



CORRUPTION AND ECONOMIC PERFORMANCE IN NIGERIA

Iferi E. Willie & Leyira C. Micah

Department of Accounting, Faculty of Management Sciences,
University of Port Harcourt, Choba, Rivers State, Nigeria.

Phone: 234 9054048686; 234 8033542244;

Email; leyira.micah@uniport.edu.ng

Abstract

This study aimed to examine the impact of corruption on economic performance in Nigeria. It sought to determine whether corruption acts as factor that disrupts economic growth rate and per capita income income. To achieve these objectives, the study employed panel data for the year 1996-2024 with respect to corruption perception index (CPI). Additionally, the study employed causal analysis techniques to establish a deeper understanding of the causal relationships between corruption, and economic performance. This was followed by estimating a co-integration regression using the multiple regression method. The empirical results show that corruption did not significantly influence economic growth rate and per capita income in Nigeria. The study recommends that the National Bureau of Statistics (NBS) should develop and publish disaggregated corruption indices and tax effort scores by geopolitical zone, to guide targeted anti-corruption and tax reform interventions. The findings clearly state that the unfavourable of economic growth is not due to corruption. But, if the government successfully controls corruption, tax collection will be increased which ensures self-sustaining economic growth.

Keywords:

Corruption, Economic, Performance.

Introduction

Corruption is a global problem that manifests in varying degrees in different parts of the world. The World Bank identifies corruption as the single greatest obstacle to economic and social development (World Bank, 1997). Corruption is generally termed as misuse of the public offices to enlarge private advantages. It is a soundly admitted statement that corruption impedes the smooth working of the economy. Mauro (1995) put prior effort to explore the consequence of corruption on economic growth. He concluded that corruption slows down the phase of growth through decreasing investment. Besides, it reduces the incentive to work, decreases investment (i.e., domestic and foreign), and diverges the distribution of the budget from productive projects

to rent-seeking actions (Shleifer & Vishny, 1993). Corruption is a pervasive and unfavorable phenomenon that casts a dark shadow over developed and developing countries collectively. In the context of developing countries, it becomes a curse, creating severe obstacles to their growth trajectory and overall development. It infiltrates various aspects of society and wreaks havoc with the country's tax structure, leading to significant consequences.

Corruption is a part of the broader issue of governance and public management. Various studies try to investigate the determinants of tax revenues. (Tetra, 2003; Weiss, 1969; Tan and zee, 2000); Imam and Jacobs (2007) explain that real per capita income, share of agriculture in GDP, trade openness, inflation and corruption are the most important determinants of tax collection.

Gupta (2007) finds that structural factors like per-capita income, share of agriculture GDP, trade openness, foreign aid, foreign debt and some new institutional variable like corruption are statistically significant and strong determinants of revenue performance.

There are two main divergent schools of thought; the moralist and the revisionist schools of thought in the corruption-economic growth relationship debate have over the past decades made interesting findings in the field. The revisionists, the younger of the two schools of thought, believe that corruption per se might not be bad for economic growth. The revisionists argue that, more attention ought to be paid to the context in which corruption occurs and to what ends. Revisionist theorists argue that corruption may accelerate economic growth when it plays the role of providing channel through which certain harmful administrative barriers could be avoided [Huntington, 1968; Bailey, 1966; Meon & Weill 2010]. In circumstances where corruption is used as a tool to overcome rigid administrative barriers, as Leff [1964] succinctly puts it, corruption tends to “grease the wheels” of economic growth.

Corruption remains one of the most debilitating challenges in Nigeria. Despite numerous efforts to curb this menace, it continues to thrive, undermining the nation's development. In countries like China, severe penalties, and sometimes including death penalty, are imposed on corrupt officials, serving as a deterrent against graft. The question then arises: why are those alleged to have stolen public funds still walking freely in Nigeria?

Take, for example, the former Minister of Humanitarian Affairs in President Buhari's administration. She claimed to have fed primary school students during the COVID-19 lockdown when schools were closed. This audacious claim raised eyebrows and highlighted the endemic corruption within the system. Yet, despite the public outcry, no substantial action has been taken against her.

Similarly, the case of the former Accountant General, who was embroiled in a massive corruption scandal involving billions of naira, has seemingly been forgotten. This is a disturbing trend that undermines public trust in the government's ability to tackle corruption. When high-profile individuals accused of embezzling public funds face no consequences, it sends a message that corruption is tolerated, if not rewarded.

