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A Good Turn Deserves Another: Political Stability, Corruption and Corruption-Control

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Abstract

We build on existing literature and contemporary challenges to African development to assess the role of political stability in fighting corruption and boosting corruption-control in 53 African countries for the period 1996-2010. We postulate that on the one hand, an atmosphere of political instability should increase the confidence of impunity owing to less corruption-control. On the other hand, in the absence such impunity from corruption, political instability further fuels corruption. Our findings validate both hypotheses. Hence, contrary to a stream of the literature, we establish causal evidence of a positive (negative) nexus between political stability/no violence and corruption-control (corruption). The empirical evidence is based on Generalized Method of Moments. The findings are robust to contemporary and non-contemporary quantile regressions. The political stability estimates are consistently significant with decreasing (increasing) magnitudes throughout the conditional distributions of corruption-control). In other words, the positive responsiveness of corruption-control to political stability is an increasing function of corruption-control while the negative responsiveness of corruption to political stability is a decreasing function of corruption. Simply put: a good turn deserves another.

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1. Introduction

The April 2015 World Bank report on Millennium Development Goals (MDGs) has revealed that poverty has been decreasing in all regions of the world with the exception of most African countries. According to the narrative, about 45% of countries in the sub-Saharan African region are still substantially off-track from reaching the MDGs extreme poverty target of halving poverty by 2015 from 1990 (Asongu & Kodila-Tedika, 2015). Political instability and corruption have been documented to represent substantial challenges to lifting the continent from its poverty tragedy (Amavilah, 2015).

In North Africa, the Arab Spring of 2011 is still exerting substantial negative externalities in terms of political instability and/or prospects for political instability. Consistent with Asongu et al. (2015) and Asongu and Nwachukwu (2015), recent evidence of these tendencies can be summarized in seven main points. First, in the post-Gaddafi era, Libya has become a failed state, characterized by complete societal breakdown and anarchy, with a plethora of rebel factions and two rival governments fighting desperately to dictate the law of the land. Second, the 2013 Westgate shopping mall and 2015 Garissa university killings in Kenya by Al-Shabab have shown that the Somali Al-Quaeda affiliated Al-Shabab can still inflict substantial political instability challenges in the sub-region. Third, in Tunisia, after the couple of political assassinations that have characterised the post-Arab Spring era, the newly democratically elected government is now facing a wave of attacks from Islamic fundamentalists, namely, the: Sousse and Bardo National Museum attacks in June and March 2015 respectively. Fourth, the Boko Haram of Nigeria is currently extending its sphere of violence to neighbouring countries like Cameroon, Niger and Chad. Fifth, in Burundi, a decision by President Pierre Nkurunziza to run for a third term in office has cast a shadow of political violence/instability across the country. Sixth, the South Sudanese political crisis and civil war which began in December 2013 has led to thousands of death and displaced hundreds of thousands of citizens in the country. Seven, the current political instability in the Central African Republic is not very different from experiences in the past, notably: (i) a plethora of failed coup d'états between 1996-2003 and (ii) the 2004-2007 Bush War.

The highlighted waves of political instability are reminiscent of the consequences of the political crises that have marred the continent's development in a much recent past, notably: (i) the protracted politico-economic crisis in Zimbabwe; (ii) 2007/2008 post-election crisis in Kenya; and (iii) Nigeria's marred political transitions in 2008 and 2011. According to Asongu (2014a, p. 1569), political strife has been the rule of the political game for decades in many African countries: Angola (1975-2002); Burundi (1993-2005); Chad (2005-2010); Côte d'Ivoire (with a resurrected crisis in 2011 after the 1999 coup d'état and 2002-2007 civil war); Liberia (1999-2003); Sierra Leone (1991-2002); the Congo Democratic Republic; Somalia and Sudan (with carnages in Durfur). In summary, seven of the ten cases of total societal breakdown and chaos documented in contemporary development literature have been registered in Africa (with the exceptions of Syria, Iraq and Afghanistan), namely: Angola, Burundi, Sierra Leone, Liberia, Zaire/Congo, Somalia, and Sudan (Asongu, 2014a).

