law and regulation quality. Instrumental variables are: legal-origins, press-freedoms, income-levels and religious-dominations. These instruments have been largely documented in the economic development literature (La Porta et al., 1997; Stulz & Williamson, 2003; Beck et al., 2003; Agbor, 2011; Asongu, 2011ab). In the regressions we control for GDP growth and population growth at the first-stage and only for the former at the second-stage.

Summary statistics and correlation analysis are presented in Appendix 1 and Appendix 2 respectively. While the former indicates that the distributions of the variables are comparable, the later guides the empirical analysis in avoiding issues related to multicolinearity and overparametization.

3.2 Methodology

3.2.1 Endogeneity

While GQ affects stock market performance, activities of financial markets also have a bearing on GQ. Though some scholars take a restrained view, others argue that financial globalization generates a "golden straightjacket" for governments (Friedman, 1999). At the

extreme, financial markets become masters of governments, eviscerating the authority of national states (Helleiner, 1994; Strange, 1996; Cerny, 1999). Investors' capacity for exit and the political voice it confers is crucial to these accounts. Whereas financial market openness provides governments with greater access to capital, it also subjects them to external market discipline (Armijo, 1999; Obstfeld & Taylor, 2004). Governments must sell their policies not only to voters but also to foreign investors. Based on the fact that investors can respond swiftly and severely to actual or expected outcomes, government must consider financial participants' preferences when choosing policies. The logic follows that financial openness should reduce the capacity of governments to tax and spend or more generally pursue divergent policies. Therefore this evidence of reverse-causality presents an important issue of endogeneity that should be taken into account by the estimation technique. More so, GQ indicators are perception-based measures which further confirm the endogeneity issue due to biased perceptions and omitted variables.

3.2.2 Estimation Technique

In accordance with Beck et al.(2003) and recently African law-finance literature(Asongu, 2011ab) the paper adopts an Instrumental Variable(IV) estimation technique. IV estimates address the puzzle of endogeneity and thus avoid the inconsistency of estimated coefficients by Ordinary Least Squares (OLS) when the explaining variables are correlated with the error term in the equation of interest. In line with Asongu (2011ab), the Two-Stage-Least-Squares (TSLS) estimation method adopted by this paper will entail the following steps.

First-stage regression:

$$Gov'tQuality_{it} = \gamma_0 + \gamma_1(legalorigin)_{it} + \gamma_2(religion)_{it} + \gamma_3(incomelevel)_{it} + \gamma_4(pressfreedom)_{it} + \alpha_i X_{it} + \upsilon \quad (1)$$

Second-stage regression:

$$Finance_{it} = \gamma_0 + \gamma_1 (Gov'tChannel)_{it} + \beta_i X_{it} + \mu \quad (2)$$

In the two equations, X is a set of explaining control variables. For the first and second equations, v and u, respectively represent the disturbance terms. Instrumental variables are legal-origins, dominant-religions, press-freedoms and income-levels.

We adopt the following steps in the analysis:

-justify the use of a TSLS over an OLS estimation technique with the Hausman-test for endogeneity;

-account, the instruments are exogenous to the endogenous components of explaining variables (GQ channels), conditional on other covariates (control variables);

-ensure the instruments are valid and not correlated with the error-term in the equation of interest through an Over-identifying Restrictions (OIR) test.

3.2.3 Robustness checks

To ensure robustness of the analysis, the following checks will be carried out: (1) usage of alternative indicators of GQ dynamics; (2) employment of two distinct interchangeable sets of moment conditions that encompass every category of the instruments; (3) usage of alternative indicators of stock market performance; (4) account for the concern of endogeneity.

4. Empirical Analysis

This section addresses the ability of exogenous components of GQ dynamics to account for differences stock market performance; the ability of the instruments to explain variations in the endogenous components of GQ dynamics and the possibility of the instruments to account for stock market performance beyond GQ dynamic channels. To make these investigations, we

use the TSLS-IV estimation method with legal-origins, press-freedoms, income-levels and religious-dominations as instrumental variables.

