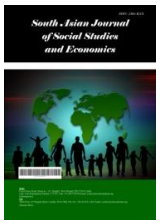

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Conduit Mentality and the Economy: The Nigerian Experience

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Authors' contributions

This work was carried out in collaboration between both authors. Both authors read and approved the final manuscript.

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ABSTRACT

The study is about conduit mentality and the Nigerian economy. Conduit mentality was proxied by annual values of aggregate illicit funds, then the economy was proxied by Educational level (EDU), Standard of living and Health in Nigeria over the period of 1996 to 2018. The research design is expost facto, for our analysis, we used the Autoregressive Distributed Lag Method of regression Analysis. Our result showed that, as expected, the relationship that exists between the dependent and independent variables are negative. We discovered that corruption as proxied by illicit funds is a serious issue in Nigeria and must be tackled if we intend to develop our economy as desired.

Keywords: Conduit; mentality; illicit funds; corruption.

1. INTRODUCTION

Once a people, country or institutions have committed to something of collective importance, it becomes necessary to monitor, evaluate, and assess the performance of such commitments. This is why citizens of nations assess the performance of their political office holders,

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employees and owners of companies also make it a point of duty to gauge the performance of their management teams. Everyone expects a certain level of performance from their various managers, basically to reward good performance and to achieve a desired goal. Stiglitz et al. [1], concluded that, "What we measure affects, what we do. And what individually or collectively we are aiming at affects what we measure". When politicians seek office and are eventually elected, the responsibility becomes that of managing and guiding the collective activities of the citizenry, they do these through taxes, expenditures, and the various regulations they could put in place. This ultimately determines the direction of the economy and the social wellbeing of the citizenry. Taking the Nigerian political space into account, political office holders have been adjudged corrupt, and these has negatively impacted our collective wellbeing over the years [2]. This menace of corruption is not limited to the political office holders alone, it is also prevalent in almost all our daily dealings in Nigeria. The average Nigerian sees the financial resources of the country as a "national cake" that must be shared instead of being "baked", this attitude lead us to the usage of the concept of conduit mentality. In other for the average Nigerian office holder to get his portion of the "national cake" he has to constantly reroute the resources in his care in the manner of the "electrical conduit tube or pipe" that takes wires from point A to point B. Like the conduit pipes, some are rigid while some are flexible (wikipadia.com), the rigid systems are usually found in government where such systems are almost impossible to dismount, while the flexible systems are those in work places where people can be let in on the largesse. This paper looks at the consequence of this corrupt practices on the wellbeing of Nigerians in terms of education, health, and standard of living.

2. CONCEPTUAL CLARIFICATIONS

2.1 Conduit Mentality

The term conduit is simply a medium through which something can be directed or routed to a desired or designated point. While the term mentality connotes attitudes or ways of conducting one's self that has been learned over time (vocabulary.com dictionary). Usually, an individual defaults into that attitude. We have used this terms to represent the attitude of Nigerians in respect to embezzlements and diversion or stealing or conversion of public financial resources for private usage.

2.2 Corruption

Defining corruption is difficult and most times, controversial. This is so because over time, evidences of corruption have been difficult to find and it is usually perception based. Adefulu [3] for the purposes of clarity and analytical simplicity looked at corruption from three dimensions; he identified corruption based on legal criteria, public opinion and public interest. From the legal dimension, whenever an individual goes contrary to laid down rules and regulations, such an individual is adjudged corrupt in the eyes of the law. For public opinion and public interest, an office holder is adjudged corrupt if the public opinion says he is. At this point, the problem is whose opinion is heard more, elites or the common man? And the opinion leads to what is termed as public interest. Corruption as defined leads to under development and under performance of the economy. Hence, for this study we have used the term illicit funds to capture corruption.

2.3 Modernize Theory of Corruption

The modernize theory of corruption emphasis that the use of public power to achieve private goals in the growth process and political development in the modern society has resulted into breeding political instability, corruption and income inequalities in many nations. The theory further posit that fight to acquire political power is an act of being corrupt especially in most part of the African countries. The theory according to Iyanda [4] explains that in the desire to acquire political power, the interest of the people should be the first at heart but unfortunately, reverse is the case as most world leaders yearn for power to oppress others and egotism purposes. The theory states that behaving contrary to the rules and ethics that guard any forms of institute or operations constitute the concept of corruption [5]. Hence, corruption can best be described when one negate the ethics, module operandi or moral principle that guard their official obligation. Within the context of this study, conduit philosophy is a composite statistics of corruption index, illicit fund, fund diversion, money laundry and all forms of moral hazard practises against the interest of the masses in favour of some selected few.