Because Corruption in Nigeria's public service and government is deeply entrenched, stemming from a combination of weak institutions, lack of accountability, and socio-economic pressures.

Tackling it requires a multi-faceted approach that addresses these root causes head-on. Several countries have successfully reduced corruption through determined efforts and innovative reforms (Vanguard, Jul 8, 2024).

This paper is determined to find ways in which **corruption** impacts the **Nigerian economy** over time and estimate the impact of **corruption** on **Nigerian GDP**,

Literature Review and Hypotheses Development

The performance of an economy is usually assessed in terms of the achievement of economic objectives. These objectives can be long term, such as sustainable growth and development, or short term, such as the stabilisation of the economy in response to sudden and unpredictable events, called economic shocks.

To know how well an economy is performing against these objectives economists employ a wide range of economic indicators. Economic indicators measure macro-economic variables that directly or indirectly enable economists to judge whether economic performance has improved or deteriorated.

Corruption and Economic growth

If corruption reduces domestic investment and reduces foreign investment, one would think that it would also reduce the economic growth rate. Mauro examined how the conditional growth rate (that is, the growth rate given the country's starting point and population size) is affected by corruption. He found that the data reveals just that relationship.

Two theories describe how corruption is expected to influence economic growth. The "grease the wheels" hypothesis holds that corruption increases economic growth because corruption circumvents inefficient regulations. When regulations on starting businesses are tight, bribing politicians and bureaucrats is likely to give rise to vibrant economic activity. The "sand the wheels" hypothesis maintains, by contrast, that corruption decreases economic growth because corruption prevents efficient production and innovation. The empirical evidence tends to suggest that corruption decreases economic growth, especially in countries with low investment rates and low-quality governance (e.g., Mauro 1995, Mo 2001, Aidt et al. 2008, Méon and Sekkat 2005, Hodge et al. 2011, Swaleheen 2011, d'Agostino et al. 2016a and 2016b, Huang 2016, Tsanana et al. 2016, Chang and Hao 2017, Cieřlik and Goczek 2018a and 2018b Campos et al. 2010 and Ugur 2014 for surveys).

Since the 2000s, many empirical studies examining the determinants and the economic and political consequences of corruption in the public sector used Transparency International's Corruption Perception Index (CPI). Examples include Paldam (2002 and 2019), Aidt (2009), Goel and Nelson (2010), Lessmann and Markwardt (2010), Méon and Weill (2010), Bjørnskov (2012), Potrafke (2012a and 2019), Cooray and Schneider (2018), Debski et al. (2018), and Vadlamannati and Cooray (2016). The studies on corruption and economic growth by Méon and Sekkat (2005), Swaleheen (2011), d'Agostino et al. (2016a and 2016b), Huang (2016), Tsanana et al. (2016), and Cieřlik and Goczek (2018a) also employed the CPI. Studies using the CPI in panel

data models ignored that the CPI was not comparable across countries and over time before 2012. In particular, including fixed period effects in panel data models does not solve the incomparability problem because the CPI in individual years before the year 2012 included data for different components and time periods to measure perceived corruption across continents.

H0₁ Corruption has no relationship gross domestic product in Nigeria

Corruption and Per capita income: Over the years, income per-capita was commonly used to describe the wellbeing of individuals in a specific period of time. This was usually done without putting into consideration the inter-temporal dimension in which sustainable development can be also affected by income per-capita level. Income per-capita level can indirectly affect sustainable development through its effect on economic development.

1. This can be through the effect of income per-capita on education, health, migration and sanitation levels. Having low levels of income per-capita is more likely to reduce the individuals' access to high levels of education and knowledge. In addition, it deprives individuals from better nutrition which negatively affect their health status and productivity as well as it encourages migration from the country whenever possible. Also, low income per-capita is associated with poor environmental conditions such as poor sanitation, high levels of pollution and lack of access to clean water.

2. In particular, the literature is rich in tracing the effect of low levels of income per-capita on pollution emissions level as illustrated by the Environmental Kuznets Inverted U hypothesis (EKC) (Dasgupta et al., 2002 and Cialani, 2007). Putting all these effects into consideration will result in adverse effects on sustainable development. Hence, it is crucial to study the determinants of Income per-capita level. Moreover, corruption level has increased massively. This phenomenon is present in both the developed as well as the developing world. However, it is more evident in developing countries. For instance, the transparency international list of the top 10 corrupt countries in 2014 include Somalia, North Korea, Sudan, Afghanistan, South Sudan, Iraq, Turkmenistan, Uzbekistan, Eritrea and Libya which are all developing countries.