4.1 Quality of government and instruments

Table 1 assesses the validity of the instruments in explaining differences in GQ. Clearly it could be observed the distinguishing African countries by legal-origins, income-levels, religious-denominations and press-freedoms help explain cross-countries differences in GQ. The instruments taken together enter significantly in all regressions at the 1% significance level. Broadly, the following could be established. (1) English common-law countries have substantially better levels of GQ than their French civil-law counterparts; in accordance with the law-finance (growth) literature (La Portal et al., 1997, 1998; Beck et al., 2003) and recent African law-finance (growth) literature (Asongu, 2011abcde; Agbor, 2011). (2) But for political-stability, the dominance of Christian nations over those of Moslem decent is very significant; which is broadly consistent with El Badawi, & Makdisi (2007). (3) GQ increases with income-levels; in accordance with Narayan et al.(2011). (4) GQ improves with press-freedom; contrary to Vaidya (2005) and Oscarsson (2008).

4.2 Stock market performance (SMP) and quality of government

Table 2 investigates two main issues: (1) the ability of GQ channels to account for SMP dynamics and (2) the possibility of the instrumental variables explaining SMP dynamics beyond GQ channels. Whereas we address the first issue by assessing the significance of estimated coefficients, the second is looked at through the OIR test. The null hypothesis of this test is the position that the instruments account for SMP dynamics only through GQ channels. Thus a rejection of the null hypothesis is the rejection of the view that the instruments explain SMP

dynamics through no other mechanisms than GQ channels. The Hausman test for endogeneity precedes every the IV regression. The null hypothesis of this test is the position that OLS estimates are consistent and efficient. Therefore a rejection of the null hypothesis points to the issue of reverse causality (endogeneity) we have elucidated earlier (see Section 3.2.1) and hence lends credit to the IV estimation technique. Otherwise we estimate by OLS. In some cases, the adjusted coefficient of determination is negative and thus we do not report any results pertaining to the regressions. For robustness purposes, results are replicated using an alternative set of instrumental variables, as depicted in the second and third to the last lines of Table 2.

With regard to the first concern which is addressed by the significance of estimated coefficients, it can be firmly established that GQ dynamics significantly improve SMP in Africa. As concerns the second-issue, failure to reject the null hypothesis of the OIR test in all regressions (were applicable) signifies that the instruments do not explain SMP through some other mechanisms beyond GQ channels. Thus the instruments are valid and not correlated with the error term in the equation of interest; the instruments do not suffer-from endogeneity.

Table 1: First-stage regressions (Government quality and instruments)

