

THE EFFECTS OF CORRUPTION IN ECONOMIC GROWTH IN NIGERIA

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**BEING A PROJECT SUBMITTED TO THE DEPARTMENT OF ECONOMICS, IN
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CERTIFICATION

We certify that this project was carried out by **ONOSE OLU-ARIGAME** with Matriculation Number: **SSC2003937** of the Department of Economics, Faculty of Social Sciences, University, Benin City, Edo State, Nigeria and has not been presented in part or full in any diploma or degree awarding institution.

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DEDICATION

This research work is dedicated to Almighty God and to my lovely parents Mr. and Mrs. Olu-Arighame, my siblings for their love and support. May God Almighty bless you abundantly.

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This journey would not have ended a success if not for God and the people He used along the way. It's my earnest intention to express my profound gratitude to Almighty God, my shield and sustainer, for His unfailing grace and directions throughout this process.

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ABSTRACT

This study examines Nigeria using annual time series data from 1996 to 2022. The study is anchored on the Institutional Economics Theory, particularly as advanced by North (1990), and the Keynesian Growth Framework. These theories provide the foundation for explaining how corruption influences economic performance through weak institutions, inefficient allocation of resources, and reduced investment incentives.

The Autoregressive Distributed Lag (ARDL) model was employed to capture both short run and long run dynamics among the variables. The unit root test results indicate a mixed order of integration, justifying the use of the ARDL approach. The bounds test results show the existence of a long run relationship in the domestic investment model, while no cointegration is found in the economic growth model. The short run results reveal that corruption has no statistically significant effect on economic growth in Nigeria. For domestic investment, corruption shows a weak negative effect in the short run but becomes insignificant in the long run. Labour force is found to have a positive and significant effect on domestic investment, while government expenditure shows mixed effects across the models. Diagnostic tests confirm that both models are generally well specified, stable, and free from serial correlation and heteroskedasticity, although the GDP growth model exhibits non-normal residuals.

The study concludes that corruption does not have a direct and significant effect on economic growth in Nigeria and only has a limited short-run effect on domestic investment. It therefore recommends that policy efforts should focus not only on anti-corruption measures but also on broader institutional reforms, labour productivity enhancement, and efficient public expenditure management to promote sustainable economic development.

Keywords: Corruption, Economic Growth, Domestic Investment, ARDL, Nigeria, Institutional Economics, Keynesian Growth Framework.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Corruption, often described as the abuse of entrusted power for private gain, is a significant barrier to economic growth and development in many countries, particularly in Nigeria. Despite being one of Africa's largest economies and endowed with abundant natural and human resources, Nigeria has been unable to fully realize its economic potential due to the pervasive influence of corruption. This issue, deeply rooted in the country's political, social, and economic structures, has far-reaching consequences that undermine governance, discourage investment, and exacerbate poverty. Transparency International consistently ranks Nigeria among the most corrupt nations globally, which reflects the gravity of the problem (Transparency International, 2021).

Corruption in Nigeria manifests in various forms, including bribery, embezzlement, nepotism, and mismanagement of public funds. Its economic impact is significant, as it undermines public trust, distorts resource allocation, and impedes sustainable development (Transparency International, 2023; World Bank, 2020). Misappropriation of public resources often diverts funds away from critical sectors such as education, healthcare, and infrastructure, thereby exacerbating poverty and inequality (UNDP, 2021). One of the most affected sectors is Nigeria's oil and gas industry, which serves as the backbone of the country's economy. The sector is plagued by systemic corruption, including illegal oil bunkering, revenue mismanagement, and bribery,

resulting in massive financial losses. A report by BudgIT (2019) estimated that Nigeria lost approximately \$15 billion annually to oil theft and corruption-related activities. These losses not only reduce government revenue but also hinder efforts to diversify the economy and reduce dependence on oil. The lack of accountability in this sector perpetuates inefficiencies, making it difficult for the country to achieve economic stability. Corruption creates an unfavorable business environment characterized by high costs and unpredictability. Investors are deterred by the need to navigate complex bureaucratic systems often riddled with demands for bribes. As a result, Nigeria loses valuable opportunities for economic expansion and job creation, further exacerbating unemployment and underdevelopment. Akinpelu et al. (2017) highlighted that countries with high levels of corruption experience reduced investor confidence, which stifles economic growth and innovation.

The public sector is also severely affected, with corruption undermining the delivery of essential services. Funds allocated to education and healthcare are frequently misappropriated, resulting in dilapidated schools, poorly equipped hospitals, and insufficient medical personnel. These deficiencies weaken human capital development, which is critical for long-term economic growth. For instance, Adekunle and Okoro (2020) observed that corruption in the healthcare sector in Nigeria contributes to high maternal and infant mortality rates, as resources meant for improving healthcare infrastructure are often siphoned off by corrupt officials.

Corruption also weakens institutions that are supposed to safeguard the economy, such as the judiciary, law enforcement agencies, and anti-corruption bodies. When these institutions are

compromised, they fail to hold corrupt individuals accountable, allowing impunity to thrive. Oluwabamide and Obafemi (2019) argue that the lack of strong enforcement mechanisms and the politicization of anti-corruption efforts further entrench corruption in Nigeria. This institutional failure creates a vicious cycle where corrupt practices continue to flourish, further destabilizing the economy. Corruption exacerbates income inequality, as wealth is concentrated in the hands of a privileged few, leaving the majority in poverty, this inequality fuels social unrest and undermines public trust in governance, making it difficult to implement effective policies.

Additionally, corruption stifles innovation and productivity by creating an environment where merit and competence are often disregarded in favor of nepotism and favoritism (Mauro, 1995; World Bank, 2020). Corruption is a pervasive issue that poses a significant threat to Nigeria's economic stability and development (Transparency International, 2023). Its effects are felt across all sectors, from public services to private investments, and its impact is particularly pronounced in critical areas such as education, healthcare, and infrastructure (United Nations Development Programme [UNDP], 2021).

Addressing corruption requires a comprehensive approach that includes strengthening institutions, promoting transparency, and fostering a culture of accountability (North, 1990; World Bank, 2020). By tackling corruption, Nigeria can unlock its economic potential, improve public trust, and set the foundation for sustainable development (Transparency International, 2023; UNDP, 2021).

This study aims to explore these economic effects in detail, shedding light on the complex interplay between corruption and economic underperformance while providing actionable recommendations for combating this persistent issue.

1.2 Statement of the Problem

Corruption has remained one of the most critical challenges impeding Nigeria's economic growth and development (Transparency International, 2023; World Bank, 2020). Despite being endowed with vast natural and human resources, Nigeria continues to grapple with pervasive corruption that undermines its ability to achieve sustainable progress (UNDP, 2021). The economic effects of corruption are deeply entrenched, affecting public service delivery, discouraging investment, and exacerbating poverty and inequality (Mauro, 1995; Gupta et al., 2002). These issues persist despite numerous anti-corruption initiatives and policy interventions (ICPC, 2022; EFCC, 2022).

Public funds meant for essential services such as education, healthcare, and infrastructure are frequently diverted through corrupt practices, leaving citizens to suffer from substandard or non-existent services (World Bank, 2020; UNDP, 2021). For example, schools remain underfunded, hospitals lack critical supplies, and infrastructure projects are abandoned due to misappropriation of funds (Transparency International, 2023). This misuse not only denies Nigerians access to basic services but also hampers the country's human capital development, a critical driver of long-term economic growth (Becker, 1993; UNDP, 2021).

Corruption also stifles economic opportunities by discouraging foreign and domestic investments. A business environment plagued by bribery, nepotism, and lack of accountability deters investors, leading to decreased economic activities and higher unemployment rates (Mauro, 1995; World Bank, 2020). Furthermore, corruption in key revenue-generating sectors, such as the oil and gas industry, has resulted in massive financial losses. Reports suggest that billions of dollars are lost annually due to oil theft, fraud, and mismanagement, depriving the country of resources needed for economic diversification and development (Nigeria Extractive Industries Transparency Initiative [NEITI], 2021; World Bank, 2020).

Another critical concern is the erosion of public trust in governance and institutions. The failure of anti-corruption agencies to effectively curb corruption has fostered a culture of impunity, where perpetrators are rarely held accountable (ICPC, 2022; EFCC, 2022). This lack of accountability undermines the credibility of institutions, weakens the rule of law, and perpetuates systemic corruption (North, 1990; Kaufmann et al., 2010). The persistence of these problems has far-reaching implications for Nigeria's economic and social stability.

Corruption deepens inequality, fuels social unrest, and creates a cycle of underdevelopment that leaves the country unable to meet its full potential (Gupta et al., 2002; UNDP, 2021). Addressing these issues is imperative, as failure to curb corruption will continue to hinder Nigeria's progress, erode public confidence, and exacerbate socio-economic disparities (Transparency International, 2023). This study seeks to investigate the economic effects of corruption in Nigeria, with a focus on understanding its impact on key sectors, identifying the underlying causes, and exploring

potential solutions to mitigate its adverse consequences. By doing so, it aims to contribute to the discourse on combating corruption and fostering sustainable economic growth in Nigeria.

1.3 Research Questions

In light of the above, this study seeks to answer the following research questions:

1. Does corruption affect economic growth in Nigeria?
2. To what extent does corruption influence domestic investment in Nigeria

1.4 Objectives of the Study

The main objective of this study is to examine the economic effects of corruption in Nigeria. The specific objectives are to:

1. examine the effect of corruption on Nigeria's economic growth, and
2. assess the influence of corruption on domestic investment in Nigeria.

1.5 Research Hypotheses

1. Corruption does not affect economic growth in Nigeria.
2. Corruption does not affect domestic investment in Nigeria

1.6 Significance of the Study

The significance of this study lies in its potential to shed light on one of Nigeria's most persistent and damaging challenges: corruption and its far-reaching economic effects. Corruption has long been identified as a significant impediment to sustainable development in Nigeria, but understanding its specific economic implications is crucial for designing effective interventions. This study aims to provide valuable insights that will benefit policymakers, academics, and the

general public. For policymakers, the findings of this research can offer evidence-based recommendations to combat corruption and improve governance. By identifying the sectors most affected by corruption and analyzing its impact on economic growth and resource utilization, the study will provide a foundation for creating targeted policies and reforms that enhance transparency, accountability, and public sector efficiency.

For academics and researchers, the study contributes to the growing body of literature on corruption, particularly in developing countries like Nigeria. It will serve as a valuable resource for future studies, helping to deepen the understanding of corruption's role in economic stagnation and underdevelopment. The research findings can stimulate further exploration of innovative strategies to combat corruption and foster sustainable growth. The study is also significant for the general public, as it highlights the tangible consequences of corruption on their everyday lives. By drawing attention to how corruption diverts resources meant for essential services such as healthcare, education, and infrastructure, this research emphasizes the urgency of collective action in addressing the issue. It aims to raise awareness and encourage active citizen participation in holding leaders accountable. The study aspires to bridge the gap between knowledge and action by providing practical solutions to mitigate the economic effects of corruption. Through its findings and recommendations, it seeks to contribute to Nigeria's quest for improved governance, economic stability, and sustainable development. This work is particularly important in the current context of Nigeria's ongoing struggles to overcome corruption, as its eradication is critical for unlocking the nation's full potential.

1.7 Scope of the Study

This study focuses on examining the economic effects of corruption in Nigeria, with particular emphasis on its impact on economic growth. The geographical scope of this study is limited to Nigeria, with an emphasis on understanding the systemic nature of corruption within the country's socio-economic and political framework

CHAPTER TWO

LITERATURE REVIEW

2.1 Conceptual Review

2.1.1 Corruption

Corruption has long been recognized as a significant barrier to economic growth and development, particularly in developing countries like Nigeria. It refers to the abuse of power for personal gain, often manifesting in bribery, embezzlement, nepotism, and favoritism. The economic effects of corruption are wide-ranging and detrimental, influencing several facets of a nation's economy, including government efficiency, investment, resource allocation, and poverty reduction. At its core, corruption distorts economic processes by diverting public resources away from their intended purposes. It leads to the misallocation of resources, inefficient public spending, and diminished public services, thereby hampering economic growth. Several studies have shown that corruption leads to a rise in transaction costs, which significantly impedes the smooth functioning of markets (Oluwatoyin & Temidayo, 2017). High transaction costs, driven by bribery and other forms of corruption, make it difficult for businesses to operate effectively, thus discouraging both domestic and foreign investment.

Corruption also negatively impacts the quality of public infrastructure. In Nigeria, where corruption is pervasive in the public sector, the allocation of funds for infrastructure development is often siphoned off by corrupt officials. As a result, critical infrastructure projects such as roads, hospitals, and schools remain underdeveloped, contributing to the nation's economic

stagnation. According to Ayodele and Atanda (2020), the Nigerian oil sector, for instance, suffers significantly from corruption, leading to inefficient resource extraction and processing, reduced revenue generation, and poor service delivery. One of the most severe consequences of corruption is its impact on poverty alleviation efforts. Corruption leads to the diversion of development aid and public funds meant for poverty-reduction programs, leaving vulnerable populations without adequate social safety nets. In Nigeria, this manifests in insufficient public health services, poor educational opportunities, and inadequate social welfare programs, all of which exacerbate socio-economic inequalities (Uzochukwu et al., 2019). This creates a vicious cycle where corruption perpetuates poverty and impedes the growth of human capital, which is essential for long-term economic prosperity.

Corruption undermines the effectiveness of governance and institutions, leading to a lack of trust in public authorities. When people perceive their leaders as corrupt, they are less likely to comply with laws, pay taxes, or participate in the democratic process, which ultimately weakens the state's ability to function effectively. A study by Olugbenga et al. (2016) demonstrated that corruption erodes the capacity of state institutions to regulate the economy, further deepening the challenges faced by the Nigerian economy. In the global context, empirical research indicates that countries with high levels of corruption often face slower economic growth and less development. Corruption reduces the efficiency of government spending, discourages investment, and fosters inequality, all of which hinder the potential for sustained economic development (Rodrik, 2018). Studies by Global Financial Integrity (2017) also highlight those

illicit financial flows caused by corruption result in significant losses of national wealth, stunting economic growth in resource-rich countries like Nigeria.

It is essential to note that while corruption has widely acknowledged negative economic effects, the severity of these effects depends on various factors, including the level of institutional development, the political will to address corruption, and the country's overall governance framework. Nigeria's ongoing struggle with corruption underscores the critical need for comprehensive reforms to enhance transparency, accountability, and efficient resource management to mitigate its economic consequences (Ajakaiye & Adeyemi, 2018). The economic effects of corruption in Nigeria are profound and multifaceted. Corruption not only diverts resources away from public welfare but also discourages investment, depletes public services, and perpetuates socio-economic inequalities. To address these issues, it is crucial to implement robust anti-corruption policies and improve governance structures to restore public trust and stimulate sustainable economic growth.

