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DEPARTMENT OF DEVELOPMENT ECONOMIC

THE RELATIONSHIP BETWEEN CORRUPTION, GOVERNANCE AND POVERTY: EMPIRICAL EVIDENCE FOR SUB-SAHARAN AFRICA USING PANEL DATA

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DECLARATION

I declare that this MA thesis is my original work, and has never been presented for the award of any degree in this or any other university and all source of materials used for the thesis have been duly acknowledged.

Dagim Addisu Signature _____

St. Mary's University

ENDORSEMENT

This thesis has been submitted to St. Mary's university school of graduate studies institute of agriculture and development studies for examination with my approval as a university advisor.

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ACRONYMS

ADI = Africa Development Indicators

CPI = Corruption Perception Index

DIFF-GMM = Difference Generalized Method of Moments

GDPPCGR = Gross Domestic Product per capita Growth rate

GE = Government Effectiveness

GN = Gender

GMM = Generalized Method of Moment

GQ = Governance Quality

HDR = Human Development Report

HPI = Human Poverty Index

INF = Inflation

MDGs = Millennium Development Goals

OECD = Organization for Economic Co-operation and Development

ODI = Overseas Development Institute

PSV = Political Stability and Absence of Violence

RL = Rule of Law

RP = Rural Population

RQ = Regulatory Quality

SSA = Sub-Saharan Africa

SYS-GMM = System Generalized Method of Moments

UNDP = United Nations Development Program

USAID = United States Agency for International Development

VA = Voice and Accountability

WDI = World Development Indicator

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Abstract

This study attempts to examine the relationship between corruption, governance and poverty in sub-Saharan Africa (SSA). The study applies SYS-GMM dynamic panel data models for a sample of 23 sub-Saharan Africa countries over the period from 2011 to 2020. The findings of the study show that the relationship between corruption and poverty is bidirectional, meaning corruption has a statistically significant effect on poverty and poverty also has a significant effect on corruption. Causality test results also show that bidirectional causality exists between them. It is shown that corruption Granger-causes poverty, and poverty also Granger-causes corruption. That is, current and past information on corruption helps to improve the prediction on poverty as well as current and past information on poverty helps to improve the prediction on corruption. Governance quality affects poverty where improved governance contributes to poverty reduction and poor governance increases poverty. All of the governance indicators: political stability and absence of violence, voice and accountability, government effectiveness, regulatory quality, and rule of law are also found to affect corruption level when considered independently. The policy implications of the study are that governments in SSA could understand corruption-poverty nexus while developing and implementing development policies and strategies. Policies of combating corruption and alleviating poverty should be integral parts of this strategy.

Key words: *Poverty, Corruption, Governance, Sub-Saharan countries, system GMM.*

CHAPER ONE

1. NTRODUCTION

1.1 Background of the Study

The general definition of corruption is the abuse of entrusted power for private gains. Corruption can be categorized, as political, grand, and petty, but this depends on the amount of money lost and the area where it happens. There are various forms that corruption can be assumed. It entails misuse of power by a government official such as nepotism and embezzlement of public funds, in addition to extortion, fraud, bribery, and influence peddling (USAID, 2019).

Political corruption is when political decision makers abuse their positions to maintain their power, status, and riches. They manipulate policies, institutions, and rules of ways in the allocation of funds and financing. Grand corruption is when a senior level of government facilitates for the leaders to gain at the expense of the public interest, by distorting policies or the core functioning of the central government. Petty corruption is the corruption committed at a small scale by the low-level public official. They abuse power entrusted to them in their transaction with the ordinary citizen who is trying to get their essential goods and services (shahs 2006). Much of the discourse in the antiquities focused on illegal trade and the theft of public revenue. However, it is apparent that corruption is much more than those, and is corrosive to the state.

As is the case with many controversial social issues, corruption has its own controversies in the literature. Different views prevail regarding the harm and benefits of corruption. The proponents of the beneficial effects of corruption rest their justification on the so-called “grease the wheels” hypothesis. Leff (2011) argues that corruption promotes economic growth reasoning that in a society where insufficient laws and regulations exist, corruption greases the wheels and reduces inefficiency. Lui (2013) supports this view in his analysis by using a game theoretic model and shows that in a system with a queue, it may be optimal to allow bribe to jump the queue so that waiting costs gets minimal. Huntington (2008), Leys (2014), Lien (2016) are some among those who support and show the benefits of corruption. They argue that corruption is a good means to compensate the ill-functioning of institutions, which is especially true in developing countries where the latter is particularly the case.

By contrast, many findings show that corruption has an adverse effect on both social and economic variables such as trust, public participation and perception, investment, growth, distribution, poverty, markets, etc. It is argued that the „speeding/greasing" argument may not happen due to the exogenous nature of the slow process. Officials or civil servants may cause delays that otherwise would not have been, with the objective to extract more bribes. Moreover, the "grease the wheels" hypothesis may not hold because an ill-functioning bureaucracy is often characterized by an administration with successive decision centers, which increases the delays instead of speeding them up (Meon P.G and Sekkat K., 2005).

Kurer (2013) argues that corrupt officials have an incentive to create other distortions in the economy to preserve their illegal source of income. The increased number of transactions due to bribe may well offset the increased efficiency with which transactions are carried out. One distortion adds up over the other instead of compensating it. Bardhan (2007) points out that the inherent uncertainty of corrupt agreements may simply make the efficiency-enhancing mechanisms ineffective. Therefore, it is likely that corruption may increase the risks associated with a weak rule of law instead of compensating it. These justifications, in general, are known to be "sand the wheels" hypothesis.

Corruption affects poverty, and, in turn, poverty can impact corruption. Chetwynd, Chetwynd and Spector (2003) and Yildiz (2017) point out that corruption has consequences on governance and economic factors, and this increase poverty. Additionally, authors such as Negin, Rashib and Nikopour (2010) argue that corruption can cause poverty. As cited by Annan (2004) "corruption hurts the poor disproportionately diverting funds intended for development, undermining a governments ability to provide basic services, and feeding inequality and injustice and discouraging foreign aid and investment" (Ibid, p.iii). In countries affected by corruption, there is weak trust on public institutions, the quality of public services is not very good – the expenditures on health and education are not a priority – and this increases the levels of poverty (Chetwynd et al., 2003). Literature also states that poverty can impact corruption. In Mauro (1998)'s article, there is evidence that poor countries have more corrupt activities because of the difficulty of allocating resources that these countries face. Also, Unver and Koyuncu (2016) argue that countries with higher levels of poverty face higher levels of corruption.

Governance has long been suspected to be a major impediment to African economic development. This suspicion came to the fore in the late 1970s when African economies suffered major setbacks after independence. Breton Woods (2011) argue that Accelerated Development in Sub-Saharan Africa: An Agenda for Action, which came to be known simply as the "Berg Report," poor governance was highlighted as a major culprit responsible for Africa's poor state of economic health. Its proposed solutions were numerous: market liberalization; anti-inflationary macroeconomic stabilization; massive privatization of state-owned enterprises; strict debt management; effective control of budget deficits; curtailment of government spending, including severely limiting government subsidies for consumption goods and social services; and other market-based and private sector–driven policies. Prominent were currency devaluation and trade liberalization intended to achieve an economically healthy and stable external balance. These proposed reforms refer to "economic governance."

Since governance is the process of decision-making and the process by which decisions are implemented, an analysis of governance focuses on the formal and informal actors involved in decision-making and implementing the decisions made and the formal and informal structures that have been set in place to arrive at and implement the decisions. Managing the actors in support of public welfare is basically the work expected from a government. Even in an ideal 'pure market economy', governments are expected to perform certain key governance functions including maintaining macroeconomic stability, developing infrastructure, providing public goods, preventing market failures, and promoting equity (Sirvastava, 2009).

Poverty can be defined as lack of material well-being, insecurity, social isolation, psychological distress, lack of freedom of choice and action, unpredictability, lack of long-term planning horizons because the poor cannot see how to survive in the present, low self confidence and not believing in one self. (Sengupta, 2003) defined poverty as not only an insufficient income to buy a minimum basket of goods and services but as the lack of basic capabilities to live in dignity. This definition recognizes poverty's broader features, such as hunger, poor education, discrimination, vulnerability and social exclusion. In the light of the International Bill of Rights, poverty is defined as a human condition characterized by sustained or chronic deprivation of the resources, capabilities, choices, security and power necessary for the enjoyment of an adequate standard of living.

1.2 Statement of the Problem

Corruption is pervasive in developing countries. The Africa Development Indicators report (2020) indicates that corruption in the African continent is multifaceted and is a major challenge for development. According to the report, corruption in the continent ranges from “big-time” to “quiet” corruption. The complexity of the matter is more pronounced because the latter, which is characterized as the malpractice by the frontline providers, is widespread in the continent. In addition, a large number of citizens in the region rely on the services provided by the government for their key needs. This undoubtedly makes the poor more vulnerable. Corruption in any form, ‘big-time', ‘quiet', or other form, thus, has both immediate and long term consequence on households, firms, and businesses in the continent.

The Transparency International Corruption Perception Index (2019) indicates that corruption is a major issue in Sub-Saharan Africa (SSA) countries. Almost 70% of the investigated SSA countries scored an index below three, indicating that corruption is rampant. In comparison, this proportion is about 33% in the America, 43% in the Asian Pacific region and 55% in Eastern Europe and Central Asia. In sixteen of thirty five countries considered in SSA, 50% of the firms reported an expectation of informal payments to get things done (Africa Development Indicators, 2020). A working paper of Overseas Development Institute (ODI) by Hadley et.al (2019) indicates that corruption is among the main drivers and maintainers of poverty in SSA. This indicates that corruption in the region should be addressed when governments and international organizations plan towards development strategies.In today's world, around 1.3 billion people, living in the 189 countries covered by Human Development Report (2020), are categorized as poor. Among these, those living in SSA constitute the lion's share. The incidence of poverty in the region ranges from three percent in South Africa to 93 percent in Niger, with an average of 45-69 percent. The Human Development Index score for most countries of SSA has stagnated or declined since 1990, leaving this region as the poorest in the world. Thirty five out of the 42 of the countries with low level of human development are in SSA (UNDP, 2020).

To these end, the theoretical framework regarding the link between corruption and poverty in this study is examined in the structuralist's approach of explaining poverty. In other words, the problem of poverty is because of social, economic, and political structures that constrain people's choices. According to the review by Ulimwengu (2006), millions of people may get poor no matter how hard they work and no matter what their skills are, which is much more attributed to the structures in which they are in. Poor people are poor because of the circumstances beyond individual control such as lack of basic education, adequate health coverage, job opportunities, political participation, protection from abuse, good governance, and other conducive factors necessary to get out of poverty. Even in a situation when countries perform exceptionally well in alleviating poverty, significant proportion of their countries may remain poor merely due to structural barriers.

There are studies that are conducted by different scholars based on The Causal Relationship between Corruption and Poverty in sub-Saharan Africa. Negin (2006) give emphasis to corruption and poverty conditions but they did not include the effect of governance in their investigation. Moreover, their study covers the time period from 1997-2006, meaning that it lacks some description of the current scenario. The other study is conducted by Syoum.A (2010), entitled on the nexus between corruption and governance in sub-Saharan Africa. However the study also shows some time gap because the study period covers years from 2001-2010, it counts 10 years from now and requires some updates to see the current situations. These all show there are still a gap that should be covered and encourage further investigations. Now, the study that we are going to do is attempting to fill the gaps in searching the relationship between corruption, governance and poverty from all source countries. This study accommodating panel model and investigates possible variables that the relationship between corruption, governance and poverty in 23 Sub Saharan countries using the data from the time period 2011-2020 and fill gaps not covered by others.

1.3 Objective of the Study

The main purpose of this study will to examine the relationship between corruption and poverty and their nexus with governance quality in the context of panel data.

The study will be the following specific objectives:

- To examine the relationship between corruption and poverty in SSA countries.
- To investigate the nexus between governance and poverty.
- To examine the nexus between governance and corruption.

1.4 Hypothesis of the Study

The null and the alternative hypotheses of the study will be specified as follows

H0: it is expected that no Granger Causality between corruption and poverty.

H1: it is expected that there is Granger Causality between corruption and poverty.

H0: it is expected that no Granger Causality between governance and poverty.

H1: it is expected that there is Granger Causality between governance and poverty.

H0: it is expected that no Granger Causality between governance and corruption.

H1: it is expected that there is Granger Causality between governance and corruption.

1.5 Significance of the Study

Corruption with its multifaceted mechanisms affects an economy and its society by undermining democracy and the rule of law, violating human rights, distorting markets, eroding quality of life, retarding economic growth, and increasing inequality and poverty. Corruption damages the interests of the poor especially those who are exceptionally poor by diverting resources from the provision of basic services, by protecting from enjoying equal rights and getting means of development, and by marginalizing them from much more benefits.

Donors and governments treat corruption and poverty as separate rather than integral components of the same strategy. This might have undermined efforts to fight both corruption and poverty. Most of the studies that have investigated the link between corruption and poverty in both developing and developed countries show the causality between the two variables in a form of models that indicate correlation between the variables. Investigations on existing causal relationship between corruption and poverty based on a panel data analysis, beyond such correlation setup, are few.

Policy recommendations for a country where corruption and poverty are detrimental require careful investigation as to whether corruption causes poverty or it is the other way round. Therefore, we would like to address this gap in the literature by inferring from causality model. In addition, the study humbly contributes to the available evidence on good governance and poverty relationship, by using international data for SSA countries. It can also justify the need to emphasize on governance matters as much as we do in micro and macro policies in combating corruption and eradicating poverty. The study will differs from previous studies at least in the area of coverage, method of analysis, and recentness, particular to the study area. Moreover, the study can help governments, policy makers, international donors, and development agencies that work in SSA in providing clear justification on the fight against corruption and poverty and may help to reexamine (or strengthen) their policies and strategies.