		Control of Corruption		Government Effectiveness		Voice & Accountability		Political Stability		Regulation Quality		Rule of Law	
	Constant	**-2.865*** **	**-0.301***	**-1.329*****	**-0.254***	**-0.906*****	**-1.103*****	**-3.739*****	**-6.693*****	**-3.235*****	**-0.764*****	**-2.886*****	**-0.684*****
		(-8.948)	**(-1.851)**	**(-7.190)**	**(-1.666)**	**(-3.748)**	**(-7.964)**	**(-6.762)**	**(-4.733)**	**(-9.485)**	**(-4.556)**	**(-7.490)**	**(-3.467)**
	English common-law	**0.711*****	---	**0.342****	---	-0.055	---	**1.481*****	---	**0.538*****	---	**0.771*****	---
Legal-origins		**(4.642)**		**(2.438)**		(-0.485)		**(5.694)**		**(3.357)**		**(4.251)**	
	French civil-law	---	**-0.495*****	---	**-0.432*****	---	0.108	---	**7.477*****	---	**-0.518*****	---	**-0.725*****
			(-3.053)		**(-3.007)**		(0.810)		**(5.637)**		**(-3.204)**		**(-3.809)**
	Christianity	**0.955*****	---	---	---	-0.050	---	**1.545*****	---	**1.180*****	---	**0.984*****	---
Religions		**(5.722)**				(-0.420)		**(5.633)**		**(6.976)**		**(5.147)**	
	Islam	---	**-0.924*****	---	**-0.887*****	---	-0.058	---	**7.256*****	---	**-1.223*****	---	**-1.078*****
			(-5.514)		**(-5.495)**		(-0.420)		**(5.208)**		**(-7.230)**		**(-5.418)**
	Low Income	---	**-0.520*****	---	**-0.485*****	---	**0.628*****	---	**9.248*****	---	**-0.489*****	---	-0.234
			(-3.991)		**(-3.937)**		**(5.895)**		**(8.685)**		**(-3.794)**		(-1.546)
	Middle Income	**1.070*****	---	**0.874*****	---	**0.650*****	---	**0.931*****	---	**0.941*****	---	**0.912*****	---
Income		**(10.27)**		**(8.970)**		**(8.466)**		**(5.298)**		**(8.685)**		**(7.446)**	
Levels	Lower Middle Income	**-0.376****	---	**-0.769*****	---	**-1.237*****	---	**-0.499***	---	**-0.435*****	---	**-0.640*****	---
		(-2.423)		**(-5.277)**		**(-11.06)**		**(-1.953)**		**(-2.762)**		**(-3.596)**	
	Upper Middle Income	---	**0.592*****	---	**0.591*****	---	**1.443*****	---	**13.838*****	---	**0.516*****	---	**0.820*****
			(3.948)		**(3.944)**		**(11.46)**		**(10.88)**		**(3.387)**		**(4.571)**
	Free	**0.452*****	---	**0.519*****	---	**0.747*****	---	-0.002	---	**0.344*****	---	**0.395*****	---
		(3.956)		**(4.758)**		**(8.697)**		(-0.013)		**(2.842)**		**(2.884)**	
Press	Partly Free	0.115	---	0.132	---	**0.284*****	---	**-0.392****	---	0.163	---	-0.006	---
Freedoms		(1.088)		(1.224)		**(3.631)**		**(-2.194)**		(1.482)		(-0.054)	
	No Freedom	---	**-0.173***	---	**-0.183***	---	**-0.461*****	---	**-3.151*****	---	**-0.232****	---	-0.146
			(-1.731)		**(-1.846)**		**(-5.354)**		**(-3.750)**		**(-2.233)**		(-1.195)
	GDP Growth	---	**0.032*****	---	**0.036*****	**0.035*****	**0.040*****	**0.064*****	**0.156****	**0.040*****	**0.042*****	**0.040*****	**0.044*****
			(3.523)		**(4.826)**	**(5.370)**	**(5.231)**	**(4.258)**	**(1.985)**	**(4.304)**	**(4.496)**	**(3.836)**	**(4.058)**
Control	Population Growth	**0.166*****	0.044	**0.113*****	---	**0.120*****	**0.081***	0.033	0.209	**0.348*****	**0.332*****	**0.103***	0.069
Variables		**(3.747)**	(0.837)	**(2.763)**		**(3.133)**	**(1.821)**	(0.385)	(0.494)	**(6.410)**	**(6.146)**	**(1.692)**	(1.096)
	Adjusted R^2	0.811	0.813	0.829	0.813	0.926	0.898	0.716	0.708	0.823	0.819	0.809	0.788
	Fisher test	**67.539*****	**68.266*****	**80.633*****	**79.760*****	**173.466*****	**138.922*****	**35.440*****	**57.919*****	**64.372*****	**71.658*****	**58.819*****	**59.160*****
	Observations	109	109	99	109	110	110	110	165	110	110	110	110

*,**,***: significance levels of 10%, 5% and 1% respectively.

Table 2: Second-stage regressions (Stock market performance and government quality)

