



POLITICAL VERSUS BUREAUCRATIC DETERMINANTS OF CORRUPTION ON DEVELOPMENT IN NIGERIA: WHERE IS THE DICE CAST?

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ABSTRACT

The dynamics of the contributions of Political Determinants of Corruption (PDC) and that of Bureaucratic Determinants of Corruption (BDC) to Nigeria's development is the linchpin of this analysis. The study used Principal Component Analysis to generate the component indexes for PDC and BDC from 1995 to 2018, which were further interacted with the Human Development Index (HDI), within the Auto Regression Distributed Lag technique. The study found out that even though there are improvements in the control of Bureaucratic Determinants of Corruption (BDC), given its upward trajectory as against the negative trajectory of Political determinants of Corruption (PDC), the Bureaucratic Determinants of Corruption (BDC) impacts development negatively more than Political Determinants of Corruption (PDC). The study recommends that due attention should be paid to closing up leakages and stemming negative actions associated with government bureaucracy to sustain the upward trajectory noticed in the control of bureaucratic thievery. Additionally, selective respect for the rule of law, nepotism and constrained freedom of the electorates are signals that embolden Political Corruption that should be addressed.

Keywords: Corruption, Political, Bureaucratic, Development, Auto Regression Distributed Lag (ARDL).

INTRODUCTION

The principle of economic rent is as old as business itself, which is suggestive that people tend to agitate for returns on jobs that they have been already paid to do. The expectation for the demand of economic rent is that it should ensure the waiting time in business is reduced, for quick turnover and accruing profit thereof. On the other hand, the rentier system increases the cost of production, especially for small firms, who are crowded-out of the business space, given their inability to raise required resources to facilitate the demands of the rentier system. This debate has necessitated scholarly works that have portrayed conflicting results among the typologies of corruption in developed and developing economies. These typologies are pegged in a basket of goods to include economic, political, bureaucratic and regulatory, geographical, cultural and religious determinants of corruption. Corruption which connotes the misuse of public office for personal gain, which according to Jain (2001) registers that for corruption to exist, it must be supported by discretionary power to design and administer regulations, which ensures economic rent and a weak judicial system with low detection and poor penalty ascribed to defaulters. In essence, the presence of these correlates ensures that the categorization of the determinants of corruption is phased into political and bureaucratic and or administrative corruption that will thrive even in an event of the absence of a moral problem. The extent of the negatives or positives of corruption have further garnered actions amongst countries to include capital punishment in certain countries, while for others plea bargain and or incarceration in correction facilities

is the norm. This unfolding discourse is not mutually independent of sub-Saharan Africa, especially Nigeria whose development grouse is strung tightly to the rentier system that has impeded her upward trajectory flight of growth and development.

The import of development as hub for improved human welfare cannot be overemphasized as confirmed by Dollar and Kraay(2002). This has enlisted various definitions of development, however that of Guha (1981) suffices for this work, which defines development as increase in per capita income and individual welfare. Therefore, while holding the absence of a moral problem as a constant, what is the magnitude that can be traced to either the political or bureaucratic determinants of corruption been adduced as the greater predictor of development in Nigeria, which is the problematic of this study. However, on the one hand, the disclosure of disaggregated components of political determinant of corruption includes such variables as Democracy and Civil Liberty, Press Freedom, Decentralization and federalism, District magnitude, closed list system, presidentialism, number of party, political instability, ideological polarization, majoritarian plurality, central planning and women in public position. On the other hand, the variable composition of bureaucratic determinants of corruption includes government wage, quality of bureaucracy, merit system and rule of law. Seldadyo and De Haan(2006).