2.4 Social Action Theory

The social action theory as propounded by Paron [6] was anchored on the assumption that human vary their actions according to social context and

how it will affect other people. The social context in the Nigerian classical cadre according to Iyanda [4] are those in the high class, political and middle class hierarchy who control public offices and acquire government funds meant for the general public to their personal poss. Weber however emphasis that human actions is motivated by meanings. Various types of actions that are distinguished by meanings on which they are based were identified and they includes emotional actions which stems from an individual emotional state at a particular time. Traditional action which is based on established customs which make people act in a certain manner because of in-built habit. [7] as well as [8] presented that human actions and reaction is driven by social factors. Their study however assert that corruption is a culture hence, everyone indulge in wrong activities believing that people does it without facing a legal penalties. The study further emphasis that individual do not just get into evil doing, there are either influence by friends or pair mate. The theory thus conclude that individual and public conduit mentality is occasioned by social factors and for an economy to maintain check and balance in income distribution such mentality should be neutralised.

2.5 Review of Related Literature

Agbodohu and Churchill [9] empirically investigated the effect of corruption on economic growth in Nigeria using time series data sourced from World Bank data base. The study adopt descriptive statistics, unit root test, vector error correction model and granger causality test. Report from the study shows that corruption promotes economic growth while economic growth does not seem to promote corruption perception. It was also established within the context of their study that as a country grows, corruption index has a propensity of growth in a less direction. In a similar study, [10] investigated corruption perception and less development countries growth using time series data extracted from the World Bank data base. The study reported that the condition in the less developing countries are more suitable for growth and sustainability of corruption. The study further shows that corruption is a general indices found in all the countries of the world but its effect can only be made feasibly if structure is not built to curb it and this is the situation in the African countries.

Bakare [11], in their study reported that the variations and instability of the Nigerian economy is a function of corruption. The study concludes that increase in the index of corruption is capable of reducing gross domestic product in Nigeria to the tune of 29 percent. Further, [12] also contributed to the discussion by reporting that gross domestic product in Nigeria respond in a negative way it corruption index such increase in corruption index will slow down economic growth to the tune of 32 percent. Nwankwo [13] explore the mix research design in investigating the political corruption and economic growth in Nigeria. The interest of the paper was to identify the intensiveness of prudency and proper accountability since the inception of democratic government in 1999. The study sourced for data from the relevant available materials. Findings from the study shows that there is an optimistic relationship between political corruption, democracy and economic growth in Nigeria despite the attempt by the past administration to stem corruption. Ade et al. [14] also contributed to the literature by arguing that corruption cannot be completely eradicated if a nation aimed at growing. The study thus suggest that the percentage of corruption level that is expected to maintain consistent growth is what has not being identified. The study employed time series data in investigating the impact of corruption on economic growth in Nigeria using granger causality test and multiple regression technique. Findings from the study shows that corruption level over the years has a significant and negative relationship on economic growth in Nigeria. On the basis of the findings, the study concluded that certain quantum of corruption level is needed for effective economic growth of any nation.

[15] investigated the impact of corruption on poverty and output level of the economy using time series data between the periods 1992 to 2010. Findings reveals that inverse relationship exist between corruption level, poverty trend and economic growth in Nigeria. Hence, the study thus suggest that poverty spread in the less developing countries is increasing due to high level of corruption which has eaten up the political leadership of the African countries.

3. DATA AND METHODOLOGY

This study employs Ex-post facto design otherwise called hypothetical research design in evaluating the interrelationships between conduit mentality and welfare in Nigeria over the periods of 1996 to 2018. The study employs annual data (secondary) extracted from the World Banks Reports (online).