1.6 Scope of the Study

The scope of this study delimited in 23 sub-Saharan Africa countries such as Angola, Botswana, Cameron, Congo Rep, Cote d'Ivoire, Ethiopia, Gambia, Ghana, Kenya, Madagascar, Malawi, Mali, Mauritius , Mozambique ,Namibia, Nigeria ,Senegal, Sierra Leone South Africa, Sudan , Tanzania ,Uganda ,Zambia. Countries are included in the empirical analysis based on data availability with a time span of 2011 to 2020. However, the researcher excluded the remaining sub-Saharan African countries from the study due to data limitation.

1.7 Limitations of the Study

The study was also limited, because specifically. It selected only in 23 sub-Saharan Africa countries due to time and budget constraints. The researcher has encountered a number of shortcomings during the course of the study. One of the major drawbacks was the war in the north of our country and the internet outage as the researcher forced to limit to collect qualitative data. Despite all these challenges, the researcher did his level to best capture reliable information explaining the purpose of the study.

1.8 Organization of the thesis

The study is organized in five chapters. The first chapter presents the introduction part starting the study background, statement of the problem, research question, and objectives of the study, significance of the study, the scope of the study, and organization of the study.

The Second chapter deals with the review of related literature, theoretical and empirical evidence and developing a theoretical framework of the study. The third chapter, research design and methodology Chapter four represent the research findings and its results, and the last chapter five includes the summary, conclusions, and recommendation drawn from this study. Finally, the lists of references were attached to the research paper.

CHAPER TWO

2. REVIEW OF LITERATURE

2. Introduction

This section of the thesis presents critical review of relevant literature focusing on both the theory and empirical findings. The theoretical literature comprises governance concepts, definitions, causes, and consequences of corruption along with its basis and nature in Africa, and poverty's definition, features, and causes. The empirical literature includes numerical findings at different times and in different countries regarding corruption-poverty nexus as well as the effects of governance and institutional qualities on corruption, poverty, and the economy at large.

2.1 Theoretical Literature

2.1.1. Governance concepts

Many economists and other people have been arguing presenting the assertion that poverty can be significantly reduced and ‘under development become history once the ‘underdeveloped nations get their policies right', disregarding the importance of good governance. It is believed that the major reason for developing nations to remain poor is lack of appropriate economic policies. For instance, World Bank (2013) was arguing that the continuing economic problems in Africa are largely attributed to a failure to carry liberalization far enough (Grindle, 2007). A ‘right economic policy' is, in fact, crucial for development. Recent literature, however, addresses that the quality of institutions and Governance are as important as economic policies.

Recent development of the economic discipline- the New Institutional Economics- indicates that economists have come to agree that institutional deficiencies are at the root of many economic problems. The neoclassical economics focus on markets and its equilibrating process for resource allocation has proven ineffective since it disregard how economic relationships are structured and how alternative institutional forms contribute to development (Herath, 2015).

The concept of Governance has acquired increased importance since the 1990s largely because international aid agencies and donors began to recognize its absence as a barrier to economic developments in developing countries. It was in 1989 that the concept was highlighted for the first time in the World Bank’s document on SSA, though it is as old as human civilization (Herath, 2005).

The World Bank defines it as “the manner in which power is exercised in the management of the country's social and economic resources”. The OECD also defines the concept as “the use of political authority and exercise of control in society in relation to the management of its resources for social and economic development” (Herath, 2005).

UNDP's definition of Governance under the parameter of sustainable human development is as “*a* framework of public management based on the rule of law, a fair and efficient system of justice, and broad popular involvement in the process of governing and being governed, which requires establishing mechanisms to sustain the system and to empower people and give them real ownership of the process*”* (Sirvastava, 2009). These definitions, in spite of their difference in expression, collectively emphasize the importance of non-abused power by government if it needs to work for development.

Control of corruption, according to World Bank’s working papers, is one of the components of governance indicators of countries. The World Governance Indicators (WGI) consists of six broad dimensions of governance: Voice and Accountability, Political Stability and Absence of Violence, Government Effectiveness, Regulatory Quality, Rule of Law, and Control of Corruption, all of which clearly accounted to show the importance of governance in a country's development (Kaufman et.al, 2010).

Since governance is the process of decision-making and the process by which decisions are implemented, an analysis of governance focuses on the formal and informal actors involved in decision-making and implementing the decisions made and the formal and informal structures that have been set in place to arrive at and implement the decisions. Managing the actors in support of public welfare is basically the work expected from a government. Even in an ideal ‘pure market economy', governments are expected to perform certain key governance functions including maintaining macroeconomic stability, developing infrastructure, providing public goods, preventing market failures, and promoting equity (Sirvastava, 2009). It is, therefore, mandatory for African governments especially for those of sub-Saharan to combat corruption if they need to achieve MDGs and realize development.

2.1.1.1 Theories of Governance

If Max Weber and Woodrow Wilson were to suddenly appear on the landscape of modern public administration, normative theories in hand, it is likely they would be unable to recognize the field of governance. The comprehensive, functionally uniform, hierarchical organizations governed by strong leaders who are democratically responsible and staffed by neutrally competent civil servants who deliver services to citizens – to the extent they ever existed – are long gone. They have been replaced by an 'organizational society' in which many important services are provided through multi organizational programs. These programs are essentially "interconnected clusters of firms, governments, and associations which come together within the framework of these programs" (Hjern and Porter, 1981).

These implementation structures operate within a notion of governance about which a surprising level of consensus has been reached. There is a pervasive, shared, global perception of governance as a topic far broader than 'government'; the governance approach is seen as a "new process of governing, or a changed condition of ordered rule; or the new method by which society is governed" (Stoker, 1998). Similarly, in the scholarship that has followed the 'Reinventing Government' themes of public effectiveness; much has been written of New Public Management practices by which governance theory is put into action (Mathiasen,1996; Lynn, 1996, 1998; Terry, 1998; Kelly, 1998; Peters and Pierre, 1998).

In this complex, devolved mode of service delivery, the unit of analysis for some students of policy implementation is the network of nonprofit organizations, private firms and governments. As Milward and Provan note, in policy arenas such as health, mental health, and welfare,".joint production and having several degrees of separation between the source and the user of government funds...combine to ensure that hierarchies and markets will not work and that networks are the only alternative for collective action" (2000).

The (mostly European) literature on governance and the increasingly international scholarship on New Public Management (NPM) describe two models of public service that reflect a 'reinvented' form of government which is better managed, and which takes its objectives not from democratic theory but from market economics (Stoker, 1998). While some use the terms interchangeably (for example, Hood, 1991), most of the research makes distinctions between the two. Essentially, governance is a political theory while NPM is an organizational theory (Peters

and Pierre, 1998). As Stoker describes it, Governance refers to the development of governing styles in which boundaries between and within public and private sectors has become blurred. The essence of governance is its focus on mechanisms that do not rest on recourse to the authority and sanctions of government….Governance for (some) is about the potential for contracting, franchising and new forms of regulation. In short, it is about what (some) refer to as the new public management.

Governance is ultimately concerned with creating the conditions for ordered rule and collective action (Stoker, 2008; Peters and Pierre, 2008; Milward and Provan, 2010). As should be expected, all efforts to synthesize the literature draw from theories found in the separate traditions. Berman owes debts to Van Meter and Van Horn (2015, 2016) and Goggin, et al (2020), among others. See Kaboolian (2008) for a description of reform movements in the public sector that collectively comprise "New Public Management" (NPM).

2.1.2. Corruption Definition

Corruption has become a widespread phenomenon in the world, taking a top priority on the agendas of governments (both developed and developing), development organizations and banks, researchers, economies, and citizens. According to Sardan (2009), "corruption has become a common element of the functioning of the administrative and Para-administrative apparatus, from top to bottom, in almost all African countries". The term corruption is used to mean different things in different contexts. Due to the existence of corrupt practices throughout the world both in developed and developing countries, people attach various practices to corruption differently on the basis of their culture and norms.

Tanzi (2008) indicates the debate on the definition of corruption by a statement: "a few years ago, the question of definition absorbed a large proportions of the time spent on discussions of corruption at conferences and meetings". Sardan (2009), emphasizing the moral economy, explained the complexity of the phenomenon particular to Africa. The author argues that The moral economy of corruption in Africa does not merely concern corruption in the strict sense of the word, but rather the 'corruption complex' in a wider sense, which covers a number of illicit practices, technically distinct from corruption, all of which none the less have in common with corruption their association with state, parastatal or bureaucratic functions, and also contradict the official ethics of 'public property' or 'public service', and likewise offer the possibility of illegal enrichment, and the use and abuse to this end of positions of authority.

Despite the complexity of the phenomenon, different observers often agree on whether a particular practice connotes corruption. Most working papers by World Bank, UNDP, and other international organizations define corruption as "the use of public office/authority for private gain", without denying the possibility for variation in included practices between countries. USAID hand book on fighting corruption (2009) as cited in (Chetwynd et.al 2003) define corruption as "the misuse of public office for private gain including, but not limited to embezzlement, nepotism, extortion, influence peddling, and fraud".

Corruption as broadly defined by Lawal (2007), is a systematic vice in an individual, society or a nation which reflects favoritism, nepotism, tribalism, sectionalism, undue enrichment, amassing of wealth, abuse of office, power, position, and derivation of undue gains and benefits. Corruption also includes bribery, smuggling, fraud, illegal payments, money laundering, drug trafficking, falsification of documents and records, window dressing, false declaration, evasion, underpayment, deliberate bending of rules of a system, deceit, forgery, concealment, aiding and abetting of any kind to the detriment of another person, community, society or nation.
Whenever a public office is abused, the public objective is set aside or compromised. It is only if a public function is unproductive that policy goals are not harmed by corruption.

2.1.2.1 Theoretical Aspect of Corruption

One best way to look at corruption is when individuals act negates the moral principle that guides their official obligations. Corruption thus cannot be de voided from breaching of ethnical rules that bind the conduct of official duties. Every official position either in private or public is guided by ethics and these ethics are there to regulate official conduct. Several factors would make having a consensus on the causes and successful way of combating corruption a bit problematic. Among these factors are according Agubamah (2009) the uniqueness of each society and or country, the dynamic or changing nature of the socio political and economic interactions within the global community and the differences in the perception of corrupt practices by different academic disciplines. One of the theories of corruption is the modernization theory.

In the word of Huntington 1968, one of the theorists of modernization cited by Adefulu (2007) he observed that: the process of economic and political development in modernizing societies tends to breed inequality, political instability and corruption which may be defined simply in terms of the use of public powers to achieve private goals. Earnestly worked after the (1955) Bandung Conference of the Non-Aligned movement… modernization theorists explained that: the causes, scale and incidence of corruption and corrupt practices in pre-colonial African states in terms of the logic of the main proposition common to all these theories of cooption centers on the view that extractive corruption in African (and elsewhere in developing countries) is one of the un salutary consequences of grafting modern political structure and processes on indigenous socio political structures which function on the basis of old values and obligation .

In spite of the presumed benefits of mixed government pin pointedly Sklar (2003) as reported in Adefulu (2007) the incidence of corruption in Africa is seen as an outcome of the behavior of public officials which deviates from the accepted norms, and which also signifies the absence of effective political institutionalization that makes it difficult for these officials to divorce their public roles from private ones, thus prompting them to subordinate their institutional roles to exogenous demands'.

Arabian Journal of Business and Management Review (OMAN Chapter) Vol. 2, No.4, Nov. 2012 42 Officials hold positions in bureaucratic organization with formally defined powers which are exercised not as a form of public services but as a form of private property relationships of the official with other members of society fall into patrimonial pattern of vassal and lord-lord rather than relational legal one of subordinate superior official behavior is correspondingly devised to play a personal status rather than to perform official functions, the relationship between officials and their clients or underlings is one of personal subordination; state officials treat their posts as personal fiefdom, use them to extract bribes or to appoint relatives; subordinate cannot take official decisions without referring them upwards because to do otherwise would be taken to mean slighting the authority of the boss.

Some of the features mentioned above if not all of them are obviously noticeable in many developing countries and this precisely is why western liberal scholars are quickly concluding that neo patrimonialism, as a defining characteristic of developing states breeds corruption to those countries. But as it could be expected such above conclusion is proned to contention as some or most of the features of neo patrimonialism ascribed to developing nations are as well

noticeable in the developed democratic nations like North America and Europe. The theorists of prebendalism another theory of corruption see the phenomenon as the return for loyalty from patronage and groups within the society and for the benefit of personal gain and that of supporters. The benefit could either be political economic or social in nature. Agubamah (2009). Okojie (2005) quickly refer to President Mobutu Seseseko of Zaire (2005-2007), one of the longest ruled African who turned the state into personal property and embezzled 5 billion US dollars while in office.

2.1.2.2 Causes of Corruption

Literature regarding causes and consequences of corruption are not few. Most of them show that both causes and consequences of corruption that are common to all countries are subject to debate. They depend on country's social, political, and economic backgrounds. Ndikumana (2006) asserts that the theoretical research on the causes and vehicles of corruption draws from the work of Bhagwati (2004), Krueger (2005), and Rose-Ackerman (2005), among others. The literature characterizes corruption as the outcome of some form of government regulation that creates opportunities for rent.

While definite causal linkages are difficult to establish, literature suggests that wherever these factors exist corruption will prevail. These factors include weak rule of law, low wage of civil servants, wider discretionary power owned by politicians, legacy of colonial rules, historical dominancy of the state in economic and political affairs, and interest to keep status quo, among others. Some indicate that due to the unstable political condition and the uncertain future in developing countries, officials and civil servants prioritize corruption benefits to keep their own living and that of extended family for the future (Ampratwum, 2008; Aidt, 2003).

Tanzi (1998) classifies the causes of corruption as factors that affect demand and those that affect supply for/of corrupt acts. The most important factors affecting the demand side include authorization and regulations, bad characteristics of tax system, spending decisions, and provision of goods and services at low market prices. The supply promoters include bureaucratic tradition, level of public sector wage, the penalty systems, institutional controls, the transparency of rules, laws, and processes, and the examples provided by the leadership.