REVIEW OF RELATED LITERATURE

Abu and Staniewski (2019) put forward theories consistently used in corruption studies, while noting that to get a theory that fully explains the context of the occurrence of corruption for any location is an onerous task. It is in this connection that authors adopt a triangulation of theories to anchor works on corruption. The tax compliance theory by Mookherjee and Png(1989), Reinganum and Wilde(1985) presumes that to reduce corruption, auditing should play a central theme in the analysis. The compensation theory as propounded by The Becker and Stigler (1974) rest on the axiom that wages, which must be above the market wages has the capacity to decimate corruption. The Social Support theory as proposed by Cullen (1994) interacts the reduction of corruption as a function of raising the welfare of the people through social amenities. The Lawyer's approach by Antonio Di Pietro (1994) in the arguments posited for the Lawyer's approach stipulated that aside assigning stricter corruption penalties, the judiciary be endowed with the power to invoke plea bargain for offenders, who are dispose to cooperating with authorities during prosecution. Decentralization will enact pricing alternatives and competition to ensure a reduction of corruption in the market place, which is the economist theory proposition of Rose- Ackerman (1978), Bliss and Di Tella (1997). The social tolerance theory of Cerqueti, Correani and Garofalo (2013) assumes that the society can only tolerate a corrupt official of government if he or she gives back to the society a greater chunk of the looted funds. This act will discourage economic rent among officials of government as a greater part of the looted funds is expected to be ploughed back for societal growth.

Abu and Staniewski (2019) on addressing the determinants of corruption in Nigeria, put forward some comprehensive empirics (see Appendix 1: Table 1 and Appendix 1: Table 2), which this work has adopted. The empirics has revealed the need for country specific works,



while acknowledging that the existing studies are substantially on cross-sectional and panel case studies. The available country specific study on Nigeria by Akinpelu, Ogunseye, Bada, and Agbeyangi (2013) is acknowledge to be fraught with methodological technique and omission of important variables.

Further compendium of empirics on determinants of corruption existing in literature as compiled by Seldadyo and Haan (2006) detailed empirics into Economic Determinants, Political Determinants, Bureaucratic and Regulatory Determinants, Geographical, Cultural and Religious Determinants of corruption. However, the interest of the current work resides with empirics on the political and Bureaucratic determinants of corruption. The summaries of these empirics are adopted and presented on Appendix 1: Table 3 and Appendix 1: table 4. From the empirics reviewed, insight is provided to the aggregated Political and Bureaucratic determinants of corruption through cross-country studies, with few country specific studies. The current work intends to complement literature in this regard by providing insight to country specific studies with reference to Nigeria.

Model Specification

To specify the model, the Principal Component Analysis (PCA) is made for the Political Determinants of Corruption which has seven (7) constituent variables (see Appendix 1: Table 5) and Bureaucratic Determinants of Corruption, which has five (5) constituent variables (see Appendix 1: Table 6). The Principal component scores of Political and Bureaucratic determinants of corruption are modelled as predictors of Human Development Index for Nigeria between the period 1995 to 2018. The theories provided elsewhere in the work have been triangulated to serve as platform for the modelling.

$$HDI_t = \omega_0 + \omega_1 PDC_t + \omega_2 BDC_t + \mu_t \dots \dots \dots (1)$$

Where, HDI = Human Development Index; PDC= Political Determinants of Corruption; BDC= Bureaucratic Determinants of Corruption; ω_i = parameter estimates; μ_t = disturbance term.

The specification of equation 1 into the conventional ARDL form for estimation becomes

$$\Delta HDI_t = \omega_0 + \sum_{i=1}^n \omega_{1i} \Delta HDI_{t-i} + \sum_{i=0}^n \omega_{2i} \Delta PDC_{t-i} + \sum_{i=0}^n \omega_{3i} \Delta BDC_{t-i} + \gamma_1 HDI_{t-1} + \gamma_2 PDC_{t-1} + \gamma_3 BDC_{t-1} + \rho_1 ECT_{t-1} + \mu_{1t} \dots \dots \dots (2)$$

Note: Δ = Differenced Operator; ω = Short run parameter estimates; γ = Long run Parameter estimates; ω_0 = Constant term.; ECT= which is lagged by one year represent the adjustment speed to equilibrium in the event of a distortion given the existence of a long run model; ρ = the adjustment parameter

The statistics interacted with the model specified were adequately sourced from world bank sources and Economic Freedom Network Index (EFNI) for the period 1995 to 2018.