Table 1. Data presentation of annual values of Aggregate Illicit funds (ILC), Educational level (EDU), Standard of living (STL) and Health (HLT) in Nigeria over the period of 1996 to 2017

Year	ILC %	EDU %	STL %	HLT %
1996	8.30	78.61	191288.66	45.877
1997	8.54	86.36	191816.44	45.921
1998	8.60	91.39	192178.74	45.992
1999	15.00	94.06	188330.59	46.101
2000	8.94	98.64	193442.43	46.266
2001	11.26	96.33	196966.43	46.509
2002	7.55	97.96	199331.67	46.834
2003	7.93	99.42	214460.71	47.24
2004	7.41	100.63	279563.66	47.717
2005	6.63	101.32	281813.21	48.246
2006	5.27	102.06	297095.33	48.802
2007	5.79	93.27	309138.73	49.356
2008	6.62	84.10	319934.34	49.887
2009	5.85	85.35	333135.43	50.385
2010	5.84	85.07	349791.64	50.847
2011	5.69	90.62	357204.05	51.279
2012	4.69	92.04	362648.15	51.699
2013	4.86	94.07	372130.04	52.121
2014	3.76	96.56	385227.62	52.549
2015	3.92	95.44	385141.96	52.985
2016	3.66	94.32	369119.65	53.428
2017	5.33	93.20	362580.40	53.05
2018	5.98	95.93	374504.90	54.04

Source: World Bank Report 2018

3.1 Operational Measure of Variables

Aggregate Illicit Funds (ILC): In an attempt to adequately capture the conduit activities, this variable is captured as the reciprocal product of the transparency index (Corruption Perception Index) and aggregate expenditure of the public sector/institutions and parastatals (as percentage of aggregate output).

Educational level (EDU): This is captured as the ratio of total enrollment, regardless of age, to the population of the age group that officially corresponds to the level of education shown. (School enrollment gross). A negative theoretical relationship is anticipated in light of conduit mentality and educational level.

Standard of living (STL): This is captured as the ratio of gross domestic product to aggregate population. (Gross domestic product per capita). A negative theoretical relationship is anticipated in light of conduit mentality and Standard of living.

Health (HLT): This is captured as the number of years a newborn infant would live if prevailing patterns of mortality at the time of its birth were to stay the same throughout its life. (Life expectancy at birth). A negative theoretical relationship is anticipated in light of conduit mentality and health.

Model Specification: In light of the study objectives, the study proceeds to specify the following models;

The general functional form of the model is stated as follows:

$$EDU = f(ILC) \quad (1)$$

$$STL = f(ILC) \quad (2)$$

$$HLT = f(ILC) \quad (3)$$

The econometric form is stated with the introduction of the constant and error term as follows;

$$EDU_t = \alpha_0 + \alpha_1 ILC_t + \mu_t \quad (4)$$

$$STL_t = \beta_0 + \beta_1 ILC_t + Z_t \quad (5)$$

$$HLT_t = \psi_0 + \psi_1 ILC_t + Y_t \quad (6)$$

Where:

ILC = Aggregate Illicit funds (as percentage of aggregate output)

EDU = Educational level (School enrollment gross)
STL = Standard of living (Gross domestic product per capita)
HLT = Health (Life expectancy at birth)

α_0, β_0, & ψ_0 are the intercept,
α_1 , β_1, & ψ_1 are the parameters and
$\mu_{i\ Zt,}Y_t$, the error term

We further introduce autoregressive distributed lag model into the study to cover the lag of the explained variable accordingly.

$$EDU_t = a_0 + \sum_{i=1}^{p} a_1 EDU_{t-l+} \sum_{i=1}^{p} a_2 ILC_{t-i} + \pi t \quad (7)$$

$$STL_t = b_0 + \sum_{i=1}^{p} b_1 STL_{t-l+} \sum_{i=1}^{p} b_2 ILC_{t-i} + Vt \quad (8)$$

$$HLT_t = C_0 + \sum_{i=1}^{p} C_1 HLT_{t-l+} \sum_{i=1}^{p} C_2 ILC_{t-i} + Qt \quad (9)$$

3.2 Apriori Expectations

Increased conduit mentality and practices would theoretically be expected to decrease the welfare level in light of its ability to stall government's efficiency. In summary it is expected that;

α_1 , β_1, & $\psi_1 < 0$

3.3 Specification of Analytical Tools and Tests

To evaluate the objectives of this study, the following analytical tools are employed:

3.3.1 Stationarity tests

It is crucial to examine the stationarity qualities of time series data in order to avoid the problem of spurious estimations. In this sense, the Augmented Dick-Fuller (ADF) test is employed. For decision, the ADF statistics for the respective study variables should on absolute terms, be more than the corresponding Mackinnon critical values at 1%, 5%, and 10% levels of significance for the null hypothesis of non-stationarity to be rejected. Failure to attain stationarity of the variables would provide for subsequent differencing for stationarity to be effected.

$$\Delta Y_t = \alpha + \beta T + \delta Y_{t-1} + \gamma_i \Delta Y_{t-i} + \varepsilon_t$$

3.1.2 Hypothesis

*H*0: β0 (there is unit root in the series).