Corruption that is relatively high in the African continent has been documented to exert substantial negative effects on development outcomes. According to Kodila-Tedika (2012a) and Asongu and Kodila-Tedika (2013), the debates on the consequences of corruption have included: (i) no impacts¹, negative effects (Ugur & Dasgupta, 2011; Mo, 2001; Mauro, 1995) or positive

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¹ See Li et al. (2000) and Brunetti et al. (1998).

impacts² on investment and economic prosperity; (ii) slight weak impact of corruption on economic growth via the investment channel (Mauro, 1997); (iii) negative effect in specifically investment-oriented lines of inquiry (Everhart et al., 2009; Baliamoune-Lutz & Ndikumana, 2008; Aysan et al., 2007; Brunetti et al., 1998; Mauro, 1997); (iv) perilous effect of foreign investment (Wei, 2000a) and bank credit (Ahlin & Pang, 2008; Wei & Wu, 2001; Wei, 2000b) in studies focused on capital flows; (v) negative return (De la Croix & Delavallade, 2007; Haque & Kneller, 2008) and quality (Tanzi & Davoodi, 1997) of public expenditure, particularly in general (Delavallade, 2006) and military (Gupta et al., 2001) expenditure and (vi) the depletion of governance income (Blackburn et al., 2008; Friedman et al., 2000; Ghura, 1998; Tanzi & Davoodi, 1997).

Other studies on the effects of the corruption have included: (i) neutrals (You & Khagram, 2005) and pros³, in debates on the positive impact on poverty and inequality; (ii) the disincentives of the concern to education with respect to years of schooling (Mo, 2001), rates of registrations (Mokaddem, 2010; Dreher & Herzfeld, 2005) and ambitions of pursuing education to the research and postgraduate levels (Kodila-Tedika, 2012b); (iii) negative influence on corporate productivity (De Rosa et al., 2010) and business climate (Dzhumashev, 2009); (iv) political violence (Pellegrini & Gerlagh, 2004); (v) perilous consequences on trade (Abe & Wilson, 2008) and degradation of the environment (Smith et al., 2003; Welsch, 2004; Barbier, 2010) and (vi) solid linkages with shadow and underground economies (Friedman et al., 2000) and strong likelihood for conflicts and crimes (Azfar & Gurgur, 2004; Azfar, 2005; Asongu & Kodila-Tedika, 2013,2016).

In light of the above, this policy note contributes to the literature by assessing the role of political stability on corruption and the control of corruption. Understanding this linkage is important because some contemporary African development literature has failed to establish the causality between variables of state fragility and corruption (Kodila-Tedika & Bolito-Losembe, 2014)⁴. Contrary to the underlying literature, we postulate that there could be causality between political stability and corruption (and/or corruption-control) for two main reasons. On the one hand, an atmosphere of political instability should increase the confidence about less impunity and corruption-control because resources allocated in the fight against corruption may not be optimal. On the other hand, in the absence of such impunity from corruption, political instability further increases corruption. Hence, two hypotheses result from the postulation. *First*, political stability has a positive effect on corruption-control. *Second*, political stability decreases corruption.

It is important to investigate these hypotheses because the findings of the underpinning papers partially motivating this study could have an important influence on policy decisions. The rest of the note is organized as follows. Section 2 discusses the data and methodology. The empirical analysis is covered in Section 3. Section 4 concludes.

² Marginal positive impacts are characteristics of countries with substantial institutional deficiency (Méon & Weill, 2010; Aidt, 2009; Aidt et al., 2008; Houston, 2007).

³ See, amongst others: Li et al. (2000), Gymiah-Brempong (2002), Gupta et al. (2002), You and Khagram (2005), Gyimah-Brempong et al. (2006) and Dincer and Gunalp (2008).

⁴ The paper has concluded: "Robust empirical evidence shows a correlation between the level of corruption and state fragility. In a further assessment with the econometrics of instrumental variables we find evidence of causality neither flowing from state fragility to classical corruption nor to extreme corruption" (p. 50).

2. Data and Methodology

We examine a panel of 53 African countries with annual data from World Bank development indicators for the period 1996-2010. The periodicity begins from 1996 because corruption, corruption-control and political stability indicators are only available from this period. The scope of the African continent is consistent with the underlying study partially motivating this note (Kodila-Tedika & Bolito-Losembe, 2014). Political stability is measured with the political stability/non violence indicator from World Governance Indicators. The corruption and corruption-control indices that are employed as dependent variables are in accordance with the hypotheses stipulated in the introduction. We control for government expenditure, trade openness, GDP per capita growth, inflation and foreign direct investment (FDI). While the first-three control variables have been adopted by Kodila-Tedika and Bolito-Losembe (2014), we have added the last-two for more subtlety in the analysis. Accordingly, the first specifications only involve the first-three while the last-two are included into the conditioning information set in the second specifications (see Table 1).