3. Recently, corruption level has played an influential role in determining income per capita level. However, theoretically and empirically its effect is still debatable. The debate is present in two levels: the nature and the direction of corruption-Income per capita relationship. Hence, the objective of this research paper is to investigate the effect of corruption on income per-capita level in developing countries. This is examined in an IV estimation over the period 1996-2013. The use of IV in a 2 stage least squares (2SLS) is the chosen estimation technique due to the presence of a potential endogeneity problem that arises from the two way relationship between corruption and income per capita levels. On the theoretical level, the relationship between corruption and income per-capita is indistinct. There is an ongoing debate in the literature on the nature and the direction of corruption-income relationship. With respect to the nature of the relationship, there are two opposing views, namely, efficiency enhancing view and efficiency reducing view (Rehman and Naveed, 2007). Efficiency enhancing view states that corruption has positive effect on economic growth which in turn increases income per capita (Leff, 1964; Huntington, 1968; Acemoglu and Verdier, 1998). According to 'the efficient grease' hypothesis, corruption results into more efficiency (Mustapha, 2014). This is

because it acts as a lubricant that motivates bureaucrats to be more productive and allows investors to escape time-consuming regulations or other transactional costs (Pak Hung Mo, 2001). In line with that, Da Silva et al. (2001) highlighted the importance of the economic theory of bribe in studying corruption-income relationship. Bureaucrats receive bribes and firms accept paying them as both are after maximizing their utilities. Nevertheless, the opposing view believes that corruption has a negative effect on the economy (Kaufman and Wei, 1998; Aidt, 2009 and Mauro, 1995). Rehman and Naveed (2007) illustrated that through what they considered the ‘efficiency reducing’ strand in which corruption has a harmful effect on efficiency. This is usually associated with demotivating investors to invest resulting into loss of productivity (Pak Hung Mo, 2001). In addition, corruption increases the gap between the rich and the poor and destroys any incentive to innovate. Furthermore, corruption increases the size of uncertainties and political instability which hinder economic growth and development (Da Silva et al., 2001). In sum, one can consider corruption effect on income as a rent seeking problem. According to Gyimah-Brempong (2002), corruption results into misallocation of resources, loss of innovation, the shift from productive activities to rent seeking ones, and incurring additional costs of production that in turn will discourage investment. Da Silva et al. (2001) also highlighted that the degree of corruption varies with the type of institutions structure and the number of regulations. In between these two opposing views, a third school of thought evolved. This school deviates a little bit from the rather rigid ideology of positive effect of corruption on income. This is through tracing the effect of corruption on allocative efficiency. According to Rehman and Naveed (2007), allocative efficiency can be realized in the presence of corruption. This is because although bureaucrats ignore the ‘principle of competitive bidding’ and grants contracts to the biggest bidder, it is usually the case that those who can afford to pay the highest bribes are the ones with the lowest cost. On the empirical level, the debate is still pronounced. For instance, Li and Wu (2010) showed in their study of pooled 65 countries that trust offsets the negative effect of corruption on income. In addition, Blackburn and Forgues-Puccio (2009) studied the reason behind the uneven effect of corruption in various countries in a dynamic general equilibrium model. Their results highlighted that countries with well-organized corruption network will result in lower levels bribes and more rates of growth.

H₀ Corruption has no relationship per capita income in Nigeria.

Theories of Corruption

Institutional corruption

The study of institutional corruption has taken a new turn in recent years as theorists have developed a conception that differs from that of conventional corruption in both its individual and structural forms (Thompson 1995; Warren 2004; Miller 2010, 2017; Lessig 2011). Institutional corruption is not the individual corruption exemplified by bribery and similar illegal offenses (Rose-Ackerman & Palifka 2016, pp. 7–11), and it is not simply the structural corruption prominent in the work on developing societies (Acemoglu & Robinson 2010). The theorists who have taken this turn call attention not simply to the corruption of institutions but to distinctive ways in which institutions can be corrupted.