*H*1: β< 0 (the series are stationary)

The hypothesis is tested on the basis of t-statistic of the coefficient ϕ

Decision rule: Reject H_0 if test statistic is less than critical values, otherwise do not reject [16].

Auto Regressive Distributive Lag: This is a model as developed by [17] in order to incorporate i(0) and i(1). The assumption of this model stems from the fact that; it is applicable to only variables stationary at level i(0) or first difference i(1). And it is most suitable for trend whose interval does not reach 30.

$$y_t = b_0 + \theta' x_t + v_t$$

ARDL Bond Co-integration: This co-integration describes the long run relationship between the variables using the residuals of the unit root test, that it must be stationary to signify co-integration existence.

Auto Regressive Distributive Lag Error Correction Estimation Test: The Error Correction test aims to ascertain the nature of long run sensitivities of a given study's dependent variable to changes in each of the independent variables. Also, it provides the relevant speed at which the dependent time series variable adjusts back to equilibrium within the year following short run shocks in the set of independent variables. For decision purposes, the coefficients of the independent variables are expected to be significant at 5% level for the null hypothesis of no long run sensitivity to be rejected. Further, the ECM coefficient is expected to be significant at 0.05 level and also, negatively signed for the null hypothesis of no long run proper fit to be rejected.

4. PRESENTATION OF RESULTS AND DISCUSSION

It is crucial to remark that the study variables employed were stationary at first difference and also provided significant results when Auto Regressive Distributive Lag test was executed. However, the Error Correction model (ECM) coefficient was found insignificant at 0.05 level. This suggests an inappropriate fit for long run relationship estimation. The model was therefore coerced into a more fitting linear relationship by employing natural logarithm variants of the study variables. This resulted in significant estimates for Stationarity, Auto Regressive Distributive Lag

and Error Correction estimation tests as duly reported hereunder. Accordingly, the results of the tests executed are therefore duly presented in accordance with the underlying study period for clarity purposes.

4.1 Presentation of Results

The Table 2 shows that; Educational level as captured by the gross school enrollment ratio which is averaged at 93.21 percent. Standard of living as seen from the per capita gross domestic product shows a value of 287833. This shows that the nation has access to an income or product of about 287833 (based on the assumption of even income/product distribution). The healthcare sector as seen from the angle of the life expectance at birth value of 49.23 shows that each resident in Nigeria is expected to live for up to 49.23 years on the average. Illicit fund as representing conduit mentality shows that 6.88 percent of funds in ratio of productive capacity are syphoned annually. All variables are not normally distributed except for Illicit funds which shows a Jarque-bera probability level of 0.003377 (this is lower than the 0.05 (5%) significance level).

4.2 Presentation of the Stationarity Test Results

The stationarity test results for this study is presented in Table 3.

Table 3 shows the difficulty of employed variables achieving stationarity at level. This has led to evaluations of stationarity at first difference. The employed variables were found to be significantly stationary at the first difference and level. This stationarity pervades the 10%, 5% and 1% significance level. After having showed stationarity, the study proceeds to the Bond co-integration, otherwise known as the Auto Regressive Distributive Lag (ARDL).

4.3 Lag Length Selection

Due to the fact that revenues of previous period may be expended in future periods, the study therefore decides to know the most suitable lag for the time series. In light of this, the study proceeds to evaluate the lag length selection criteria.

Looking at the SC values in Table 4, it can be observed that a maximum lag of 1 and 2 is suggested for the three employed model. (The AIC values suggest that 2 lags employed variables may be appropriate). In light of the above table, the study will thus proceed to use the first and second lag (1) for all employed variables.