Before delving into the empirical specification, it is relevant to highlight the expected signs for the control variables. Government expenditure should increase corruption (Asongu & Jellal, 2013, p. 2196; Baliamoune-Lutz & Ndikumana, 2008). Trade openness decreases corruption (Asongu, 2014b; Asongu, 2012, p. 2178). Economic prosperity increases corruption (Asongu & Jellal, 2013, p. 2196; Asongu, 2013a, p. 63), decreases corruption-control (Asongu, 2013b, p. 44) and per capita economic prosperity also increases corruption (Asongu, 2013c, p. 16). The reverse effect is also true if: (i) the benefits of economic growth trickling-down through equitable distribution mechanisms eventually deter 'corruption for survival' and (ii) economic growth provides the much needed financial resources to implement control of corruption measures. From intuition, low inflation should be favorable to corruption-control while high inflation should not; essentially because in situations of soaring food prices, many citizens revert to corrupt means to make ends meet. Like trade openness, financial globalization (FDI) is also a powerful tool in the fight against corruption (Asongu, 2014b). The definition of the variables, summary statistics and correlation analysis are presented in Appendix 1, Appendix 2 and Appendix 3 respectively.

In accordance with Asongu (2013d), we adopt a system Generalized Methods of Moments (GMM) for three main reasons: it controls for the potential endogeneity in all the regressors⁵, mitigates potential biases of the difference estimator in small samples and, does not eliminate cross-country variations. Hence, we prefer the system GMM estimation (Arellano & Bover, 1995; Blundell & Bond, 1998) to the difference estimator (Arellano & Bond, 1991) in accordance with Bond et al. (2001, pp. 3-4). The *two-step* approach is preferred to the *one-step* because it controls for heteroscedasticity. Two tests are performed to assess the validity of the models. The Arellano and Bond autocorrelation (AR(2)) test and the Sargan overidentifying restrictions (OIR) test for the absence of autocorrelation and validity of instruments respectively. We control for time-effects and ensure that the instruments are less than the number of cross-sections in the specifications by using three-year non-overlapping intervals. Hence, the basic condition for using a GMM technique has been met: N>T (53>5). We do not provide the equations in levels and first difference: (i) for brevity and lack of space and (ii) because the GMM estimation technique is

⁵ The concern about endogeneity is even more relevant because of the established evidence on reverse causality, notably, studies that have concluded that corruption (Asongu & Kodila-Tedika, 2013) and bad governance (Asongu & Kodila-Tedika, 2016) are causes of conflicts and crimes in Africa.

standard and well known. However, details of the specifications and equations are available upon request.

3. Empirical results

This section presents the findings of the two main hypotheses outlined in the introduction. As shown in Table 1 below, but for a thin exception (second specification of corruption perception index), the models are overwhelmingly valid. This is essentially because the null hypotheses of the AR(2) and Sargan OIR tests are not rejected for the most part⁶. Contrary to the findings of the underlying paper, the two hypotheses are validated, notably: (1) political stability increases corruption-control and; (2) political stability mitigates corruption. In the interpretation of the incidence on corruption, note should be taken of the fact that the corruption perception index (CPI) which is our indicator for corruption is measured in decreasing order by Transparency International. Hence, high CPI values imply low levels of corruption. The significant control variable has the expected sign. Accordingly, trade openness is a good tool in the fight against corruption (Asongu, 2014b).