Voskanyan (2000), acknowledging to Leslie Holmes (1993) classifies the causes of corruption in to three categories: cultural, psychological and system related. He argues that some acts of corruption may be acceptable mainly due to the traditional political culture in many poor countries. Traditional societies in these countries are often criticized for their inability to identify ‘gifts' from ‘bribe', which undoubtedly make the problem persistent. Weak tradition of rule of law may also have contributed in promoting corruption.

Among the psychological factors indicated are ‘the evil nature' of some individuals, peer-pressure associated with individual's relationship with a group, and fear of not acting in a similar way for his/her supervisor and of under-fulfillment of a plan. Most cross-sectional studies indicate that poverty is among the causes of corruption, presenting the following theoretical reasoning. The poor population often have low education, less exposure to media, low political participation, and less asset or wealth which would have give them the capacity to protest and complain further on corrupt acts. These factors that can be stated as both the supply and demand side drivers particular to the poor may make them accept and practice corruption (You and Khangram, 2005).

2.1.2.3 Consequences of Corruption

The debate on the impact of corruption as beneficial and harmful are commonly categorized as “grease the wheels” and “sand the wheels” hypotheses. While the former evidenced the ill-functioning inefficient institutions in developing countries as reason for the advocacy of corruption, the latter strongly argue that, under whatever circumstances, the net effect of corruption does not show the supplementary role, rather a persistent national welfare loss.

It has been argued that corruption can enhance political participation for historically marginalized and deprived individuals, groups, and communities (Bayley, 2006). In the same study, it is indicated that “corruption, whether in the form of kickbacks or of payments originating with the briber, may result in increased allocations of resources away from consumption and into investment”. He explained that civil servants, who represent a relatively more educated and skilled group than the rest of society in the African and other developing countries, have more information about economic growth and prospects for wealth creation than ordinary people. Hence, corruption helps to transfer scarce resources to members of the civil service who, according to the author, have a higher propensity to invest in the creation of wealth (and hence, economic growth) than the individuals who bribe them. Lui (2005) indicates that in a system with a queue, it is optimal to allow bribe to jump the queue so that waiting costs remain minimum.

Leff (2004) also advocates corruption to bring economic growth in a country with weak rule of law and poor institutions. Huntington (2008) agrees that corruption can help to overcome tedious bureaucratic regulations and enhance growth. He strengthen his argument by stating “In terms of economic growth, the only thing worse than a society with a rigid, over centralized, dishonest bureaucracy is one with a rigid, over centralized, honest bureaucracy”.

According to Beck and Mehar (2004) and Lien (2006), corruption can reduce the problem of information asymmetry in decision making. It may improve the choice of the right decision by officials since the ranking of bribes can replicate the ranking of firms by efficiency. Leys (2004) and Bayley (2006), emphasizing on the quality of civil servants, argue that benefits from corruption acts in public sector compensates the low wages in the sector and hence attract quality professionals from other sectors.

Tanzi and Divoodi (2007) find that Corruption tends to increase the size of public investment (at the expense of private investment among other things) because many items in public expenditure lend themselves to manipulations by high level officials to get bribes. Corruption also skews the composition of public expenditure away from needed operation and maintenance towards expenditure on new equipment. It also skews the composition of public expenditure away from needed health and education funds, because these expenditures, relative to other public projects, are not easy for officials to extract rents from. They added that corruption reduces the productivity of public investment and of a country's infrastructure. Further, it reduces tax revenue because it compromises the government's ability to collect taxes and tariff.

Corruption, according to Gray and Kaufman (2008), also leads to the over budgetary of defense contracts at the expense of rural health clinics. Less manipulate public projects do not get in to budget adequately, even if they have high social value. It is argued that to the extent that rural residents tend to have lower incomes than their urban counterparts, this corruption-induced policy bias may worsen the income distribution, and at the same time, divert the needed resources away from rural. Nbaku (2008) strongly argue against the efficiency enhancing argument, through the transfer of resources, stating the real experience of African civil servants for the last fifty years. He asserts that African civil servants to whom a large proportion of resources went for the last fifty years fail to develop into entrepreneur as evidenced by most of business activities in African countries are still dominated by foreign interests.

Corruption encourages competition in bribery, rather than competition in quality and in the price of goods and services. It inhibits the development of a healthy market (Zemanovicova et.al, 2002). Ades and Di Tella (2004) added to this argument by making a strong conclusion that "more competitive countries should be less corrupt", to indicate that corruption has a potential to destroy market competition.

A number of studies show that corruption exacerbates poverty and deprivation. Gupta et.al (1998) relates corruption and poverty in two channels. One is through the impact of corruption on growth. They, presenting the finding by Ravallion (2007) that a higher growth rate is associated with a higher rate of poverty reduction, argue that corruption slows the rate of poverty reduction by reducing growth..

Literature often categorizes the link between corruption and poverty into two models; the "economic model" and the "governance model". The "economic model" postulates that corruption affects poverty by first impacting economic growth factors, which in turn affect poverty levels. In other words, corruption reduces investment, distorts market, hinders competition, creates inefficiency by increasing the costs of doing business, increases inequality, and as a result exacerbates poverty (chetwynd et al, 2003).

The "governance model" asserts that corruption affects poverty by first influencing governance factors, which in turn impact poverty levels. Corruption disrupts governance practices, destabilizes governance institutions, reduces the provision of services by government, reduces respect for the rule of law, and reduces public trust in government and its institutions. These reduce the capability of government to support its citizens and particularly hurt the poor (Ibid).The extent of the impact of corruption is often related to the institutional and infrastructure development levels of a country. Choudhary (2010) in his analysis about the impact of corruption on growth in India asserts that states with poor social and economic infrastructure feel the impact of corruption more adversely. This implies that corruption hurts poor countries like Africa more than their counter parts though the effect on growth of both categories of countries is adverse. Handley et.al (2009) also categorizes corruption among the political-economy maintainers and drivers of poverty in sub-Saharan Africa.

Apart from the negative social and economic consequences, corruption has also a political impact. It is one of the tools used by politically dominant groups to monopolize political spaces and limit the participation of certain ethnic, social, and racial groups. In a corrupt environment, the citizens lose their confidence in the country and in the rules. Not only the rule of law is put in question, but also democracy and moral declines and criminality grow. Corruption undermines democratic development, inhibiting the performance of public institutions and the optimal use of resources. It feeds secrecy and suppression (Zemanovicova et.al, 2002).

Johnston (2006) suggests that serious corruption threatens democracy and governance by weakening political institutions and mass participation, and by delaying and distorting the economic development needed to sustain democracy. Some, still, argue that the relationship between corruption and democracy is not yet clear especially for Africa. Sardan (2009) argues that establishing democracy in a number of African countries has done nothing to put a brake on corruption. Even if democracy has the capacity to reduce corruption, Africa has left behind from enjoying this remedial tool. Rose-Ackerman (2007) argues that many African remain autocratic though some of them have made substantial progress in establishing democratic governments. They are either unabashedly autocratic or are nominal democracies with strong one party or one man rule; even in the case when power rotates between rulers they are not the result of ‘appropriate transition'.

2.1.2.3 Measuring Corruption

When it comes to measuring the depth and reach of corruption, we can find no less than 140 publicly accessible sets of corruption indexes, which in turn gather together surveys of all kinds of corruption in developing countries. To name just the six most widely used indexes: The International Country Risk Guide (ICRG), Business International (now incorporated into The Economist Intelligence Unit), Freedom House's “Freedom in the World” publication, Transparency International’s Corruption Perceptions Index (CPI), the World Bank’s Country Policy and Institutions Assessments (CPIAs) and its semiannual so-called KKZ or KKM indicators, named after the report’s authors Kaufmann (since 2001).Yet this imposing volume of surveys does not necessarily present us with a clear picture of the extent and depth of corruption within various countries.

In a paper published by the Development Centre of the Organization for Economic Cooperation and Development (OECD), Arndt and Oman (2006) raise several concerns about both the quality of these indexes and the uses to which they are put by the business and donor communities. They distinguish between, on the one hand, the inherent difficulties involved in any attempt to measure the dimensions of corruption, make cross-country comparisons and track the development of corruption over time, and on the other hand, the questionable bias on the part of those that assemble these indexes and put them to practical use. First, the authors cast doubt on the objectivity of these sets of indicators and point out that in fact, none of them even claim to be objective.

Transparency International's (TI) CPI index is to which this index measures the quality of government institutions. TI itself warns explicitly that its survey must not be mistaken for an entirely objective assessment upon which, for instance, one could or should make definitive decisions about investment or aid; nor is it intended as a reliable measure of progress in improving institutions. Instead the list more or less aims to shame corrupt countries and instigate a race to the top in the perceptions of the business community. Arndt and Oman raise similar concerns about the World Bank's governance surveys, pointing out that they tend to favor the views of external stakeholders over internal stakeholders, men over women, and that the general business bias of the database means that this index is not necessarily a good indicator of how well a government fulfills its task of governing an entire polity (Arndt and Oman,2006).

2.1.2.4. The state, nature, and bases of corruption in Africa

Corruption is one of the serious afflictions confronting Africa today. It is not only rampant throughout the continent but also deep rooted in the society, the public domain, and critical sectors of the continent. Corruption has legal, political, and economic implications. It has also a negative consequence on the Africa's recovery effort for human and social development, and on areas such as the environment (Africa Development Indicators (ADI), 2020). According to estimates of the African Union, African economies lose more than US$ 148 billion a year as a result of corruption. Most African countries are characterized by what is termed "embedded levels of corruption", involving inter-woven networks of politicians, bureaucrats, the private sector, and the security sectors (Khemani, 2019).

According to the United Nations estimate in 1991 alone, more than 200 billion dollar in capital was siphoned out of Africa by the ruling elites. This wealth resulting from corruption forms part of capital flight and on an annual basis exceeds what comes to Africa during the year as foreign aid. The amount was also more than half of African foreign debt, during the time.

The evidence by George Ayittew (2012) mentions some of the amount of money taken by leaders as published by French weekly (May 2007). These are 20 billion dollar by General Sani Abacha of Nigeria, 6 billion dollar by president H. Boigny of Ivory Coast, 4 billion dollar by Mobutu of Zaire, 2 billion dollar by president Mouza Traore of Mali, 200 million dollar by president Denis N‟gnesso of Congo, and 30 million dollar by president Mengistu H/Mariam of Ethiopia, to mention a few (Lawal, 2007).

Corruption in Africa is multifaceted. It ranges from “big-time” to “quiet” corruption. The complexity of the matter is more pronounced because the latter, which is often characterized as the malpractice by the frontline providers, is widespread in the continent. In addition, the fact that a large number of citizens in the region rely on the services provided by government for their key basic needs makes the poor more vulnerable (ADI, 2020). The latest transparency international corruption perception index indicates that almost 70 percent of the investigated SSA countries score below three (where 0 show the most corrupt and 10 show the least).

Different arguments have been put to explain the pervasiveness of corruption in Africa. These include poverty, personalization of public office, political culture, tradition of the society, and the inability of leaders to overcome their colonial mentality. In Africa, the basic information on corruption is difficult to come by and officials are not often forthcoming in discussing the problems of corruption. The absence or poor functioning of ‘freedom of information' laws often makes it impossible to compel government officials to give basic data on government operations and project budgets. Civic society and mass media in Africa are poor in exposing corruption acts. Civic societies in many African countries are weak, unorganized and in an embryonic stage of organization while the mass media is undeveloped, lacks trained man power and resources, and is highly influenced by politics (African Development Bank Group, 2013).

2.1.3. Poverty Definition

Poverty is often defined as the lack of access to necessities. The definition evolves over time from the only focus on lack of a standard dollar amount necessary for basic needs such as food, shelter, and medical care to the denial of access to basic and comprehensive economic, social, and political needs and rights.

Most researchers working on poverty in developing countries contexts have dissatisfied with the money metric measures, which defined poverty as lack of a certain standardized minimum amount of money essential to purchase basic needs at standard prices. Measuring poverty in terms of GDP or Purchasing Power Parity does not fully capture the phenomenon of poverty. A broader definition treats it as multidimensional, including low income, low levels of education and health, vulnerability to (income loss, natural disaster, crime and violence, education curtailment), and voicelessness and powerlessness (feeling discrimination, lacking income earning possibilities, mistreatment by the state institution, and lacking status under the law) among the many aspects of well-being (Chetwynd et al. 2003).

Matte (2008) describes the multidimensionality of poverty by acknowledging to the definition by the 1995 world summit on social development in Copenhagen. Poverty has various manifestations, including lack of income and productive resources sufficient to ensure sustainable livelihoods; hunger and malnutrition; ill health; limited or lack of access to education and other basic services; increased morbidity and mortality from illnesses; homelessness and inadequate housing; unsafe environments and social discrimination and exclusion. It is also characterized by a lack of participation in decision-making and in civil, social and cultural life. Absolute poverty is a condition characterized by severe deprivation of basic human needs, including food, safe drinking water, sanitation facilities, health, shelter, education and information. It depends not only on income but also on access to services.

While measuring poverty in terms of income level seems relatively straight forward, the multidimensional approach may be more complex and include variables that are difficult to quantify. To manage this problem, researchers have developed indices such as the UNDP Human Poverty Index which conceives of poverty in terms of longevity, knowledge, and economic provisioning.

2.1.3.1 Theories of poverty

2.1.3.1.1 Classical and neoclassical theory

Classical traditions view individuals as largely responsible for their own destiny, choosing in effect to become poor (e.g. by forming lone-parent families). The concept of 'sub-cultures of poverty' implies that deficiencies may continue over time, owing for example to lack of appropriate role models, and that state aid should be limited to changing individual capabilities and attitudes that means the laissez-faire tradition (Adam Smith,1876).

Neoclassical theories are more wide ranging and recognize reasons for poverty beyond individuals' control. These include lack of social as well as private assets; market failures that exclude the poor from credit markets and cause certain adverse choices to be rational; barriers to education; immigrant status; poor health and advanced age; and barriers to employment for lone-parent families. They also highlight the influence of incentives on individual behavior as well as the relationship between productivity and income (John Stuart Mill, 1898).