4.4 Auto Regressive Distributive Lag (ARDL) Short Run

Based on shorter series interval, the study undertakes the Auto Regressive Distributive Lag (ARDL) test as presented below as follows:

$$EDU_t = \alpha_0 + \alpha_1 ILC_t + \mu_t \quad \text{(Model 1)}$$

$$STL_t = \beta_0 + \beta_1 ILC_t + \mu_t \quad \text{(Model 2)}$$

$$HLT_t = \psi_0 + \psi_1 ILC_t + \mu_t \quad \text{(Model 3)}$$

Table 2. Descriptive statistics

	EDU %	STL %	HLT %	ILC %
Mean	93.21823	287833.6	49.23141	6.883265
Median	94.06336	303117.0	49.07900	6.234429
Maximum	102.0627	385227.6	53.42800	14.99916
Minimum	78.61452	188330.6	45.87700	3.661197
Std. Dev.	6.174923	76905.59	2.691944	2.641756
Skewness	-0.627812	-0.192864	0.153987	1.373024
Kurtosis	2.725943	1.385083	1.534891	5.208067
Jarque-Bera	1.514058	2.527014	2.054610	11.38165
Probability	0.469058	0.282661	0.357970	0.003377
Sum	2050.801	6332340.	1083.091	151.4318
Sum Sq. Dev.	800.7231	1.24E+11	152.1779	146.5564
Observations	22	22	22	22

Source: Extracts from E-views 10.0 output

Table 3. Presentation of Stationary Test Result

Variable	ADF T-statistics		Test critical values			Probability	Order of
	At level	1st diff	1%	5%	10%	level	integration
ILC	-0.909877	-8.552347***	-3.808546	-3.020686	-2.650413	0.0000	I(0)
EDU	-2.519591	-3.989677***	-3.808546	-3.020686	-2.650413	0.0037	I(1)
STL	-0.809616	-3.971499***	-3.808546	-3.020686	-2.650413	0.0002	I(1)
HLT	-2.355872	-3.818993***	-2.685718	-1.959071	-1.607456	0.0005	I(1)

Source: Extracts from E-views 10.0 output

Table 4. Lag length selection criteria output

VAR Lag Order Selection Criteria
Endogenous variables: EDU STL HLT ILC
Exogenous variables: C
Date: 10/11/19 Time: 06:44
Sample: 1996 2018
Included observations: 20

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-365.9582	NA	1.37e+11	36.99582	37.19497	37.03470
1	-289.4430	114.7729*	3.37e+08*	30.94430	31.94003*	31.13868*
2	-272.2138	18.95212	3.77e+08	30.82138*	32.61370	31.17126

** 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: Extracts from E-views 10.0 output*

Table 5. Presentation of auto regressive distributive lag for model 1

Dependent Variable: EDU
Method: ARDL
Date: 10/11/19 Time: 06:37
Sample (adjusted): 1998 2018
Included observations: 20 after adjustments
Maximum dependent lags: 4 (Automatic selection)
Model selection method: Akaike info criterion (AIC)
Dynamic regressors (4 lags, automatic): ILC
Fixed regressors: C
Number of models evaluated: 20
Selected Model: ARDL(2, 1)
Note: final equation sample is larger than selection sample

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
EDU(-1)	1.104787	0.194690	5.674590	0.0000
EDU(-2)	-0.451730	0.168772	-2.676567	0.0172
ILC	-0.434227	0.319555	-1.358850	0.1943
ILC(-1)	-0.692026	0.307531	-2.250263	0.0399
C	30.73655	11.41292	2.693137	0.0167
R-squared	0.764646	Mean dependent var		94.29142
Adjusted R-squared	0.701885	S.D. dependent var		5.218171
S.E. of regression	2.849116	Akaike info criterion		5.144213
Sum squared resid	121.7619	Schwarz criterion		5.393146
Log likelihood	-46.44213	Hannan-Quinn criter.		5.192807
F-statistic	12.18345	Durbin-Watson stat		2.113116
Prob(F-statistic)	0.000131			

**Note: p-values and any subsequent tests do not account for model selection; Source: Extracts from E-views 10.0 output*

The above ARDL output (model 1) shows that; employed predictor variables in the form of Conduit mentality and past values of the criterion variable (Educational level) jointly account for up to 76.46% variations in the Educational level. This goes to show that corruption shows a great influence on welfare in form of educational level. Following this, the F-statistics of 12.18345 at a probability level of 0.000131 is seen to show a very viable model. The Durbin Watson is seen to be within the significant range (although, the presence of lagged values has limited its validity). Based on the above, significant short run relationship is seen to exist. This relationship is most significant in light of present and immediate past values of welfare. Although current values of illicit funds show anticipated negative values which shows that presence of adverse influence of conduit activities. Although current influence of this is insignificant in light of its influence on educational level. It is seen that past values of conduit activities significantly influence education. The above thus shows that educational level as a measure of welfare is influence by its past values and illicit fund.