Table 1: The effect of political stability on corruption and corruption-control

	Corru	ption Perceptio	on Index(Corr	uption)	Corruption-Control				
Corruption (-1)	0.655*** (0.002)	0.445*** (0.0003)	0.793*** (0.004)	0.533*** (0.003)					
Corruption Control (-1)					0.967** (0.013)	1.057*** (0.000)	0.648** (0.023)	0.620*** (0.004)	
Constant	1.138* (0.099)	2.072*** (0.002)	0.677 (0.463)	1.696*** (0.002)	0.089 (0.594)	0.134 (0.381)	-0.070 (0.514)	-0.084 (0.400)	
Political Stability	0.304** (0.016)	0.438**	0.245* (0.081)	0.466*** (0.002)	0.073 (0.613)	0.042 (0.717)	0.244 (0.145)	0.232** (0.028)	
Government Expenditure	-0.0008 (0.776)	-0.0006 (0.863)	0.006 (0.568)	-0.002 (0.824)	0.001 (0.546)	0.0006 (0.785)	0.001 (0.707)	-0.000 (0.973)	
Trade	0.001	0.003* (0.060)	-0.0003	0.002	-0.001	-0.001	-0.0007	-0.0003	
GDP per capita growth	(0.336) -0.009 (0.676)	-0.003 (0.875)	(0.935) -0.020 (0.451)	(0.239) 0.009 (0.771)	(0.241) -0.005 (0.475)	(0.131) -0.002 (0.748)	(0.523) -0.001 (0.913)	(0.673) 0.005 (0.626)	
Inflation			0.011 (0.653)	-0.006 (0.810)			0.008 (0.430)	0.002 (0.737)	
Foreign Direct Investment			0.011 (0.554)	-0.001 (0.933)			0.003 (0.586)	0.001 (0.755)	
Time effects AR(2)	No -1.626 (0.103)	Yes -1.865* (0.062)	No -1.199 (0.230)	Yes -1.581 (0.113)	No -0.984 (0.325)	Yes -0.908 (0.363)	No -0.725 (0.468)	Yes -1.112 (0.265)	
Sargan OIR	9.496 (0.302)	3.372 (0.908)	11.265 (0.187)	7.483 (0.485)	6.428 (0.599)	5.669 (0.684)	10.231 (0.249)	7.217 (0.513)	
Wald (joint)	827.48*** (0.000)	1184.31*** (0.000)	2461.93*** (0.000)	1330.5*** (0.000)	323.64*** (0.000)	486.39*** (0.000)	268.54*** (0.000)	426.43*** (0.000)	
Instruments	14	17	16	19	14	17	16	19	

⁶ It should be recalled that, in order to examine the validity of the models, we have performed two tests, notably the Arellano and Bond test for autocorrelation which investigates the null hypothesis of no autocorrelation and the Sargan-test which examines the over-identification restrictions. The latter test investigates if instruments are uncorrelated with the error term in the equation of interest. The null hypothesis of this test is the stance that the instruments as a group are strictly exogenous (that is, they do not suffer from endogeneity). We only report AR(2) in difference because it is more relevant than the AR(1) which detects autocorrelation in levels. Overwhelmingly for almost all estimated models, we are neither able to reject the AR(2) null hypothesis for the absence of autocorrelation nor the Sargan null for the validity of the instruments.

Countries	21	21	18	18	36	36	28	28
Observations	70	70	63	63	128	128	100	100

***, ***, and * indicate significance at 1%, 5% and 10% levels respectively. AR(2): Second Order Autocorrelation test. OIR: Overidentifying Restrictions test. The significance of bold values is twofold. 1) The significance of estimated coefficients and the Wald statistics. 2) The failure to reject the null hypotheses of: a) no autocorrelation in the AR(2) tests and; b) the validity of the instruments in the Sargan OIR test. P-values in brackets.

4. Robustness checks

In order to establish whether existing levels of corruption and corruption-control influence the effect of political stability on corruption and corruption-control respectively, we assess the impact of political stability throughout the conditional distributions of corruption and corruption-control. For this purpose, we employ quantile regressions (QR) on corresponding data without non-overlapping intervals.

Panel A (B) of Table 2 shows findings on corruption (corruption-control). The purpose of including a lagged value of the independent variables in the right-hand-side by one year is to mitigate the implication of the biases associated with endogeneity (Mlachila et al., 2014, p. 21). For either panel, irrespective of contemporary or non-contemporary specifications, there are consistent threshold effects from political stability. A threshold effect in the context of non-interactive QR is established when estimates corresponding to the independent variable of interest consistently display significant: (i) increasing positive and/or decreasing negative magnitudes or (ii) decreasing positive and/or increasing negative magnitudes (Asongu, 2014c). The first (second) scenario denotes a positive (negative) threshold effect. From our analysis, the positive and negative scenarios are established with respect to corruption-control and corruption respectively.

Accordingly, given that higher CPI values denote lower levels of corruption, political stability decreases corruption with the decreasing magnitude highest in countries where initial corruption levels is least. Hence, it is reasonable to infer that the political stability estimates are consistently significant with decreasing (increasing) magnitudes throughout the conditional distributions of corruption (corruption-control). In other words, the positive responsiveness of corruption-control to political stability is an increasing function of corruption-control while the negative responsiveness of corruption to political stability is a decreasing function of corruption. Simply put: a good turn deserves another. Most of the significant control variables have the expected signs.