Panel A: Stock Market Capitalization and Total Value Traded

	Stock Market Capitalization						Stock Market Value Traded					
Constant	**0.627*** (3.605)**	**0.210*** (4.531)**	**0.707*** (9.283)**	n.a	**0.638*** (3.575)**	**0.630*** (3.449)**	**0.174* (1.866)**	**0.210*** (4.531)**	**0.217*** (4.664)**	n.a	**0.168* (1.822)**	**0.166* (1.743)**
Control of Corruption	**0.462*** (4.199)**	---	---	---	---	---	**0.190*** (3.190)**	---	---	---	---	---
Government Effectiveness	---	**0.189*** (3.671)**	---	---	---	---	---	**0.189*** (3.671)**	---	---	---	---
Voice & Accountability	---	---	**0.290*** (4.792)**	---	---	---	---	---	**0.131*** (3.469)**	---	---	---
Political Stability	---	---	---	n.a	---	---	---	---	---	n.a	---	---
Regulation Quality	---	---	---	---	**0.540*** (4.135)**	---	---	---	---	---	**0.218*** (3.119)**	---
Rule of Law	---	---	---	---	---	**0.401*** (4.036)**	---	---	---	---	---	**0.162*** (3.050)**
GDP Growth	-0.029 (-0.759)	**-0.016* (-1.920)**	**-0.041*** (-3.219)**	n.a	-0.033 (-0.847)	-0.021 (-0.542)	-0.006 (-0.297)	**-0.016* (-1.920)**	**-0.013* (-1.730)**	---	-0.006 (-0.293)	-0.001 (-0.051)
Hausman test	**19.074*****	0.201	1.059	**53.801*****	**15.435*****	**40.681*****	**14.389*****	0.201	1.438	**26.733*****	**5.904***	**27.894*****
OIR-Sargan	**1.333**	n.a	n.a	n.a	**1.210**	**0.809**	**0.935**	n.a	n.a	n.a	**1.793**	**1.159**
P-value	**[0.721]**				**[0.750]**	**[0.847]**	**[0.816]**				**[0.616]**	**[0.762]**
Cragg-Donald	3.581	n.a	n.a	n.a	3.916	3.860	3.482	n.a	n.a	n.a	3.863	3.828
Adjusted R^2	0.094	0.131	0.145	-0.019	0.082	0.034	0.035	0.087	0.073	-0.017	0.055	0.001
Fisher	**10.564*****	**6.770*****	**13.473*****	n.a	**10.239*****	**9.722*****	**6.695*****	**7.004*****	**6.361*****	n.a	**6.521*****	**6.157*****
Observations	105	91	148		106	106	100	127	137		101	101

Panel B: Stock Market Turnover and Number of Listed Companies

	Stock Market Turnover						Number of Listed Companies					
Constant	n.a	**0.142*** (7.910)**	n.a	n.a	n.a	n.a	**0.126*** (5.564)**	**0.140*** (4.822)**	**0.102*** (9.765)**	**0.083*** (3.778)**	**0.135*** (5.062)**	**0.110*** (11.08)**
Control of Corruption	n.a	---	---	---	---	---	**0.113*** (6.562)**	---	---	---	---	---
Government Effectiveness	---	**0.070*** (3.532)**	---	---	---	---	---	**0.124*** (5.265)**	---	---	---	---
Voice & Accountability	---	---	n.a	---	---	---	---	---	**0.058*** (6.627)**	---	---	---
Political Stability	---	---	---	n.a	---	---	---	---	---	**0.077*** (5.315)**	---	---
Regulation Quality	---	---	---	---	n.a	---	---	---	---	---	**0.126*** (5.642)**	---
Rule of Law	---	---	---	---	---	n.a	---	---	---	---	---	**0.073*** (8.300)**
GDP Growth	n.a	**-0.005* (-1.658)**	n.a	n.a	n.a	n.a	-0.005 (-1.177)	-0.010 (-1.439)	**-0.003* (-1.869)**	0.004 (0.883)	-0.008 (-1.385)	**-0.004*** (-2.930)**
Hausman test	**23.554*****	0.711	3.653	**26.733*****	**16.414*****	**54.909******	**19.159*****	**6.609****	0.238	**21.731*****	**26.916*****	3.519
OIR-Sargan	n.a	n.a	n.a	n.a	n.a	n.a	**0.436**	**3.265**	n.a	**5.250**	**4.324**	n.a
P-value							**[0.932]**	**[0.352]**		**[0.154]**	**[0.228]**	
Cragg-Donald	n.a	n.a	n.a	n.a	n.a	n.a	4.475	2.247	n.a	5.854	4.771	n.a
Adjusted R^2	-0.002	0.073	-0.0006	-0.012	-0.004	-0.018	0.265	0.093	0.217	0.154	0.176	0.307
Fisher	n.a	**6.330*****	n.a	n.a	n.a	n.a	**26.485*****	**22.102*****	**21.984*****	**17.915*****	**20.010*****	**34.477*****
Observations		135					108	98	152	109	109	152