Sectorial Analysis of Corruption in Nigeria

Corruption remains a major impediment to the development and effective functioning of various sectors in Nigeria's economy. The effects are particularly profound in key sectors such as oil and gas, education, healthcare, and agriculture, which not only suffer from mismanagement but also become breeding grounds for systemic inefficiency and inequity. The pervasive nature of corruption in these sectors exacerbates Nigeria's socio-economic challenges, perpetuating poverty and underdevelopment. The oil and gas sector, a critical contributor to Nigeria's economic performance, is deeply entangled in corruption. As a primary source of government

revenue, the sector is highly susceptible to malpractice, including oil theft, illegal bunkering, and fraudulent contracts. A significant portion of the country's oil wealth is siphoned off through corrupt practices that limit the benefits of Nigeria's vast oil reserves. Mismanagement of these resources has led to inefficiencies and lost revenues, which could have been channeled into the development of other vital sectors. Inadequate regulation, coupled with corruption, discourages foreign and domestic investment, which in turn stifles the sector's potential for growth. Despite Nigeria's ranking as one of the world's largest oil producers, its inability to fully capitalize on its oil wealth is a stark reflection of how corruption hinders the nation's overall development (Akinyemi, 2017).

Corruption in Nigeria's education sector manifests in multiple forms, ranging from the misappropriation of funds meant for infrastructure development to the diversion of scholarships and grants. Public institutions, particularly universities, suffer from a lack of resources, with many operating under poor conditions due to the mismanagement of allocated funds. The misallocation of educational resources often results in overcrowded classrooms, inadequate learning materials, and poorly maintained facilities. Furthermore, systemic corruption leads to widespread inefficiencies, such as the sale of exam results, favoritism in admissions, and the diversion of government funds meant for educational reforms. These practices severely limit access to quality education, particularly in underserved areas, and contribute to the deterioration of the nation's human capital. The consequences of these corrupt activities hinder Nigeria's capacity to meet its educational goals and, by extension, its development objectives (Olusanya, 2018). The healthcare sector, another area significantly impacted by corruption, faces challenges

that affect the quality and accessibility of healthcare services across Nigeria. Corruption within the healthcare system manifests through the diversion of funds allocated for medical supplies, infrastructure, and personnel development. Funds intended for essential services, such as purchasing medicines and medical equipment, are often embezzled, leading to shortages of critical resources. As a result, patients are denied access to life-saving treatments, and the health system struggles to provide quality care. In addition, healthcare workers in some regions may not receive the necessary training or equipment to perform their duties effectively. This widespread corruption deepens the gap in healthcare service delivery, particularly in rural areas, where access to even basic health services is limited. The failure of the healthcare system due to corruption contributes directly to poor health outcomes, including high infant and maternal mortality rates (Transparency International, 2017, Adelaja, 2019).

Corruption in the agriculture sector is equally damaging, with significant consequences for food security and economic growth. Mismanagement of agricultural funds, subsidies, and loans intended to support farmers often results in the misallocation of resources, depriving the sector of much-needed investment. Corrupt practices within government agencies that oversee agricultural programs further exacerbate the situation by diverting resources away from initiatives that could improve food production, create jobs, and enhance rural livelihoods. As a result, Nigeria continues to struggle with issues of food insecurity, poverty, and low productivity in the agriculture sector. Despite the potential for agriculture to contribute significantly to the country's economic diversification, corruption in this sector has impeded progress, leaving many Nigerians dependent on imports for basic foodstuffs (FAO, 2019). The systemic corruption across these

key sectors highlights a critical issue for Nigeria: the need for comprehensive reform and the elimination of corrupt practices that undermine economic development. While corruption affects various sectors differently, its overall impact is felt in the country's ability to develop sustainably. Corruption not only depletes public funds but also undermines the efficient allocation of resources, affecting all facets of Nigeria's economic and social well-being. As such, addressing corruption within these sectors is paramount to fostering a more transparent, accountable, and equitable economy.

Transparency, Accountability, and Governance in Nigeria's Fight Against Corruption

Transparency, accountability, and good governance are critical elements in addressing corruption and its adverse effects on the Nigerian economy. These concepts are closely intertwined and essential for ensuring that public resources are used efficiently, and that public officials act in the best interests of the people they serve. Effective governance, marked by transparency and accountability, is often seen as the antidote to corruption, as it fosters an environment of openness and responsibility in both the public and private sectors. Transparency refers to the openness with which public officials and institutions disclose information about their decisions, actions, and the utilization of public resources. Transparency is essential for curbing corruption because it allows citizens, civil society organizations, and the media to scrutinize government actions. In Nigeria, a lack of transparency has been one of the key drivers of corruption. Public officials are often able to divert funds and engage in corrupt practices because there is insufficient oversight, and citizens are left in the dark about how resources are being used. Transparency initiatives such as open data platforms, government budgets, and expenditure

reports are crucial for promoting public participation and reducing the opportunities for corrupt behavior. As noted by Okonjo-Iweala (2015), promoting transparency through digital platforms can enhance accountability in public financial management and improve trust in government institutions.

Accountability is the obligation of public officials to answer for their actions, decisions, and use of public resources. For corruption to be addressed, public officials must be held accountable for their conduct, and institutions must be designed to monitor their performance. In Nigeria, accountability mechanisms have often been weak or ineffective, allowing corrupt practices to thrive. However, accountability is vital to reducing the systemic nature of corruption. Institutions such as the Economic and Financial Crimes Commission (EFCC) and the Independent Corrupt Practices and Other. Related Offenses Commission (ICPC) are tasked with enforcing accountability, but their capacity and effectiveness have often been hindered by political interference and inadequate resources. A study by Akinyemi (2018) emphasized that stronger accountability frameworks, including independent audits and effective law enforcement, are critical to reducing corruption and its economic consequences in Nigeria. When public officials know they will be held accountable for their actions, they are less likely to engage in corrupt activities.

Good Governance encompasses the processes and institutions through which public resources are managed and how decisions are made. Governance is about creating an environment in which policies and practices lead to sustainable development, economic growth, and social

equity. Effective governance in Nigeria has been marred by corruption, as bad governance practices, including the misallocation of resources and political patronage, have perpetuated systemic corruption. A study by Olowu (2019) found that the erosion of good governance in Nigeria has led to inefficiencies in the public sector, poor service delivery, and a decline in investor confidence. The lack of effective governance structures has contributed to an unsustainable economic environment where corruption flourishes unchecked. Strengthening governance structures in Nigeria, such as enhancing the rule of law, improving public service delivery, and fostering citizen participation, can help mitigate corruption's economic effects.

One of the key challenges in addressing corruption in Nigeria is the insufficient enforcement of laws that demand transparency and accountability from government institutions. Recent efforts to strengthen governance, such as the introduction of the Nigeria Extractive Industries Transparency Initiative (NEITI) and the Open Government Partnership (OGP), are steps in the right direction. These initiatives aim to promote transparency in the management of Nigeria's extractive resources and engage citizens in governance. However, as highlighted by Onyekwena et al. (2020), the implementation of such initiatives has faced challenges, including bureaucratic inertia, resistance from entrenched interests, and the lack of political will. While transparency and accountability are essential for fighting corruption, their effectiveness in Nigeria will depend on the commitment of government institutions to enforce existing policies, support the independence of anti-corruption bodies, and address the political and economic incentives that drive corrupt behavior. Recent studies underscore that a culture of transparency, accountability, and good governance is necessary for sustainable economic development in Nigeria. According

to Ezeani and Ugwu (2021), transparency and accountability are key in fostering investor confidence, improving public service delivery, and ensuring that resources are used for the intended public welfare. Nigeria's economic growth prospects will continue to be stunted unless these foundational principles are consistently enforced across all sectors of government and public life. The establishment of robust accountability mechanisms, the promotion of transparency in governance, and the strengthening of governance structures are critical to mitigating the economic effects of corruption and unlocking Nigeria's economic potential.

Transparency, accountability, and governance are essential to reducing corruption in Nigeria and addressing its economic consequences. Effective governance can ensure that public resources are used efficiently, that corruption is minimized, and that economic development can be achieved. While progress has been made in recent years with the introduction of transparency initiatives, significant challenges remain. The implementation of these initiatives will require a committed effort from both the government and civil society to foster an environment where corruption is not tolerated and accountability is central to the governance process. As highlighted by previous studies, it is only through sustained efforts to promote transparency, accountability, and good governance that Nigeria can overcome the crippling effects of corruption and achieve long-term economic growth and development.

Forms/Types of Corruption in Nigeria

Corruption in Nigeria manifests in various forms, each deeply embedded in the nation's socio-political and economic structures. One prevalent form is political corruption, which involves the

misuse of public office for personal gain. This includes practices such as embezzlement, nepotism, and vote-buying, which undermine democratic processes and erode public trust in governance. A study by Okoye and Ani (2016) highlights that political corruption pervades Nigeria, with the rise of public administration and the discovery of petroleum and natural gas leading to increased corrupt practices.

Another significant form is bureaucratic corruption, occurring within the public service sector. This encompasses bribery, favoritism, and the manipulation of regulations for personal benefit. According to Onwuka (2020), bureaucratic corruption in Nigeria's public service has been a persistent impediment to effective governance, leading to a breakdown of ethical values and integrity within the system. Judicial corruption is also prevalent, where court officials and judges engage in corrupt practices, leading to miscarriages of justice. This undermines the rule of law and public confidence in the legal system. The Nigerian Journal of Social Sciences (2021) reports that judicial corruption poses a great threat to the development of the country, as it erodes trust in legal institutions.

In the economic sphere, financial corruption is rampant, involving activities such as money laundering, fraud, and tax evasion. These illicit activities distort economic policies and contribute to economic instability. The Economic and Financial Crimes Commission (EFCC) has been actively addressing financial corruption and its detrimental impacts in Nigeria, particularly between 2015 and 2019. Furthermore, electoral corruption is a critical issue, characterized by rigging, intimidation, and manipulation of electoral processes. This form of corruption

compromises the legitimacy of elections and hampers the development of a true democratic culture. A study by Odalonu (2021) assessed the trend of corruption under Buhari's administration and highlighted the persistent rise in corrupt practices, including electoral corruption, which poses a great threat to the country's development. These various forms of corruption are interrelated and collectively hinder Nigeria's development, affecting all sectors of society and perpetuating a cycle of inefficiency and mistrust.

Causes of Corruption in Nigeria

Corruption in Nigeria remains one of the most significant challenges to the country's development. A variety of socio-economic, political, and institutional factors contribute to its persistence, making it a deeply ingrained problem. The causes of corruption in Nigeria can be understood through a detailed analysis of these factors. One of the primary causes of corruption in Nigeria is economic hardship and poverty. According to the World Bank (2018), Nigeria's population is grappling with poverty, and a significant portion lives below the poverty line. Economic insecurity often drives individuals into corrupt practices, as they seek to secure personal wealth or survival in an environment where access to basic resources is limited. When people are desperate to improve their standard of living, they are more likely to engage in corrupt activities, including bribery, embezzlement, and fraud, especially in public service or private sector roles. This economic desperation intertwines with widespread unemployment, particularly among youth, which exacerbates the inclination towards corruption as a form of economic self-preservation (Odigboh & Akinyele, 2019).

Another significant cause is the weak institutional framework in Nigeria. The country's institutions, including the judiciary, law enforcement, and anti-corruption agencies, are often insufficiently empowered or corrupt themselves. The inability of these institutions to enforce laws or punish corrupt behavior effectively contributes to a culture of impunity. According to a report by Transparency International (2020), the lack of accountability within Nigeria's public sector enables corruption to flourish at both the national and local government levels. For instance, officials involved in corrupt activities often face little to no consequences, while those who attempt to challenge the system are met with resistance or punishment, which further deepens the cycle of corruption. Cultural factors also play a crucial role in perpetuating corruption in Nigeria. Many Nigerian communities maintain strong kinship and social structures that prioritize loyalty and family ties. This often leads to practices such as nepotism, where government positions, contracts, and resources are distributed based on familial relationships rather than merit. As pointed out by Ajayi (2017), in such a culture, personal connections are valued over transparency, making it difficult to combat corruption within public institutions. This cultural acceptance of using one's position for personal or family gain creates an environment where corrupt behavior is normalized and even encouraged in some instances.

The political system in Nigeria is another critical contributor to corruption. Nigeria's political system is characterized by a patronage network that often incentivizes corrupt behavior. The winner-takes-all mentality in Nigerian politics, coupled with intense competition for power, has led politicians and government officials to engage in corrupt practices to secure and maintain political power. According to Enemuoh (2016), politicians often use public office as a means of

enriching themselves and their associates, which involves illicit financial transactions, embezzlement, and mismanagement of public funds. The competition for scarce resources in this highly polarized political environment creates a fertile ground for corruption, with individuals engaging in unethical behavior to remain in power. The absence of political will to tackle corruption is also a major impediment. Despite various anti-corruption campaigns and initiatives by successive governments, there is often little genuine effort to dismantle the structures that perpetuate corruption. As noted by Akinyele (2019), many Nigerian leaders have demonstrated a lack of commitment to implementing meaningful reforms due to their own involvement in corrupt practices. This undermines efforts to curb corruption and ensure accountability in the governance system.

The global dimension of corruption cannot be ignored. Nigeria's integration into the global economy has led to a flow of illicit funds across borders. According to the United Nations Office on Drugs and Crime (UNODC, 2021), Nigeria has been a key player in the global network of corruption, where corrupt officials often launder money through international channels, further perpetuating the cycle of corruption. This global dimension often makes it difficult for Nigeria to hold corrupt individuals accountable, as the funds are hidden in foreign bank accounts and are beyond the reach of local authorities. Corruption in Nigeria is a complex issue driven by economic, institutional, cultural, political, and global factors. The interplay of these causes creates a vicious cycle where corruption becomes entrenched in society. To effectively combat corruption, a multifaceted approach is needed, involving not only stronger institutions and better enforcement of laws but also a cultural shift towards transparency and accountability. Only

through sustained efforts in these areas can Nigeria hope to reduce the pervasive influence of corruption on its development.