Table 2: Conditional effects of political stability on corruption and corruption-control

Panel A: Corruption Perception Index(Corruption)										
		C	ontemporai	ry		Non-contemporary				
	Q.10	Q.25	Q.50	Q.75	Q.90	Q.10	Q.25	Q.50	Q.75	Q.90
Constant	2.18*** (0.000)	2.757*** (0.000)	3.326*** (0.000)	4.435*** (0.000)	4.952*** (0.000)	2.21*** (0.000)	2.43*** (0.000)	3.42*** (0.000)	4.06*** (0.000)	4.91*** (0.000)
Political Stability	0.386***	0.496***	0.756***	1.116***	1.212***	0.400***	0.461***	0.827***	1.04***	1.21***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Gov't Expenditure	-0.004	-0.006	-0.019**	-0.010	-0.0004	-0.004	-0.002	-0.008	-0.009	-0.018***
_	(0.425)	(0.553)	(0.011)	(0.188)	(0.913)	(0.366)	(0.558)	(0.349)	(0.145)	(0.000)
Trade	0.004	0.003	0.003	-0.001	-0.001	0.004*	0.005***	0.001	0.00009	-0.001
	(0.137)	(0.241)	(0.130)	(0.624)	(0.414)	(0.087)	(0.000)	(0.612)	(0.972)	(0.539)
GDPpcg	0.035**	0.022	0.016	-0.0003	-0.009	0.005	0.006	0.030	0.024	0.012
	(0.022)	(0.443)	(0.470)	(0.990)	(0.626)	(0.649)	(0.504)	(0.300)	(0.385)	(0.529)
Inflation	-0.004	-0.011	-0.014	0.005	-0.002	-0.0006	-0.010**	-0.002	0.007	-0.0001
	(0.602)	(0.317)	(0.186)	(0.691)	(0.729)	(0.940)	(0.034)	(0.844)	(0.519)	(0.981)
FDI	-0.005	-0.012	0.016	-0.007	-0.020	0.006	0.006	0.001	-0.001	-0.017
	(0.772)	(0.582)	(0.438)	(0.783)	(0.239)	(0.734)	(0.511)	(0.950)	(0.957)	(0.419)
R²/Pseudo R²	0.270	0.283	0.350	0.400	0.418	0.298	0.319	0.358	0.424	0.445
Observations	197	197	197	197	197	198	198	198	198	198

	Panel B: Corruption-Control									
		C	Contempora	ry		Non-contemporary				
	Q.10	Q.25	Q.50	Q.75	Q.90	Q.10	Q.25	Q.50	Q.75	Q.90
Constant	-1.08***	-0.82***	-0.26***	0.197***	0.491***	-1.07***	-0.86***	-0.29***	0.198***	0.525***
	(0.000)	(0.000)	(0.005)	(0.003)	(0.000)	(0.000)	(0.000)	(0.001)	(0.004)	(0.000)
Political Stability	0.263***	0.328***	0.489***	0.576***	0.628***	0.259***	0.316***	0.481***	0.575***	0.616***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Gov't Expenditure	-0.002	0.0003	-0.0007	-0.002	0.003**	-0.002	0.0006	-0.0005	-0.002	0.001
	(0.478)	(0.903)	(0.817)	(0.266)	(0.026)	(0.383)	(0.856)	(0.866)	(0.206)	(0.519)
Trade	0.003***	0.003***	0.001	-0.001	-0.002***	0.003***	0.003***	0.001*	-0.001*	-0.002***
	(0.002)	(0.000)	(0.107)	(0.096)	(0.000)	(0.003)	(0.000)	(0.081)	(0.092)	(0.000)
GDPpcg	0.023*** (0.000)	0.017*** (0.006)	0.013 (0.188)	0.003 (0.733)	0.004 (0.667)	0.022*** (0.000)	0.018*** (0.007)	0.012 (0.201)	0.002 (0.794)	0.002 (0.832)
Inflation	-0.001 (0.364)	-0.0005 (0.776)	0.002 (0.272)	0.001 (0.403)	0.0008 (0.531)	-0.003** (0.042)	-0.0002 (0.911)	0.002 (0213)	0.001 (0.412)	0.0003 (0.838)
FDI	0.002	-0.008	-0.019**	-0.007	0.0001	0.005	-0.009	-0.015	-0.006	0.002
	(0.737)	(0.236)	(0.030)	(0.253)	(0.972)	(0.586)	(0.234)	(0.075)	(0.322)	(0.680)
R²/Pseudo R²	0.343	0.340	0.371	0.406	0.382	0.341	0.334	0.369	0.404	0.379
Observations	269	269	269	269	269	261	261	261	261	261

*,***,***: significance levels of 10%, 5% and 1% respectively. Gov't: Government. GDPpcg: GDP per capita growth. FDI: Foreign Direct Investment. Lower quantiles (e.g., Q 0.1) signify nations where corruption is highest or corruption-control is least.