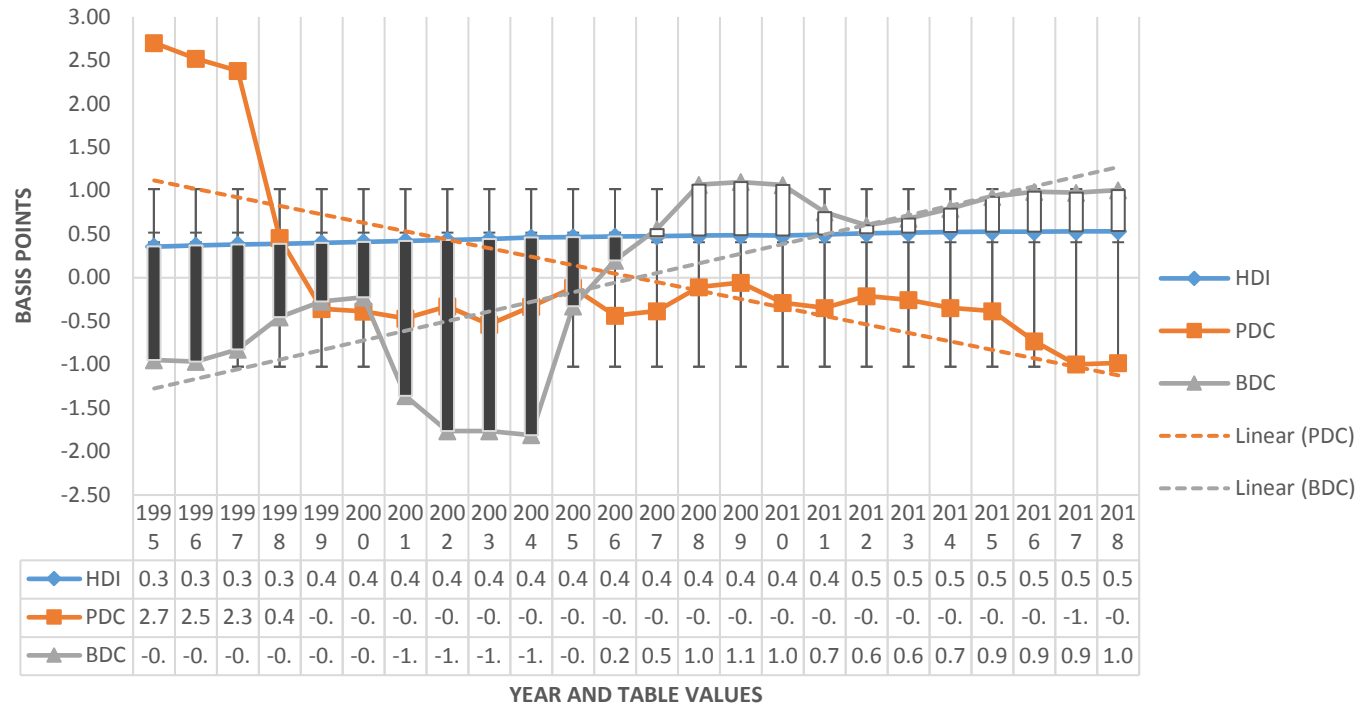
The descriptive statistics of the Principal Component scores are presented on table 1 with its trending chart on fig 1

	BDC	HDI	PDC	
Mean	1.35E-15	0.463542	-3.70E-16	
Maximum	1.102706	0.534667	2.702290	
Minimum	-1.81092	0.357667	-0.99617	
Jarque-Bera	2.431214	1.810199	20.43257	
Probability	0.296530	0.404502	0.000037	
Observations	24	24	24	