Anti-Corruption Efforts in Nigeria

Nigeria has long faced challenges with corruption, which has pervaded various sectors, from politics to business, hindering economic progress and development. Over the years, the Nigerian government has made several attempts to combat corruption through various initiatives, policies, and institutions. These efforts are crucial in addressing the adverse economic effects of corruption and restoring trust in public institutions. One of the most significant anti-corruption measures in Nigeria is the establishment of specialized agencies, such as the Economic and Financial Crimes Commission (EFCC) and the Independent Corrupt Practices and Other Related Offences Commission (ICPC). These institutions were created to investigate, prosecute, and reduce corruption in both public and private sectors. The EFCC, established in 2003, focuses on financial crimes, including money laundering and fraud, while the ICPC, established in 2000, is tasked with preventing and punishing corrupt practices in government ministries and agencies (Omotola, 2017). Both agencies have achieved some successes, such as, prosecuting high-profile individuals and recovering stolen funds, but their efforts are often hampered by political interference, lack of resources, and weak judicial systems (Ogundiya, 2020).

The Nigerian government has also introduced legal frameworks to combat corruption. The Nigeria Financial Intelligence Unit (NFIU), for example, is tasked with improving financial transparency and reporting suspicious financial activities. The Whistleblower Policy, introduced

in 2016, encourages citizens to report corrupt practices without fear of retaliation. The policy has led to the recovery of stolen assets, but it has also been criticized for its insufficient protection of whistleblowers (Alemika & Chukwuma, 2018). Furthermore, the Public Procurement Act (2007) was established to ensure transparency and accountability in government contracts. Despite these efforts, enforcement remains weak, with many contracts still being awarded without adequate oversight or transparency (Amundsen, 2019). Nigeria's anti-corruption efforts also involve international cooperation, especially in the fight against money laundering and illicit financial flows. In 2014, Nigeria joined the Open Government Partnership (OGP), an international initiative aimed at fostering transparency, accountability, and public participation. The partnership has led to the implementation of several reforms, such as the Open Treasury Portal, which provides real-time data on government spending. Additionally, Nigeria has made strides in its commitment to the United Nations Convention Against Corruption (UNCAC), which obliges countries to establish measures against corruption at both domestic and international levels (Adebayo, 2020).

Despite these efforts, significant challenges remain in curbing corruption in Nigeria. Political will has often been inconsistent, with some leaders accused of engaging in corrupt practices themselves or tolerating corruption within their administrations. Additionally, the judicial system in Nigeria has been criticized for its inefficiency and delays in handling corruption cases, which erodes public confidence in the fight against corruption (Adejuwon, 2018). The lack of a strong accountability mechanism within political parties and the influence of elites in the judiciary have further hindered the effectiveness of anti-corruption measures (Okigbo & Ibekwe, 2019). The

administration of President Muhammadu Buhari, who assumed office in 2015, made combating corruption a central part of its policy agenda. His government launched the Anti-Corruption War, which aimed to bring high-ranking public officials to justice and recover stolen assets. This initiative, however, has faced criticism for targeting political opponents while leaving others in power untouched (Ibeanu, 2018). Despite these criticisms, the administration's commitment to anti-corruption efforts has led to some notable successes, including the recovery of billions of dollars in stolen assets and the prosecution of former government officials. While anti-corruption efforts in Nigeria have made some progress, they are still plagued by systemic issues such as political interference, lack of resources, and weak enforcement mechanisms. The fight against corruption requires comprehensive reforms across the public sector, judicial system, and political landscape. Future efforts must focus on strengthening institutions, improving the transparency of government activities, and ensuring that anti-corruption measures are consistently enforced to mitigate the economic effects of corruption in Nigeria.

2.1.2 Economic Growth

Economic growth is a key indicator of the overall health and development of a country's economy, typically measured by the increase in a country's Gross Domestic Product (GDP) over a period of time. It reflects the capacity of an economy to produce goods and services that meet the needs and wants of its population. For developing countries like Nigeria, economic growth is a critical element for poverty reduction, employment generation, and the improvement of living standards. However, corruption is a significant factor that can undermine the potential for sustained and inclusive economic growth, and in countries like Nigeria, it remains a pervasive

challenge. The negative impact of corruption on economic growth has been widely documented, with several scholars pointing out that corruption erodes the quality of governance, discourages foreign investment, and deepens inequality, which, in turn, stifles long-term economic development. One of the main ways in which corruption affects economic growth in Nigeria is through the inefficiency and misallocation of public resources. When public officials divert funds meant for infrastructure development, education, health services, and other essential public goods, it hampers the country's ability to make meaningful progress in these sectors.

Akinyemi et al. (2017) explain that corruption in the public sector leads to the inefficiency of governmental institutions, which undermines the delivery of critical services and infrastructure development. For instance, infrastructure such as roads, schools, and hospitals, when not adequately funded or poorly executed due to corruption, limits economic productivity and reduces the potential for social and human capital development. As a result, economic growth is impeded because the foundation for sustainable development is weakened. The absence of a well-functioning public sector that can efficiently allocate resources to the right places diminishes the ability of the economy to expand in a balanced manner.

Corruption is a significant barrier to attracting foreign direct investment (FDI), which is an essential source of capital for developing countries. Nigeria, being heavily dependent on oil exports, faces challenges in diversifying its economy due to corruption. As noted by Olaniyi (2016), corruption in the form of bribery, embezzlement, and regulatory manipulation creates an unpredictable business environment, which discourages potential foreign investors from entering

the Nigerian market. Foreign investors tend to avoid economies where they face high levels of corruption because of the risks associated with doing business, including the high costs of bribes and the uncertainty in dealing with corrupt officials. Consequently, this reduction in foreign investment stunts economic growth, as the country misses out on crucial investments that could be used to create jobs, improve infrastructure, and enhance the productivity of key sectors of the economy.

Corruption also exacerbates income inequality in Nigeria, which directly impacts economic growth. According to Nwachukwu and Onwuka (2018), corruption perpetuates inequality by disproportionately benefiting the elite class, leaving the majority of the population at a disadvantage. The wealthy, who are often the beneficiaries of corrupt practices, consolidate their wealth and resources, while the majority of the population remains in poverty. This unequal distribution of wealth leads to an unequal access to opportunities, such as education, healthcare, and social mobility. The result is a lack of inclusive growth, where the benefits of economic expansion are not shared equitably among the population. This exacerbates social tensions and reduces the overall productivity of the labor force, as a significant portion of the population is left without the skills and resources needed to contribute meaningfully to the economy. A study by Okigbo and Eze (2015) found that economic inequality in Nigeria, fueled by corruption, severely limits the potential for human capital development, which is essential for long-term economic growth. Corruption often creates an environment of instability, undermining public trust in the institutions that govern economic activities. As noted by Adebayo (2020), the prevalence of corruption in Nigeria weakens the social contract between the government and its

citizens, as people lose confidence in the government's ability to effectively manage resources. This loss of trust in institutions discourages citizens from participating in economic activities, as they may view the system as unjust or rigged against them. In the long term, this instability can lead to lower levels of domestic and international economic activity, further stalling economic growth. Additionally, when individuals and businesses are forced to engage in corrupt practices to survive, the overall ethical standards of society deteriorate, which can have broader negative effects on the economy's functioning. Despite the numerous challenges posed by corruption, efforts have been made to combat it in Nigeria, particularly through the establishment of anti-corruption institutions like the Economic and Financial Crimes Commission (EFCC). However, the effectiveness of these measures in curbing corruption and fostering economic growth remains debatable. Adebayo (2020) argues that while these policies may have had some success in targeting corruption, they often fall short due to political interference, weak enforcement, and a lack of judicial support. As a result, corruption continues to be a significant constraint on economic growth in Nigeria. For these anti-corruption efforts to be truly effective, they must be supported by comprehensive institutional reforms, transparency, and the political will to tackle corruption at all levels of government. The relationship between corruption and economic growth in Nigeria is complex and multifaceted. While corruption may offer short-term benefits in terms of facilitating economic transactions, the long-term consequences are overwhelmingly negative. Corruption undermines the effectiveness of public institutions, deters foreign investment, deepens inequality, and stifles the potential for sustainable economic growth. To achieve long-term economic development, it is essential that corruption be tackled head-on

through robust governance reforms, greater accountability, and increased transparency. Only by addressing the root causes of corruption can Nigeria hope to unlock its full economic potential and create an environment conducive to sustained and inclusive growth.

2.2 Theoretical Literature Review

The economic effects of corruption in Nigeria can be comprehensively understood through the lens of several prominent theories. The theories selected for this review are Public Choice Theory, Rent-Seeking Theory, and Institutional Theory. These theories are particularly relevant in explaining how corruption impedes economic growth, the efficient allocation of resources, and the overall development of the Nigerian economy. These frameworks not only help us understand the origins and consequences of corruption but also highlight potential areas for intervention to foster sustainable economic progress.

2.2.1 Public Choice Theory

Public Choice Theory, primarily developed by James Buchanan and Gordon Tullock, provides an insightful explanation of how corruption thrives within a political system. This theory applies economic principles to political decision-making, emphasizing that politicians and public officials are motivated by self-interest, rather than the public good. According to Public Choice Theory, when individuals in the government act in their own self-interest, they are likely to engage in corrupt practices such as bribery, embezzlement, and misallocation of public resources. In Nigeria, Public Choice Theory helps explain the pervasive corruption within the political and administrative systems. Corruption is often the result of individuals using their

political positions to extract rents, misuse state resources, or direct public funds into their personal coffers. This undermines economic growth because public goods and services that could be used to improve infrastructure, education, healthcare, and other critical areas are diverted or mismanaged.

Public Choice Theory suggests that corruption is more likely to flourish in a system where political accountability is weak and institutions are ineffective. In Nigeria, political instability, weak enforcement of laws, and a lack of transparency create an environment in which corrupt practices are not only tolerated but often go unpunished. As a result, public officials have few incentives to act in the public interest, and the economic consequences of such behavior include inefficient use of public resources, an erosion of trust in government, and stunted growth in key sectors of the economy (Adebayo, 2020). By focusing on the self-interest of public officials, Public Choice Theory underscores the importance of strengthening governance and accountability mechanisms. Reforms aimed at reducing political corruption in Nigeria must address these self-interested behaviors create systems that promote transparency, reduce opportunities for rent extraction, and foster public sector accountability.

2.2.2 Rent-Seeking Theory

Rent-Seeking Theory, introduced by Anne Krueger in the 1970s, provides a powerful explanation for how corruption negatively affects economic growth. Rent-seeking refers to the activities of individuals or firms that seek to increase their own wealth by manipulating the political or economic system rather than through productive economic activities. Corruption is a

central aspect of rent-seeking behavior, as individuals or groups use their connections to secure privileges such as government contracts, subsidies, or monopolies. In the case of Nigeria, Rent-Seeking Theory is particularly relevant to understanding the corruption that plagues its oil sector. Nigeria is one of the largest oil producers in Africa, and the revenues from oil have created significant opportunities for rent-seeking behavior. Political elites and businessmen often exploit their access to government resources to capture a portion of the oil rents, bypassing normal market mechanisms and distorting the distribution of resources. This system of rent extraction leads to the misallocation of resources and prevents the country from using its oil wealth for the long-term economic development of its people.

The detrimental effects of rent-seeking behavior are evident in Nigeria's development challenges. Rent-seeking undermines the potential for diversification in the economy, as resources are channeled into unproductive sectors dominated by corruption. For example, instead of investing in infrastructure, education, or healthcare, public funds are diverted into politically connected ventures that do little to stimulate the broader economy. The result is a lack of innovation, increased inequality, and a stagnation of economic growth, as rent-seeking behaviors reduce the incentives for entrepreneurship and discourage market competition (Olaniyi, 2016). The theory emphasizes that for Nigeria to overcome the negative economic impacts of corruption, it must address the root causes of rent-seeking by promoting policies that reduce government interference in markets and foster fair competition. Reducing the opportunities for rent extraction would help create a more productive economic environment, which in turn could spur long-term growth and development.

2.2.3 Institutional Theory

Institutional Theory emphasizes the role of institutions both formal and informal in shaping economic outcomes. The theory suggests that the quality of institutions, such as the legal system, political structures, and regulatory frameworks, directly affects a country's ability to reduce corruption and achieve sustained economic growth. In the context of Nigeria, the lack of effective institutions has been a major factor enabling corruption to persist and hinder economic development. Nigeria's institutional environment is characterized by weak governance structures, poor enforcement of laws, and a lack of transparency in public decision-making. Institutional Theory argues that corruption thrives in such environments because weak institutions fail to provide the necessary checks and balances that would deter corrupt practices. The absence of strong regulatory frameworks, accountability mechanisms, and independent judicial systems allows public officials and private actors to exploit the system without fear of retribution.

One of the key insights of Institutional Theory is that corruption becomes a systemic issue when it is embedded within the institutions of a country. In Nigeria, this is evident in the way corruption is deeply embedded in the public sector, from government agencies to law enforcement. The lack of effective oversight and judicial independence means that corruption is not only tolerated but sometimes institutionalized, making it a difficult problem to address (Nwachukwu & Onwuka, 2018). Moreover, the failure to enforce contracts and protect property rights deters investment and economic activity, further compounding the country's development challenges. According to Institutional Theory, the key to combating corruption and fostering economic growth lies in strengthening the country's institutions. This includes reforming the

judiciary to ensure impartiality, improving law enforcement to combat corruption, and enhancing transparency in government transactions. A robust institutional framework that ensures accountability and reduces opportunities for corrupt practices is essential for creating an environment conducive to growth and development (North, 2015).

In conclusion, the Public Choice Theory, Rent-Seeking Theory, and Institutional Theory offer valuable insights into the relationship between corruption and economic growth in Nigeria. Public Choice Theory emphasizes the role of self-interest in political decision-making, which leads to corrupt practices that undermine economic performance. Rent-Seeking Theory highlights how corruption allows elites to capture rents at the expense of productive economic activities, leading to inefficiency and stunted growth. Finally, Institutional Theory underscores the importance of strong, transparent institutions in reducing corruption and fostering economic development. These theories collectively suggest that addressing corruption in Nigeria requires both institutional reforms and the promotion of accountability and transparency within the political and economic systems.

2.3 Empirical Literature Review

Corruption has long been recognized as a significant obstacle to economic development, particularly in developing nations like Nigeria. Empirical studies examining the relationship between corruption and economic growth consistently reveal that corruption negatively affects economic performance by distorting resource allocation, discouraging investment, and fostering inequality (Mauro, 2015; Adebayo, 2020). A considerable body of research has examined the

economic implications of corruption, particularly its impediment to development and hindrance to the effective utilization of public resources.