Publicly provided capital (including education) has an important role to play, with physical and human capital believed to be the foundation for economic prosperity. Unlike the classical approach, unemployment, viewed as a major cause of poverty, is largely seen as involuntary and in need of government intervention to combat it. Excessive inflation, high sovereign debt and asset bubbles are other macroeconomic factors, besides weak aggregate demand, believed to cause poverty (Domar, 1946).

2.1.3.1.4 Social exclusion and social capital theory

Another strand of the literature stresses the interrelation between social exclusion, social capital and the occurrence of poverty and recognizes the importance of the structural characteristics of society and the situation of certain groups. Social exclusion and social capital theories are, among all the reviewed approaches, arguably the ones that focus most on understanding the intrinsic processes that allow deprivation to arise and persist. Nevertheless, the wide definition of poverty considered under these theories comes at the cost of being less precisely defined and more challenging to quantify and address by policy (Hilary Silver, 1994).

2.1.3.2. Causes of Poverty

A poverty profile often describes the pattern of poverty without due attention to why some people are poor. Poverty may be due to national, sector specific, community, household, or individual characteristics. Correlates indicate that poverty is high in areas characterized by geographical isolation, a low resource base, low rainfall, and other inhospitable climatic conditions. Regions with inadequate public services, weak communication and infrastructure, and underdeveloped markets are poorer than those with improved facilities (Haughton and Khandker, n.d).

Among the national/regional characteristics that affect poverty are good governance, economic and environmental policy, macroeconomic and political stability, mass participation, global and regional security, rule of law, and gender, ethnic, and racial inequality. At the community level, infrastructure which often includes proximity to paved roads, availability of electricity, proximity to large markets, availability of schools and medical clinics, access to employment, social mobility and representation, and land distribution is a major determinant of poverty (Ulimwengu (2006).

2.1.3.3 Measuring poverty

Related to the definition of poverty are the measurements of poverty whose importance is to know who is poor, how many people are poor, and where the poor are located. According to Foster (2004), the most frequently used measurements are: The head count poverty index given by the percentage of the population that live in the household with a consumption per capita less than the poverty line; poverty gap index which reflects the depth of poverty by taking into account how far the average poor persons' income is from the poverty line; and the distributional sensitive measure of squared poverty gap defined as the means of the squared proportionate poverty gap which reflects the severity of poverty.

According to UNDP (various issues) HDI combines three components in the measure of poverty which include: longevity as measured by life expectancy at birth; educational attainment as measured by a combination of adult literacy (two-thirds weight) and combined primary, secondary and tertiary enrolment ratios (onethird weight); and improvement in standard of living as measured by real GDP per capita income (PPP$). The first relates to survival - vulnerability to death at a relatively early age. A situation further stressed by Sen (1985) as not what people posses, but what their possession enable them to do.

2.2. Empirical literature

2.2.1 Corruption

Brempong (2007) found that corruption in Sub-Saharan countries has a negative and statistically significant effect on the growth rate of income and is positively correlated with income inequality, in the continent. A one point increase in corruption decreases the growth rates of GDP by between 0.75 and 0.9 percentage points per year and of per capita income growth rate by between 0.39 and 0.41 percentage points per year, respectively. A one point increase in the corruption index is associated with a 7 point increase in the Gini-coefficient of income inequality.

Mauro (2005) demonstrates that high levels of corruption are associated with lower level of investment. Investment rises by about 2.9 percent following a decline in corruption by one standard deviation. The analysis by the same author in his 2004 study shows that an improvement in corruption perception index brings about a significant percentage increase in investment rate and hence, an increase in annual growth rate of per capita GDP. To put in his statement, “Regression analysis shows that a country that improves its standing on the corruption index from, say, 6 to 8 (0 being the most corrupt, 10 the least) will experience a 4 percentage point increase in its investment rate and a 0.5 percentage point increase in its annual per capita GDP growth rate”.

According to Anoruo and Braha (2015), corruption has both direct and indirect negative effect on economic growth. Their results reveal that a one-unit increase in corruption retards economic growth by roughly 0.87 percent for the period under consideration. Similarly, a one-unit increase in corruption translates to about 4.69 percent decrease in investment share of GDP. Pellegrini and Gerlagh (2014) also show that a one standard deviation decrease in the corruption index raises private investment by as much as 2.5 percentage points. This increase in private investment in turn raises GDP growth by about 0.34 percentage points.

The micro evidence from eight SSA capital cities by Razafindrakoto and Roubaud (2007) shows that corruption makes a greater hole in the poorest individuals pockets when measured as the percentage of their income than the relatively richer ones. They found that households in the poorest quartile paid 7.8 percent of their income for corruption as opposed to 2.2 percent for the richest quartile. Gupta et.al (2008) also show that a one standard deviation increase in the growth rate of corruption cause a decline in the growth rate of the income of the bottom 20 percent of the population by 1.6 to 4.7 percent per year.

A comparative study by Li, Xu, and Zou (2003) to investigate the effect of corruption on income distribution and growth in Asia, Latin America, and OECD shows that corruption affects income inequality in an inverted U-shaped way and growth negatively. Corruption alone explains a large proportion of the Gini differential across developing and industrial countries. It explains almost half the Latin America-OECD Gini differential, and the entire Asia-OECD Gini differential. Corruption in countries with more inequality in asset allocation raises inequality to a lesser extent and reduces growth to a large extent. This study further asserts that more corrupt countries have lower schooling attainment, thinner financial depth, higher black market premiums, more unequal land distribution, higher government spending, smaller extent of foreign trade, and lower average income.

Data analysis on the firms perception of corruption in World Bank study (2010) of poverty following the transition to a market economy in Eastern Europe and Central Asia show that more firms report as corruption is a problem in the region. The paper also shows that lower levels of corruption were seen to be statistically associated with lower levels of income inequality. Gupta et al. (2008) conducted cross-national analysis of up to 56 countries and found that higher corruption is associated with higher income inequality. That is, a worsening of a country's corruption index by 2.5 points on a scale of 10 corresponds to an increase in the Gini-coefficient of about 4 points. They also reported that corruption has lead to reduced social spending on health and education, lower tax revenue, and increases government costs.A study on the relationship between the impact of corruption on growth and investment and the quality of governance in a sample of 63 to 71 countries indicates that corruption have a negative effect on growth and investment (Meon and Sekkat, 2005). They further found that corruption has a negative impact on growth independently from its impact on investment. It is also found that corruption supports and deepens inequality.

The analysis by You and Khagram (2015) on data from 129 countries shows that income inequality increases the level of corruption through material and normative mechanisms. The poor are not able to monitor the rich and this enables the rich to misuse their positions. A study on the effect of corruption on income inequality and poverty by Dincer and Gunalp (2018) using data from United State of America states reveal that an increase in corruption increases income inequality and poverty. One standard deviation in corruption increases Gini index and poverty by 0.3 and 0.5 percentage points respectively. Using Atkinson indexes, the author also evidenced that the effects of corruption on the lower end of the distribution are higher.

As a result of corruption, the public at large loses confidence in the government's ability to manage the economy in the interest of the people. Chang and Chu (2006) find a negative relationship between institutional trust and corruption, for four East Asian countries. Cho and Kirwin (2007) also demonstrate a vicious circular relationship between mistrust in state and experience with corruption. Their result suggest that citizens "experience of corruption lowers their trust in political institutions and that lower levels of trust are likely to increase the experience of corruption. Levellee et.al (2008), in their study about the link between corruption and trust in political institutions for 18 SSA countries, reveal that both experienced corruption and the perception that corruption is widespread have a negative impact on citizens' trust in political institutions.

2.2.2 Governance

Governance has long been suspected to be a major impediment to SSA economic development. This suspicion came to the fore in the late 2007s when SSA economies suffered major setbacks after independence. In 2011 report, commissioned by the Bretton Woods Institutions, Accelerated Development in Sub-Saharan Africa: An Agenda for Action, which came to be known simply as the "Berg Report," poor governance was highlighted as a major culprit responsible for Africa's poor state of economic health. Its proposed solutions were numerous: market liberalization; anti-inflationary macroeconomic stabilization; massive privatization of state-owned enterprises; strict debt management; effective control of budget deficits; curtailment of government spending, including severely limiting government subsidies for consumption goods and social services; and other market-based and private sector–driven policies. Prominent were currency devaluation and trade liberalization intended to achieve an economically healthy and stable external balance. These proposed reforms refer to "economic governance."

Subsequently, a number of African countries undertook political reforms, partially following the above economic policies, and partially in response to donors' demands for such reforms in exchange for external aid. These reforms refer to "political governance." The importance of governance has been highlighted in a study by the African Economic Research Consortium, "Explaining African Economic Growth" (the Growth Project). This project put governance at the core of the growth record of sub-Saharan Africa (SSA), concluding that poor governance led to growth-inhibiting "policy syndromes" while improved governance resulted in greater prevalence of growth-enhancing "syndrome-free" regimes.

According to Economist & IMF in 2014 are enjoying a rapid and high GDP growth rates. And the others are still low-income countries with relatively low exposure to globalization due to the direction and the governance of each political regime. The rationality behind the taking-off of many economies can be the improvement of the institution. These are seen through business environment, doing business and so on. For a country to have a sustainable growth it needs not only the economic agent to add on the principal aggregates but also a following up of good governance. The rationality behind the taking-off of many economies can be the improvement of the institution. These are seen through business environment, doing business and so on. For a country to have a sustainable growth it needs not only the economic agent to add on the principal aggregates but also a following up of good governance.

Framing the poverty–governance nexus is problematic because it is difficult to establish a cause-effect relationship between them. In fact, some scholars (Hyden, 2006, 2007; Karim et al, 2013) argue that governance problem leads to poverty. They consider governance as the major obstacle to the alleviation of poverty. The study by Shahs et.al (2009) about the effect of governance on per capita income in 173 countries, treating the 'control of corruption' as one of the components of good governance, show a strong positive causal relationship running from improved governance to better development outcomes. A one standard deviation improvement in governance raised per capita income 2.4 to 4 times. Kraay (2002), using governance data for 2010/11 particular to Latin America and Caribbean countries, found that better governance tends to yield higher per capita incomes.

2.2.3 Poverty

Sub-Saharan countries have been stagnating and the economy has been diverging from the rest of the world. Recent years on the other hand have witnessed Africa with another feature. As indicated in Nudulu et al(2007), although SSA currently accounts for only 10 percent of the world's population, it now accommodates 30 percent of the world's poor. Alemayehu (2006) stressed that this poverty is more pervasive in Eastern and Southern Africa sub-regions, where about 50 percent of their population is estimated to live below the poverty line. The world as a whole has made a remarkable progress in reducing extreme poverty over the past three decades, cutting it by nearly two-thirds. But the trend in this region has been in opposite direction; increasing both in headcounts as well as in percent especially from 2000's to 2015.

According to IMF (2007), the challenge now is to frequently accelerate and maintain fairly high growth and spread it throughout the region to achieve the income poverty goal of the MDGs. The report stresses that at present only about half a dozen countries seem to be on track to meet it. Sub-Saharan counties still tails behind other regions in most measures of human development. The continent is continuously being overwhelmed by natural and manmade shocks including (civil) wars, climatic changes, international market crisis, and expansion of different epidemics in spite of the general improvement. To improve the situation, UNECA (2007) clearly put that Sub-Saharan counties need to become more innovative in terms of resource mobilization and in the design of pro-growth and pro-poor policies to tackle the problems of persistent poverty. Country evidences also suggest that the recent growth performance needs to be supported by targeted distribution policies to make inroads into poverty

In contrast to other parts of the world which enjoyed unprecedented prosperity, SSA entered the 21st century with daunting challenges of poverty and underdevelopment. Globally, 31 of the 49 least developed countries and 34 of the 41 heavily indebted poor countries are in SSA (UNCTAD, 2008). Thus, absolute poverty is also endemic in the region. Recently, it is documented by UN-MDG Report (2009) that $1.25 a day poverty rate in the region oscillates between 58 percent and 51 percent through 1990 - 2005. This was despite numerous policy measures since independence that were introduced to eradicate poverty and improve living standards.

UN-MDG Report (2009), poverty rate in other poor countries has been steadily declining in the past 3 decades. Between 2000 and 2015, it has declined by more than 40 percent globally. Thus, SSA's contribution in this had only been meager. Rather, countries in East Asia and pacific region have the biggest contribution to the reduction as the figure there fall from 54.7 percent in 1990 to 16.8 percent in 2005. Another commendable contribution is due to South Eastern Asia where the fall has been from 51.7 percent in 2000 to 40.3 percent in 2015. But, the fall in SSA has been from 57.6 percent in 2000 to 50.9 percent in 2015.

The poverty-reducing effect of growth in SSA has been hampered by high inequality (income and gender) and the fact that the growth mostly depends on capital-intensive sectors like natural resource extraction, which is often not inclusive which needs time to reach the poor (Workneh, 2020; Bicaba et al., 2017). While resource-poor countries reduced poverty by 16 percentage points during 2005 – 2010, resource-rich countries recorded only a 7 percentage point reduction (Bicaba et al., 2016). Poverty in Africa is also largely concentrated in landlocked regions, mountainous regions, arid/semi-arid lands, and in rural areas (Christiaensen & Hill, 2019; Hulme & Lawson, 2017). The depth of poverty in Africa is also more extreme. For those living below the poverty line in Africa, the average consumption level is only US$.70 a day, considerably lower than levels in other regions that are all nearly approaching the $1 a day level (Bhorat et al., 2016, 10).The study, on a sample of 97 developing countries over the period 2007-2016, by Negin et.al (2010) show that corruption and poverty go together with bidirectional causality. The results of all the specifications and the Granger causality test show that there is significant relationship between corruption and poverty, governance and corruption as well as governance and poverty.