Principal – agent theory

The desire for personal gain is often understood as the primary cause of public sector corruption, but this is an over-simplification of the complex relationships between individuals and the State. There are several theories that help to deconstruct these relationships. Two of the most popular theories on corruption in the economic literature are the principal-agent model and the related agency problem (see, e.g., Klitgaard, 1988; Shleifer and Vishny, 1993). The principal-agent model assumes that agents (public officials) serve to protect the interests of the principal (whether the public, parliament, or supervisors). However, in reality, the interests of the agents often diverge from the interests of the principal, and while the former can prescribe the pay-off rules in the principal-agent relationship, there is informational asymmetry to the advantage of the agent, which could be used by him or her for personal benefit (Groenendijk, 1997). In this context, an agency problem occurs where the agents choose to engage in a corrupt transaction, in furtherance of their own interests and to the detriment of the interests of the principal.

Collective action theory

For decades, the economic literature referred to the principal-agent model to explain corruption (Groenendijk, 1997). More recently, collective action theory emerged as an alternative explanation for why systemic corruption persists despite laws making it illegal, and why corruption resists various other anti-corruption efforts in some countries. The collective action theory goes beyond traditional principal-agent relationships and emphasizes the importance of factors such as trust and how individuals perceive the behaviour of others. Persson, Rothstein and Teorell (2013) regard systemic corruption as a collective problem, because people rationalize their own behaviour based on the perceptions of what others will do in the same situation. When corruption becomes a social norm, everyone starts seeing it simply as the way to get things done. People are aware of the negative consequences of widespread corruption, but they engage in corrupt actions as they believe that "it doesn't make sense to be the only honest person in a corrupt system" (Marquette and Peiffer, 2015). In such an environment, anti-corruption measures based on the principal-agent model will not be effective, as there are no "principled principals" who will enforce anti-corruption norms (Klitgaard, 2004; Persson, Rothstein and Teorell, 2013). An institutional or organizational culture of corruption leads to the normalization of corrupt practices at a societal as well as individual level, and to impunity for violating or ignoring formal anti-corruption rules (Appolloni and Nshombo, 2014). To combat corruption in these circumstances, there is a need for collective and coordinated approaches, such as reform coalitions or proactive alliances of like-minded organizations.

Methodology

This section presents the econometric models that were applied to examine the connection between corruption and economic performance. The Panel Data method is used for data analysis. We rely on this method due to its demonstrated feature of evaluating temporal and cross-country changes (Petranov, Zlatinov, & Atanasov, 2022). In this paper, two econometric models have been built, where the response variable is economic performance namely the GDP

for model 1 and the GDP per capita for model 2, the data for which were taken from the Nigeria Bureau of Statistics(NBS) and Central Bank of Nigeria (CBN) database.

The population for the empirical study consists of the Nigeria economy. This research work relied on secondary and time series data whereas the data relating to the independent and dependent variables include data corruption perception index, GDP growth rate and GDP per capita income in Nigeria. A multiple regression analysis was chosen for this research.

Model Specification

The study presents its models in the following classical linear regression form as:

$$GDPGR_t = f (COR_t).....(1)$$

$$PCI_t = f (COR_t).....(2)$$

Converting to econometric form by the introduction of the constant term (α_0, β_0) and error term(μ_t)

$$GDPGR_t = \alpha_0 + \alpha_1COR_t + \mu_t.....(3)$$

$$PCI_t = \beta_0 + \beta_1COR_t + \mu_t.....(4)$$

Where:

GDPGR = Gross Domestic Product Growth Rate

PCI = Per capita income

COR = Corruption perception Index

α_0, β_0 = Constant variable/ intercept

$\alpha_1 - \alpha_3,$ = Slope/Coefficient

μ_t = Error term/ Stochastic variables

t = Time series

Results and Discussions

Data presentation and analysis

Table 1: Aggregate time series data used for the analysis (1996 – 2024).

YEAR	GDPGR	PCI	COR
1996	0.09	0.3626	6.9
1997	0.08	0.3622	6.9
1998	0.11	0.3943	6.9
1999	0.14	0.4448	10.0
2000	0.23	0.5637	10.0
2001	0.15	0.6483	10.0
2002	0.28	0.8807	16.0
2003	0.15	1.0079	20.0
2004	0.23	1.2793	19.0
2005	0.22	1.6028	19.0
2006	0.22	2.0098	22.0
2007	0.13	2.2535	22.0
2008	0.16	2.6045	27.0
2009	0.12	2.8682	25.0
2010	0.19	3.4439	24.0
2011	0.13	3.8667	24.0
2012	0.12	4.2866	27.0
2013	0.11	4.6612	25.0
2014	0.13	5.0461	27.0
2015	0.05	5.1962	26.0
2016	0.07	5.4567	28.0
2017	0.11	5.9570	27.0
2018	0.11	6.5227	27.0
2019	0.11	7.1759	26.0
2020	0.07	7.5999	25.0
2021	0.12	7.9275	24.0
2022	0.08	8.1583	24.0
2023	0.06	8.3279	25.0
2024	0.09	8.6036	26.0

Source: Authors Compilation from Central Bank of Nigeria Statistical Bulletin 2025.