Mauro (2015) explored how corruption impacts investment and economic growth in developing countries. His findings highlighted that corruption reduces investment by increasing the cost of doing business and creating an environment of uncertainty. This, in turn, hampers long-term economic growth, as investment is a key driver of development. Mauro also suggested that corruption distorts market competition by favoring well-connected individuals and companies, leading to inefficiencies in resource allocation. In the context of Nigeria, corruption has been identified as a major factor contributing to the country's stagnating growth despite its vast natural resources (Adebayo, 2020).

Further research by Olufemi & Ayodele (2017) examined the effects of corruption on public sector spending in Nigeria. Their study found that corruption results in the misallocation of public funds, with large portions of resources intended for infrastructure and social services being diverted for personal gain. This inefficiency in the use of public funds not only slows down the country's development but also worsens the living conditions of the populace, as essential services such as education, healthcare, and infrastructure remain underfunded and poorly managed. Similarly, Alemika & Chukwuma (2018) analyzed how corruption within the public sector leads to the inefficient distribution of development aid, further exacerbating economic disparities in Nigeria.

Akpan and Akpan (2019) conducted an empirical study focusing on the relationship between corruption and foreign direct investment (FDI) in Nigeria. They argued that corruption has a direct negative impact on FDI, as potential investors are often deterred by the perception of a corrupt business environment. Their study pointed out that multinational companies are more likely to avoid countries where corruption is prevalent, as they may face higher costs associated with bribes, unpredictable regulatory environments, and inefficient infrastructure. As a result, Nigeria's economic potential is limited, as FDI is a crucial factor for the growth of sectors such as manufacturing, technology, and infrastructure development.

The work of Ogundiya (2020) further investigates how corruption in Nigeria's oil and gas sector has impeded the country's economic development. Nigeria, one of the largest oil producers in Africa, has been plagued by corruption in the management and allocation of oil revenues. Ogundiya's study concluded that the embezzlement and mismanagement of oil revenues have led to underdeveloped infrastructure and social services, which are vital for sustained economic growth. The oil sector, despite being a major contributor to Nigeria's GDP, has not sufficiently translated into tangible improvements in living standards or poverty reduction due to the pervasive corruption in the industry.

Amundsen (2019) emphasized the role of transparency and good governance in mitigating the negative effects of corruption on economic development. His study illustrated that countries with higher levels of transparency and accountability are better able to attract foreign investment, improve public service delivery, and achieve higher growth rates. For instance, countries like

Singapore and South Korea, which are known for their strong anti-corruption measures, have experienced rapid economic development by utilizing public resources effectively and fostering investor confidence.

Additional studies by Adeyemi (2021) and Okonkwo (2022) examined the socio-economic costs of corruption in Nigeria. Their research found that corruption contributes to high inflation rates, unemployment, and reduced economic competitiveness. Adeyemi (2021) argued that corrupt practices, such as tax evasion and embezzlement, lead to revenue shortfalls for the government, reducing its ability to invest in public infrastructure. Meanwhile, Okonkwo (2022) explored the impact of corruption on small and medium-sized enterprises (SMEs), finding that high levels of corruption force businesses to operate informally, limiting their access to financial support and legal protection.

Despite these numerous studies highlighting the negative impact of corruption on Nigeria's economic development, Oluwole and Olayiwola (2020) offered a more nuanced perspective. They argued that while corruption undeniably slows down development, it is not the sole factor responsible for Nigeria's economic challenges. They suggested that poor governance, ineffective policies, and political instability also significantly hinder Nigeria's economic progress. Their study recommended a multifaceted approach, focusing not only on tackling corruption but also on improving governance, policy implementation, and institutional strengthening to achieve sustainable development.

Empirical studies overwhelmingly support the view that corruption severely hampers economic development in Nigeria. Corruption undermines investments, misallocates resources, and fosters inequality, making it a significant barrier to economic progress. While anti-corruption efforts have made some strides, addressing corruption's effects on development requires a comprehensive approach that includes institutional reforms, improved governance, and greater accountability.

CHAPTER THREE

THEORETICAL FRAMEWORK AND METHODOLOGY

3.1 Theoretical Framework

This study is anchored on the Institutional Economics Theory, particularly as advanced by North (1990), and further supported by the Keynesian Growth Framework. These theories provide the foundation for explaining how corruption affects economic growth and domestic investment in Nigeria.

Institutional Economics Theory emphasizes the importance of institutions in shaping economic outcomes. According to North (1990), institutions are the formal and informal rules, regulations, norms, and enforcement mechanisms that govern economic and social interactions. These include legal systems, governance structures, public administration, and regulatory agencies. Institutions shape incentives in human exchange and determine the efficiency of economic activities.

Strong institutions promote economic growth by ensuring accountability, reducing uncertainty, protecting property rights, and improving market efficiency (North, 1990). However, weak institutions create opportunities for corruption, inefficiency, and poor allocation of public resources. Corruption is regarded as a major institutional failure because it weakens governance structures and reduces the effectiveness of public institutions (Mauro, 1995).

In Nigeria, corruption manifests through bribery, embezzlement, diversion of public funds, inflated contracts, and abuse of office. These practices increase transaction costs, discourage domestic investment, reduce productivity, and hinder economic growth (Tanzi, 1998). Corruption also distorts market incentives and reduces the confidence of investors in the economy.

The Keynesian Growth Framework further supports this study by emphasizing the role of government expenditure and labour force in determining economic performance. According to Keynes (1936), government intervention is necessary to stimulate aggregate demand, investment, and employment, especially in developing economies where market failures are prevalent.

Government expenditure contributes to growth by providing infrastructure, education, healthcare, and other public goods that support productive activities (Keynes, 1936). Labour force participation enhances productivity and national output, thereby promoting sustainable growth. However, corruption reduces the effectiveness of government expenditure through leakages, project abandonment, inflated contracts, and poor implementation of development policies (Shleifer & Vishny, 1993).

Thus, both Institutional Economics Theory and the Keynesian Growth Framework explain how corruption weakens the positive contributions of labour and government expenditure to economic growth and domestic investment in Nigeria.

3.2 Methodology

This study adopts the ex-post facto research design. This design is considered appropriate because it relies on already existing macroeconomic time series data and does not involve manipulation of variables by the researcher. According to Gujarati and Porter (2009), ex-post facto research is suitable for macroeconomic studies involving time series data where variables cannot be controlled directly by the researcher.

The study makes use of annual time series data covering the period 1996 to 2022. The choice of this period is based on the availability of reliable data, especially for corruption indicators from Transparency International.

The variables used in the study include Real Gross Domestic Product (GDP), Domestic Investment (INV), Corruption Index (CORR), Labour Force (LAB), and Government Expenditure (GEX).

3.2.1 Model Specification

To achieve the objectives of this study, two econometric models are specified.

Model I: Corruption and Economic Growth

The model for examining the effect of corruption on economic growth is given as:

$$\ln GDP_t = \beta_0 + \beta_1 CORR_t + \beta_2 \ln LAB_t + \beta_3 \ln GEX_t + \mu_t$$

A priori expectation:

$$\beta_1 < 0, \beta_2 > 0, \beta_3 > 0$$

Model II: Corruption and Domestic Investment

The model for examining the effect of corruption on domestic investment is given as:

$$\ln INV_t = \alpha_0 + \alpha_1 CORR_t + \alpha_2 \ln LAB_t + \alpha_3 \ln GEX_t + \varepsilon_t$$

A priori expectation:

$$\alpha_1 < 0, \alpha_2 > 0, \alpha_3 > 0$$

3.2.2 Estimation Technique

The study employs the Autoregressive Distributed Lag (ARDL) model as the estimation technique developed by Pesaran, Shin, and Smith (2001).

The ARDL approach is preferred because it is suitable when variables are integrated of mixed order, that is, I(0) and I(1), provided none of the variables is integrated of order two I(2). It is also appropriate for small sample sizes and provides both short-run and long-run estimates of the relationship among variables (Pesaran, Shin, & Smith, 2001).

The ARDL model helps to establish the existence of long-run relationships among the variables through the Bounds Cointegration Test. Where cointegration exists, the Error Correction Model (ECM) is estimated to determine the speed of adjustment from short-run disequilibrium to long-run equilibrium.

The estimation procedure involves descriptive statistics, unit root test using the Augmented Dickey-Fuller (ADF) test, ARDL Bounds Cointegration Test, long-run ARDL estimation, Error Correction Model (ECM), and diagnostic tests such as serial correlation, heteroskedasticity,

normality, and stability tests (CUSUM and CUSUMSQ). These tests ensure the reliability, validity, and robustness of the estimated results.

3.3 Description of Variables and Measurement

Table 3.1: Description of Variables and Measurement

Variable	Description	Measurement/Proxy	Source	Expected Sign
GDP	Economic Growth	Real Gross Domestic Product	World Development Indicators (WDI)	Dependent Variable
INV	Domestic Investment	Gross Fixed Capital Formation	National Bureau of Statistics (NBS)	Dependent Variable
CORR	Corruption	Corruption Perception Index	Transparency International	Negative (-)
LAB	Labour	Total Labour Force	World Development Indicators (WDI)	Positive (+)
GEX	Government Expenditure	Total Government Expenditure	National Bureau of Statistics (NBS)	Positive (+)

Author's Computation (2026)

CHAPTER FOUR

PRESENTATION OF RESULTS AND DISCUSSION OF FINDINGS

4.1 Pre-Estimation Results

4.1.1 Descriptive Statistics of Variables

This section presents the summary statistics of economic growth (GDPG), domestic investment (INV), corruption (CORR), labour force (LAB), and government expenditure (GEX), providing insights into their distributional properties over the period 1996 to 2022.

Table 4.1: Descriptive Statistics of Variables (1996-2022)

Statistic	GDPG	INV (₦)	CORR	LAB (Persons)	GEX (₦)
Mean	4.540970	9.04E+12	2.135185	75,483,363	5.65E+12
Median	5.015935	9.00E+12	2.400000	73,499,013	3.45E+12
Maximum	15.32916	1.14E+13	2.800000	105,000,000	2.44E+13
Minimum	-6.368898	6.86E+12	0.690000	53,211,071	3.37E+11
Std. Dev.	4.004628	1.22E+12	0.590315	15,277,810	6.58E+12
Skewness	-0.134786	0.114957	-0.880083	0.319507	1.590257
Kurtosis	4.780360	1.984158	2.704374	1.957592	4.380674
Jarque Bera	3.647644	1.220396	3.583779	1.681823	13.52467
Probability	0.161408	0.543243	0.166645	0.431317	0.001157
Observations	27	27	27	27	27

Source: Author's computations (2026) using EViews 13

As shown in Table 4.1, the results indicate that economic growth recorded a mean value of 4.54 percent, suggesting moderate average growth in Nigeria during the period under review. However, the wide gap between the maximum value of 15.33 percent and the minimum value of negative 6.37 percent reflects significant fluctuations in economic performance, which is indicative of macroeconomic instability. The standard deviation of 4.00 further confirms the volatility in growth rates. The skewness value of negative 0.13 shows that the distribution is approximately symmetric, while the kurtosis of 4.78 suggests a leptokurtic distribution, implying the presence of extreme values.

Domestic investment, proxied by gross fixed capital formation, has a mean value of 9.04 trillion naira, with a maximum of 11.4 trillion naira and a minimum of 6.86 trillion naira. The relatively low standard deviation of 1.22 trillion naira indicates moderate variability, suggesting some level of stability in investment over time. The skewness of 0.11 reveals a fairly symmetric distribution, while the kurtosis of 1.98 indicates a platykurtic distribution, implying fewer extreme observations.

The corruption variable, measured using the Corruption Perceptions Index, recorded a mean value of 2.14, with a maximum of 2.80 and a minimum of 0.69. These values reflect persistently high levels of perceived corruption in Nigeria. The low standard deviation of 0.59 suggests limited variation over time, indicating that corruption has remained relatively consistent. The skewness of negative 0.88 indicates a left skewed distribution, while the kurtosis of 2.70 suggests that the distribution is approximately normal.

Labour force shows a mean value of approximately 75.48 million, with a maximum of about 105 million and a minimum of 53.21 million. The relatively large standard deviation of 15.28 million reflects steady growth in the labour force over the period, consistent with population expansion. The skewness of 0.32 indicates a slight right skew, while the kurtosis of 1.96 suggests a platykurtic distribution.

Government expenditure recorded a mean value of 5.65 trillion naira, with a maximum of 24.43 trillion naira and a minimum of 0.337 trillion naira. The large standard deviation of 6.58 trillion naira indicates high volatility in government spending, likely reflecting fiscal policy changes and structural shifts in the economy. The skewness value of 1.59 reveals a strong right skewed distribution, while the kurtosis of 4.38 indicates a leptokurtic distribution, suggesting the presence of extreme values.

The Jarque-Bera statistics and their associated probabilities reveal that all variables, except government expenditure, are normally distributed at conventional levels of significance. The non-normality of government expenditure may be attributed to large fluctuations and structural changes in fiscal operations over the study period.

Generally, the descriptive statistics suggest that while some variables, such as investment and labour force, exhibit relative stability, others, particularly economic growth and government expenditure, are characterized by significant volatility. Additionally, corruption appears to be

persistently high with limited variation, highlighting its entrenched nature in the Nigerian economy.

4.1.2 Unit Root Test Results

This section presents the results of the Augmented Dickey Fuller unit root test conducted to determine the stationarity properties of the variables, namely economic growth (GDPG), domestic investment (LNINV), corruption (CORR), labour force (LNLAB), and government expenditure (LNGEX).

Table 4.2: Summary of Augmented Dickey Fuller Unit Root Test Results

Variable	Level Prob.	First Difference Prob.	Order of Integration
GDPG	0.1375	0.0074	I(1)
LNINV	0.0010	-	I(0)
CORR	0.6932	0.0422	I(1)
LNLAB	0.9916	0.0069	I(1)
LNGEX	0.1794	0.0000	I(1)

Source: Author's computations (2026) using EViews 13

As revealed in Table 4.2, the results of the unit root test at level indicate that domestic investment is stationary at level, as the probability value of 0.0010 is less than the 5 percent level of significance. This implies that LNINV is integrated of order zero.

However, economic growth, corruption, labour force, and government expenditure are not stationary at the level since their probability values exceed 0.05, indicating the presence of unit roots.

At first difference, all the non-stationary variables become stationary, as their probability values fall below the 5 percent level of significance. This shows that GDPG, CORR, LNLAB, and LNGEX are integrated of order one.