Source: Extractions from eviews 10 output



FIG 1: TRENDING OF VARIABLES OF INTEREST USED IN THE STUDY



A cursory look at table 1 and figure 1 has shown from the 24 observations recorded from 1995 to 2018, the component index of Bureaucratic Determinants of Corruption (BDC) and Political Determinants of Corruption (PDC) in Nigeria has averaged about zero basis points from a scale of -3 to 3 over the period of study. This means the strong presence of these corruption determinants within the Nigerian public space. Human Development Index (HDI), which is a component index of Education, Health and per capita income, has also performed below par at an index of 0.46 basis points from a scale of unity. However, HDI maintained a consistent maximum value ranging from 2015 to 2018, probably because of the government anti-corruption efforts, while 1995 recorded the lowest value of 0.35 basis points, probably because of the governance regime type as at 1995 (i.e. the military or centralized government) that discourage political rights and civil liberties, in consonance with skewed government spending. The maximum value of BDC was recorded in 2009 at basis points of 1.10, which was attributable to the reforms instituted by the Obasanjo's regime to include Bureau for Public Service Reform, whose goal was to streamline and set up minimum standards towards restructuring and repositioning Ministries, Departments and agencies (MDAs), the issue of contributory pension reforms also took a positive pace on the Nigeria polity in 2009. However, the minimum value of BDC of -1.8 basis points was in 2004, which might have been the rationale for the enactment of the Independent Corrupt Practices Commission (ICPC) 2000 Act and Economic and Financial Crimes Commission (2002) Act. These actions might have led to the steady upward linear trajectory of the trend line associated with BDC.

On the other hand, the Political Determinants of Corruption (PDC) has recorded a maximum 2.7 basis points in 1995 probably because the control of Corruption was better handled by the military government of that time. The minimum value of -0.99 basis points was recorded in 2017, when the spate of insecurity and integrity of government worsen in Nigeria. The combined effects of these issues give credence to the negative linear trajectory of the trend line associated with the PDC. At the Jarque -Bera probability of almost zero for PDC, while BDC and HDI are reporting 29.6% and 40.4% respectively, it is adduced that BDC and HDI have exhibited normality, while PDC is a non-normal series. This means that BDC and HDI tend to show signs of close replicable of the true population parameters unlike the PDC. This further validates the rationale for undertaking the unit root test to enable a correction of this information or differences so as to guide against spurious regression results.

Unit Root Test

The results of the Unit root as presented on table 2, which is of mixed order of integration at I (0) and I (1) has justified the use of the Auto Regressive Distributed Lag (ARDL) technique with the two low power unit root techniques of PP and ADF Statistics used as rationale to arrive at this decision.



Variables	PP		5%		ADF		Order of Integration
	levels	First difference	Critical values	Levels	First difference	Critical values	
BDC	-1.27	-3.14	-3.00	-1.57	-3.63*	-3.02	I(1)
PDC	-3.47*		-2.99	-2.99*		-2.99	I(0)
HDI	-3.28*	-3.60*	3.00	-2.87	-3.60*	-3.00	I(1)

Source: Extractions From e-views 10 Output

* Conventional Decision for Convergence of the Order of Integration at 5% level.

In adopting the ARDL estimation technique, there is need to examine the lag order selection criteria whose results are presented on table 3.

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-9.189944	NA	0.000579	1.059995	1.208103	1.097244
1	74.28374	137.9130*	9.02e-07*	-5.415977*	-4.823545*	-5.266982*

* indicates lag order selected by the criterion

LR: sequential modified LR test statistic (each test at 5% level)

FPE: Final prediction error

AIC: Akaike information criterion

SC: Schwarz information criterion

HQ: Hannan-Quinn information criterion

Source: Author's Extractions from eviews 10

The interaction of the variables in the lag structure has indicated a lag 1 order based on all the 5-selection criterion of LR, FPE, AIC, SC, and HQ as shown on table 3 with decision arrived at by the observation of the asterisks. Therefore, the application of the lag order in the ARDL technique reveals the selected ARDL (1,0,0) model, which is estimated for the ARDL long run form and Bounds Cointegration with results presented on table 4.