For model 2, the ARDL output shows that; employed predictor variables in the form of Conduit mentality and past values of the criterion variable (Standard of living) jointly account for up to 96.56% of variations in Standard of living. Following this, the F-statistics of 105.3039 at a probability level of 0.0000 is seen to show a very viable model. The Durbin Watson is seen to be within the significant range (although, the presence of lagged values has limited its validity). Based on the above, standard of living is seen not to be influenced by flows of illicit funds despite negative/adverse connotations. Although the standard of living is influenced by past values of standard of living in Nigeria.

Model 3 ARDL output shows that; employed predictor variables in the form of Conduit mentality and past values of the criterion variable (Health) jointly account for up to 89.83% of variations in the Total Expenditure pattern of the government on health. Following this, the F-statistics of 1527.645 at a probability level of 0.0000 is seen to show a very viable model. The Durbin Watson is seen to be within the significant range (although, the presence of lagged values has limited its validity). Based on the above, significant short run relationship is seen to exist between Health care and illicit fund flows (conduit mentality) based on expected negative

Table 6. Presentation of auto regressive distributive lag for model 2

Dependent Variable: STL
Method: ARDL
Date: 10/11/19 Time: 06:37
Sample (adjusted): 1998 2018
Included observations: 20 after adjustments
Maximum dependent lags: 4 (Automatic selection)
Model selection method: Akaike info criterion (AIC)
Dynamic regressors (4 lags, automatic): ILC
Fixed regressors: C
Number of models evalulated: 20
Selected Model: ARDL(1, 2)
Note: final equation sample is larger than selection sample

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
STL(-1)	0.735287	0.136703	5.378722	0.0001
ILC	-3771.576	2279.717	-1.654406	0.1188
ILC(-1)	-2504.126	2418.308	-1.035487	0.3168
ILC(-2)	-1139.523	2366.231	-0.481577	0.6371
C	135771.1	68803.31	1.973322	0.0672
R-squared	0.965613	Mean dependent var		297461.7
Adjusted R-squared	0.956444	S.D. dependent var		73916.60
S.E. of regression	15426.53	Akaike info criterion		22.33788
Sum squared resid	3.57E+09	Schwarz criterion		22.58682
Log likelihood	-218.3788	Hannan-Quinn criter.		22.38648
F-statistic	105.3039	Durbin-Watson stat		1.767213
Prob(F-statistic)	0.000000			

**Note: p-values and any subsequent tests do not account for model selection; Source: Extracts from E-views 10.0 output*

Table 7. Presentation of auto regressive distributive lag for model 3

Dependent Variable: HLT
Method: ARDL
Date: 10/11/19 Time: 06:37
Sample (adjusted): 1999 2018
Included observations: 19 after adjustments
Maximum dependent lags: 4 (Automatic selection)
Model selection method: Akaike info criterion (AIC)
Dynamic regressors (4 lags, automatic): ILC
Fixed regressors: C
Number of models evalulated: 20
Selected Model: ARDL(3, 1)
Note: final equation sample is larger than selection sample

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
HLT(-1)	-5.481576	1.846359	-2.968857	0.0109
HLT(-2)	11.28531	3.155425	3.576478	0.0034
HLT(-3)	-5.079863	1.382998	-3.673080	0.0028
ILC	-0.166636	0.037425	-4.452541	0.0007
ILC(-1)	-0.118420	0.033415	-3.543941	0.0036
C	16.46924	3.318097	4.963460	0.0003
R-squared	0.898301	Mean dependent var		49.75268
Adjusted R-squared	0.897647	S.D. dependent var		2.520035
S.E. of regression	0.122230	Akaike info criterion		-1.113737
Sum squared resid	0.194222	Schwarz criterion		-0.815493
Log likelihood	16.58050	Hannan-Quinn criter.		-1.063262
F-statistic	1527.645	Durbin-Watson stat		1.962516
Prob(F-statistic)	0.000000			

**Note: p-values and any subsequent tests do not account for model selection; Source: Extracts from E-views 10.0 output*

values. Also, health care factors are seen to be significantly influenced by past values of itself. The above shows that illicit funds flows (conduit mentality) is seen to be a negative influence on health factor over the study period.

4.5 Bonds Co-integration Test

To evaluate the long run relationship amongst employed ARDL variables, the bond test is carried out as follows.