5. Conclusion

We have built on existing literature and contemporary challenges to African development to assess the role of political stability in fighting corruption and boosting corruption-control in 53 African countries for the period 1996-2010. We have postulated that on the one hand, an atmosphere of political instability should increase the confidence of impunity owing to less corruption-control. On the other hand, in the absence such impunity from corruption, political instability further fuels corruption. Our findings have validated both hypotheses. Hence, contrary to a stream of the literature, we have established causal evidence of a positive (negative) nexus between political stability/no violence and corruption-control (corruption).

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Appendices

Appendix 1: Definitions of variables

Variable(s)	Definition(s)	Source(s)
Corruption	"Corruption Perception Index represents an aggregation of perceived levels of corruption as determined by expert assessments and opinion surveys".	World Bank (WDI)
Corruption-Control	"Control of corruption (estimate): captures perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as 'capture' of the state by elites and private interests".	World Bank (WDI)
Political Stability/ No violence	"Political stability/no violence (estimate): measured as the perceptions of the likelihood that the government will be destabilized or overthrown by unconstitutional and violent means, including domestic violence and terrorism".	World Bank (WDI)
Government Expenditure	Government Final Expenditure (% of GDP)	World Bank (WDI)
Trade Openness	Exports plus Imports of Commodities (% of GDP)	World Bank (WDI)
GDP per capita growth	Gross Domestic Product per capita growth rate (annual %)	World Bank (WDI)
Inflation	Consumer Price Index (annual %)	World Bank (WDI)
Foreign Investment	Gross Foreign Direct Investment (% of GDP)	World Bank (WDI)

WDI: World Bank Development Indicators. GDP: Gross Domestic Product.

Appendix 2: Summary statistics

	Mean	S.D	Min	Max	Obs.
Corruption	3.005	1.064	1.066	6.100	181
Corruption Control	-0.598	0.622	-2.344	0.971	265
Political Stability	-0.571	0.952	-3.229	1.143	265
Government Expenditure	4.495	8.064	-17.387	49.275	164
Trade Openness	78.340	39.979	20.980	250.95	247
GDP per capita growth rate	2.320	5.016	-11.248	38.258	257
Inflation	56.191	575.70	-45.335	8603.3	230
Foreign Direct Investment	4.706	11.354	-4.112	145.20	202

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

Appendix 3: Correlation Analysis

Po	olSta	Gov. Exp.	Trade	GDPpcg	Inflation	FDI	Corruption	C. Control	
1	.000	-0.037	0.321	0.071	-0.098	0.012	0.673	0.691	PolSta
		1.000	-0.070	0.245	-0.243	0.011	-0.095	0.056	Gov. Exp.
			1.000	0.245	0.024	0.512	0.209	0.194	Trade
				1.000	-0.105	0.577	0.077	-0.055	GDPpcg
					1.000	0.041	-0.054	-0.121	Inflation
						1.000	0.013	-0.045	FDI
							1.000	0.896	Corruption
								1.000	C. Control

PolSta: Political Stability. Gov. Exp: Government Expenditure. GDPpcg: GDP per capita growth rate. FDI: Foreign Direct Investment. C. Control: Corruption Control.

References

Abe, K and S. Wilson (2008) "Governance, Corruption, and Trade in the Asia Pacific Region" *World Bank Policy Research Working Paper*, No. 4731.

Ahlin, C and J. Pang (2008) "Are Financial Development and Corruption Control Substitutes in Promoting Growth?" *Journal of Development Economics* **86(2)**, 414-433.

Aidt, T (2009) "Corruption, Institutions, and Economic Development" Oxford Review of Economic Policy **25(2)**, 271-291.

Aidt, T., J. Dutta, and V. Sena (2008) "Governance Regimes, Corruption and Growth: Theory and Evidence" *Journal of Comparative Economics* **36**, 195-220.

Amavilah, V. H (2015) "Social Obstacles to Technology, Technological Change, and the Economic Growth of African Countries: Some Anecdotal Evidence from Economic History", *MPRA Paper* No. 63273.

Arellano, M and S. Bond (1991) "Some tests of specification for panel data: Monte Carlo evidence and an application to employment equations" *The Review of Economic Studies* **58**, 277-297.

Arellano, M and O. Bover (1995) "Another look at the instrumental variable estimation of error-components models" *Journal of Econometrics* **68**, 29-52.

Asongu, S. A (2012) "On the effect of foreign aid on corruption", *Economics Bulletin*, **32(3)**, 2174-2180.

Asongu, S. A (2013a) "Fighting corruption when existing corruption-control levels count: what do wealth-effects tell us in Africa?" *Institutions and Economies* **5(3)**, 53-74.

