UNIVERSITY OF GHANA

COLLEGE OF HUMANITIES

THE FIGHT AGAINST CORRUPTION IN AFRICA: THE ROLE OF WOMEN PARTICIPATION IN GOVERNANCE AND IN THE LABOUR MARKET

BY

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THIS DISSERTATION IS SUBMITTED TO THE UNIVERSITY OF GHANA, LEGON IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE AWARD OF MPHIL ECONOMICS DEGREE

JULY, 2019

DECLARATION

I, ERNEST AMOFA, hereby declare that this thesis is the original research undertaken by me under the guidance of my supervisors; and with the exception of references to other people's work which have been duly cited, this thesis has neither in part nor in whole been submitted for another degree elsewhere.

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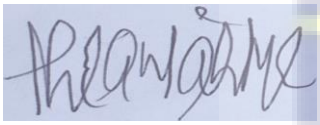

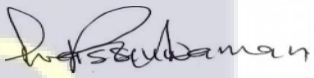

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ABSTRACT

The controversial debate of associating women with less corruption has been extensively discussed and analyzed with cross-country, micro, and experimental data mostly for the western world. However, this assertion on the impact of women participation in governance and in the labour market on corruption has received less attention in Africa.

Using the percentage of women in parliament and in the labour force as proxies for women participation in governance and in the labour market respectively, the study provides evidence on their relationship using a panel data of forty–six (46) countries in Africa for the period, 2012–2016. In accounting for endogeneity issues purported to exist in the corruption literature, the study adopted the two-step system GMM estimation technique to yield consistent and efficient estimates for the effect of women participation on corruption. Like other empirical studies, the study accounts for the regional diversities, time-invariant effects, and unobserved country-specific effects.

The study provides robust evidence of a significant negative relationship between women in parliament and corruption. However, the relationship between women in the labour force and corruption was not significant. This findings suggest that women may not necessarily be innately honest but concludes that, the impact of women in fighting corruption is manifested significantly in policy making. Again, the prediction by some scholars that the negative effect of females in parliament on corruption would diminish over time because of their newness in the political space was tested with a long-run analysis. However, women participation in parliament even showed a greater significance and a higher impact on corruption. Meanwhile, other economic and institutional factors like GDP per capita, government effectiveness, press freedom, and urbanization proved to be important factors in the fight against corruption in Africa.

DEDICATION

This thesis is dedicated to the Lord Almighty for his wisdom and directions throughout this journey. I also dedicate this work to my parents, Mr. Alex Nketia and Mrs. Hannah Antwi and my siblings, Lina Adu-Poku, Evelyn Nketia, Bernice Konadu, Olivia Kyeraa, and Mavis Mansah.

ACKNOWLEDGMENT

First of all, I am thankful to the Lord God Almighty for his strength throughout this journey. He alone offered me the assistance of the right people and guidance throughout my education. May His name be praised forever!

I appreciate the effort of Dr. Alfred Barimah whose supervision invaluably enriched this study. I am especially grateful to Dr. Abdul Rahaman Wassiuw for purposefully shaping my writing ability and secondly, for the critical supervision. I am very grateful to Dr. Emmanuel Kojo and Dr. Loius Boakye-Yiadom for their immense contribution to the success of this study.

I appreciate the financial commitments of my sisters and brothers: Agyekum Isaac, Lina Adu-Poku, Evelyn Nketia, Bernice Konadu, Olivia Kyeraa, Mavis Mansah, and Grace Agemang. I am also grateful to Samuel Gordor, David Nambo, Brown and Linda Apeti for their critique and their diverse contributions which have made this piece a great one.