2.3 Conceptual Framework

Based on the reviewed literature above, the study has developed the following conceptual framework. Corruption affects the poor since it increases the cost of public services, lowers quality of public services and often restricts poor people's access to public services. To implementing anti poverty strategies decrease corruption if the high poverty level simply caused by high corruption. Therefore Corruption is the dependent variable while poverty is among the independent variables and in vice versa. Poor governance is the major obstacle to the alleviation of poverty and reducing corruption. If the policies and growth trajectories are not pro-poor, poverty will decrease in the presence of good governance. Combating corruption and poverty reduction efforts rely on and are determined by the quality of governance. so that Governance also has a significant effect on both corruption and poverty. And also, both corruption and poverty has a significant effect on governance. Corruption perception index, human development index, GDP per capita growth rate governance quality, voice and accountability, political stability, government effectiveness, regulatory quality and rule of law are control variables.

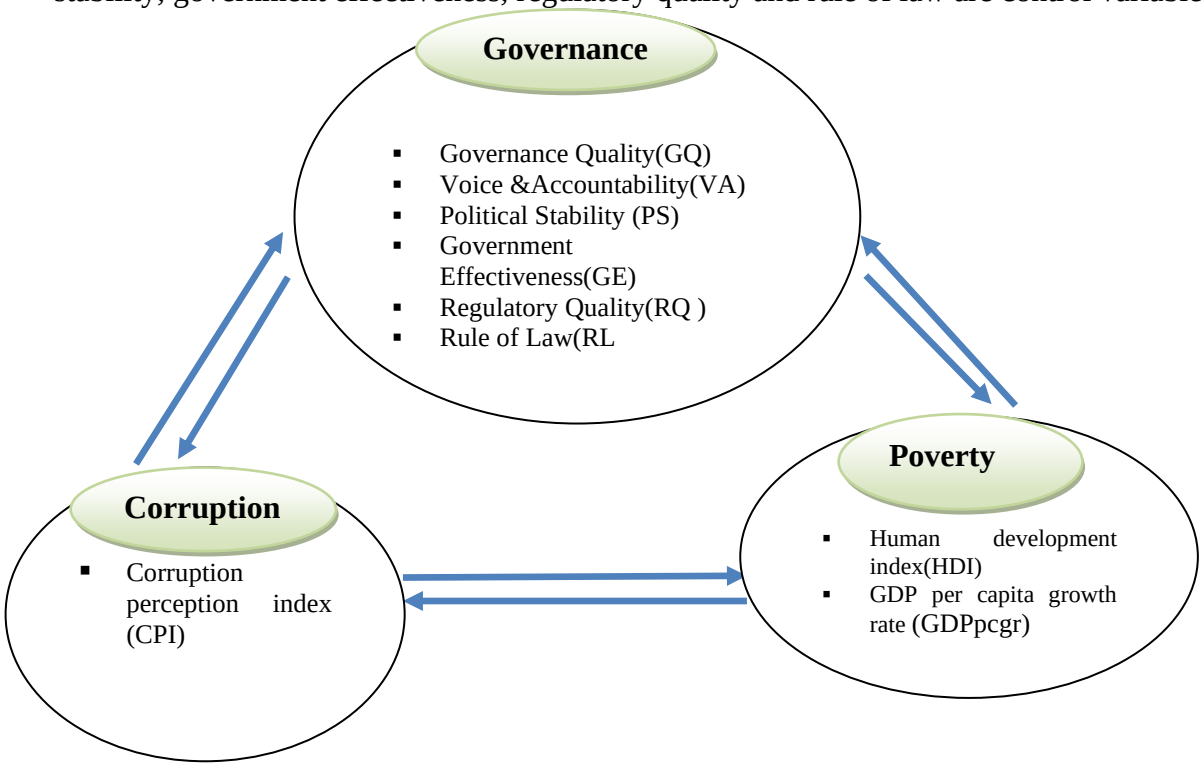


Figure 2.1: Conceptual framework of the Study

Sources: Developed by a Researcher, (2022)

CHAPER THREE

3. RESEARCH METHODOLOGY

3. Introduction

This section of the paper is going to deliberate the overall methodology of the study: model variables, data sources, methods of data analysis. It also described on how these methods employed refers to the objective set earlier to address the purpose of this study and issues related to reliability and validity as well as ethical consideration within the proposed methods is being put in place briefly.

3.1 Description of study area

Sub-Saharan Africa is the term used to describe the area of the African continent which lies south of the Sahara Desert. Geographically, the demarcation line is the southern edge of the Sahara Desert. There are 46 Saharan Africa countries. Among these, this study covered 23 sub-Saharan countries such as Angola, Botswana, Cameron, Congo Rep, Cote d'Ivoire, Ethiopia, Gambia, Ghana, Kenya, Madagascar, Malawi, Mali, Mauritius, Mozambique, Namibia, Nigeria, Senegal, Sierra Leone South Africa, Sudan, Tanzania, Uganda, and Zambia. Countries are included in the empirical analysis based on data availability with a time span of 2011 to 2020.Most of it is a vast plateau, with only ten percent of its land area below an altitude of 500 feet. Near the equator are humid rainforests, but north and south of that band, most of sub-Saharan Africa is savanna, grasslands with scattered trees. In the south, the Kalahari Desert stretches along the Atlantic coast.

The total population of the sub-Saharan Africa is estimated at 1.1 billion (according to Global Trends in 2019), of which 59 percent is rural. The annual population growth rate is 2.63 percent over the period 2011-2020 and the average population density is 45 per Km^2 (117 people per m^2). The urban population is growing rapidly as a result of both population increase and high rural-urban migration. Sub-Saharan Africa's economy is set to expand by 3.7 percent in 2020.Generally, sub-Saharan Africa is the poorest region in the world, still suffering from the legacies of colonialism, slavery, native corruption, socialist economic policies, and inter-ethnic conflict. The region contains many of the least developed countries in the world.

3.2 Research Design and Approach

The research design had a plan that specifies the source of data and the types of information relevant to the study. To achieve the stated objective, the researcher used panel data for its advantage of accommodating the good identities of both the cross-sectional and time-series data; and due to the dynamic nature of the variables of interest. In recent times, panel data has become widely used to estimate dynamic econometric models. Panel data outweighs the cross-sectional data at least in providing sufficient information about earlier time periods especially if the relationship to be investigated has dynamic nature. It has also advantages over the time-series type data in that it offers greater scope to investigate heterogeneity in adjustment dynamics between different types of individuals/countries. The study used mainly secondary data source obtained from United Nation annual Human Development Reports (UNDP), World Development Indicator (WDI, 2020), Transparency International annual reports(TI), World Bank Governance database. Because of time limitation; the researcher employed only quantitative method.

3.3 Data Source

The study considers annual data for 23 sub-Saharan Africa countries for the years from 2011 to 2020. The data uses secondary data collecting from various sources. Data (for a particular variable) for all countries are taken from a single source to keep its consistency and to avoid possible biases due to difference in measurement techniques. To measure corruption, we used the Transparency International corruption perception index (CPI). To measure poverty, we used the Human Development Index (HDI) published by UNDP. This HDI represents indicators such as education and adult literacy, life expectancy and household income. To measure Governance we used, Voice and Accountability, Government Effectiveness, Regulatory Quality, Rule of Law and Governance Quality.

3.4 Method of Data Analysis

The methods of data analysis used for this study is descriptive statistics. Descriptive statistics is the discipline of quantitatively describing the main features of a collection of data. In this research, descriptive analysis conduct to understand the behavior and interaction of the panel data over time with the aid of simple graphs and descriptive statistics like mean and standard deviation.

3.5 The Economic Model

3.5. 1 Theoretical framework

Modeling the economics of corruption is not as such an easy task to researchers since the deal is about attaching an economic interpretation to a non-economic (political) variable. This part of the methodology section is, thus, included with an intention to give a brief on why corruption interests economists and how economists are thinking about corruption beyond its political sense. Following Jain (2011), there are two approaches to modeling the different types of corruption-the agency model and the resource allocation model. An agency model views corruption as a factor affecting the incentives and constraints facing the legislators and examine its effect on their decisions. The model basically examines the issue of corruption in a situation of information asymmetry and considers it as non-problematic in the absence of information asymmetry between the principal and the agent.

In the case of corruption, however, the problem can arise not only when there is information asymmetry between the agent and the principal but also when there are problems of enforcement (when the principal lacks mechanisms to fully hold the agent accountable for its behavior). Agents with a control over the political system can circumvent many of the checks and balances implemented by the principal; and hence, the principal is unable to enforce its implicit contract with the agent which in turn is the challenge to model building (Jain, 2011).

On the other hand, a resource allocation model views corruption as a cost in a supply-demand framework. The model considers that corruption changes the relative costs of inputs and outputs as well as the penalties faced by decision makers, and hence, the behavior of players in an economy as well as the total output. The most common application of this model is for rent seeking behavior where entrepreneurs attempt to escape the ‘invisible hand' of the market and to redirect policy proposals for their own advantage. This model encompasses game theoretic application and the effects on market structure where the former shows the behavior of firms towards competitive rent-seeking and the latter addresses the effect on market equilibrium through its effect on the costs of resources.

Following the aforementioned briefs, it is apparent that the resource allocation model is more appropriate in dealing with the effects of corruption and in explaining the rationale behind investigating the issue of corruption like ours. Since we have no objective to investigate either the causes or the consequences or both of corruption, we limit our economic model in such a way that a political variable-corruption- has some relationship with an economic variable-poverty; and governance variables have correlation with both corruption and poverty.

Our economic model is developed to show only corruption's nexus with poverty and governance indicators. Thus, following Negin et.al (2011) we developed an empirical function:

$Y = f(Y_{t-i}, X, Z,)$ where, Y indicates poverty or corruption, Y_{t-i} indicates the lagged values of poverty/corruption, X indicates corruption or poverty depending on what is assigned as Y, Z indicates the control variables such as inflation, gender, rural population, and governance quality. GDP per capita growth rate is also among the factors affecting poverty though it's excluded from corruption function. Y and X are denoted as poverty or corruption because we deal with two models where at one time poverty is the dependent variable and corruption is among the repressors and in the second model vice versa. For the purpose of examining the effects of governance indicators on corruption, the dependent variable corruption is modeled as a function of its lags, poverty, inflation, gender, rural population, and each of the five governance indicators separately.

3.5.2 Dynamic panel data

Many economic relationships are dynamic in nature. The dynamic relationship between variables requires sufficient information about earlier time periods and greater deal with heterogeneity in adjustment changes, to arrive at efficient outcomes. In econometrics, the dynamics in a model is characterized by the presence of lagged dependent variable among the regressors (Baltagi, 2015). In such a case, it is rare that the conditional density of the outcomes (say, Y_{it}) conditional on a certain variables (say, X_{it}) are independently identically distributed across individual i and over time t. To capture the effects of those omitted factors it is common to assume that in addition to the effects of observed Xit, there exist unobserved individual specific effects (μ_i) and time-specific effects (λ_t) which can be treated either as fixed constants or random variables (Hsiao and Tahmiscioglu, 2017; Baltagi, 2015).

In other words, the basic model for dynamic panel with additional explanatory variable can be written as $Y_{it} = \alpha Y_{it-j} + \sum . X_{it} + \varepsilon_{it}$, where $\varepsilon_{it} = \mu_i + \lambda_t + \nu_{it}$ (*)

Where Y_{it}, $Y_{i,t-1}$, and X_{it} represent the dependent variable, the lagged dependent variable, and a vector of values of additional explanatory variables respectively. μ_i indicates individual-specific effect, λ_t indicates time specific effect, and ν_{it} represents the disturbance term. i= 1,., N is cross-section and t= 1,…T is time periods.

Such type of model is characterized by two sources of persistence over time. One is the autocorrelation due to the presence of lagged dependent variable and the other is heterogeneity among individuals due to the individual effects. Since Y_{it} is a function of μ_i, it follows that $Y_{i,t}$-1 from the lagged equation is also a function of μ_i indicating that one of the regressors is correlated with the error term. In such a model, it is not necessary to specify models for the X_{it} series in order to estimate the parameters. The moment conditions to be considered depend on what is assumed about the correlation between X_{it} and the error terms (μ_i and V_{it}) (Bond, 2012).

The X_{it} series may be endogenous, predetermined, or strictly exogenous assuming the V_{it} disturbances are serially uncorrelated. The X_{it} also may or may not be correlated with the individual effect (μ_i). The X_{it} may be endogenous in a sense that it is correlated with the V_{it} and earlier shocks, but uncorrelated with V_{it+1} and subsequent shocks. In such a case, the X_{it} is treated symmetrically with the dependent variable Y_{it} ; and the lagged values X_{it-2}, X_{it-3}, and longer lags can be valid instrumental variables in the first differenced equations for periods t=3, 4,…,T. The X_{it} may be predetermined in a sense that the X_{it} and V_{it} are uncorrelated but the X_{it} may still be correlated with Vi,t-1 and earlier shocks. In this case, Xit-1 is additionally available as a valid instrument in the first differenced equation for period t (Bond, 2012).

The X_{it} may be strictly exogenous in a sense that X_{it} is uncorrelated with all past, present, and future realizations of Vis. In such a case, the complete time series (Xi1, Xi2,…., XiT) can be valid instrumental variables in each of the first differenced equations (Bond, 2012). Further, when we are not willing to assume that the level of the X_{it} variable is uncorrelated with the individual effects (μ_i) but we are willing to assume that the first differences ΔX_{it} are uncorrelated with μ_i, the lagged values of ΔXis can be used as instrumental variables in the levels equation for period t (Arellano and Bover, 2011).

Specific to our objectives of examining the relationship between corruption and poverty and corruption and governance indicators using dynamic panel data, our paper rests on the following basic model. That is,

$$Yit = \alpha Yi, t\text{-}j + \beta Xi\ t + \delta Zit + \varepsilon it \quad (3.1)$$

$$\varepsilon it = \mu i + \lambda t + \nu it$$

Where, Y and X are poverty or corruption, alternatively. Z represents control variables used as a mediator between poverty and corruption such as inflation, governance quality, rural population, GDP per capita growth, and gender. i= 1,….N is cross-section/country while t= 1,…T is time period. The denotations μi, λt, and νit are individual effects, time effects, and disturbance term respectively.