Asongu, S. A (2013b) "Fighting corruption in Africa: do existing corruption control-levels matter?" *International Journal of Development Issues* **12(1)**, 36-52.

- Asongu, S. A (2013c) "On the effectiveness of foreign aid in institutional quality" *European Econnomic Letters* **2(1)**, 12-19.
- Asongu, S. A (2013d) "Harmonizing IPRs on Software Piracy: Empirics of Trajectories in Africa" *Journal of Business Ethics* **118**(1), 45-60.
- Asongu, S. A (2014a) "On the substitution of institutions and finance in investment" *Economics Bulletin* **34(3)**, 1557-1574.
- Asongu, S. A (2014b) "Globalization, (fighting) corruption and development: how are these phenomena linearly and nonlinearly related in wealth-effects?" *Journal of Economic Studies* **41(3)**, 346-369.
- Asongu, S. A (2014c) "Financial development dynamic thresholds of financial globalisation: evidence from Africa" *Journal of Economics Studies* **41(2)**,166-195.
- Asongu, S. A., U. Efobi and I, Beecroft (2015) "FDI, Aid, Terrorism: Conditional Threshold Evidence from Developing Countries" *African Governance and Development Institute Working Paper* No. 15/019, Yaoundé.
- Asongu, S. A and O, Kodila-Tedika (2013) "Crimes and Conflicts in Africa: Consequences of Corruption" *European Economics Letters* **2(2)**, 50-55.
- Asongu, S. A and O, Kodila-Tedika (2015) "Is Poverty in the African DNA(Gene)?" *African Governance and Development Institute Working Paper* No. 15/011, Yaoundé.
- Asongu, S. A and O, Kodila-Tedika (2016) "Fighting African Conflicts and Crimes: Which Governance Tools Matter?" *International Journal of Social Economics*: Forthcoming.
- Asongu, S. A and M, Jellal (2013) "On the channels of foreign aid to corruption" *Economics Bulletin* **33(3)**, 2191-2201.
- Asongu, A. A and J, Nwachukwu (2015) "Revolution Empirics: Predicting the Arab Spring" *Empirical Economics*: Forthcoming.
- Aysan, F., K, Nabli and A, Veganzones-Varoudakis (2007) "Governance institutions and private investment: An application to the MENA" *Developing Economies* **45(3)**, 339-377.
- Azfar, O (2005) "Corruption et criminalité, in: Transparency International, Rapport mondial sur la corruptio" *Economica*, Paris, 358-361.
- Azfar, O and T. Gurgur (2004) "Crime, Crime reporting and Governance", mimeo, IRIS University of Maryland, College Park.
- Baliamoune-Lutz, M and L. Ndikumana (2008) "Corruption and Growth: Exploring the Investment Channel", University of Massachusetts, Amherst.

Barbier, B (2010) "Corruption and the Political Economy of Resource-Based Development: A Comparison of Asia and Sub-Saharan Africa" *Environmental & Resource Economics* 46(4), 511-537.

Blackburn, K., C., Neanidis Kyriakos and E. Haque (2008) "Corruption, Seigniorage and Growth: Theory and Evidence" *CESinfo Working Paper* No. 2354.

Blundell, R and S. Bond (1998) "Initial conditions and moment restrictions in dynamic panel data models" *Journal of Econometrics* **87(1)**, 115-143.

Bond, S., A., Hoeffler and J. Tample, (2001) "GMM Estimation of Empirical Growth Models", University of Oxford.

Brunetti, A., G., Kisunko and B. Weder (1998) "Credibility of Rules and Economic Growth: Evidence from a World Wide Private Sector Survey" *The World Bank Economic Review* **12(3)**, 353-384.

De la Croix, D and C, Delavallade (2007) "Corruption et allocation optimale de l'investissement public" *Revue économique* **58(3)**, 637-647.

De Rosa, D., N, Gooroochurn and H, Görg (2010) "Corruption and Productivity. Firm-level Evidence from the BEEPS Survey" *Policy Research Working Paper* No. 5348.

Delavallade, C., (2006). "Corruption and Distribution of public spending in Developing Countries". *Journal of Economics and Finance* **30(2)**, 222-239.

Dincer, C and B. Gunalp (2008) "Corruption, Income Inequality, and Poverty in the United States" *Working Papers* No. 54. Fondazione Eni Enrico Mattei.

Dreher, A and T. Herzfeld (2005) "The Economic Costs of Corruption: A Survey and New Evidence". Mimeo.