The F-statistics value of 8.630210 is seen to be greater that all the critical value bonds. This goes to show that there exists significant long run relationship between employed variables. This connotes that variables have relative tendencies in light of changes and external factors.

The F-statistics for model 2 exhibited a value of 8.941616 which seem to be greater that all the critical value bonds. This goes to show that there exists significant long run relationship between employed variables. This connotes that variables have relative tendencies in light of changes and external factors.

The F-statistics value for model 3 of 14.09734 is seen to be greater that all the critical value bonds. This goes to show that there exists significant long run relationship between employed variables. This connotes that variables have relative tendencies in light of changes and external factors.

4.6 Autoregressive Lag Distributive Error Correction Estimate

To adjust for disequilibrium between the long and short run estimate, the study proceeds to further evaluate the co-integration and long run form in light of the error correction term (CointEq(-1)).

In light of existence of long run relationship as seen by the Bond test above, it can be further

reckoned that the disequilibrium between the long and short run ARDL model can be adjusted for back by approximately -0.346944. This shows that there would be a 34.69 percent adjustment back to equilibrium in the model. In light of the long run coefficients, it can be seen that illicit fund does not significantly influence Educational level despite negative tendencies.

This could be attributed to the stale level of education in the nation amidst massive reports of public fund looting.

Table 8. Presentation of ARDL bond test for long run relationship Model 1

ARDL Bounds Test
Date: 10/11/19 Time: 06:40
Sample: 1998 2018
Included observations: 20
Null Hypothesis: No long-run relationships exist

Test Statistic	Value	k
F-statistic	8.630210	1
Critical Value Bounds		
Significance	**I0 Bound**	**I1 Bound**
10%	4.04	4.78
5%	4.94	5.73
2.5%	5.77	6.68
1%	6.84	7.84

Source: Extracts from E-views 10.0 output

Table 9. Presentation of ARDL bond test for long run relationship model 2

ARDL Bounds Test
Date: 10/11/19 Time: 06:41
Sample: 1998 2018
Included observations: 20
Null Hypothesis: No long-run relationships exist

Test Statistic	Value	k
F-statistic	8.941616	1
Critical Value Bounds		
Significance	**I0 Bound**	**I1 Bound**
10%	4.04	4.78
5%	4.94	5.73
2.5%	5.77	6.68
1%	6.84	7.84

Source: Extracts from E-views 10.0 output

Table 10. Presentation of ARDL bond test for long run relationship model 3

ARDL Bounds Test
Date: 10/11/19 Time: 06:43
Sample: 1999 2018
Included observations: 19
Null Hypothesis: No long-run relationships exist

Test Statistic	Value	k
F-statistic	14.09734	1
Critical Value Bounds		
Significance	**I0 Bound**	**I1 Bound**
10%	4.04	4.78
5%	4.94	5.73
2.5%	5.77	6.68
1%	6.84	7.84

Source: Extracts from E-views 10.0 output

Table 11. Presentation of ARDL error correction estimate model 1

ARDL Cointegrating And Long Run Form
Dependent Variable: EDU
Selected Model: ARDL(2, 1)
Date: 10/11/19 Time: 06:40
Sample: 1996 2018
Included observations: 20

Cointegrating form				
Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
D(EDU(-1))	0.451730	0.168772	2.676567	0.0172
D(ILC)	-0.434227	0.319555	-1.358850	0.1943
CointEq(-1)	-0.346944	0.119843	-2.894974	0.0111
Cointeq = EDU - (0.7431*ILC + 88.5923)				
Long run coefficients				
Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
ILC	-0.743057	0.838965	-0.885683	0.3898
C	88.592331	5.924935	14.952457	0.0000

Source: Extracts from E-views 10.0 output

Table 12. Presentation of ARDL error correction estimate model 2

ARDL Cointegrating And Long Run Form
Dependent Variable: STL
Selected Model: ARDL(1, 2)
Date: 10/11/19 Time: 06:41
Sample: 1996 2018
Included observations: 20

Cointegrating form				
Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
D(ILC)	-3771.576244	2279.716830	-1.654406	0.1188
D(ILC(-1))	1139.523417	2366.231281	0.481577	0.6371
CointEq(-1)	-0.264713	0.136703	-1.936412	0.0519
Cointeq = STL - (-28012.3046*ILC + 512898.9813)				
Long run coefficients				
Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
ILC	-28012.30462	5750.995778	-4.870862	0.0002
C	512898.9813	42180.711299	12.159562	0.0000

Source: Extracts from E-views 10.0 output

In light of existence of long run relationship as seen by the Bond test above, it can be further reckoned that the disequilibrium between the long and short run ARDL model can be adjusted back by approximately -0.264713. This shows that there would be a 26.47 percent adjustment back to equilibrium in the model. In light of the long run coefficients, it can be seen that illicit funds (conduit mentality) displays a negative and significant influence on standard of living in the nation. This shows that a growth in conduit activities negatively affects the standard of living of the Nigerian populace.