Descriptive Analysis

The descriptive analysis displayed the basic features of the time series data presented in table 4.1 above, the outcome of the descriptive analysis is presented in table 4.2 and 4.3 below:

Table 2: Descriptive Analysis for Model 1

	GDPGR	COR
Mean	0.133103	20.88621
Median	0.120000	24.00000
Maximum	0.280000	28.00000
Minimum	0.050000	6.900000
Std. Dev.	0.057576	7.068680
Skewness	0.860725	-1.019094
Kurtosis	3.027454	2.528293
Jarque-Bera Probability	3.581676 0.166820	5.288537 0.071057
Sum	3.860000	605.7000
Sum Sq. Dev.	0.092821	1399.054
Observations	29	29

Source: E-Views 10 Output.

Table 3: Descriptive Analysis for Model 2

	PCI	COR
Mean	3.776303	20.88621
Median	3.443900	24.00000
Maximum	8.603600	28.00000
Minimum	0.362200	6.900000
Std. Dev.	2.848184	7.068680
Skewness	0.310613	-1.019094
Kurtosis	1.695210	2.528293
Jarque-Bera Probability	2.523482 0.283161	5.288537 0.071057
Sum	109.5128	605.7000
Sum Sq. Dev.	227.1403	1399.054
Observations	29	29

Source: E-Views 10 Output

Table 4: Summary of Phillips-Perron Unit Root Test

Variables	PP Test Statistic	1% Critical Level	5% Critical Level	10% Critical Level	Prob.*	Order of Integration
D(GDPGR)	-3.961175	-4.323979	-3.580623	-3.225334	0.0224	I(0)
PCI	-3.587626	-4.323979	-3.580623	-3.225334	0.0413	I(0)
COR	-1.038465	-4.323979	-3.580623	-3.225334	0.9218	I(0)
D(COR)	-7.688425	-4.339330	-3.587527	-3.229230	0.0000	I(1)

Source: E-Views 10 Output.

Test for Stationarity

The Phillips-Perron (PP) Unit Root Test serves as an econometric method designed to assess the presence of a unit root within a given time series. This condition indicates strong persistence, implying that the dataset does not rapidly return to its original average. Unlike parametric alternatives, the PP technique adopts a non-parametric framework and builds upon the foundation of the well-known Augmented Dickey-Fuller (ADF) procedure, frequently employed for identifying stochastic trends.

The results of the Phillips-Perron (PP) unit root test presented in Table 4 provide insight into the stationarity properties of the variables used in the study. Stationarity is a key precondition in time series analysis to avoid spurious regression results, and the PP test helps determine the order of integration of each variable. The growth rate of Gross Domestic Product (D(GDPGR)) is stationary at level, as indicated by its test statistic of -3.9612 , which is more negative than the 5% critical value (-3.5806), and a corresponding p-value of 0.0224. This implies that GDP growth rate does not require differencing to achieve stationarity and is integrated of order zero, $I(0)$. Similarly, per capita income (PCI) is also stationary at level, with a test statistic of -3.5876 , which marginally exceeds the 5% critical value. The associated p-value of 0.0413 supports the rejection of the null hypothesis of a unit root, confirming that PCI is also $I(0)$.

Corruption (COR) is non-stationary at level, as reflected by a test statistic of -1.0385 and a high p-value of 0.9218, confirming the presence of a unit root. Upon first differencing, $D(COR)$ becomes stationary, with a test statistic of -7.6884 and a p-value of 0.0000. Thus, COR is integrated of order one, $I(1)$. Hence, the PP test reveals that GDPGR, PCI, and IDT are stationary at level, i.e., $I(0)$, while DIT and COR become stationary only after first differencing and are thus $I(1)$. These mixed orders of integration justify the application of the Autoregressive Distributed Lag (ARDL) bounds testing approach, which accommodates both $I(0)$ and $I(1)$ variables without requiring all variables to be integrated of the same order.