To put it precisely, we have three models where the first two capture the relationship between corruption and poverty and the third addresses the effects of governance indicators on corruption. The third model is a general model which comprises five models. In all our models, we introduced time dummies to consider for the time effects as suggested by Islam (2008).

The first equation (equation 2) specifies the effect of corruption on poverty. That is,

$$Yit = \gamma + \sum_{j=1}^{m}.\ \alpha\ j\ Yi, t\text{-}j + \sum_{r=0}^{n}.\ \beta\ rXi, t\text{-}r + \sum_{k=0}^{q}.\ \delta\ kZi, t(L) + \sum^{Dt}.+ \mu i + \nu it \quad (3.2)$$

Where Yit = poverty (human poverty index (in natural logarithm), LnHPI), Yi,t-j = lagged poverty (LnHPIi,t-j), Xi,t-r = corruption (corruption perception index (in natural logarithm), LnCPI), and Zi,t-k = a vector of other explanatory variables such as inflation (INF), GDP per capita growth rate (GDPPCGR), governance quality (GQ), rural population (in natural logarithm, LnRP), and Gender (in natural logarithm, LnGN), and Dt =time dummy. μi, νit , i, and t are as defined before and L represents lag of the variable. The lag (L) is taken as an option to incorporate for the possibility of some of the control variables to affect the dependent variable by their lag instead of their levels. γ, α, , and δ are coefficients; m and n are number of lags and q is a number attached to the vectors of control variables for identification.

To put it in another form, the model is defined using the variables of interest as:

$$LnHPIit = \gamma + \sum_{j=1}^{m}.\ \alpha\ j\ LnHPIi, t\text{-}j + \sum_{r=0}^{n}.\ \beta r\ LnCPIi, t\text{-}r + koLnRPit(L) + k1LnGNit(L) + k2INFit(L) + k3GQit(L) + k4GDPPCGRit(L) + \sum^{Dt}.+ \mu i + \nu it \quad (3.3)$$

Where all are as defined for equation (3.2).

We specify the third equation (4) identical to equation (3) as a general equation designed to estimate the effect of governance indicators on corruption. We prefer to use a replica model of equation (3) because the reliability of our result increases if it is interpreted with in a model showing the relationship between corruption and poverty. We further derive five different equations from equation (4) in order to deal with the effects of each governance indicators. The general equation is specified as

$$Xit = \gamma + \sum_{j=1}^{m}. \alpha jXi,t-j + \sum_{r=0}^{n}. \beta\, rYi,t-r + \delta kZi,t(L) + \sum_{.}^{Dt}. + \mu i + \nu it \qquad (3.4)$$

Where all variables are as defined under equation (3) but the governance quality component in vector Z is to be substituted further by each of the indicators: voice and accountability (VA), political stability and absence of violence (PSV), government effectiveness (GE), regulatory quality (RQ), and rule of law (RL). All of the five sub-equations from equation (4) are identical except that the governance quality variable in the vector Z is replaced by each of the five governance indicators separately.

In an explicit form, the five equations are given as:

$$LnCPIit = \gamma + \sum_{j=1}^{m}. \alpha\, j\, LnCPIi, t-j + \sum_{r=0}^{n}. \beta r\, LnHPIi, t-r + koLnRPit(L) + k1LnGNit(L) + k2INFit(L) + k3VAit + \sum_{.}^{Dt}. + \mu i + \nu it \qquad (3.4.a)$$

$$LnCPIit = \gamma + \sum_{j=1}^{m}. \alpha\, j\, LnCPIi, t-j + \sum_{r=0}^{n}. \beta r\, LnHPIi, t-r + koLnRPit(L) + k1LnGNit(L) + k2INFit(L) + k3PSVit + \sum_{.}^{Dt}. + \mu i + \nu it \qquad (3.4.b)$$

$$LnCPIit = \gamma + \sum_{j=1}^{m}. \alpha\, j\, LnCPIi, t-j + \sum_{r=0}^{n}. \beta r\, LnHPIi, t-r + koLnRPit(L) + k1LnGNit(L) + k2INFit(L) + k3GEit + \sum_{.}^{Dt}. + \mu i + \nu it \qquad (3.4.c)$$

$$LnCPIit = \gamma + \sum_{j=1}^{m}. \alpha\, j\, LnCPIi, t-j + \sum_{r=0}^{n}. \beta r\, LnHPIi, t-r + koLnRPit(L) + k1LnGNit(L) + k2INFit(L) + k3RQit + \sum_{.}^{Dt}. + \mu i + \nu it \qquad (3.4.d)$$

$$LnCPIit = \gamma + \sum_{j=1}^{m}.\alpha\, j\, LnCPIi, t-j + \sum_{r=0}^{n}. \beta r\, LnHPIi, t-r + koLnRPit(L) + k1LnGNit(L) + k2INFit(L) + k3RLit + \sum_{.}^{Dt}. + \mu i + \nu it \qquad (3.4.e)$$

where all variables are as explained before.

In all of our models, we assume that $E(\mu i) = 0$, $E(vit) = 0$, $E(\mu i\, vit) = 0$ for i=1,…N & t=2,…T. we also assume that $E(vit\, vis) = 0$ for $i = 1, \ldots, N$ & $t \neq s$. In other words, the individual effect and the error term are independent of each other and among themselves.

3.5.3 Generalized Moments of Methods (GMM)

Based up on the innovation of using instrumental variable by Anderson and Hsiao, researchers have developed more efficient estimators. Arellano and Bond (2011), Arellano and Bover (2015), Blundell and Bond (2017), and Ahn and Schmidt (2015), among the many others, suggested the Generalized Method of Moment (GMM) framework to derive estimators that surmount the problems of Anderson-Hsiao. The key intuition behind the GMM method is that the panel structure of the data provides a large number of instrumental variables in the form of lagged endogenous as well as exogenous variables. It is generally known that using many instruments can improve the efficiency of various IV and GMM estimators (Blundell and Bond, 2017). The GMM estimators are more efficient than the Anderson-Hsiao estimators because they use additional instrumental variables that the Anderson-Hsiao neglects.

Hsiao and Tahmiscioglu (2017) also recommend GMM estimators for dynamic panel data model showing that the method is applicable with the presence of either random or fixed individual- and time- specific effects and is consistent and asymptotically normally distributed whether N or T or both tend to infinity. Among the GMM estimators, the Difference GMM (DIFF-GMM) and System GMM (SYS-GMM) are common for use. These estimators are designed for short wide panels and to fit linear models with a dynamic variable, additional controls, and fixed effects.

To deal with GMM estimation, let's consider our equations with all the assumptions stated. We further assume that the initial condition Y_{i1} for equation (2) and X_{i1} for the remaining equations are predetermined meaning $E(Y_{i1}vit) = 0$ or $E(Xi1vit) = 0$ for i= 1,…N & t= 2,…T. X_{it} in equation (2) and Yit in all other equations are endogenous in a sense that they are correlated with V_{it} and earlier shocks but uncorrelated with V_{it+1} and subsequent shocks. This implies that taking first differences introduces moment conditions $E(Xi,t\text{-}s\ \Delta Vit) = 0$ for equation (2) and $E(Yi,t\text{-}s\ \Delta Vit) = 0$ for each of other equations for t=3,…T, s > 2, & k > 2, in addition to the 1/2 (T-1)(T-2) moment restrictions in the no endogenous variable case. Therefore, while taking the first-differenced GMM estimator the lagged values of endogenous repressors, dated t-2 and earlier can be used as instruments for the equations in first difference.

The GMM estimators while widely suggested for dynamic panel model are not free of limitations. They are sometimes criticized for it may produce biased estimators. The DIFF-GMM estimator which corrects for the problems associated with the cross-sectional estimators may perform poorly in certain situations. When the time series is persistent and when the time under consideration is small, this estimator behaves poorly. Hayawaka (2015) states two sources of bias for the GMM estimator. One is the ‘weak instruments problem' and the other is ‘the problem of many instruments'. When the lagged levels of any series are only weakly correlated with subsequent first differences, the GMM estimator has been found to have poor finite sample properties.

Again, when the number of instruments is large relative to the sample size the GMM estimator allows a tradeoff between efficiency and bias (efficiency increases and the estimator may be biased). Blundell and Bond (2008) evidenced that DIFF-GMM estimator displays large downward biases and a serious lack of precision in estimating the autoregressive parameter when it approaches to unity (or often be greater than 0.8). Alonso-Borrego and Arellano (2009) also shows that in the first differencing models the bias is sizable especially when the parameter concerning the lagged dependent variable is close to unity.

Considering these scenarios, Blundell, Bond, and Windimeijer (2012) have suggested another type of GMM estimator-SYS GMM which better resolves the problems by exploiting additional assumptions about the initial condition. In other words, SYS-GMM assume $E(\mu_i \Delta Y_{it}) = 0$ in equation (2) and $E(\mu_i \Delta X_{it}) = 0$ in all the remaining equations for i=1,…N. This yields additional moment conditions $E(V_{it} \Delta Y_{i,t-1}) = 0$ for equation (2) and $E(V_{it} \Delta X_{i,t-1}) = 0$ for the remaining equations, for i = 1,…, N & t= 3,…,T. The moment conditions allow the use of lagged first difference of the series as instrument for equations in level.

From the argument of ‘more instruments - more efficiency', SYS-GMM estimator in dynamic panel model is more efficient than DIFF-GMM estimator. The system GMM combines moment conditions for the differenced equation with moment conditions for the model in levels. The system GMM estimator despite using more instruments is less biased than the first differencing and the level GMM estimators (Blundell and Bond (2008); Hayakawa (2015); Roodman (2016)). Hayawaka (2015) especially argues that the primary reason for the system estimators to be less biased is the fact that the bias of the system GMM is composed of a weighted sum of the biases of the first differencing and the level estimators which have opposite effects.

However, the SYS-GMM estimator also has some limitations alike the estimators discussed before. For instance, Increased bias and unreliable inference may hold as a result of large number of instruments employed while using the estimator (Newey and Smith, 2014; Hayawaka, 2015). We handled this problem by conducting a Sargan-test of over identifying restrictions as suggested by Roodman (2016). In other words, the appropriateness of the instruments is checked by testing for the absence of any correlation between the instrumental variables and the disturbances (Harris et.al, 2011). When the p-value fails to reject the null hypothesis, it implies that the instruments used are appropriate for the estimation.

It is important to note that the consistency of our estimators depends on our assumption that vit are serially uncorrelated. If serial correlation exists, then some of our instruments will be invalid and the moment conditions used to identify parameter may not hold. In other words, the use of lagged values (and first differences of lags) of the endogenous variable as instruments would be invalid in the presence of serial correlation. Therefore, we conduct test for serial correlation so that we judge the reliability of our estimates. Arellano and Bond (2011) provide a test for autocorrelation, AR (1) & AR (2), appropriate for linear GMM regression. If the test shows a first order autocorrelation but no second order autocorrelation, it is indicating that the instruments are valid.

3.5.5 Diagnostic Tests

Three types of diagnostic test are used to determine the validity of our empirical models. These tests include the Sargan test of identifying restrictions, autocorrelation test, and significance tests of the included time dummies.

3.5.5.1 Sargan test

The Sargan test of identifying restrictions under the null hypothesis of the validity of instruments (Roodman, 2011) examines the quality of specification of the model and the appropriateness of the instruments used. When interpreting the Sargan test statistic, the high p-value indicates the fail to reject of the null-hypothesis of the validity of no over identification restrictions.

3.5.5.2 Autocorrelation

The second test is an autocorrelation test for the presence of serial correlation in the first differenced residuals of first and second order. Arellano and Bond (2001) proposed this test to examine the null hypothesis that the residual from the estimated regressions is first-order correlated but not second-order correlated.

3.5.5.3 Engle-Granger causality

In order to address the causality between corruption and poverty, the study employs Engle-Granger causality test of panel (Wald test). Engle and Granger (2009) defined causality between variables as: "a given variable Granger causes another variable if better predictions of the latter variable are obtained using lagged and current information on the former variable". Wald test on lags of corruption in equation (2) and on lags of poverty in equation (3) is used to inter the Mathematically, Wald test on corruption from equation (2) is given as

H0: There is no Granger Causality between corruption and poverty.

H1: There is Granger Causality between corruption and poverty.

H0: There is no Granger Causality between governance and poverty.

H1: There is Granger Causality between governance and poverty.

H0: There is no Granger Causality between governance and corruption.

H1: There is Granger Causality between governance and corruption.

CHAPTER FOUR

4. ANALYSIS AND RESULTS

In this section, detailed analysis about the descriptive and econometric results starting with presentation of the data is made. Descriptive analysis and System GMM results along with its economic intuitions are discussed. Causality and other diagnostic tests are also presented.

4.1. Data Presentation and Description

This section presents the summary of data used in the study and provides statistical description. The description is important in providing an insight about the distribution of the data as well as explaining some important statistical measures needed prior to the econometric analysis. The minimum and maximum values of the variables, their averages, and graphical descriptions are included.

Table4.1: summary of descriptive statistics

Variable	observation	Mean	St. deviation	Minimum	Maximum
HPI	199	37.99648	10.38898	10.1	70.7
CPI	211	20.994787	11.131927	11	65
GDPPCCGR	230	0.878626	1.942682	-10.86215	18.053621
VA	207	0.4243138	0.1387945	0.163421	0.709512
PSV	207	0.406864	0.1812155	0.00294	0.724433
GE	207	0.3954295	0.1200651	0.192191	0.66144
RQ	207	0.4155254	0.1137059	0.144664	0.68116
RL	207	0.3903751	0.1325294	0.162707	0.710691

Source: own computation from the raw data (2022)

As shown in Table 1 and figure 1 (a) below shows the human poverty index SSA countries from 2011-2020 looks to have decreasing nature, although it had some fluctuation at the 2018s. To the other extreme the human poverty index of Mauritius, Botswana, South Africa and Namibia seems low compared to other Sub-Saharan countries, as shown in the trend graph, the human poverty index value ranges from a minimum 10.1 for Mauritius in 2012 to a maximum 70.7 for Madagascar in 2012.