In light of existence of long run relationship as seen by the Bond test above, it can be further reckoned that the disequilibrium between the long and short run ARDL model can be adjusted for back by approximately -0.276131. This shows that there would be a 27.61 percent adjustment back to equilibrium in the model. In light of the long run coefficients, it can be seen that illicit funds (conduit mentality) displays a negative and significant influence on healthcare in the nation. This shows that a growth in conduit activities negatively affects the ability of the nation to foster its health care sector.

4.7 Presentation of the Results of Granger Causality Test

The results of the Granger Causality test for the deregulated/flexible exchange rate regime are presented in Table 14.

Table 13. Presentation of ARDL error correction estimate model 3

ARDL Cointegrating And Long Run Form
Dependent Variable: HLT
Selected Model: ARDL(3, 1)
Date: 10/11/19 Time: 06:43
Sample: 1996 2018
Included observations: 19

Cointegrating form				
Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
D(HLT(-1))	-6.205445	1.799257	-3.448893	0.0043
D(HLT(-2))	5.079863	1.382998	3.673080	0.0028
D(ILC)	-0.166636	0.037425	-4.452541	0.0007
CointEq(-1)	-0.276131	0.054268	-5.088249	0.0002
Cointeq = HLT - (-1.0323*ILC + 59.6428)				
Long run coefficients				
Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
ILC	-1.032321	0.084576	-12.205787	0.0000
C	59.642792	1.026358	58.111103	0.0000

Source: Extracts from E-views 10.0 output

Table 14. Presentation of ARDL bond test for long run relationship identification

Pairwise Granger Causality Tests
Date: 10/11/19 Time: 06:38
Sample: 1996 2018
Lags: 2

Null Hypothesis:	**Obs**	**F-Statistic**	**Prob.**
ILC does not Granger Cause EDU	20	1.91326	0.1819
EDU does not Granger Cause ILC		0.60028	0.5613
ILC does not Granger Cause STL	20	0.45858	0.6408
STL does not Granger Cause ILC		3.05211	0.0773
ILC does not Granger Cause HLT	20	0.02639	0.9740
HLT does not Granger Cause ILC		6.51979	0.0092

Source: Extracts from E-views 10.0 output

The pair wise granger Causality tests above shows absence of significant bidirectional causal relationship but unidirectional causal relationship is seen to exist between the Healthcare sector and illicit funds. Based on the findings, it can be seen that conduit activities could be seen to be influenced by investment in the healthcare sector. This shows that many kleptomanias are largely capable of syphoning funds allocated to this sector which also weakens the activities and performance of this sector.

5. DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

This study has examine the influence of Conduit Mentality on economic welfare in Nigeria between the periods of 1996 to 2018 where time series data were sourced from the world bank data base and the central bank of Nigeria statistical bulletin. The results shows that all employed variables were stationary at first difference and level. Due to the length/time interval of the study, the study employed the Autoregressive Distributive Lag model. The lag length selection criteria showed the sufficiency of the first lag for the employed model, the ARDL test showed significant long run relationship and it was discovered that; conduit mentality in the form of illicit funds negatively affect economic welfare activities in Nigeria as attributable to the standard of living of the populace and the healthcare level. Whereas, unidirectional causal relationship is seen to emanate from healthcare sector to Conduit activities in the nation over the study period.

It is thus concluded in light of the above that, as conduit activities rises, standard of living of the populace and our institutions will continue to weaken (especially the healthcare sector).

It is recommended based on the above findings that; (i) the public sector should ensure a

transparent and fluid budgetary process to ensure easier transition and monitoring of the budgetary process, (ii) A zero based budgeting system should be implemented to curtail lingering activities of looters. (iii) Corruption fighting institutions of government like the EFCC, ICPC, even the Law Courts should be strengthened. (iv)The perceived one sided nature of the fight against corruption of the government should be addressed if we are to eradicate corruption.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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