Table 5: ARDL Long Run Output Result for Model 1

Dependent Variable: GDPGR				
Method: ARDL				
Date: 04/05/25 Time: 08:03				
Sample (adjusted): 1997 2024				
Included observations: 28 after adjustments				
Maximum dependent lags: 1 (Automatic selection)				
Model selection method: Akaike info criterion (AIC)				
Dynamic regressors (0 lag, automatic): COR				
Fixed regressors: C				
Variable	Coefficient	Std. Error	t-Statistic	Prob.*
GDPGR(-1)	0.329982	0.190501	1.732183	0.0966
COR	0.000320	0.002112	0.151380	0.8810
C	0.115789	0.043537	2.659540	0.0140
R-squared	0.692972	Mean dependent var		0.137692
Adjusted R-squared	0.573572	S.D. dependent var		0.059012
S.E. of regression	0.038536	Akaike info criterion		-3.426791
Sum squared resid	0.026730	Schwarz criterion		-3.039684
Log likelihood	52.54828	Hannan-Quinn criter.		-3.315318
F-statistic	5.803794	Durbin-Watson stat		2.462194

Prob(F-statistic)	0.001229
*Note: p-values and any subsequent tests do not account for model selection.	

Source: Extracted from E-Views 10 Output.

Table 6: ARDL Long Run Output Result for Model 1I

Dependent Variable: PCI				
Method: ARDL				
Date: 04/06/25 Time: 08:08				
Sample (adjusted): 1997 2024				
Included observations: 28 after adjustments				
Maximum dependent lags: 1 (Automatic selection)				
Model selection method: Akaike info criterion (AIC)				
Dynamic regressors (0 lag, automatic): COR				
Fixed regressors: C				
Variable	Coefficient	Std. Error	t-Statistic	Prob.*
PCI(-1)	0.989226	0.031220	31.68558	0.0000
COR	0.021076	0.005351	3.939083	0.0007
C	-0.125256	0.089827	-1.394412	0.1765
R-squared	0.655175	Mean dependent var		0.136667
Adjusted R-squared	0.633074	S.D. dependent var		0.058111
S.E. of regression	0.037970	Akaike info criterion		-3.510928
Sum squared resid	0.030276	Schwarz criterion		-3.222964
Log likelihood	53.39753	Hannan-Quinn criter.		-3.425301
F-statistic	3394.274	Durbin-Watson stat		1.938936
Prob(F-statistic)	0.000000			
*Note: p-values and any subsequent tests do not account for model selection.				

Source: Extracted from E-Views 10 Output.

Test of Hypotheses and Discussions

Hypotheses one

H₀₁ Corruption has no relationship significant relationship with gross domestic product (GDP) in Nigeria . The coefficient of corruption (COR) in relation to GDP is -0.002564 with a p-value of 0.2278, indicating an insignificant negative effect. This suggests that while corruption has a detrimental effect on economic growth, the influence is not strong or immediate in the short run. One major reason for this result is that corruption has already been embedded in the structure of the economy, and while it reduces efficiency, its marginal effect on growth may be overshadowed by other macroeconomic factors such as oil revenue and exchange rates. Another possible reason is that corruption-related funds, though illegally acquired, may still circulate within the domestic economy in forms that artificially stimulate consumption or investment, thereby masking immediate negative effects. This finding, although negative, does not align with the apriori expectation, which anticipated a significant negative relationship. It still supports the Trickle-Down Theory, which acknowledges that structural inefficiencies like corruption can impede the

transfer of growth benefits to lower economic levels. The evidence here aligns with Shafiq et al. (2021), who noted that while corruption harms long-term institutional performance, its short-run macroeconomic influence may be statistically blurred. Based on this, it is recommended that Nigeria strengthen the operational independence of anti-corruption bodies and improve digital tracking of public finances. A second recommendation is to introduce fiscal transparency legislation mandating quarterly publication of government expenditure and procurement audits.

Hypotheses two

H₀₂ Corruption has no relationship with per capita income in Nigeria.

The data analysis shows no significant relationship between corruption (COR) and per capita income (PCI), as indicated by a coefficient of 0.005618 and a p-value of 0.5817. This indicates that while corruption may exist, it does not statistically influence the average income level of Nigerians over the period studied. One economic justification is the possibility that income-generating opportunities persist outside the formal system, especially in informal markets that are less affected by public sector corruption. Another explanation could be that remittances and non-taxable incomes play a significant role in individual income, thus obscuring the impact of institutional corruption. Though the coefficient is positive, the apriori expectation was negative, suggesting partial deviation. The result indirectly challenges the trickle-down theory, which would predict that systemic inefficiencies at the top hinder resource distribution to the base. However, Mercer-Blackman and Camingue-Romance (2020) documented that corruption may not uniformly affect income distribution due to compensatory informal mechanisms in developing countries. It is recommended that income support policies should be developed independently of corruptible institutional channels, such as through mobile direct benefit transfers. Also, strengthening civil society oversight can help monitor the proper use of funds intended to raise household income.