Simply put, the results reveal a mixture of integration orders, with LNINV being $I(0)$ and the remaining variables being $I(1)$. This justifies the use of the Autoregressive Distributed Lag estimation technique, which is appropriate for models with mixed order of integration. Furthermore, none of the variables is integrated of order two, thereby satisfying the condition for the application of the ARDL bounds testing approach.

4.1.3 ARDL Bounds Test for Cointegration

This section presents the ARDL bounds test results used to examine the existence of a long run relationship among the variables in Model I and Model II.

Table 4.3: ARDL Bounds Test Results

Model	Dependent Variable	F Statistic	t Statistic	Decision
Model I	GDPG	2.341382	-2.470458	No cointegration
Model II	LNINV	8.321239	-5.613123	Cointegration exists

Critical Values (Asymptotic, 5 percent level)

Statistic	I(0) Lower Bound	I(1) Upper Bound
F Statistic	3.230	4.350
t Statistic	-2.860	-3.780

Source: Author's computations (2026) using EViews 13

As seen in Table 4.3, the bounds test result for Model I shows that the F statistic of 2.341382 is lower than the lower bound critical value of 3.230 at the 5 percent significance level. Similarly, the t statistic of -2.470458 is less negative than the lower bound critical value of -2.860 in absolute comparison. This implies that the null hypothesis of no long run relationship cannot be rejected. Therefore, there is no evidence of cointegration among economic growth, corruption, labour force, and government expenditure in Model I.

In contrast, the bounds test result for Model II indicates that the F statistic of 8.321239 is greater than the upper bound critical value of 4.350. In addition, the t statistic of -5.613123 is more negative than the upper bound critical value of -3.780. This leads to the rejection of the null

hypothesis of no levels relationship. Hence, there exists a long-run relationship among domestic investment, corruption, labour force, and government expenditure in Model II.

Therefore, the results indicate that Model I does not exhibit cointegration, while Model II confirms the presence of a stable long-run relationship among the variables. This justifies the estimation of short run dynamics for Model I and both long run and error correction models for Model II.

4.2 Model Estimations

4.2.1 Long Run Estimates of Domestic Investment Model (Model II)

This section presents the long run results of Model II, where domestic investment (LNINV) is specified as a function of corruption (CORR), labour force (LNLAB), and government expenditure (LNGEX). The long-run coefficients are derived from the conditional error-correction representation of the ARDL model.

Table 4.4: Long Run ARDL Estimates for Domestic Investment Model (Model II)

Variable	Coefficient	Std. Error	t Statistic	Probability
CORR(-1)	0.050309	0.050647	0.993336	0.3309
LNLAB	1.104702	0.448365	2.463845	0.0216
LNGEX	-0.126217	0.074322	-1.698248	0.1030

Source: Author's computations (2026) using EViews 13

As shown in Table 4.4, the long-run results indicate that corruption has a positive but statistically insignificant relationship with domestic investment in Nigeria, as shown by the coefficient of

0.050309 and probability value of 0.3309. This suggests that corruption does not exert a significant long-run influence on domestic investment.

Labour force, however, has a positive and statistically significant effect on domestic investment, with a coefficient of 1.104702 and a probability value of 0.0216. This implies that an increase in labour force enhances domestic investment in the long run, reflecting the role of labour availability in stimulating productive activities and investment decisions.

Government expenditure has a negative but statistically insignificant relationship with domestic investment, as indicated by the coefficient of -0.126217 and probability value of 0.1030. This suggests that higher government spending does not significantly crowd in or crowd out domestic investment in the long run.

In short, the results reveal that labour force is the only variable that significantly drives domestic investment in the long-run while corruption and government expenditure do not exhibit statistically significant long-run effects within the period under study.

4.2.2 Short Run Results

This section presents the short-run ARDL estimates for economic growth (Model I) and domestic investment (Model II), together with key diagnostic indicators used to assess model adequacy.

Table 4.5: Short Run ARDL Results for GDP Growth Model (Model I)

Variable	Coefficient	Std. Error	t Statistic	Probability
GDPG(-1)	-0.456973	0.138768	-3.293068	0.0033
D(LNLAB)	283.8213	98.24129	2.889022	0.0085
D(LNGEX)	-1.640701	2.878877	-0.569910	0.5745
C	547.7987	168.9545	3.242286	0.0037
R-squared	0.539636			
Adjusted R ²	0.476859			
F- statistic	8.596094			
F-stat. (Prob.)	0.000579			
Durbin Watson	2.042062			

Source: Author's computations (2026) using EViews 13

Table 4.6: Short Run ARDL Results for Domestic Investment Model (Model II)

Variable	Coefficient	Std. Error	t-Statistic	Probability
COINTEQ*	-1.210545	0.195663	-6.186897	0.0000
D(CORR)	-0.042002	0.054948	-0.764392	0.4524
C	16.13483	2.606440	6.190372	0.0000
R squared	0.629736			
Adjusted R ²	0.597539			
F-statistic	19.55890			
F-stat. (Prob.)	0.000011			
Durbin Watson	2.034258			

Source: Author's computations (2026) using EViews 13

As shown in Table 4.5, for Model I, the short-run results reveal that the lagged value of economic growth is statistically significant and negatively signed, indicating a correction mechanism in the short term whereby previous periods of higher growth are followed by adjustments in the current period. This suggests a degree of mean reversion in economic growth dynamics within the Nigerian economy.

The differenced labour force variable is positive and statistically significant, implying that increases in labour force participation contribute positively to economic growth in the short run. This reflects the productive role of labour availability in stimulating economic activity through increased output capacity. On the other hand, government expenditure exhibits a negative but

statistically insignificant effect on economic growth, suggesting that short-run changes in public spending do not exert a meaningful direct influence on output growth during the period under review.

As revealed in Table 4.6, for Model II, the results show that corruption has a negative but statistically insignificant effect on domestic investment in the short run. This implies that although corruption may discourage investment activity, its immediate impact is not strong enough to produce statistically measurable effects within the period analysed.

The error correction term is negative and highly statistically significant, indicating a strong and valid adjustment process toward the long-run equilibrium following short-run deviations. The magnitude of the coefficient suggests a relatively fast speed of adjustment, meaning that disequilibrium in domestic investment is corrected rapidly over time.

In sum, the results suggest that while short-run fluctuations in labour force and corruption exhibit varying effects across the two models, the domestic investment model demonstrates stronger dynamic stability through a significant adjustment mechanism.

4.3 Diagnostic Tests

This section presents the post-estimation diagnostic tests for both Model I (GDP growth) and Model II (domestic investment). The diagnostics include tests for serial correlation, heteroskedasticity, normality, and parameter stability, which are used to evaluate the reliability and robustness of the estimated ARDL models.

Table 4.7: Summary of Diagnostic Test Results for Model I and Model II

Diagnostic Test	Model I (GDPG)	Model II (LNINV)
Serial Correlation (Breusch Godfrey LM)	F = 0.083785 (0.7755)	F = 0.248787 (0.6237)
Heteroskedasticity (Breusch Pagan Godfrey)	F = 0.294838 (0.9319)	F = 0.474655 (0.7908)
Jarque Bera Test	13.07996 (0.001445)	1.099947 (0.576965)
CUSUM Test	Stable (within 5% bounds)	Stable (within 5% bounds)
CUSUM of Squares Test	Stable (within 5% bounds)	Stable (within 5% bounds)

Source: Author's (2026) using EViews 13

From Table 4.7, the diagnostic results indicate that both models satisfy the key classical regression assumptions relating to serial correlation, heteroskedasticity, and parameter stability. For Model I, the Breusch Godfrey LM test shows no evidence of serial correlation, as indicated by the insignificant probability value of 0.7755. Similarly, the Breusch Pagan Godfrey test confirms the absence of heteroskedasticity, with a probability value of 0.9319, implying that the error variance is constant over time.

However, the Jarque Bera test for Model I reveals that the residuals are not normally distributed, given the probability value of 0.001445. Despite this, the CUSUM and CUSUM of Squares tests indicate that the model is structurally stable, as the cumulative sum lines remain within the 5 percent critical boundaries.

For Model II, the diagnostic results similarly confirm the absence of serial correlation and heteroskedasticity, as shown by the insignificant Breusch Godfrey and Breusch Pagan Godfrey test statistics. In addition, the Jarque Bera test indicates that the residuals are normally

distributed, with a probability value of 0.576965. The CUSUM and CUSUM of Squares tests further confirm parameter stability over the sample period.

Overall, the diagnostic results suggest that both models are statistically reliable and structurally stable, with Model II exhibiting stronger adherence to all classical regression assumptions compared to Model I.

4.4 Discussion of Findings

The empirical results of this study are interpreted in relation to the stated hypotheses that corruption does not affect economic growth in Nigeria and corruption does not affect domestic investment in Nigeria, while also situating the findings within existing empirical literature on corruption and economic performance.

For the GDP growth model (Model I), the bounds test result indicates the absence of a long run relationship among the variables, implying that corruption and the other explanatory variables do not move together with economic growth in a stable equilibrium framework. In the short run estimation, corruption is statistically insignificant in explaining variations in economic growth. This finding supports the first hypothesis and suggests that corruption does not have a direct measurable impact on economic growth in Nigeria within the study period.

This result contrasts with several established empirical studies. Mauro (2015) argues that corruption significantly reduces economic growth by discouraging investment and increasing uncertainty in economic decision making. Similarly, Adebayo (2020) and Olufemi and Ayodele

(2017) find that corruption impedes growth through misallocation of public resources and inefficient public spending. In addition, Alemika and Chukwuma (2018) emphasize that corruption weakens the effectiveness of public expenditure, thereby constraining development outcomes. The findings of this study therefore diverge from the dominant view in the literature, suggesting that the effect of corruption on economic growth in Nigeria may be indirect, weak, or absorbed by other macroeconomic variables rather than being directly observable in the growth equation.

However, the result is partially consistent with the argument of Oluwole and Olayiwola (2020), who contend that corruption alone may not fully explain Nigeria's economic challenges, as factors such as governance quality, policy inconsistency, and political instability may play more dominant roles in determining growth outcomes. This provides a plausible explanation for the insignificant effect of corruption on economic growth observed in this study.

For the domestic investment model (Model II), the bounds test confirms the existence of a long run relationship among the variables, indicating that investment is structurally linked with corruption, labour force, and government expenditure over time. In the long run estimation, corruption does not exert a statistically significant effect on domestic investment. However, the short run results show a negative but statistically weak relationship between corruption and investment.

This finding partially aligns with Mauro (2015), who posits that corruption increases the cost of doing business and reduces investment by creating uncertainty in the economic environment. It is also consistent with the work of Akpan and Akpan (2019), who find that corruption discourages foreign direct investment in Nigeria due to increased transaction costs and institutional inefficiencies. Similarly, Okonkwo (2022) argues that corruption constrains business expansion by forcing firms to operate informally, thereby limiting access to finance and growth opportunities.

Nevertheless, the weak statistical significance of corruption in this study suggests that its effect on domestic investment may not be as strong or persistent as widely documented in the literature. This outcome may be explained by the argument of Oluwole and Olayiwola (2020), who emphasize that corruption interacts with other structural and institutional factors, meaning its isolated effect may appear weak when these broader determinants are included in the model.

Furthermore, studies such as Ogundiya (2020) highlight that corruption in key sectors such as oil and gas significantly distorts development outcomes in Nigeria. While this study does not disaggregate sectoral effects, the general weak impact of corruption on aggregate investment suggests that corruption may operate more strongly in specific sectors rather than uniformly across the entire economy.

In summary, the findings of this study partially diverge from the dominant empirical literature which largely establishes a strong negative relationship between corruption, economic growth,

and investment. While the literature (Mauro, 2015; Adebayo, 2020; Akpan and Akpan, 2019) generally supports the view that corruption is a major constraint to development, this study finds no significant direct effect on economic growth and only a weak short-run effect on domestic investment. This implies that the impact of corruption in Nigeria may be more complex, indirect, and mediated through other institutional and macroeconomic channels rather than being strongly linear and direct as commonly assumed.

4.5 Policy Implications

The findings of this study provide important implications for economic policy in Nigeria, particularly with respect to corruption control, investment promotion, and macroeconomic management. The results show that corruption does not exert a statistically significant direct effect on economic growth, while its effect on domestic investment is weak in the long run but mildly negative in the short run. This suggests that policy responses should be broadened beyond a narrow focus on corruption to include complementary structural and institutional reforms.

First, although corruption was found to be statistically insignificant in explaining economic growth, this does not imply that anti-corruption efforts are unnecessary. Rather, it suggests that the transmission of corruption into growth outcomes may be indirect and mediated through other channels such as governance quality, institutional efficiency, and public expenditure effectiveness. Therefore, anti-corruption policies should be strengthened, but integrated with broader governance reforms that enhance transparency, accountability, and efficiency in public resource management.

Second, the weak but negative short-run effect of corruption on domestic investment indicates that corruption still poses a deterrent to investment decisions, especially in the short term, where uncertainty and transaction costs are more relevant. Policy makers should therefore prioritize the simplification of administrative procedures, reduction of bureaucratic bottlenecks, and strengthening of regulatory institutions to reduce opportunities for rent seeking behaviour. This will help improve investor confidence and encourage both domestic and foreign investment inflows.

Third, the presence of a significant long run relationship in the investment model suggests that investment in Nigeria is structurally driven by macroeconomic fundamentals such as labour force dynamics and government expenditure. Policy efforts should therefore focus on improving the productivity of the labour force through education, skills development, and employment generation programmes. A more productive labour force enhances investment returns and strengthens the capacity of the economy to attract sustainable capital formation.

Fourth, government expenditure should be reoriented towards productive and growth-enhancing sectors such as infrastructure, health, and education. The results suggest that while government spending has some influence on investment, its effectiveness depends largely on how efficiently it is allocated and implemented. Fiscal discipline and improved public financial management systems are therefore essential to ensure that government expenditure translates into real economic benefits.

Finally, the findings imply that corruption control alone is insufficient to drive economic growth in Nigeria. A more comprehensive policy framework is required, combining anti-corruption strategies with institutional reforms, macroeconomic stability measures, and investment-friendly policies. Strengthening legal institutions, improving contract enforcement, and ensuring policy consistency will collectively enhance the overall investment climate and support sustainable economic development.

In brief, the policy direction emerging from this study emphasizes an integrated approach where corruption mitigation is pursued alongside structural reforms in governance, labour productivity enhancement, and efficient fiscal management in order to achieve long-term economic transformation in Nigeria.