Looking at the value of the index; the average value of human poverty for the sample country is relatively higher. The average value is higher even when compared to that of Mauritius (within the same sample).This implies that the most basic dimensions of deprivation such as short life, lack of basic education, and lack of access to public and private resources is on average severe in the sample countries.

As shown in Table 4.1 and figure 4.1(b), Study of corruption in South Africa, Sudan, Angola, and Mozambique report that government institutions with the highest levels of corruption tend to provide lower quality services. The converse is also true: in Botswana, the study shows that state sector entities with better systems of public administration tend to have lower levels of corruption.

The mean value of corruption perception index of the sample countries falls in the range of values showing the most corrupt countries of the world as per the scale of transparency international (0 showing highly corrupt and 100 highly clean). The cleanest country among the sample is with a CPI score of only 65 (Botswana as of 2011). While the highly is with a score of 11 (South Africa as of 2016). Even the so called "less corrupt" country in the sample is not far above the international standard's average. It is only Botswana that shows a consistent value above the international average for the whole years under consideration. These imply that the countries are more corrupt and most of transactions in them are tainted by corruption.

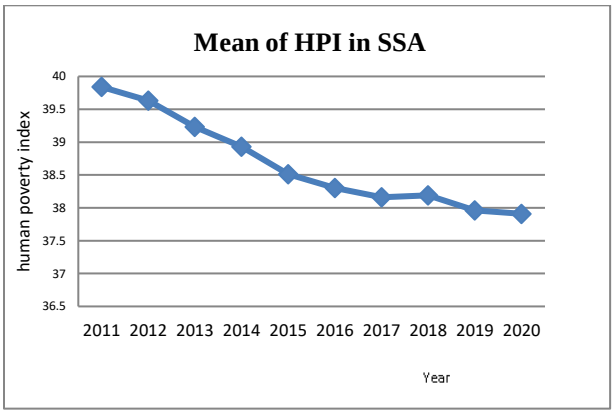
The graph below shows the GDP per capita growth rate Sub Saharan African countries from 2011-2020. The Botswana GDP per capita growth rate looks to have highly decreasing nature, although it had some fluctuation at the 2012s. GDP per capita growth in Botswana was reported at -10.36 % in 2020, according to the World Bank collection of development indicators, compiled from officially recognized sources. To the other extreme the GDP per capita growth rate of Ethiopia ,Kenya and Tanzania seems increase compared to other sub Saharan African countries, as shown in the trend graph, during the period 2011 to 2020 the average GDP per capita growth rate from the summary statistics also shows that the countries have registered positive economic growth averaged to 0.87. The rate of their GDP per capita growth was mixed, some registering negative growth and others positive with highly varying trend. The fluctuation can also easily be seen from figure1 (e).

As shown below in table 1 and figure 2 from a- g (in annex 3), The calculated governance quality index (0- highly poor and 1- good quality) data reveal that the sample countries are on average below the standard average governance quality, rotating between a minimum of 0.15 and a maximum of 0.68 (Table 1). Regarding governance indicators, the sample countries show a mean voice and accountability value below the international index's average, ranging from 0.16 for Sudan to 0.71 for Mauritius. It is only Botswana, Mali, Mauritius, Namibia, and South Africa that consistently score above the standard average (though not far). This indicates that governments in these countries are, on average, not hearing to the voices of their citizens and are not responsive to the questions of those from which they drive the authority. In other words, the participation of citizens in selecting their governments and the freedom of expression and association in these countries is lower.

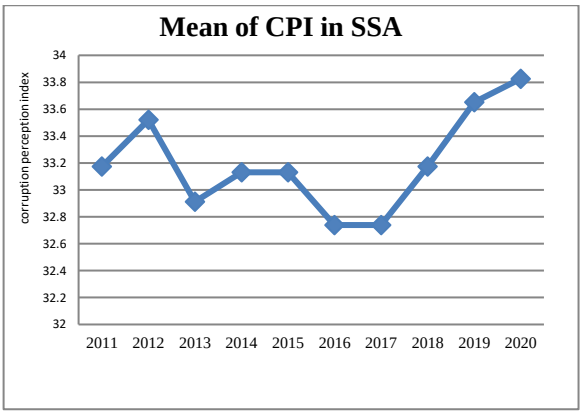
Similarly, political stability and absence of violence which proxy the probability of a government to be destabilized and overthrown by violence is high in these countries, as shown by the average index in Table 1. That is, the majority of these countries score below the international average implying higher unrest rate in these countries. The regulatory quality of governments in these countries is poor as well. The average result indicates that the ability of the governments to formulate and implement sound policies is lower, showing the maximum of only 0.68. The data reveals that only six of the sample countries register stability above the standard average while only four countries did the same in regulatory quality.

As shown in the same source, the quality of public and civil services, of their independency from political pressure, of policy implementation and the credibility of governments to their policies (as proxies by government effectiveness) in the countries are lower. The lowest of this index is experienced by Sudan in the year 2018. It is only four of the countries of our sample that consistently score above 0.5 for the entire period considered. Likewise, rule of law in these countries is very weak as only Mauritius, Botswana, Namibia, and South Africa consistently registered nearly above standard average's index. This, in other words, means that the effectiveness and predictability of judiciary in the countries is low.

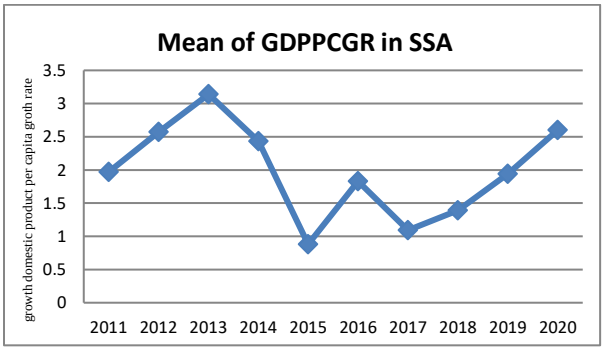
Distribution of the variables by their means



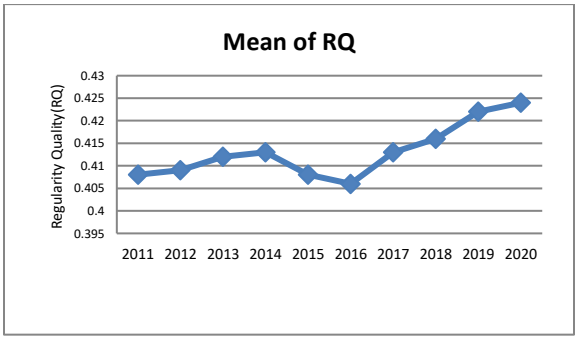
(a)



(b)



e



(f)

Figure 4.1: Distribution of the variables by their means

Source: Own computation (2022)

4.2. Regression Results Analysis

4.2.1. Multicollinearity test

Multicollinearity test is made prior to estimation of the results. The result from the test (annex 4) shows that there is no multicollinearity problem observed in all of our models. The empirical results of poverty and corruption equations in a notion of causality are presented in Table 2. The table shows system GMM results of corruption (model1) and poverty (model2) models designed to indicate the relationship between the variables as well as their causal link.

In model1, corruption is the dependent variable while poverty is among the independent variables. In model2, on the other hand, poverty is the dependent variable while corruption is among the independent variables. Inflation, gender (in logarithm), rural population (in logarithm), GDP per capita growth rate, and governance quality are additional explanatory variables in the models. Time dummies are incorporated in both models at least to minimize contemporaneous correlation (the likely form of unobserved cross-country correlation). Despite the inclusion of the control variables and the time dummies, our variables of interest in models one and two are poverty and corruption respectively.

Results from model1 show that corruption is significantly affected by its lag, lag of poverty, and governance quality. The persistent nature of corruption and poverty supports the reported effect of the lag of the variables. The result that poverty positively affects corruption indicates the established argument that poor people are obliged to pay additional offer (in monetary term or in kind) to enjoy their rights since they lack the capacity and power to resist corrupt acts and monitor officials (Khagram, 2015). The result, in addition, supports the assertion that the possibility for corruption activities to flourish and strengthen in poverty-stricken society is higher than that of the rich economy, though the monetary amount involved is larger in the latter. Some individuals in poor economy may decide to sack undue benefits instead of generating the dues. Moreover, the deficient institutions in the poor nations make the poor (with frequent contact with the service providers) prone to corruption.

Table 4.2: System-GMM results of corruption-poverty model (where model1 represents corruption model and model2 represents poverty model)

Estimated Variable	Model1(estimated coefficients)	Model2(estimated coefficients)
(Lncpi)t		-.2181354 (.1277027) *
(Lncpi)t-1	.6045649 (.0851254)***	.0743865 (.1383905)
(Lncpi)t-2	.0547957 (.0585212)	.1227841 (.1033918)
(Lncpi)t-2	.0547957 (.0585212	.1227841 (.1033918)
(Lncpi)t-3		-.2129632 (.1057158) **
(lnhpi)t	-.0540233 (.1201532)	
(lnhpi)t-1	-.2568508 (.1172094)**	.783091 (.1139479) ***
(lnhpi)t-2	.1623472 (.1217349)	-.0377213 (.1050622)
Gq	.779901 (.25069) ***	
Gqt-1		-.7245777 (.4185355) **
GDPpccgr		-.0002759 (.0030696)
Year dummy (2014)	-.0893816 (.0352794) **	
Year dummy (2015)	.0457631 (.0317953)	
Year dummy (2016)	.0267725 (.0243172)	.0500116 (.0323501
Year dummy (2017)	.0403385 (.0174913)**	.0324851 (.0173531) *
Year dummy (2018)	.0317903 (.0219615)	
Year dummy (2019)		.029571 (.0161386) *
Year dummy (2020)		-.0789903 (.0415164) *
Constant	.0786551 (.823084)	-.0704367 (.0379175) *
No. of observation	139	132
No. of groups	23	23
Sargan test (p value)	0.2990	0.2706
AR(1), p value	0.0045	0.0092

Figures in parentheses are standard errors. *** indicates significance at 1% level, ** indicates significance at 5% level, and * indicates significance at 10% level. Abbreviations are as defined in the acronyms section.

In model1, corruption is the dependent variable while poverty is among the independent variables. In model2, on the other hand, poverty is the dependent variable while corruption is among the independent variables. Inflation, gender (in logarithm), rural population (in logarithm), GDP per capita growth rate, and governance quality are additional explanatory variables in the models. Time dummies are incorporated in both models at least to minimize contemporaneous correlation (the likely form of unobserved cross-country correlation). Despite the inclusion of the control variables and the time dummies, our variables of interest in models one and two are poverty and corruption respectively.

Governance quality is found significant (at one percent significance level) indicating the strong relationship between governance and level of corruption. The positive coefficient shows that improved governance imply lower corruption and poor governance indicate higher possibility for spread of corruption. The result is consistent with theoretical and empirical justifications that improved governance lowers corruption and poor governance creates and breeds corruption (Pillay, 2014; Kaufmann et.al, 2015).

In model2 of Table2, it is shown that the lag of poverty, level, and lag of corruption are significant at one percent, ten percent, and five percent significance levels respectively; whereas the remaining lags of both variables are found insignificant. The sign of the coefficient of corruption is negative mainly because lower values of corruption data indicates higher corruption level, as defined in the measurement nature of corruption perception index. The significance of corruption in the model reveals that corruption has an impact of aggravating poverty. In an economy where provision of services is tainted by corruption poor people are often marginalized from the services and incase they decide to pay rents it is at the expense of their other best alternative uses. The poverty levels in SSA countries have shown less improvement (UNDP-HDRs) for the past years may be because of the adverse effect of rampant corruption in the region. This finding is in line with those of Gupta et.al (1998), Razafindrako to and Roubaud (2007), and Dincer and Gunalp (2008).

Both governance quality and rural population are found significant at 5 percent significance level (model2). Governance quality negatively affects poverty, meaning improved governance helps to reduce poverty. Poor people warmly need a system which gives them equal opportunity in accessing services. Improving governance, therefore, is creating this system which energizes poor in getting out of poverty. On the other hand, the likelihood of increasing poverty is higher among the rural population since rural area is often characterized by poor infrastructure and is marginalized from other facilities necessary to reduce poverty. These results are consistent with the finding in Haughton and Khandker (n.d). The variables gender, inflation, and rural population are found insignificant in model1 while the former two variables and GDP per capita growth rate are found insignificant in model2.

To consider the independent effect of each governance indicator, five regressions are run on corruption model represented by equation (3.4) in chapter three. Model (a) represents corruption model where governance quality is represented by voice and accountability (VA). Model (b) is the same model where political stability and absence of violence (PSV) denotes governance quality. Similarly, models (c), (d), and (e) are corruption models where government effectiveness (GE), regulatory quality (RQ), and rule of law (RL) respectively are exclusively the variables of interest.

Results from model (a) show that voice and accountability positively and significantly (at 0ne percent significance level) affects corruption indicating that lack of transparency and accountability prepares a breeding ground for corruption and negatively affects the efforts of combating corruption. This shows that the extent to which a country's citizens are able to participate in selecting their government and the degree of freedom of expression and association significantly affects the level of corruption in a country. In other words, improved accountability which is imperative to make public officials answerable to government behavior and responsive to the entity from which they drive their authority has the capacity to lower corruption.

Table 4.3: System GMM results for the five separate regressions of corruption model (in each model the dependent variable is corruption).

Estimated variable	Coefficients and standard errors from each model regression				
	Model (a)	Model (b)	Model (c)	Model (d)	Model (e)
(lncpi)t-1	.5424(.0975)***	.6944(.0968)***	.6714(.1090)***	.5675(.0834)***	.6604(.0852)***
(lncpi)t-2	.1149(.05949)*	.0591 (.0602)	.0551(.0671)	.0474(.0669)	.0149(.0559)
(lnhpi)	-.0198 (.1042)	.0090(.1059)	-.0576(.0978)	-.1309(.1199)	-.0409(.0959)
(lnhpi)t-1	-.2458(.1200)**	-.2602(.1185)**	-.2527(.1148) **	-.1414(.1277)	-.2767(.1190) **
(lnhpi)t-2	.0517 (.1493)	.0623(.1217)	.1852(.1268)	.1554 (.1136)	.1892(.1119)
VA	.7287(.2663)***				
PSV		.2343(.1157)**			
GE			.4321(.2114)**		
RQ				1.170(.2998)***	
RL					.6746(.2442)***

Numbers in parenthesis are standard errors. *, **, and *** indicate significance at 10%, 5%, and 1% levels respectively. Abbreviations are as defined before.