Initial Instruments	Constant; Lower Middle Income; Middle Income; English; Christians; Free Press; Partly Free Press
Robust Instruments	Constant; Upper Middle Income; Low Income; French; Islam; Not Free Press

*,**,***: significance levels of 10%, 5% and 1% respectively. OIR: Overidentifying Restrictions

4.3 Discussion of results, policy implications and limitations

The results demonstrate that GQ is positively associated with stock market performance in the African continent; consistent with Hooper et al. (2009). Thus countries that have an efficient institutional environment should expect improvements in their stock market performance dynamics. Risk-averse investors would not invest in countries that are not mean-variance efficient. Results indirectly support the view that the quality of governance reduces both transaction and agency costs, which maximize shareholder return.

Many African countries especially those in French speaking sub-Saharan Africa have stock markets that are taking too long to pick-up. The road to stock market development depends significantly on institutional arrangements and the regulatory environment. Quite often these arrangements have been ignored. Corruption remains dire in the continent and represents a significant risk to financial market development. To sum up, a policy recommendation to African countries could be summarized in the following: increase the control of corruption, improve government effectiveness, avoid incidences of violence and political instability that send wrong signals to international investors, promote institutions of voice and accountability, maintain regulation quality and respect for the rule of law.

The main limitation of this work is that it doesn't incorporate the diversification dimension into the analysis. It has been well documented that integration reduces the country risk effects on the decision of investment (Bekaert & Harvey, 1995; Stulz, 1999; Hail & Leuz, 2003). Therefore with international market integration and diversification, poor governance impact on SMP could become insignificant. In this context, stocks in a market with higher risk and lower returns are still held by risk-averse investors due to the portfolio diversification benefits. However, this limitation (absence of diversification dimension) doesn't much apply to

African stock markets owing to relatively lower levels of integration (; with the exception of South Africa and Egypt). Another important limitation worth mentioning is that this kind of analysis depends to a great extent on the integrity of the proxy for GQ obtained from perception-based measures. Therefore omitted variables and media-effect may significantly influence perceptions of GQ and consequently bias the link between the GQ indicators and the performance measures. However, to the best of our knowledge there are no better indicators of GQ other than those from African Development Indicators of the World Bank. The paper has limited this setback by using six different measures of GQ. Also the use of a methodology that accounts for endogeneity addresses concerns of omitted-variables and bias in the perception-based measures.

5. Conclusion

Many African countries especially those in French speaking sub-Sahara have stock markets that are taking too long to pick-up. How do government policies and institutions affect stock market performance? As stock markets grow broader and deeper in developing countries, the question becomes more critical. Government quality dynamics of corruption-control, government-effectiveness, political-stability or no violence, voice and accountability, regulation quality and rule of law are instrumented with income-levels, religious-dominations, press-freedom degrees and legal origins to account for stock market performance qualities of capitalization, value traded, turnover and number of listed companies. The results demonstrate a significant positive association between stock market performance measures and the quality of government institutions. These findings suggest countries with better developed government institutions would favor stock markets with higher market capitalization, better turnover ratios, higher value in shares traded and greater number of listed companies.

Further research attempting to assess the association between institutional factors and financial markets should use firm-specific indicators to confirm the findings. Also, exploring how foreign direct investment is impacted by the quality of government could have interesting policy implications.