Dzhumashev, R (2009) "Is there a direct Effect of Corruption on Growth? MPRA Paper No. 18489.

Everhart, S., J. Martinez-Vazquez and M. McNab (2009) "Corruption, Governance, Investment and Growth in Emerging Markets" *Applied Economics* **41(13)**, 1579-1594.

Friedman, E., S. Johnson, D. Kaufman and P. Zoido-Lobaton (2000) "Dodging the Grabbing Hand: The Determinants of Unofficial Activity in 69 Countries" *Journal of Public Economics* **76**, 459-493.

Ghura, D (1998) "Tax Revenue in Sub-Saharan Africa - Effects of Economic Policies and Corruption" *IMF Working Papers* No. 98/135.

Gupta, S., H. Davoodi and R. Alonso-Terme (2002) "Does Corruption Affect Income

Inequality and Poverty?" Economics of Governance 3, 23-45.

Gupta, S., L. de Mello and R. Sharan (2001) "Corruption and Military Spending" *European Journal of Political Economy* **17(4)**, 749-777.

Gyimah-Brempong, K (2002) "Corruption, Economic Growth and Income Inequality in Africa" *Economics of Governance* **3**, 183-209.

Gyimah-Brempong, K., De Camacho, and M. Samaria (2006) "Corruption, Growth, and Income Distribution: Are there Regional Differences?" *Economics of Governance* **7(3)**, 245-269.

Haque, M and R. Kneller (2008) "Public Investment and Growth: The Role of Corruption" *Centre for Growth & Business Cycle Research Discussion Paper Series* No 098.

Houston, H (2007) "Can Corruption Ever Improve An Economy?" *Cato Journal*, **27(3)**, 325-342.

Kodila-Tedika, O (2012a) "Empirical survey on the causes of corruption". MPRA Paper, No. 41484.

Kodila-Tekida, O (2012b) "Consequences of corruption: empirical survey". MPRA Paper No. 41482.

Kodila-Tedika, O and R. Bolito-Losembe (2014) "Corruption et Etats fragile africains", *African Development Review* **26(1)**, 50-58.

Li, H., C. Xu and H.-F. Zou (2000) "Corruption, Income Distribution and Growth" *Economics and Politics* **12(2)**, 155-182.

Mauro, P (1995) "Corruption and growth" *The Quarterly Journal of Economics* **110(3)**, 681-712.

Mauro, P (1997) The Effects of Corruption on Growth, Investment, and Government Expenditure: A Cross–Country Analysis", in: Elliot, Corruption and the Global Economy, (Washington D.C.: Institute for International Economics), 83-107.

Méon, P. G. and L, Weill (2010) "Is Corruption an Efficient Grease?" World Development **38(3)**, 244-259.

Mlachila, M., R, Tapsoba and S. J. A. Tapsoba (2014) "A Quality of Growth Index for Developing Countries: A Proposal" *IMF Working Paper* No. 14/172, Washington.

Mo, H (2001) "Corruption and Economic Growth" *Journal of Comparative Economics* **29**, 66-79.

Mokaddem, L (2010) "La corruption compromet la réalisation de l'éducation pour tous?: les

canaux de transmission" Presented at the European Seminar, Study Visit 11 mars 2010.

Pellegrini, L and R, Gerlagh (2004) "Corruption's Effect on Growth and its Transmission Channels" *Kylos* **57**, 429-456.

Smith, J., J. Muir, J., A. Walpole, A. Balmford and N. Leader-Williams (2003) "Governance and the Loss of Biodiversity" *Nature* **426**, 67-70.

Tanzi, V and H. Davoodi (1997) "Corruption, Public Investment and Growth" *IMF Working Paper*, No. 97/139.

Ugur, M and N, Dasgupta (2011) "Corruption and Economic Growth: A Meta-analysis of the Evidence on Low-Income Countries and Beyond *MPRA Paper* No. 31226.

Wei, S.-J (2000a) "Natural Openness and Good Government" World Bank Policy Research Working Paper No. 2411.

Wei, S.-J (2000b) "Corruption, Composition of Capital Flows, and Currency Crises" World Bank Working Paper No. 2429.

Wei, S.-J and Y. Wu (2001) "Negative Alchemy? Corruption, Composition of Capital Flows, and Currency Crises" *NBER Working Paper* No. 8187.

Welsch, H (2004) "Corruption, Growth and the Environment: A Cross-Country Analysis" *Environment and Development Economic*, **9**, 663-693.

You, J.-S and S. Khagram (2005) "Inequality and Corruption" *American Sociological Review* **70(1)**, 136-157.