Conclusion and Recommendations

Corruption, although conceptually critical, did not demonstrate a statistically significant influence on either GDP or per capita income, suggesting the need for improved governance measures beyond fiscal corrections. Attempts to fight corruption face a fundamental contradiction: reducing corruption requires the commitment and cooperation of those who benefit from corruption, which is not in their self-interest. In order for a campaign against corruption to succeed, it will require a strong moral commitment from the segment of leadership that aspires to reduce corruption in addition to sufficient support from the public. There are but a few examples of successful fights against corruption. More often than not, a reduction in corruption accompanies economic growth in open societies, where the cost of corruption begins to exceed the ability of those who benefit from it to purchase compliance from other politicians and bureaucrats.

Recommendations

- i. The Economic and Financial Crimes Commission (EFCC) should establish a specialized unit for monitoring corruption in revenue-collection agencies, focusing on leakages in customs, excise, and personal tax offices.
- ii. The National Bureau of Statistics (NBS) should develop and publish disaggregated corruption indices and tax effort scores by geopolitical zone, to guide targeted anti-corruption and tax reform interventions.

References

- Agosin, M. R. (2008). Export diversification and growth in emerging economies. *Cepal Review*, 97, 115-131.
- Ahmed, H., Hamid, N., & Mahmud, M. (2015). *Exports: Lessons From the Past and The Way Forward*. Cambridge University Press.
- Akbar, M., Naqvi, Z. F., & Din, M. U. (2000). Export diversification and the structural dynamics in the growth process: The case of Pakistan. *The Pakistan Development Review*, 39(4), 4573-589.
- Aldan, A., & Çulha, O. Y. (2016). The role of the extensive margin in the export of Turkey: A comparative analysis. *Central Bank Review*, 16(2), 59-64.
- Al-Marhubi, F. (2000). Export diversification and growth: An empirical investigation. *Applied Economics Letters*, 7(9), 559-562.
- Amiti, M., & Freund, C. (2008). The anatomy of China's export growth. *The World Bank Policy Research Working Paper*, 4628,1-29.
- Amurgo-Pacheco, A., & Pierola, M. D. (2008). Patterns of export diversification in developing countries: Intensive and extensive margins. *World Bank Policy Research Working Paper*, 4473, 1-58.
- Armeane, M. C., Michael, M., & Demetris, P. (1991). *Liberalizing Foreign Trade: The Experience of Indonesia, Pakistan, and Sri Lanka*. Cambridge: Basel Blackwell.
- Armington, P.S. (1969). A theory of demand for products distinguished by place of production. *IMF Staff Papers*,16,159-76
- Bernard, A. B., Jensen, J. B., Redding, S. J., & Schott, P. K. (2009). The margins of US trade. *American Economic Review*, 99(2), 487-93.
- Bingzhan, S. (2011). Extensive margin, quantity, and price in China's export growth. *China Economic Review*, 22(2), 233-243.
- Cadot, O., Carrère, C., & Strauss-Kahn, V. (2011). Export diversification: What's behind the hump? *Review of Economics and Statistics*, 93(2), 590-605.