Table 4: ARDL Long Run Form, ECM Regression, Bounds Test and Diagnostic Tests									
Dependent Variable: D(HDI)									
Selected Model: ARDL(1, 0, 0)									
Case 2: Restricted Constant and No Trend									
Sample: 1995 2018									
Conditional Error Correction Regression					F-Bounds Test		Null Hypothesis: No levels relationship		
Variable	Coefficient	Std. Error	t-Statistic	Prob.	Test Statistic	Value	Signif.	I(0)	I(1)
C	0.016728	0.016695	1.001971	0.3289	F-statistic	18.62530	10%	2.63	3.35
HDI(-1)*	-0.01941	0.036582	-0.53058	0.6019	K	2	5%	3.1	3.87
BDC**	-0.002483	0.001552	-1.60025	0.126			2.5%	3.55	4.38
PDC**	-6.49E-05	0.001644	-0.03946	0.9689			1%	4.13	5
* p-value incompatible with t-Bounds distribution.									
** Variable interpreted as Z = Z(-1) + D(Z).									
Levels Equation					Breusch-Godfrey Serial Correlation LM Test:				
Variable	Coefficient	Std. Error	t-Statistic	Prob.	F-statistic	0.541078	Prob. F(2,17)		0.5918
BDC	-0.127924	0.30581	-0.41831	0.6804	Obs*R-squared	1.376473	Prob. Chi-Square(2)		0.5025
PDC	-0.003342	0.080583	-0.04148	0.9673					
C	0.86181	0.767317	1.123147	0.2754					
ECM Regression					Heteroskedasticity Test: Breusch-Pagan-Godfrey				
Case 2: Restricted Constant and No Trend									
Variable	Coefficient	Std. Error	t-Statistic	Prob.	F-statistic <td>0.222071</td> <td colspan="2">Prob. F(3,19)</td> <td>0.8799</td>	0.222071	Prob. F(3,19)		0.8799
CointEq(-1)*	-0.01941	0.00209	-9.28787	0.0000	Obs*R-squared	0.779149	Prob. Chi-Square(3)		0.8544
R-squared	0.380204		Log likelihood	93.06456					
Adjusted R-squared	0.380204		Durbin-Watson stat	2.198248					
* p-value incompatible with t-Bounds distribution.									
Source: Author's Extractions made from eviews 10 computations									

Table 4 has revealed that the selected ARDL (1,0,0) model, reveal the existence of Cointegration based on the F-Bounds test, which shows an approximate F-statistics of 18.62 that is above the I (1) value of 3.87 at 5% level of significance. This means that the ARDL long run form and short run equations registered at the levels equation and conditional error correction regression respectively are relevant, and that both Bureaucratic Determinants of Corruption (BDC) and Political Determinants of Corruption (PDC) on individual basis are not statistically significant or they are not strong predictors of Human Development Index in Nigeria within the time period studied, but their joint significance is strong as established by the log likelihood of 93.1 units. This finding is further buttressed by the weak explained variation in the adjusted R-squared of 38.02%. However, the economic relationships both in the long run and short run are in tandem with the a priori such that both the BDC and PDC



do exhibit negative relationships with HDI. This means an increasing BDC and PDC will affect the HDI negatively. However, for the purpose of this work, despite the statistical insignificance of the individual parameter estimates of BDC and PDC to HDI, but given that their joint effect is significant, inferences can be drawn, to the effect that the magnitude of the parameter estimates of the BDC both in the long run and short run analysis contributes or impact more on Nigeria's Development or Human Development Index of Nigeria, than the estimates of PDC.

Further discourse connotes that if there is a shock in the short run model represented by the Conditional error correction model it will take just about 1.9% as revealed by the ECM regression to equilibrate towards the long run equilibrium. The Breusch-Godfrey Serial Correlation LM Test reveal probability values of 50.2%, which is further reinforce with the Durbin-Watson Stats of 2.18, which both show the absence of autocorrelation or serial independence of the residuals. The Breusch- Pagan-Godfrey Heteroskedasticity Test with the probability of the Chi-squared at 85.4% have shown that the null hypothesis of homoscedasticity cannot be rejected. These tests signify that the specification of the model is valid having met basic econometric tests for residuals of the model. To further analysis on the extent to which results or parameter estimates remain stable over time the Cusum and Cusum squared are employed. The results are presented on fig 2 and 3.