CHAPTER FIVE

SUMMARY, CONCLUSION, AND RECOMMENDATIONS

5.1 Summary of Findings

This study examined the effect of corruption on economic growth and domestic investment in Nigeria using annual time series data from 1996 to 2022. The study employed the Autoregressive Distributed Lag (ARDL) approach to estimate both the short-run and long-run relationships among economic growth (GDPG), domestic investment (LNINV), corruption (CORR), labour force (LAB), and government expenditure (GEX).

The unit root test results showed a mixed order of integration, with variables becoming stationary at levels and first differences, justifying the use of the ARDL framework. The bounds test for cointegration revealed that a long-run relationship exists in the domestic investment model, while no such relationship was found in the economic growth model.

The short-run results for the GDP growth model indicated that corruption does not have a statistically significant effect on economic growth in Nigeria. Similarly, labour force and government expenditure showed mixed and weak short-run effects on growth. For the domestic investment model, corruption exhibited a negative but weak short-run effect on investment, while labour force had a positive and significant influence.

The long-run results confirmed that corruption does not significantly influence domestic investment, although labour force remains an important determinant of investment performance. Diagnostic tests confirmed that both models are statistically reliable, structurally stable, and free from serial correlation and heteroskedasticity, although the GDP growth model exhibited non-normal residuals.

5.2 Conclusion

Based on the empirical evidence, the study concludes that corruption does not exert a statistically significant direct effect on economic growth in Nigeria within the period under review. This suggests that the growth process in Nigeria is influenced more by structural and macroeconomic factors rather than corruption alone.

For domestic investment, corruption does not have a significant long-run effect but shows a weak negative influence in the short run. This implies that while corruption may discourage investment decisions temporarily, its long-term impact is limited when compared to fundamental economic drivers such as labour force dynamics and government expenditure.

Overall, the study concludes that corruption is not a dominant direct determinant of economic growth and investment in Nigeria, although it may operate indirectly through institutional and governance channels.

5.3 Recommendations

Policy Recommendations

1. Government should strengthen institutional quality by enhancing transparency, accountability, and efficiency in public sector operations to indirectly reduce the negative channels through which corruption may affect investment.
2. Policies aimed at improving domestic investment should prioritize labour force development through education, skills acquisition, and employment generation programmes, as labour was found to be a significant determinant of investment.
3. Government expenditure should be redirected toward productive sectors such as infrastructure, health, and education to ensure higher efficiency and stronger transmission effects on investment and growth.
4. Anti-corruption strategies should be integrated into broader governance reforms rather than treated as standalone policies, since corruption effects appear to be indirect rather than direct in the growth process.
5. Efforts should be made to improve the ease of doing business in Nigeria by reducing bureaucratic delays and regulatory inefficiencies that may amplify the short-run negative effects of corruption on investment.

Recommendations for Further Studies

1. Future research should consider sectoral analysis, particularly separating oil and non-oil sectors, to capture heterogeneous effects of corruption.
2. Studies could incorporate additional institutional variables such as political stability, rule of law, and governance effectiveness to better capture indirect corruption channels.
3. Further studies may also extend the analysis using panel data across African economies for comparative assessment.
4. Research could explore nonlinear or threshold effects of corruption on economic performance to determine whether the impact changes at different levels of corruption intensity.

5.4 Limitations of the Study

This study is limited by the use of aggregate national-level data, which may not fully capture sector-specific effects of corruption. In addition, the corruption variable is measured using available proxies, which may not perfectly reflect the true extent of corruption in the economy. The sample period is also limited to available consistent data, which may affect the generalizability of the findings. Furthermore, potential omitted variables such as political instability and institutional quality may influence the estimated relationships.

5.5 Contribution to Knowledge

This study contributes to the existing literature in several ways. First, it provides updated empirical evidence on the corruption growth and investment nexus in Nigeria using recent data and the ARDL methodology. Second, it distinguishes between the effects of corruption on economic growth and domestic investment within a unified framework, allowing for comparative analysis. Third, the study highlights the weak and indirect nature of corruption effects in Nigeria, thereby challenging the widely held assumption of a strong direct negative impact. Finally, it adds to policy literature by emphasizing the importance of structural and institutional factors in explaining macroeconomic performance rather than focusing solely on corruption.

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APPENDIX

Descriptive Statistics

	GDPG	INV	CORR	LAB	GEX
Mean	4.540970	9.04E+12	2.135185	75483363	5.65E+12
Median	5.015935	9.00E+12	2.400000	73499013	3.45E+12
Maximum	15.32916	1.14E+13	2.800000	1.05E+08	2.44E+13
Minimum	-6.368898	6.86E+12	0.690000	53211071	3.37E+11
Std. Dev.	4.004628	1.22E+12	0.590315	15277810	6.58E+12
Skewness	-0.134786	0.114957	-0.880083	0.319507	1.590257
Kurtosis	4.780360	1.984158	2.704374	1.957592	4.380674
Jarque-Bera	3.647644	1.220396	3.583779	1.681823	13.52467
Probability	0.161408	0.543243	0.166645	0.431317	0.001157
Sum	122.6062	2.44E+14	57.65000	2.04E+09	1.53E+14
Sum Sq. Dev.	416.9631	3.87E+25	9.060274	6.07E+15	1.13E+27
Observations	27	27	27	27	27

Unit Root Test

@ Level

Null Hypothesis: GDPG has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic - based on SIC, maxlag=6)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-3.054984	0.1375
Test critical values:		
1% level	-4.356068	
5% level	-3.595026	
10% level	-3.233456	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(GDPG)

Method: Least Squares

Date: 05/01/26 Time: 13:57

Sample (adjusted): 1997 2022

Included observations: 26 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GDPG(-1)	-0.571915	0.187207	-3.054984	0.0056
C	4.449338	1.998090	2.226796	0.0360
@TREND("1996")	-0.136494	0.099953	-1.365582	0.1853
R-squared	0.288725	Mean dependent var		0.004727
Adjusted R-squared	0.226875	S.D. dependent var		3.925171
S.E. of regression	3.451307	Akaike info criterion		5.423550
Sum squared resid	273.9649	Schwarz criterion		5.568715
Log likelihood	-67.50615	Hannan-Quinn criter.		5.465352
F-statistic	4.668145	Durbin-Watson stat		2.040413
Prob(F-statistic)	0.019881			

Null Hypothesis: LNINV has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 1 (Automatic - based on SIC, maxlag=6)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-5.388965	0.0010
Test critical values:		
1% level	-4.374307	
5% level	-3.603202	
10% level	-3.238054	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(LNINV)

Method: Least Squares

Date: 05/01/26 Time: 14:05

Sample (adjusted): 1998 2022

Included observations: 25 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
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LNINV(-1)	-1.546849	0.287040	-5.388965	0.0000
D(LNINV(-1))	0.431564	0.195477	2.207747	0.0385
C	45.84736	8.505974	5.390019	0.0000
@TREND("1996")	0.020783	0.004500	4.618452	0.0001
R-squared	0.630173	Mean dependent var		0.010817
Adjusted R-squared	0.577341	S.D. dependent var		0.135003
S.E. of regression	0.087769	Akaike info criterion		-1.882578
Sum squared resid	0.161770	Schwarz criterion		-1.687557
Log likelihood	27.53222	Hannan-Quinn criter.		-1.828487
F-statistic	11.92778	Durbin-Watson stat		1.735785
Prob(F-statistic)	0.000090			

Null Hypothesis: CORR has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 1 (Automatic - based on SIC, maxlag=6)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-1.760404	0.6932
Test critical values:		
1% level	-4.374307	
5% level	-3.603202	
10% level	-3.238054	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(CORR)

Method: Least Squares

Date: 05/01/26 Time: 14:06

Sample (adjusted): 1998 2022

Included observations: 25 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
CORR(-1)	-0.321594	0.182682	-1.760404	0.0929
D(CORR(-1))	0.102032	0.182833	0.558062	0.5827
C	0.470039	0.254952	1.843635	0.0794
@TREND("1996")	0.017888	0.013722	1.303567	0.2065
R-squared	0.135968	Mean dependent var		0.025600
Adjusted R-squared	0.012535	S.D. dependent var		0.247758
S.E. of regression	0.246200	Akaike info criterion		0.180303
Sum squared resid	1.272906	Schwarz criterion		0.375324
Log likelihood	1.746206	Hannan-Quinn criter.		0.234394
F-statistic	1.101552	Durbin-Watson stat		2.102242
Prob(F-statistic)	0.370565			

Null Hypothesis: LNLAB has a unit root
 Exogenous: Constant, Linear Trend
 Lag Length: 2 (Automatic - based on SIC, maxlag=6)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-0.104342	0.9916
Test critical values: 1% level	-4.394309	
5% level	-3.612199	
10% level	-3.243079	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
 Dependent Variable: D(LNLAB)
 Method: Least Squares
 Date: 05/01/26 Time: 14:08
 Sample (adjusted): 1999 2022
 Included observations: 24 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LNLAB(-1)	-0.024458	0.234399	-0.104342	0.9180
D(LNLAB(-1))	-0.304629	0.300646	-1.013247	0.3237
D(LNLAB(-2))	-0.742808	0.310901	-2.389213	0.0274
C	0.483079	4.158237	0.116174	0.9087
@TREND("1996")	0.000887	0.005895	0.150514	0.8819
R-squared	0.334410	Mean dependent var		0.026127
Adjusted R-squared	0.194286	S.D. dependent var		0.006196
S.E. of regression	0.005561	Akaike info criterion		-7.362927
Sum squared resid	0.000588	Schwarz criterion		-7.117499
Log likelihood	93.35512	Hannan-Quinn criter.		-7.297815
F-statistic	2.386528	Durbin-Watson stat		1.873933
Prob(F-statistic)	0.087361			

Null Hypothesis: LNGEX has a unit root
 Exogenous: Constant, Linear Trend
 Lag Length: 0 (Automatic - based on SIC, maxlag=6)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-2.896871	0.1794
Test critical values: 1% level	-4.356068	
5% level	-3.595026	
10% level	-3.233456	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
 Dependent Variable: D(LNGEX)
 Method: Least Squares
 Date: 05/01/26 Time: 14:09
 Sample (adjusted): 1997 2022
 Included observations: 26 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LNGEX(-1)	-0.516262	0.178214	-2.896871	0.0081
C	13.93191	4.749407	2.933399	0.0075
@TREND("1996")	0.075706	0.026843	2.820257	0.0097
R-squared	0.267922	Mean dependent var		0.164728
Adjusted R-squared	0.204263	S.D. dependent var		0.208022
S.E. of regression	0.185564	Akaike info criterion		-0.422665
Sum squared resid	0.791984	Schwarz criterion		-0.277500
Log likelihood	8.494639	Hannan-Quinn criter.		-0.380862
F-statistic	4.208707	Durbin-Watson stat		2.191711
Prob(F-statistic)	0.027696			

@ First Difference

Null Hypothesis: D(GDPG) has a unit root
 Exogenous: Constant, Linear Trend
 Lag Length: 2 (Automatic - based on SIC, maxlag=6)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-4.561779	0.0074
Test critical values:		
1% level	-4.416345	
5% level	-3.622033	
10% level	-3.248592	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
 Dependent Variable: D(GDPG,2)
 Method: Least Squares
 Date: 05/01/26 Time: 13:59
 Sample (adjusted): 2000 2022
 Included observations: 23 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(GDPG(-1))	-2.490360	0.545919	-4.561779	0.0002
D(GDPG(-1),2)	0.999235	0.427275	2.338624	0.0311
D(GDPG(-2),2)	0.551882	0.256302	2.153252	0.0451
C	2.594439	2.049548	1.265859	0.2217
@TREND("1996")	-0.179479	0.129541	-1.385501	0.1828
R-squared	0.747768	Mean dependent var		0.226378
Adjusted R-squared	0.691717	S.D. dependent var		6.742824
S.E. of regression	3.743836	Akaike info criterion		5.667759
Sum squared resid	252.2935	Schwarz criterion		5.914605
Log likelihood	-60.17922	Hannan-Quinn criter.		5.729840
F-statistic	13.34074	Durbin-Watson stat		1.891977
Prob(F-statistic)	0.000032			

Null Hypothesis: D(CORR) has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 6 (Automatic - based on SIC, maxlag=6)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-3.766665	0.0422
Test critical values: 1% level	-4.532598	
5% level	-3.673616	
10% level	-3.277364	

*MacKinnon (1996) one-sided p-values.