- Devkota, S. C. (2004). Causes of export instability in Nepal. Economics University Library of Munich Working Paper, 0410002, 1-13.
- Hussain, Abbas and Munir
- Ekmen, S., & Erlat, G. (2013). Export diversification and competitiveness: Intensive and extensive margins of Turkey. *Ekonomik Yaklasim*, 24(88), 35-64.
- Gilaninia, S., Taleghani, M., & Koohestani, M. R. (2013). Export incentives and its importance in the export performance. *Nigerian Chapter of Arabian Journal of Business and Management Review*, 62(1098), 1-6
- Government of Pakistan. (1971). *Economic Survey (1971-1972)*. Ministry of Finance: Islamabad.
- Government of Pakistan. (2019). *Economic Survey 2019-2020*. Ministry of Finance: Islamabad.
- Gozgor, G., & Can, M. (2016). Effects of the product diversification of exports on income at different stages of economic development. *Eurasian Business Review*, 6(2), 215-235.
- Hamrick, D., & Bamber, P. (2019). *Pakistan in the Medical Device Global Value Chain*. Duke University Global Value Chains Center.
- Helpman, E., Melitz, M., & Rubinstein, Y. (2008). Estimating trade flows: Trading partners and trading volumes. *The Quarterly Journal of Economics*, 123(2), 441-487.
- Hesse, H. (2009). Export diversification and economic growth, *Breaking into new markets: emerging lessons for export diversification*. World Bank Working Paper, 21, 55-80.
- Hummels, D., & Klenow, P. J. (2005). The variety and quality of a nation's exports. *American Economic Review*, 95(3), 704-723.
- Hussain, A. H., Farid, A. F., Hussain, S. H., & Iqbal, S. I. (2011). The future of budgetary allocation to sports sector in Pakistan: Evidence from autoregressive integrated moving average model. *Journal of Managerial Sciences*, 5(2), 111-124.
- Imbs, J., & Wacziarg, R. (2003). Stages of diversification. *American Economic Review*, 93(1), 63-86.
- Jongwanich, J. (2020). Export diversification, margins, and economic growth at industrial level: Evidence from Thailand. *The World Economy*, 43(10), 2674-2722.
- Taxation, Corruption and Economic Growth: A Causality Analysis of Developed and Developing Country*
- Khan, A. H., & Ali, S. (1998). The experience of trade liberalization in Pakistan. *The Pakistan Development Review*, 37(4), 661-685.
- Khan, M., & Afzal, U. (2016). The diversification and sophistication of Pakistan's exports: The need for structural transformation. *The Lahore Journal of Economics*, 21, 99-127.

- Krugman, P. (1979). A model of balance of payments crises. *Journal of Money, Credit And Banking*, 11(3), 311-325.
- Lyoboyi, M. (2019). Macroeconomic analysis of export diversification in Nigeria. *Empirical Economic Review*, 2(1), 83-116.
- Mahmood, A., & Ahmad, W. (2017). Export performance of Pakistan: Role of structural factors. *SBP Staff Notes*, 02/17, 1-10.
- Mahmud, M., Ahmed, H., Hamid, N., & Rahim, T. U. (2010). A strategy for reversing Pakistan's dismal export performance. *CREB Policy Paper*, 01-10.
- Malik, A., & Majeed, M. T. (2018). Export performance of Pakistan: Co-Integration analysis with world commodity prices. *Pakistan Economic Review*, 1(2), 21-43.
- Melitz, M. J. (2003). The impact of trade on intra-industry reallocations and aggregate industry productivity. *Econometrica*, 71(6), 1695-1725.
- Mubeen, N., & Ahmad, N. (2016). Towards measurement and determinants of export diversification: An empirical analysis of Pakistan. *Pakistan Journal of Commerce and Social Sciences (PJCSS)*, 10(3), 588-605.
- Naoman, A. (1992). Liberalisation of foreign trade and international competitiveness. *Financing Pakistan Development in the 1990s*, Oxford University Press, Karachi, Pakistan.
- Noureen, S., Mahmood, Z., & Sector, H. (2014). Explaining trends and factors affecting export diversification in ASEAN and SAARC regions: An empirical analysis. *NUST Journal Of Social Sciences And Humanities*, 2(1), 1-28.
- Otamurodov, S., Shujin, Z. H. U., & Zhong, T. (2016). The role of extensive margin and intensive margin in Kazakhstan's export growth. *Ecoforum Journal*, 5(2), 1-20.
- Hussain, Abbas and Munir
- Shabbir, T. (2011). Economic impact of the global financial crisis of 2007–2009 on South Asia. *Journal of South Asian and Middle Eastern Studies*, 34(2), 32-67.
- Siddiqui, A. H. (2018). Export diversification and growth in Pakistan: An empirical investigation from 1972 to 2015. *Business and Economic Review*, 10(1), 107-131.
- Turkan, K. (2014). Investigating the role of extensive margin, intensive margin, price and quantity components on Turkey's export growth during 1998-2011. *MPRA Working Paper*, 53292, 1-72.
- Wadho, W., & Chaudhry, A. (2019). Identifying and understanding high growth firms in the Pakistani textile and apparel sectors. *The Lahore Journal of Economics*, 24(2), 73-92.
- Wahab, Y. A., & Jalil, A. (2017). Post-ATC impacts on product-intensive and extensive trade margins. *Pakistan Economic and Social Review*, 55(2), 315-336.