Fig 2: Cusum Stability Test

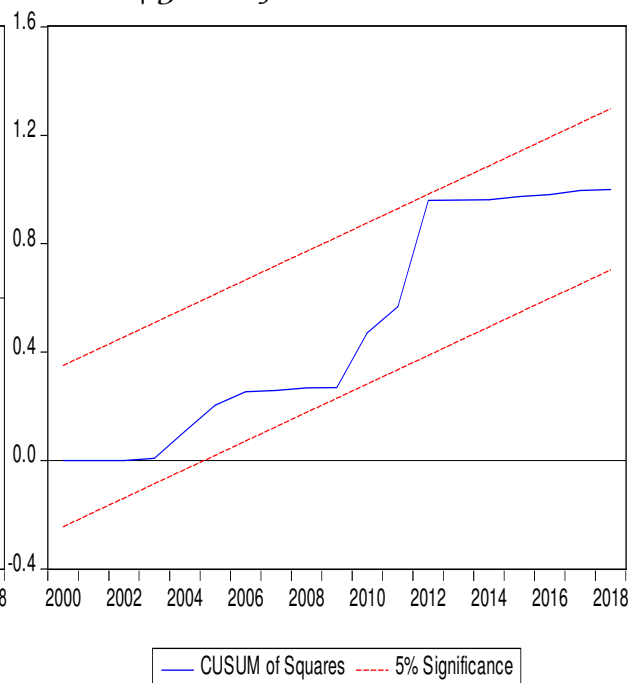


Fig 3: Cusum of Squares Stability Test

CONCLUSION AND RECOMMENDATION

In the discourse of factoring out, which has the greater impact between Political Determinants of Corruption and Bureaucratic Determinants of Corruption on Development in Nigeria from 1995 to 2018, the study used the Principal Component Analysis to arrive at the PDC and BDC index, thereafter the ARDL methodology was adopted to reveal that both Political and Bureaucratic Determinants of Corruption met the a priori criteria of a negative relationship with the Human Development Index of Nigeria. Further inference drawn show that Bureaucratic Determinants of Corruption impacts greater on Development than the Political Determinants over the period of analysis. However, the linear trend line further reveal that there is greater control of BDC, which has taken an upward trajectory than the PDC whose linear trajectory is declining overtime. The respect for the rule of Law as well as the freedom of expression by the citizenry are key component activities that can dislodge the downward trending of political determinants of corruption, to take an upward spike. These activities have the capacity to improve government spending, the integrity of government and political stability of the nation. The control of corruption should be sustained with more efforts geared towards the Bureaucracy to enable her maintain the upward trajectory, in addition to the rationale that corruption in the bureaucracy impacts negatively on development than political corruption in Nigeria.

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APPENDIX

Table I. Summary of Empirical Literature on the Determinants of Corruption.

Authors	Country/Region	Method/Model	Findings
Kolstad and Wiig (2015)	Cross-country (1946–2008)	OLS and IV	Democracy reduces corruption.
Busse and Gröning (2013)	129 countries (1984–2007)	System-GMM	Exports of natural resources encourage corruption, but income reduces corruption.
Kotera Okada, and Samreth (2012)	82 countries (1995–2008)	OLS, IV and GMM	Government size, democracy (average of political rights and civil liberties), government size and democracy interaction, and income level are negatively related to corruption.
Nur-Tegin and Czap (2012)	113–115 countries 2000–2009	OLS and Leamer's Extreme Bounds Analysis	Corruption is less in unstable democracies compared to stable autocracies. In addition, income level is negatively related to the level of corruption.
Elbahnasawy and Revier (2012)	150 countries (1998–2005)	Hausman and Taylor which takes into account effects	Greater law enforcement, freedom of expression and accountability, high income have a negative effect on corruption.



Iwasaki and Suzuki (2012)	Transition economies (1996-2006)	Random effects and fixed effects	Greater rule of law, democracy and progress in marketisation are effective in the control corruption.
Arezki and Bruckner (2011)	30 oil exporting countries (1992–2005)	System-GMM and least squares	Oil rents do promote corruption, have a negative effect on political rights, and positive impact on civil liberties.
Evrensel (2010)	154 countries (1998–2000)	Cross-section OLS	Corruption is high in countries with high inflation rates, totalitarian political regimes, ineffective judicial systems, slow economic growth and low levels of education.
Goel and Nelson (2010)	100 countries (1995–1997, 1998–2000, 2001–2003)	Random effects	Income level, democracy (captured by the sum of political rights and civil liberties) and common law are negatively related to the level of corruption.
Billger and Goel (2009)	99 countries (2001–2003)	OLS and quantile regression	Greater democracy (captured by the sum of political rights and civil liberties) reduces the level of corruption.
Serra (2006)	62 countries (1990–1998)	Leamer's Extreme-Bounds Analysis	High income and greater democracy (political rights and civil liberties) reduce corruption. But corruption is high in political unstable countries.
Gokcekus and Kn€orich (2006)	133 countries	OLS and IV	Openness, free press and income level have a reducing effect on the level of corruption.
Ades and Di Tella (1999)	Cross-country (1980–1983, 1989–1990)	OLS, TSLS and fixed effects	Rents are positively related with corruption, while income level and competition reduce corruption.