Political stability and absence of violence also affects corruption significantly at five percent significance level (model (b) in Table3). It is found that an economy with no violence and characterized by political stability have low corruption and vice versa. This implies that in a situation where the likelihood of the government to be destabilized and overthrown by unconstitutional and violent means is higher, corrupt activities increase.

Government effectiveness which proxies the quality of public services, the quality of civil services, the degree of their independence from political pressure, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies is found to have significant impact on corruption. The result from model (c) shows a five percent significant positive coefficient of government effectiveness. This implies that improved effectiveness by government contributes to lower corruption while poor effectiveness contributes in bringing rampant corruption.

As indicated in Table 3 (model d), poor regulatory quality of the government has the capacity to increase corruption. The effect is significant at one percent significance level signifying that poor ability of the government to formulate and implement sound policies can contribute to the problem of corruption. Likewise, good regulatory quality by government helps to close ways to spreading corruption. The extent to which agents have confidence in and abide by the rules of the society also has significant effect on corruption (model e). Rule of law that measures the enforceability of contracts as well as the effectiveness and predictability of the judiciary affects corruption significantly (at one percent significance level). In a case when the rule of law is weak, corruption increases while strong rule of law limits expansion of corruption. The result that voice and accountability, Regulatory quality, and rule of law independently show very strong significance indicates that these variables explain corruption more, among the others.

The results from Table 3, in general, provide empirical evidence that the five governance indicators are among the main contributors to the problem of corruption. In addition, our result develops the opposite look against the theories presented by chetwynd et al (2013) that corruption affects poverty through its impact on governance factors. In their classification of models about the link between corruption and poverty, their “governance model” postulates that corruption affects poverty by first influencing governance factors. Our finding, on the other hand, evidenced that the governance factors also affect corruption, without denying the possibility of their assertion.

4.2.2. Causality Results

Causality tests are conducted to identify whether unidirectional or bidirectional causality exists between corruption and poverty. The test of whether one variable Granger-causes another variable consists of a test of the hypothesis that the coefficients of current and lagged values of the former variable are jointly equal to zero (Wald test) after controlling for the latter variable's own lags and the influence of additional controls.

To test whether corruption Granger-causes poverty, the coefficients of lags of corruption (from model2) are tested jointly employing Wald test. The null hypothesis that corruption does not Granger-cause poverty (the coefficients are jointly equal to zero) is tested against the alternative that at least one of them is different from zero (causality exists). The Wald test result from model 2 in Table 2 rejects our null hypothesis of no causality. This indicates that corruption Granger-causes poverty which in turn means that current and past information on corruption helps to improve prediction of poverty. Similar findings are reported by Negin et.al (2014) and Dincer and Gunlap (2011) in the context of their respective areas of study.

Similarly, the null hypothesis that the coefficients of lagged values of poverty (in model1 of Table2) are jointly equal to zero is tested against the alternative that at least one of them is different from zero. The Wald test, again, rejects the null hypothesis of no causality showing that poverty also Granger-causes corruption. In other words, current and past information on poverty helps to improve the prediction of corruption. The causality test result of our study, therefore, implies that corruption and poverty have bidirectional causality running both from corruption to poverty and from poverty to corruption.

4.2.3 Diagnostic Tests

Three types of diagnostic test are used to determine the validity of our empirical models. These tests include the Sargan test of identifying restrictions, autocorrelation test, and significance tests of the included time dummies. The tests are reported at the lower end of each table corresponding to each model.

The Sargan test of identifying restrictions under the null hypothesis of the validity of instruments (Roodman, 2013) examines the quality of specification of the model and the appropriateness of the instruments used. When interpreting the Sargan test statistic, the high p-value indicates the fail to reject of the null-hypothesis of the validity of no over identification restrictions. For all models, a high p-value of Sargan test statistics is observed and hence the null hypothesis fails to reject. This shows that all specifications are well specified and that the instruments are appropriate.

The second test is an autocorrelation test for the presence of serial correlation in the first differenced residuals of first and second order. Arellano and Bond (2011) proposed this test to examine the null hypothesis that the residual from the estimated regressions is first-order correlated but not second-order correlated. The test results of first-order autocorrelation (AR (1)) reported in tables 2 & 3, particular to each models, show that the null hypothesis of no autocorrelation is rejected as the p-values exhibits significance.

The test results of the second-order autocorrelation (AR (2)) from all models, on the other hand, fails to reject the null hypothesis of no autocorrelation as indicated by higher p-value. The absence of serial correlation shows the differenced residuals by significant negative first-order serial correlation and no second order serial correlation. In other words, the fact that the first differenced error terms exhibit first-order serial correlation does not imply the correlation of the instruments with the error term; rather, the true serial correlation is reflected by the p-value of second-order autocorrelation statistics (AR(2)). In line with this, the observed high p-value results of AR(2) in all of our models reveal that the instruments used in all models are independent of the error term and hence appropriate for the estimation.

Finally, the joint significance test for time dummies is tested to examine the validity of the time dummies considered in each models. The null hypothesis that the coefficients of all the time dummies considered are jointly equal to zero is tested against the alternative that they are not. Results from all models show rejection of the null hypothesis and that the time dummies are found relevant and appropriate for the estimation.

CHAPTER FIVE

Conclusions and Implications

In this section, the conclusions followed from the results of the study and the possible implications are presented. The implications include both the policy options and possible future research agendas that are expected to solve (at least minimize) the problem.

5.1. Conclusions

The estimation results show that the relationship between corruption and poverty is bidirectional, meaning corruption has a statistically significant effect on poverty and poverty also has a significant effect on corruption. Causality test results also show that bidirectional causality exists between them. It is shown that corruption Granger-causes poverty, and poverty also Granger-causes corruption. This indicates that the severity of one may increase unless the other is carefully managed.

Governance quality also has a significant effect on both corruption and poverty. Good governance limits corruption and helps to reduce poverty while poor governance brings a breeding ground for corruption and increases poverty.

The coefficients from the estimation results of models showing the relationship between governance indicators and corruption show that each of the governance indicators affects corruption significantly. Voice and accountability is highly significant indicating that listening to the voices of citizens and making decisions explicable decreases the probability for corruption. Similarly, sound rule of law limits the spread of corruption. Political instability and violence also positively contributes to the problem of corruption since the high probability of a government to be overthrown by unconstitutional and violent means strengthen the reluctance of corrupt officials to work in a justice/fair environment.

If the capacity of the government to formulate and implement sound policies is weak, corruption flourishes. Likewise, the significant coefficient of government effectiveness indicates that the quality of civil services, public services, and their independence from political pressure matters in efforts towards combating corruption. Poor quality of the services is associated with increased corruption and vice versa.

In a nutshell, corruption and poverty have a significant relationship with bidirectional causality running in both directions. For both corruption and poverty, governance matters. Voice and accountability, regulatory quality, rule of law, political stability and absence of violence, and government effectiveness independently and significantly affects corruption. This, therefore, adds to the literature that governance factors affects poverty may be through their impact on corruption and hence on economic factors.

5.2. Policy Implications

In line with our objectives and results, we imply the following options so that the problems will safely be handled.

The significance and bidirectional causality between corruption and poverty necessitates the need to develop pro-poor anti-corruption strategies. Poverty alleviation strategies of a country should also be within a framework of laying corruption-free channels of implementing the strategies. Since the causality is running from both directions, governments have to put ‘combating corruption' and ‘poverty reduction' simultaneously among their priorities. Due attention, also, has to be given to improving the quality of governance while working towards poverty alleviation and combating corruption. The stakeholders should not treat poverty alleviation and combating corruption as different strategies, rather it has to be treated as integral components of the same strategy.

The specific policy options that we suggest as a remedy include: one, increasing transparency. Creating transparent system fosters accountability which together promotes inclusiveness, where all citizens including the poor gets access to participate in both political and economic affairs. Second, enhancing implementation which involves making the government effective and increasing its regulatory quality. When agents, principals, and citizens abide by the rule of law and are empowered according to their level of professional competence, failure of policies decline and incase it do so the system punishes a responsible. Finally, developing commitment by government (or the leading political party in a country) is crucial in recognizing the existence of the problem, understanding its severity and impacts, and in effectively implementing both political and economic solutions.

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Annexes

Annex 1: List of Sample Countries

Angola	Mauritius
Botswana	Mozambique
Cameron	Namibia
Congo,	Rep. Nigeria
Cote d‟Ivoire	Senegal
Ethiopia	Sierra Leone
Gambia	South Africa
Ghana	Sudan
Kenya	Tanzania
Madagascar	Uganda
Malawi	Zambia
Mali	

Annex 2: Description of Variables and Source

Variable		Description	Source
Human Poverty Index	HPI	A percentage figure indicating the denial of choices leading to tolerable life.	UNDP-HDR (Annual)
Corruption Perception Index	CPI	The perceived level of corruption as determined by expert assessment and opinion survey	TI (Annual)
GDP per capita Growth rate	GDPPCGR	Growth rate of Gross Domestic Product accounted for number of population	WDI (2022)
Governance Quality	GQ	The quality of the traditions and institutions by which authority in a country is exercised	World Bank Governance database
Voice and Accountability	VA	Perceptions of the extent to which a system is responsive	World Bank Governance database
Political Stability and Absence of Violence	PSAV	Perceptions of the likelihood of instability and violence	World Bank Governance database
Government Effectiveness	GE	Perception of the quality & independence of public &civil services including policy formulation, implementation, & credibility	World Bank Governance database
Regulatory Quality	RQ	Perceptions about the ability of the government to formulate & implement sound policies and regulations	World Bank Governance database
Rule of Law	RL	Perception about the confidence of agents in the rule of society and abide by it	World Bank Governance database

Annex 3:

Figure 2: Distribution of governance indicators by their means

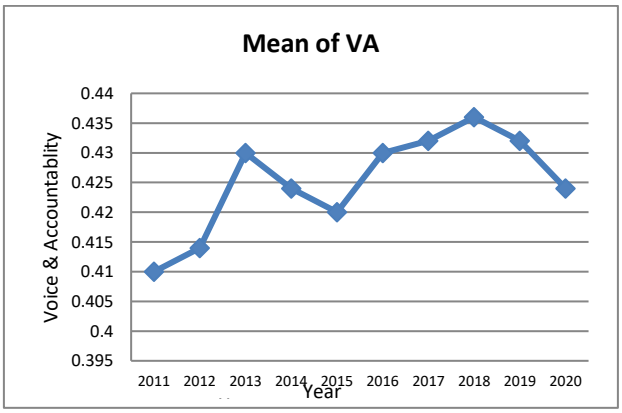

fig (i)

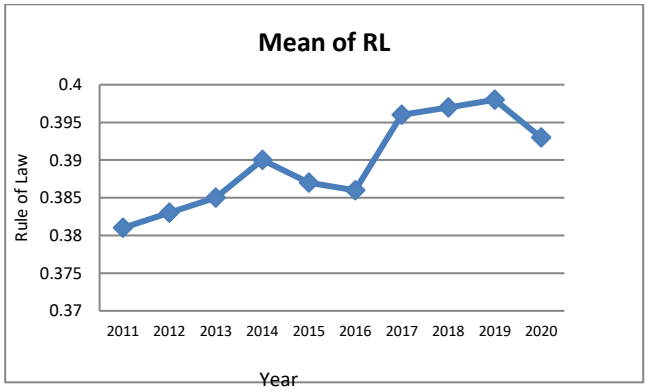

fig (ii)

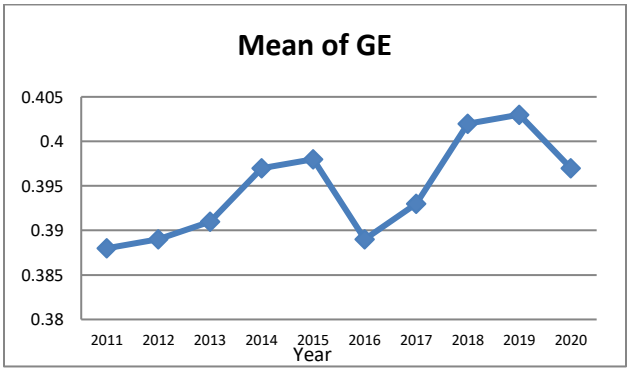

fig (iii)

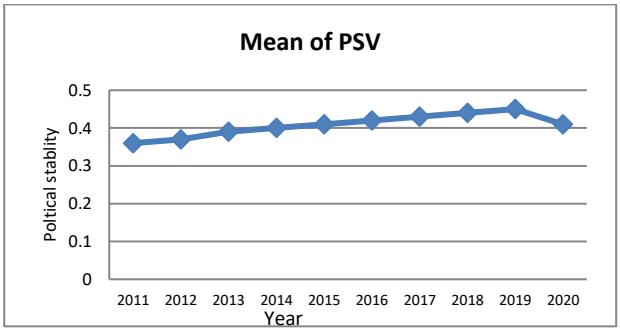

fig (iv)

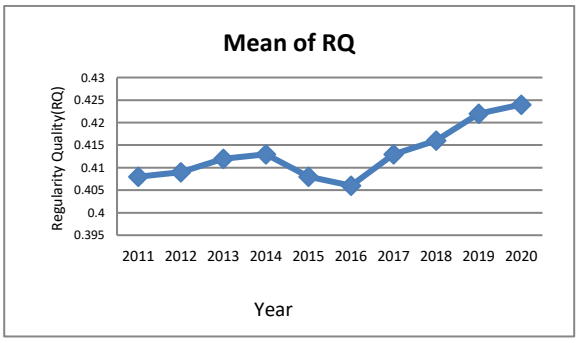

fig (v)