Warning: Probabilities and critical values calculated for 20 observations
and may not be accurate for a sample size of 19

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(CORR,2)

Method: Least Squares

Date: 05/01/26 Time: 14:07

Sample (adjusted): 2004 2022

Included observations: 19 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(CORR(-1))	-2.246765	0.596486	-3.766665	0.0037
D(CORR(-1),2)	1.057120	0.507713	2.082122	0.0640
D(CORR(-2),2)	0.715114	0.369439	1.935675	0.0817
D(CORR(-3),2)	0.483255	0.280335	1.723846	0.1155
D(CORR(-4),2)	0.435119	0.214829	2.025423	0.0703

D(CORR(-5),2)	0.062796	0.170773	0.367717	0.7207
D(CORR(-6),2)	0.226198	0.097263	2.325631	0.0424
C	0.652663	0.194632	3.353323	0.0073
@TREND("1996")	-0.030335	0.009429	-3.217368	0.0092
R-squared	0.914667	Mean dependent var		0.010526
Adjusted R-squared	0.846401	S.D. dependent var		0.317796
S.E. of regression	0.124550	Akaike info criterion		-1.022709
Sum squared resid	0.155126	Schwarz criterion		-0.575343
Log likelihood	18.71574	Hannan-Quinn criter.		-0.946997
F-statistic	13.39851	Durbin-Watson stat		2.600316
Prob(F-statistic)	0.000203			

Null Hypothesis: D(LNLAB) has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 1 (Automatic - based on SIC, maxlag=6)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-4.567853	0.0069
Test critical values:		
1% level	-4.394309	
5% level	-3.612199	
10% level	-3.243079	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(LNLAB,2)

Method: Least Squares

Date: 05/01/26 Time: 14:08

Sample (adjusted): 1999 2022

Included observations: 24 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LNLAB(-1))	-2.073488	0.453931	-4.567853	0.0002
D(LNLAB(-1),2)	0.751725	0.291439	2.579359	0.0179
C	0.049201	0.011707	4.202609	0.0004
@TREND("1996")	0.000272	0.000162	1.684965	0.1075
R-squared	0.604103	Mean dependent var		0.000627
Adjusted R-squared	0.544718	S.D. dependent var		0.008036
S.E. of regression	0.005422	Akaike info criterion		-7.445687
Sum squared resid	0.000588	Schwarz criterion		-7.249345
Log likelihood	93.34825	Hannan-Quinn criter.		-7.393598
F-statistic	10.17271	Durbin-Watson stat		1.885712
Prob(F-statistic)	0.000280			

Null Hypothesis: D(LNGEX) has a unit root
 Exogenous: Constant, Linear Trend
 Lag Length: 0 (Automatic - based on SIC, maxlag=6)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-7.080732	0.0000
Test critical values: 1% level	-4.374307	
5% level	-3.603202	
10% level	-3.238054	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
 Dependent Variable: D(LNGEX,2)
 Method: Least Squares
 Date: 05/01/26 Time: 14:10
 Sample (adjusted): 1998 2022
 Included observations: 25 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LNGEX(-1))	-1.388981	0.196163	-7.080732	0.0000
C	0.233864	0.095771	2.441904	0.0231
@TREND("1996")	-0.000615	0.005655	-0.108686	0.9144
R-squared	0.695188	Mean dependent var		-0.001481
Adjusted R-squared	0.667478	S.D. dependent var		0.353260
S.E. of regression	0.203706	Akaike info criterion		-0.232108
Sum squared resid	0.912918	Schwarz criterion		-0.085843
Log likelihood	5.901351	Hannan-Quinn criter.		-0.191540
F-statistic	25.08780	Durbin-Watson stat		1.912414
Prob(F-statistic)	0.000002			

ARDL Bounds Test for Cointegration

GDPg Model Bounds Test (Model I)

Null hypothesis: No levels relationship
 Number of cointegrating variables: 3
 Trend type: Unrest. constant (Case 3)
 Sample size: 26

Test Statistic	Value
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F-statistic	2.341382
t-statistic	-2.470458

Bounds Critical Values

		10%		5%		1%	
Sample Size	I(0)	I(1)	I(0)	I(1)	I(0)	I(1)	
F-Statistic							
30	3.008	4.150	3.710	5.018	5.333	7.063	
Asymptotic	2.720	3.770	3.230	4.350	4.290	5.610	
t-Statistic							
Asymptotic	-2.570	-3.460	-2.860	-3.780	-3.430	-4.370	

* I(0) and I(1) are respectively the stationary and non-stationary bounds.

Domestic Investment Model Bounds Test (Model II)

Null hypothesis: No levels relationship

Number of cointegrating variables: 3

Trend type: Unrest. constant (Case 3)

Sample size: 26

Test Statistic	Value
F-statistic	8.321239
t-statistic	-5.613123

Bounds Critical Values

		10%		5%		1%	
Sample Size	I(0)	I(1)	I(0)	I(1)	I(0)	I(1)	
F-Statistic							

30	3.008	4.150	3.710	5.018	5.333	7.063
Asymptotic	2.720	3.770	3.230	4.350	4.290	5.610
t-Statistic						
Asymptotic	-2.570	-3.460	-2.860	-3.780	-3.430	-4.370

* I(0) and I(1) are respectively the stationary and non-stationary bounds.

Long Run Result

INV Model (Model II)

Variable *	Coefficient	Std. Error	t-Statistic	Prob.
CORR(-1)	0.050309	0.050647	0.993336	0.3309
LNLAB	1.104702	0.448365	2.463845	0.0216
LNGEX	-0.126217	0.074322	-1.698248	0.1030

Note: * Coefficients
derived from the CEC
regression.

Short Run Result

GDPg Model (Model I)

Dependent Variable: D(GDPG)

Method: ARDL

Date: 05/01/26 Time: 15:19

Sample: 1997 2022

Included observations: 26

Dependent lags: 1 (Automatic)

Automatic-lag linear regressors (1 max. lags): CORR LNLAB LNGEX

Deterministics: Unrestricted constant and no trend (Case 3)

Model selection method: Akaike info criterion (AIC)

Number of models evaluated: 8

Selected model: ARDL(1,0,1,1)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
COINTEQ*	-0.456973	0.138768	-3.293068	0.0033
D(LNLAB)	283.8213	98.24129	2.889022	0.0085
D(LNGEX)	-1.640701	2.878877	-0.569910	0.5745
C	547.7987	168.9545	3.242286	0.0037

R-squared 0.539636 Mean dependent var 0.004727

Adjusted R-squared	0.476859	S.D. dependent var	3.925171
S.E. of regression	2.839017	Akaike info criterion	5.065431
Sum squared resid	177.3203	Schwarz criterion	5.258984
Log likelihood	-61.85060	Hannan-Quinn criter.	5.121167
F-statistic	8.596094	Durbin-Watson stat	2.042062
Prob(F-statistic)	0.000579		

* p-values are incompatible with t-Bounds distribution.

INV Model (Model II)

Dependent Variable: D(LNINV)

Method: ARDL

Date: 05/01/26 Time: 18:44

Sample: 1997 2022

Included observations: 26

Dependent lags: 1 (Automatic)

Automatic-lag linear regressors (1 max. lags): CORR LNLAB LNGEX

Deterministics: Unrestricted constant and no trend (Case 3)

Model selection method: Akaike info criterion (AIC)

Number of models evaluated: 8

Selected model: ARDL(1,1,0,0)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
COINTEQ*	-1.210545	0.195663	-6.186897	0.0000
D(CORR)	-0.042002	0.054948	-0.764392	0.4524
C	16.13483	2.606440	6.190372	0.0000

R-squared	0.629736	Mean dependent var	0.012587
Adjusted R-squared	0.597539	S.D. dependent var	0.132583
S.E. of regression	0.084110	Akaike info criterion	-2.005207
Sum squared resid	0.162715	Schwarz criterion	-1.860042
Log likelihood	29.06769	Hannan-Quinn criter.	-1.963405
F-statistic	19.55890	Durbin-Watson stat	2.034258
Prob(F-statistic)	0.000011		

* p-values are incompatible with t-Bounds distribution.

Diagnostic Tests for GDPg Model (Model I)

Breusch-Godfrey Serial Correlation LM Test:

Null hypothesis: No serial correlation at up to 1 lag

F-statistic	0.083785	Prob. F(1,18)	0.7755
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Obs*R-squared 0.120462 Prob. Chi-Square(1) 0.7285

Test Equation:

Dependent Variable: RESID

Method: ARDL

Date: 05/01/26 Time: 18:39

Sample (adjusted): 1997 2022

Included observations: 26 after adjustments

Presample missing value lagged residuals set to zero.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GDPG(-1)	0.065941	0.296389	0.222480	0.8264
CORR	-0.094710	1.966165	-0.048170	0.9621
LNLAB	6.727860	121.5374	0.055356	0.9565
LNLAB(-1)	-5.143679	124.1631	-0.041427	0.9674
LNGEX	0.081715	3.619842	0.022574	0.9822
LNGEX(-1)	-0.212191	3.544976	-0.059857	0.9529
C	-25.22249	323.2983	-0.078016	0.9387
RESID(-1)	-0.109247	0.377423	-0.289456	0.7755

R-squared	0.004633	Mean dependent var	-5.64E-13
Adjusted R-squared	-0.382454	S.D. dependent var	2.663234
S.E. of regression	3.131372	Akaike info criterion	5.368479
Sum squared resid	176.4988	Schwarz criterion	5.755586
Log likelihood	-61.79023	Hannan-Quinn criter.	5.479952
F-statistic	0.011969	Durbin-Watson stat	1.997753
Prob(F-statistic)	0.999998		

Heteroskedasticity Test: Breusch-Pagan-Godfrey

Null hypothesis: Homoskedasticity

F-statistic	0.294838	Prob. F(6,19)	0.9319
Obs*R-squared	2.214584	Prob. Chi-Square(6)	0.8989
Scaled explained SS	2.537636	Prob. Chi-Square(6)	0.8642

Test Equation:

Dependent Variable: RESID^2

Method: Least Squares

Date: 05/01/26 Time: 18:39

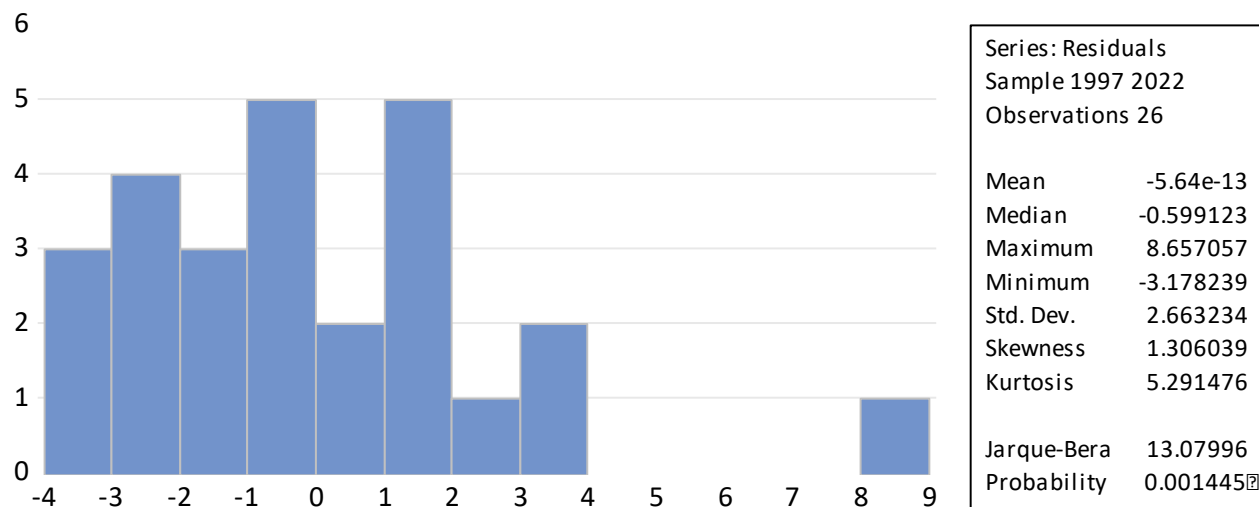
Sample (adjusted): 1997 2022

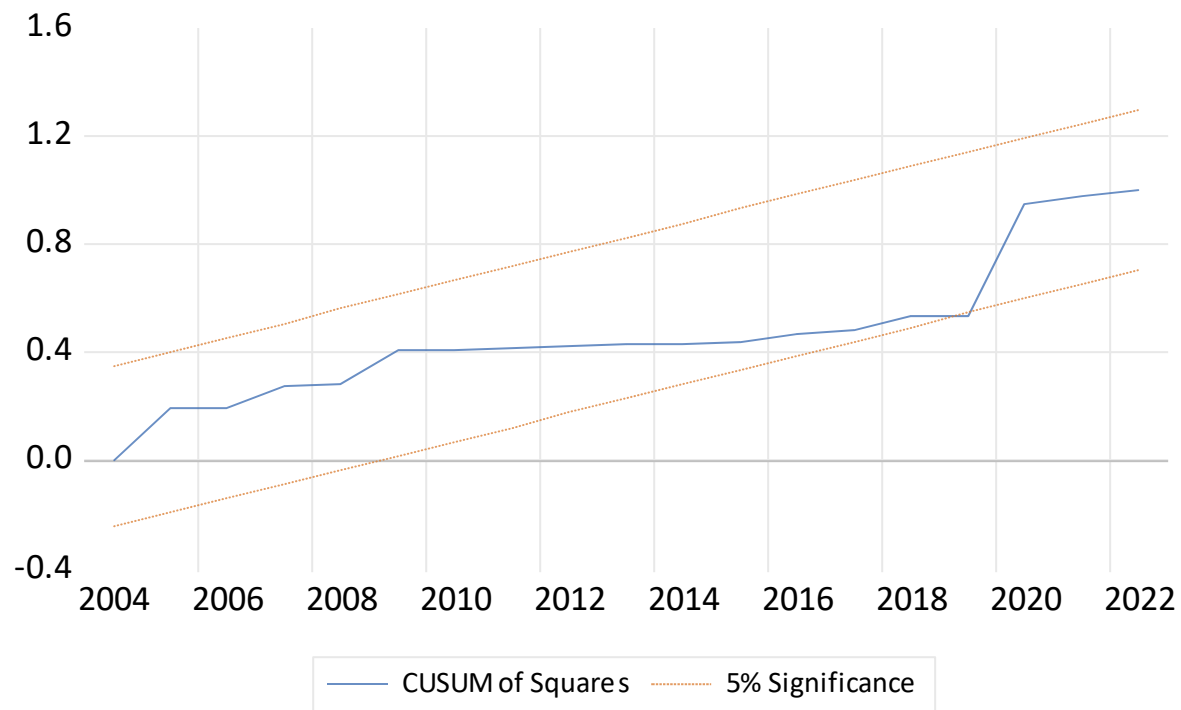
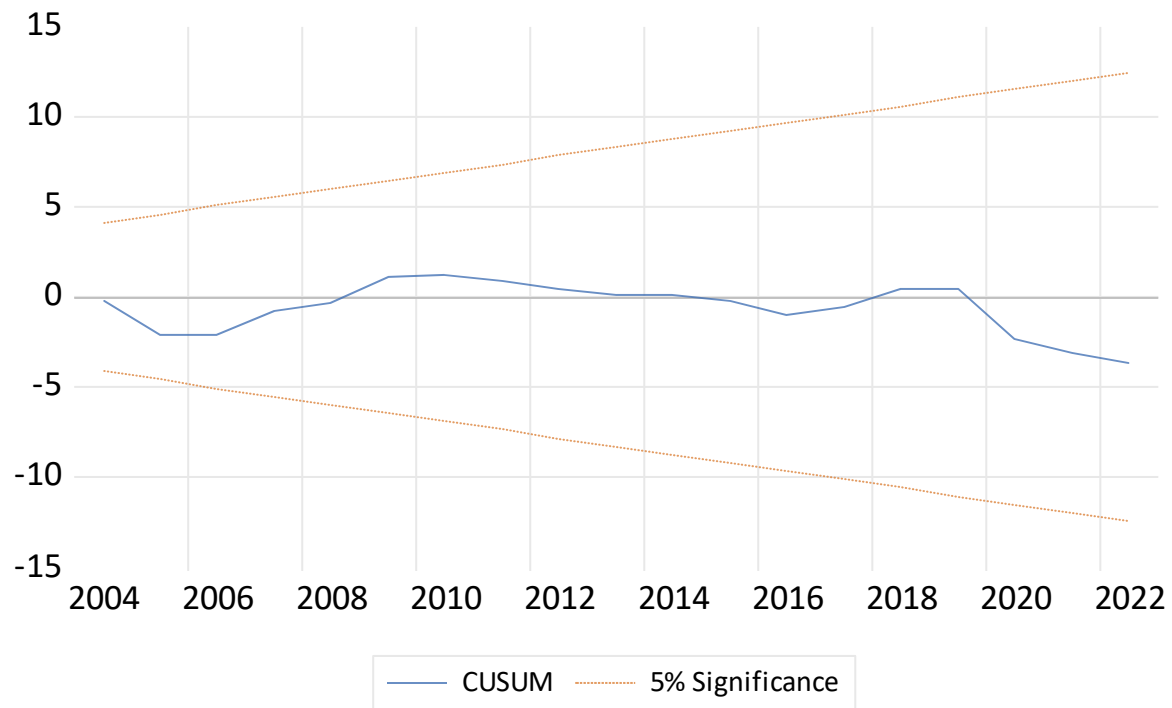
Included observations: 26 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-634.3226	1571.661	-0.403600	0.6910
GDPG(-1)	-0.091891	0.957145	-0.096005	0.9245