Note: (OLS) Ordinary Least Squares; (IV) Instrument Variables; (GMM) Generalized Method of Moments; and (TSLS or 2SLS) Two Stage Least Squares.

Source: Adopted from Abu and Staniewski (2019)

Table 2. Summary of Empirical Literature on the Determinants of Corruption.

Authors	Country/Region	Method/Model	Findings
Triesman(2007)	Cross-national (2007)	OLS and IV	Developed and liberal democracies, free press, trade openness, women in government reduces corruption. Unstable inflation, disruptive business regulations and fuel exports increases corruption.
Del Monte and Papagni (2007)	20 regions in Italy (1963–2001)	2SLS	Economic variables (i.e. government consumption and economic development) and political and cultural influences (i.e. party concentration, presence of voluntary organization, absenteeism at national elections) are significant determinants of corruption)
Glaeser and Saks (2006)	Across states in USA (1976–2002)	OLS, and IV	Wealthy and more educated states reduce corruption. Also, racial fractionalization and inequality increases corruption. interaction, and income level are negatively related to corruption. Corruption is not related to government size.
Gatti(2004)	USA 2000-2009	OLS	No clear association between corruption and openness was established
Brunetti and Weder (2003)	128countries (1994-1998)	OLS and 2SLS	Higher press freedom reduces corruption.
Ali and Ise (2003)	Cross Country Study	OLS and 2SLS	Education, economic freedom, federalism and rule of law reduces corruption. However, government size and foreign aid increases corruption. The foreign aid and government expenditure interaction



			suggest that corruption increases with increasing foreign aid that affects government expenditure.
Fisman and Gatti (2002)	Sample of countries	OLS and 2SLS	Population increases corruption while decentralization, government size and income per capita reduces corruption
Treisman (2000)	Developing and Developed countries Surveys for 1980 and 1990 periods	OLS and WLS	Corruption is lower in developed economies with high imports, predominantly protestant and with a history of British rule. Democracy also reduces corruption; corruption is high in Federal states.
Ades and Di Tella (1997)	Across countries	OLS	Trade openness and judiciary independence have negative relationship with corruption

Note: (OLS) Ordinary Least Squares; (IV) Instrument Variables; (GMM) Generalized Method of Moments; and (TSLS or 2SLS) Two Stage Least Squares.

Source: Adopted from Abu and Staniewski (2019)

**Political Versus Bureaucratic Determinants of Corruption on Development in Nigeria:
Where is the Dice Cast?**

Table 3: Political and Political Institution Determinants of Corruption*

Variable	Positive-Significant by	Negative-Significant by
Democracy, Civil Liberty		Kunicova-RAckerman (2005), Lederman et al. (2005), Gurgur-Shah (2005), Braun-Di Tella (2004), Chang-Golden (2004), Damanian et al. (2004), Herzfeld-Weiss (2003), Knack-Azfar (2003), Broadman-Recanatini (2002-00), Paldam (2002), Bonaglia et al. (2001), Frechette (2001), Swamy et al. (2001), Treisman (2000), Wei (2000), Ades-Di Tella (1999-97), Leite-Weidmann (1997), Goldsmith (1999), van Rijckeghem-
Press freedom, Media		Lederman et al. (2005), Suphacahlasai (2005), Brunetti-Weder (2003)
Decentralization, Federalism	Brown et al. (2005), Kunicova-RAckerman (2005), Damanian et al. (2004), Treisman (2000), Goldsmith (1999)	Gurgur-Shah (2005), Lederman et al. (2005), Fisman-Gatti (2002), Ali-Isse (2003), Wei (2000)
District maginute		Chang-Golden (2004)
Closed list System	Kunicova-RAckerman (2005), Persson-Tabellini (2003), Persson et al (2003),	Lederman et al. (2005), Chang-Golden (2004)
Presidentialism	Brown, et al. (2005), Kunicova-RAckerman (2005), Lederman et al. (2005), Chang-Golden (2004)	
Number of party	Chang-Golden (2004)	
Political Instability	Park (2003),Leite-weidmann(1999)	
Ideological polarization		Brown, et al. (2005),
Majoritarian plurality		Kunicova-R.Ackerman (2005),
Central planning		Abed-Davoodi (2000),
Women in Public Position		Swamy et al. (2001)

Note: *] Corruption is measured by various indexes; higher score, more corrupt. Significant at conventional levels.