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Appendices

Appendix 1: Summary Statistics

	Variables	Mean	S.D	Min.	Max.	Observations
Stock Market Performance	Stock Market Capitalization	0.354	0.521	0.008	3.382	259
	Stock Market Value Traded	0.078	0.268	0.000	2.591	245
	Stock Market Turnover	0.095	0.119	0.000	0.704	253
	Number of Listed Companies	0.067	0.085	0.002	0.712	268
Government Quality	Control of Corruption	-0.259	0.666	-1.489	1.086	167
	Government Effectiveness	-0.171	0.654	-1.674	0.807	155
	Political Stability	-0.314	0.885	-2.530	1.122	168
	Regulation Quality	-0.224	0.694	-2.394	0.905	168
	Rule of Law	-0.325	0.756	-1.913	1.053	168
	Voice and Accountability	-0.389	0.793	-1.805	1.047	168
Control Variables	GDP growth	3.504	3.719	-17.254	12.272	294
	Population growth	1.952	0.775	-0.143	3.739	294
Instrumental Variables	English Common-Law	0.714	0.452	0.000	1.000	294
	French Civil-Law	0.285	0.452	0.000	1.000	294
	Christianity	0.714	0.452	0.000	1.000	294
	Islam	0.285	0.452	0.000	1.000	294
	Low Income	0.285	0.452	0.000	1.000	294
	Middle Income	0.714	0.452	0.000	1.000	294
	Lower Middle Income	0.428	0.495	0.000	1.000	294
	Upper Middle Income	0.285	0.452	0.000	1.000	294
	Press Freedom	0.345	0.476	0.000	1.000	165
	Partial Press Freedom	0.230	0.422	0.000	1.000	165
	No Press Freedom	0.424	0.495	0.000	1.000	165

S.D: Standard Deviation. Min: Minimum. Max: Maximum.

Appendix 2: Correlation Analysis

Stock Market Performance				Quality of Government						Control Vles		Instrumental Variables										
SMC	SMVT	SMT	ListC	CC	Gov.E	PolS	R.Q	R.L	V&A	GDP	Popg	Eng.	Frch.	Chris	Islam	LI	MI	LMI	UMI	Free	PFree	NFree	
1.000	0.863	0.733	0.242	0.19	0.308	0.008	0.22	0.165	0.310	-0.11	-0.29	0.109	-0.109	0.123	-0.12	-0.14	0.144	-0.234	0.399	0.391	-0.12	-0.272	SMC
	1.000	0.795	0.084	0.15	0.273	0.045	0.21	0.119	0.257	-0.04	-0.20	0.074	-0.074	0.065	-0.06	-0.13	0.130	-0.138	0.274	0.337	-0.13	-0.215	SMVT
		1.000	0.078	0.09	0.261	-0.061	0.12	0.115	0.096	-0.02	-0.30	-0.18	0.180	-0.24	0.24	-0.17	0.176	0.048	0.117	0.340	-0.06	-0.277	SMT
			1.000	0.43	0.423	0.397	0.33	0.526	0.458	0.029	-0.38	0.146	-0.146	0.156	-0.15	-0.30	0.308	-0.261	0.596	0.557	-0.18	-0.375	ListC
				1.00	0.912	0.826	0.82	0.899	0.719	0.299	-0.21	0.068	-0.068	0.100	-0.10	-0.48	0.482	-0.233	0.737	0.725	-0.14	-0.588	CC
					1.000	0.737	0.84	0.888	0.719	0.347	-0.17	0.064	-0.064	-0.16	0.163	-0.50	0.050	-0.184	0.695	0.777	-0.00	-0.769	Gov. E
						1.000	0.71	0.848	0.627	0.270	-0.24	0.211	-0.211	0.238	-0.23	-0.19	0.190	-0.375	0.601	0.591	-0.24	-0.370	PolS
							1.00	0.866	0.725	0.444	0.100	0.013	-0.013	0.066	-0.06	-0.39	0.399	-0.207	0.627	0.618	-0.02	-0.583	R..Q
								1.000	0.709	0.336	-0.18	0.004	-0.004	0.007	-0.00	-0.39	0.391	-0.245	0.660	0.730	-0.15	-0.581	R.L
									1.000	0.292	0.065	0.471	-0.471	0.397	-0.39	-0.07	0.079	-0.676	0.821	0.805	-0.00	-0.784	V&A
										1.000	0.134	-0.03	0.033	-0.16	0.165	-0.17	0.174	0.070	0.097	0.254	0.107	-0.336	GDPg
											1.000	0.099	-0.099	0.152	-0.15	0.214	-0.214	-0.038	-0.17	-0.24	0.253	0.017	Popg
												1.000	-1.000	0.650	-0.65	0.400	-0.400	-0.730	0.400	0.229	0.173	-0.368	English
													1.000	-0.65	0.65	-0.40	0.400	0.730	-0.40	-0.22	-0.17	0.368	French
														1.000	-1.00	0.400	-0.400	-0.730	0.400	0.229	-0.37	0.100	Christian
															1.000	-0.40	0.400	0.730	-0.40	-0.22	0.377	-0.100	Islam
																1.000	-1.000	0.547	0.400	-0.36	-0.09	-0.268	LIncome
																	1.000	0.547	0.400	0.363	-0.09	-0.268	MIncome
																		1.000	-0.54	-0.44	0.020	0.410	LMI
																			1.000	0.775	-0.11	-0.648	UMI
																				1.000	-0.39	-0.623	Free
																					1.000	-0.469	PFree
																						1.000	NFree