CORR	-7.017107	9.787099	-0.716975	0.4821
LNLAB	-336.9365	602.2151	-0.559495	0.5824
LNLAB(-1)	386.7353	620.3419	0.623423	0.5404
LNGEX	-5.876056	18.21786	-0.322544	0.7506
LNGEX(-1)	-2.324775	17.50877	-0.132778	0.8958

R-squared	0.085176	Mean dependent var	6.820013
Adjusted R-squared	-0.203715	S.D. dependent var	14.40805
S.E. of regression	15.80764	Akaike info criterion	8.583668
Sum squared resid	4747.750	Schwarz criterion	8.922386
Log likelihood	-104.5877	Hannan-Quinn criter.	8.681207
F-statistic	0.294838	Durbin-Watson stat	2.345152
Prob(F-statistic)	0.931899		





Diagnostic Tests for INV Model (Model II)

Breusch-Godfrey Serial Correlation LM Test:

Null hypothesis: No serial correlation at up to 1 lag

F-statistic	0.248787	Prob. F(1,19)	0.6237
Obs*R-squared	0.336045	Prob. Chi-Square(1)	0.5621

Test Equation:

Dependent Variable: RESID

Method: ARDL

Date: 05/01/26 Time: 18:51

Sample (adjusted): 1997 2022

Included observations: 26 after adjustments

Presample missing value lagged residuals set to zero.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LNINV(-1)	0.232062	0.514576	0.450978	0.6571
CORR	0.000974	0.073220	0.013303	0.9895
CORR(-1)	-0.006674	0.071551	-0.093280	0.9267
LNLAB	-0.166200	0.683145	-0.243286	0.8104
LNGEX	0.010187	0.095723	0.106421	0.9164
C	-4.187541	11.68624	-0.358331	0.7240

RESID(-1)	-0.278481	0.558319	-0.498785	0.6237
R-squared	0.012925	Mean dependent var	-1.78E-15	
Adjusted R-squared	-0.298783	S.D. dependent var	0.080676	
S.E. of regression	0.091942	Akaike info criterion	-1.710524	
Sum squared resid	0.160612	Schwarz criterion	-1.371805	
Log likelihood	29.23681	Hannan-Quinn criter.	-1.612985	
F-statistic	0.041464	Durbin-Watson stat	1.960191	
Prob(F-statistic)	0.999620			

Heteroskedasticity Test: Breusch-Pagan-Godfrey

Null hypothesis: Homoskedasticity

F-statistic	0.474655	Prob. F(5,20)	0.7908
Obs*R-squared	2.757986	Prob. Chi-Square(5)	0.7372
Scaled explained SS	1.395505	Prob. Chi-Square(5)	0.9248

Test Equation:

Dependent Variable: RESID^2

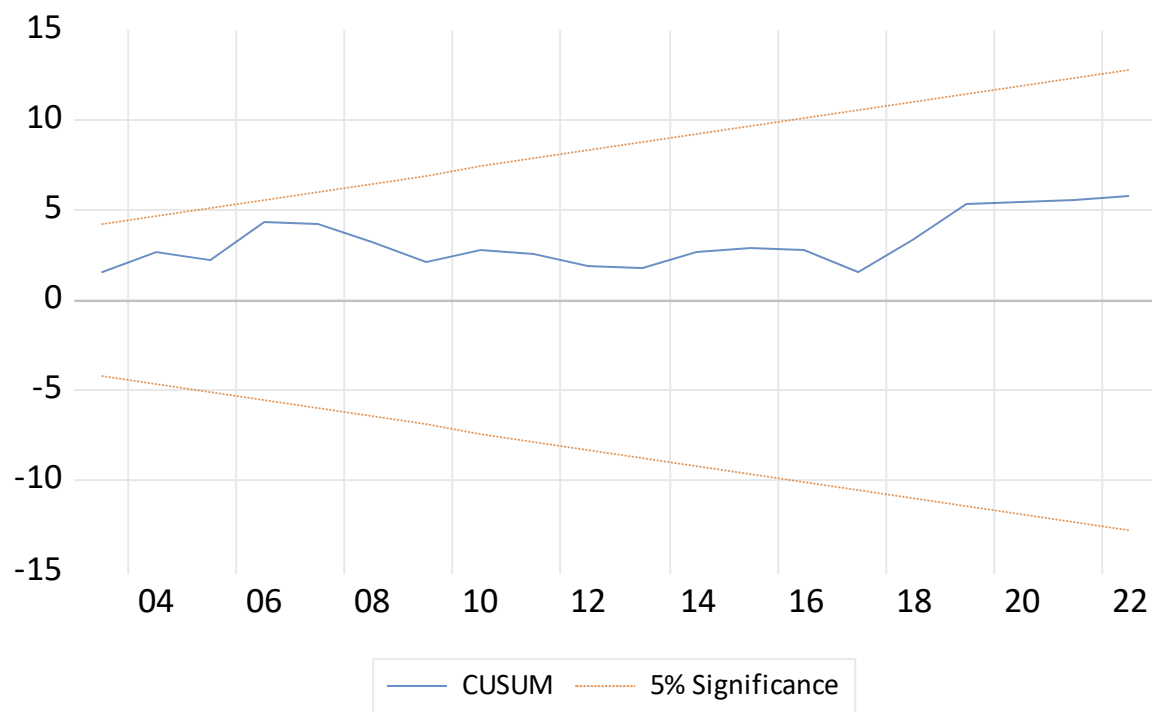
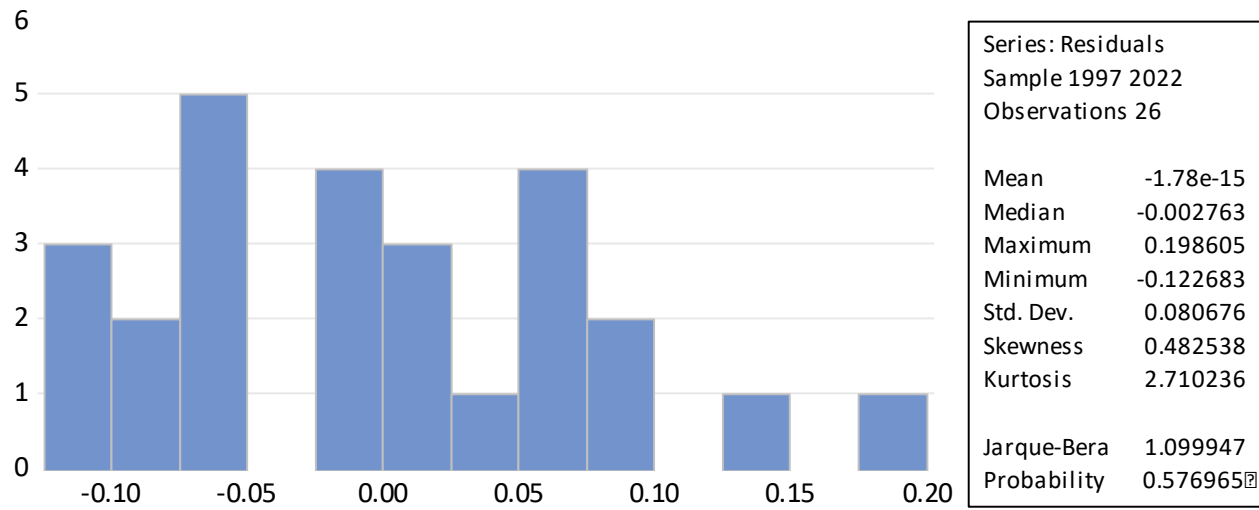
Method: Least Squares

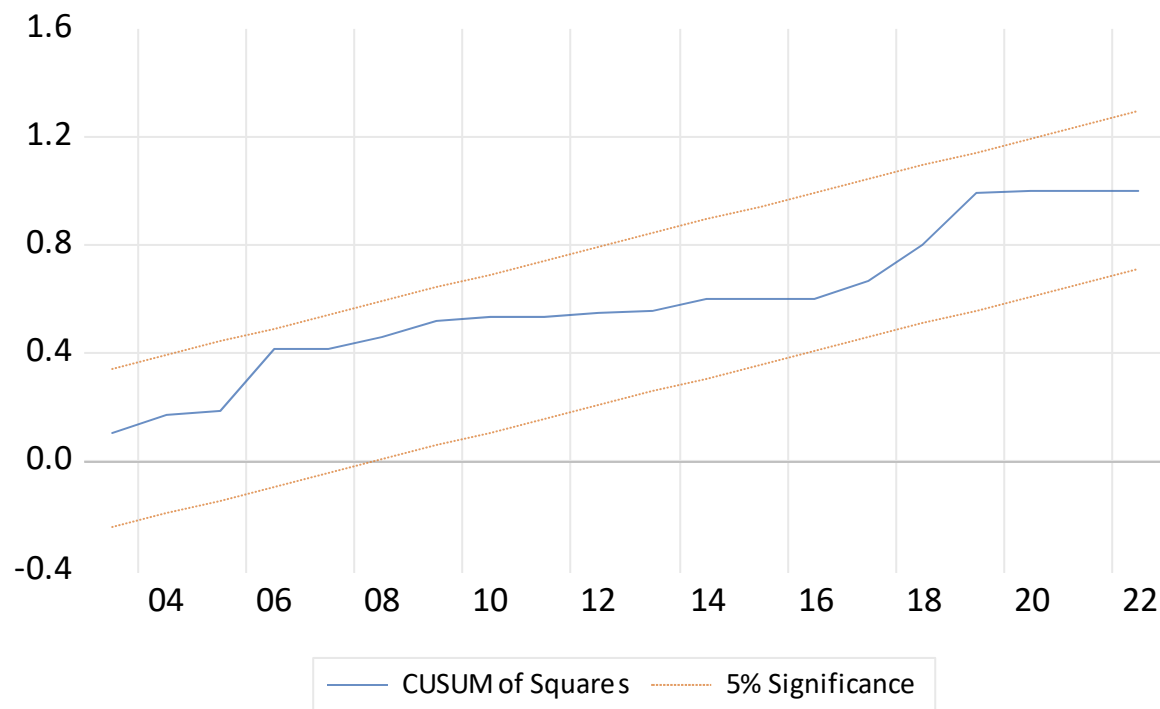
Date: 05/01/26 Time: 18:52

Sample (adjusted): 1997 2022

Included observations: 26 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.473113	0.780082	0.606491	0.5510
LNINV(-1)	-0.022182	0.021095	-1.051511	0.3056
CORR	-0.000404	0.007024	-0.057512	0.9547
CORR(-1)	-0.002641	0.006745	-0.391559	0.6995
LNLAB	0.010908	0.057228	0.190611	0.8508
LNGEX	0.000113	0.008974	0.012562	0.9901
R-squared	0.106076	Mean dependent var	0.006258	
Adjusted R-squared	-0.117405	S.D. dependent var	0.008346	
S.E. of regression	0.008823	Akaike info criterion	-6.423794	
Sum squared resid	0.001557	Schwarz criterion	-6.133464	
Log likelihood	89.50933	Hannan-Quinn criter.	-6.340190	
F-statistic	0.474655	Durbin-Watson stat	2.025920	
Prob(F-statistic)	0.790765			





Dataset

Year	GDPg	INV	CORR	LAB	GEX
Source	WDI	NBS	TI	WDI	NBS
1996	4.195924	7.61E+12	0.69	53211071	3.37E+11
1997	2.937099	8.06E+12	1.76	54708361	4.28E+11
1998	2.581254	8.17E+12	1.9	56231989	4.87E+11
1999	0.584127	8.39E+12	1.6	57821632	9.48E+11
2000	5.015935	9E+12	1.2	59281872	7.01E+11
2001	5.917685	6.86E+12	1	60772025	1.02E+12
2002	15.32916	7.56E+12	1.6	62235800	1.02E+12
2003	7.347195	9.18E+12	1.4	63693782	1.23E+12
2004	9.250558	7.35E+12	1.6	65217367	1.5E+12
2005	6.438517	7.52E+12	1.9	66741004	1.92E+12
2006	6.059428	1.06E+13	2.2	68316893	2.04E+12
2007	6.59113	8.25E+12	2.2	69975807	2.45E+12
2008	6.764473	8.03E+12	2.7	71669029	3.24E+12
2009	8.036925	8.83E+12	2.5	73499013	3.45E+12
2010	8.005656	9.18E+12	2.4	75284751	4.19E+12
2011	5.307924	8.43E+12	2.4	77225150	4.71E+12
2012	4.230061	8.64E+12	2.7	79317244	4.61E+12
2013	6.671335	9.32E+12	2.5	81303065	5.19E+12
2014	6.309719	1.06E+13	2.7	83458627	4.59E+12
2015	2.652693	1.04E+13	2.6	85773802	4.99E+12
2016	-1.61687	9.93E+12	2.8	88256929	5.86E+12
2017	0.805887	9.63E+12	2.7	90905566	6.46E+12
2018	1.922757	1.06E+13	2.7	93615892	1.38E+13
2019	2.208429	1.14E+13	2.6	96335866	1.55E+13
2020	-6.3689	9.76E+12	2.5	97041268	1.76E+13
2021	1.109253	1.02E+13	2.4	100887576	2E+13
2022	4.318829	1.06E+13	2.4	105269418	2.44E+13

Sources: World Development Indicators (WDI), National Bureau of Statistics (NBS), Transparency International (TI).