Source: Adopted from Seldadyo and Haan(2006)



Table 4: Bureaucratic Determinants of Corruption *

Variable	Positive-Significant by	Negative-Significant by
Government Wage		Alt-Lassen (2003), Herzfeld-Weiss (2003), Rauch-Evan (2000), van Rijckeghem-Weder (1997),
Quality of bureaucracy		Gurgur-Shah (2005), Brunetti-Weder (2003), van Rijckeghem-Weder (1997)
Merit system		Rauch-Evan (2000)
Rule of Law		Damania et al. (2004), Ali-Isse (2003), Brunetti-Weder (2003), Herzfeld-Weiss (2003), Park (2003), Broadman-Recanatini (2000), Leite-Weidmann (1997), Ades-Di Tella (1997),

Note: *] Corruption is measured by various indexes; higher score, more corrupt. Significant at conventional levels. Source: Adopted from Seldayo and Haan(2006).

**Political Versus Bureaucratic Determinants of Corruption on Development in Nigeria:
Where is the Dice Cast?**

POLITICAL DETERMINANTS OF CORRUPTION				
Table 5: Variables Description and Measurement				
No	Variable	Description	Measurement	Source
1	Control of corruption proxy for corruption(Corr)	The index for Control of Corruption 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.	Points; (-2.5 weak; 2.5 strong)	The World Bank
2	Government Integrity	The index of Government Effectiveness captures perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies.	Points: (0 weak; 100 strong)	The Freedom House
3	Political rights index,	The Political Rights ratings from the Freedom House evaluate three categories: electoral process, political pluralism and participation, and the functioning of government.	Points; 7 (weak) - 1 (strong)	The Freedom House
4	Civil liberties index,	The Civil Liberties index evaluate the following: freedom of expression and belief, associational and organizational rights, rule of law, and personal autonomy and individual rights.	Points; 7 (weak) - 1 (strong)	The Freedom House
5	Political stability index	The index of Political Stability and Absence of Violence/Terrorism measures perceptions of the likelihood that the government will be destabilized or overthrown by unconstitutional or violent means, including politically-motivated violence and terrorism. The index is an average of several other indexes from the Economist Intelligence Unit, the World Economic Forum, and the Political Risk Services, among others.	Points; (-2.5 weak; 2.5 strong)	The World Bank
6	Voice and accountability index	The index for Voice and Accountability captures perceptions of the extent to which the citizens are able to participate in selecting their government, as well as freedom of expression, freedom of association, and a free media.	Points; (-2.5 weak; 2.5 strong)	The World Bank
7	Government Spending	Measures the Size of Government expenditure, taxes and participation in investment	Percentage; 100(high)- 0(low)	The Freedom House



BUREAUCRATIC DETERMINANTS OF CORRUPTION

Table 6: Variables Description and Measurement

No	Variable	Description	Measurement	Source
1	Control of corruption proxy for corruption(Corr)	The index for Control of Corruption 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.	Points; (-2.5 weak; 2.5 strong)	The World Bank
2	GDP per capita, current U.S. dollars proxy for Government wage(Gwage)	GDP per capita is gross domestic product divided by midyear population. GDP is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources. Data are in current U.S. dollars.	U.S. dollars;	The World Bank
3	Government Effectiveness Index proxy for Quality of Bureaucracy(QOB)	The index of Government Effectiveness captures perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies.	Points: (-2.5 weak; 2.5 strong)	The World Bank
4	Regulatory Quality Index proxy for Merit system	The index of 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.	Points; (-2.5 weak; 2.5 strong)	The World Bank
5	Rule of law index	The index for Rule of Law captures perceptions of the extent to which agents have confidence in and abide by the 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.	Points; (-2.5 weak; 2.5 strong)	The World Bank