SMC: Stock Market Capitalization. SMVT: Stock Market Value Traded. SMT: Stock Market Turnover. ListC: Listed Companies. CC: Control of Corruption. Gov. E: Government Effectiveness. PolS: Political Stability or No Violence. R.Q: Regulation Quality. R.L: Rule of Law. V& A: Voice and Accountability. GDPg: GDP growth. Popg: Population growth. Eng: English Common-Law. Frch: French Civil-Law. Chris: Christian Religion. LI: Low Income. MI: Middle Income. LMI: Lower Middle Income. UMI: Upper Middle Income. Free: Freedom of the Press. PFree: Partial Freedom of the Press. NFree: No Freedom of the Press.

Appendix 3: Variable Definitions

Variables	Signs	Variable Definitions	Sources
Stock Market Capitalization	SMC	Stock Market Capitalization(% of GDP)	World Bank(FDSD)
Stock Market Value Traded	SMVT	Stock Market Total Value Traded(% of GDP)	World Bank(FDSD)
Stock Market Turnover	SMT	Stock Market Turnover Ratio	World Bank(FDSD)
Listed Companies	ListC	Number of Listed Companies Per(% of Population)	World Bank(FDSD)
Control of Corruption	CC	Control of Corruption(estimate)	World Bank(WDI)
Government Effectiveness	Gov. E	Government Effectiveness(estimate)	World Bank(WDI)
Political Stability/ No Violence	PolS	Political Stability/ No Violence (estimate)	World Bank(WDI)
Regulation Quality	R.Q	Regulation Quality (estimate)	World Bank(WDI)
Rule of Law	R.L	Rule of Law(estimate)	World Bank(WDI)
Voice and Accountability	V & A	Voice and Accountability (estimate)	World Bank(WDI)
Population growth	Popg	Average annual population growth rate	World Bank(WDI)
Growth of GDP	GDPg	Average annual GDP growth rate	World Bank(WDI)
Population growth	Popg	Average annual population growth rate	World Bank(WDI)

FDSD: Financial Development and Structure Database. WDI: World Bank Development Indicators.

Appendix 4: Presentation of Countries

Instruments	Instrument Category	Countries	Num
Law	English Common-Law	Botswana, Ghana, Kenya, Mauritius, Namibia, Nigeria, South Africa, Swaziland, Zambia, Zimbabwe.	10
	French Civil-Law	Ivory Coast, Egypt, Morocco, Tunisia.	4
Religion	Christianity	Botswana, Ivory Coast, Ghana, Kenya, Mauritius, Namibia, South Africa, Swaziland, Zambia, Zimbabwe.	10
	Islam	Egypt, Morocco, Nigeria, Tunisia.	4
Income Levels	Low Income	Ghana, Kenya, Zambia, Zimbabwe.	4
	Middle Income	Botswana, Ivory Coast, Egypt, Mauritius, Morocco, Namibia, Nigeria, South Africa, Swaziland, Tunisia.	10
	Lower Middle Income	Ivory Coast, Egypt, Morocco, Nigeria, Senegal, Sudan, Swaziland, Tunisia.	8
	Upper Middle Income	Botswana, Mauritius, Namibia, South Africa.	4

Num: Number of cross sections(countries)

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