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LIST OF ABBREVIATIONS

AAACA - African Association of Anti-Corruption Authorities

AR- Autocorrelation

AU - African Union's

AUCC - African Union Convention on Prevention and Combating Corruption

BMA - Bayesian Model Averaging

CEDAW - Convention on the Elimination of All Forms of Discrimination Against Women

COC- Control of corruption

CPI- Corruption Perception Index

DWH - Durbin–Wu–Hausman

GDP- Gross Domestic Product

GFI - Global Financial Integrity

GMM- Generalized Method of Moments

IMF – International Monetary Fund

IPU - International Parliamentary Union

IV - Instrumental Variable

NACAP - National Anti-Corruption Action Plan

OLS- Ordinary Least Squares

PIP - Posterior Inclusion Probabilities

SADCOPAC - Southern African Development Committee organization of Public Accounts Committees

SAP - Structural Adjustment Programme

SDG- Sustainable Development Goal

TI- Transparency International

UNECA – United Nations Economic Commission on Africa

WDI – World Development Indicators

WGI- World Governance Indicators

WIN- World Independent Network

2SLS - Two-Stage Least Square

CHAPTER ONE

INTRODUCTION TO THE STUDY

1.0 Introduction

Over the years, there has been an intense debate over factors accounting for Africa's economic woes. Although warfare, drought, disease and bad management have been cited, corruption remains one of the most daunting obstacles to African economic progress and good governance (Coolidge and Rose-Ackerman, 1997; UNECA, 2016). Recent arguments have exposed the entrenched nature, the secrecy and even more importantly, the cost of corruption to developing countries, especially in Africa. Although these costs are difficult to measure accurately, a recent estimate sets the global annual cost of bribery at $1.5 to $2 trillion which is about 2 percent of global GDP (IMF, 2016; Kaufmann, 2015). The overall social and economic costs of corruption are expected to be higher since bribery is just one form of corruption. To this end, discussion on effective tools to bring the menace to its barest minimum is useful in African discourse.

Hitherto, the strength of institutions has become a dominant pillar for checking corruption in the system. It was reported that the level of institutional weakness and continuous fall in the standard of living of public servants linked with poor remunerations constituted the most fundamental factors that had resulted in the increasing level of corruption in many African countries (UNECA, 2016). Although the subject of institutionalization is relatively new, institutions such as IMF and World Bank have had a long history of promoting reforms to improve the management of public resources and reduce opportunities for corruption. These institutional reforms such as the Structural Adjustment Programme (SAP), Public Anti-corruption Authorities, Capacity building,

and others, were deemed to curb mismanagement and subsequently corruption. Entrenched in these reforms were liberalization of markets and liquidation of public enterprises which inadvertently created opportunities for officials to use their discretionary powers to accumulate wealth through privatization (World Bank, 2000: Tanzi, 1998).

Due to the failure of past anti-corruption reforms, debate on the behavioural characteristics of gender as a tool in the fight against corruption was ignited (Alhassan-Alolo, 2007). Though there had been a growing concern for women's participation in governance and in the labour market on accounts of equality and justice, the quest to use women participation as an antidote to corruption is quite recent. Works by Dollar et al. (2001) and Swamy et al. (2001) showed that gender characteristics and differences is an effective means for the fight against corruption. This was supported by the World Bank in its Engendering Development Report in 2001, that, there is a strong relationship between increased women participation in the affairs of the state and lower levels of corruption. This assertion generated a new consciousness of women participation in most African countries. For instance, in 2004, the Ghanaian government gave out a directive to increase female appointed representatives in strategic sectors, such as the cabinet, local government, and the security services. In Uganda, majority of treasury positions were assigned to women with the expectation that women will be less corrupt (Alhassan-Alolo, 2007).

Africa seems to have made progress on women participation by virtue of commitments made by governments in the implementation of protocols from the African Charter on Human and People's Rights on the Rights of Women in Africa, and African Union Gender Policy. The Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW) in 1979 and the Beijing Platform of Action in 1995, which sought to establish a legal and policy framework for

female participation have also helped improved global women participation especially in Africa (Hassim & Meintjes, 2005). Moreover, the declarations on Gender Equality in Africa and the incorporation of these into national policies and programs may have partly accounted for the increasing women participation in governance and even in the labour market, although, women's participation in governance is still lagging behind (Nwafor, 2018). A review in 46 countries in Africa revealed an average of 43 percent of women in the labour force but women occupy only 21 and 19 percent of seats in parliament and ministerial positions respectively (WDI, 2017).

The behavioural sciences have suggested that certain social-cultural factors degenerates and makes women less prone to indulging in criminal acts (eg. corruption). Therefore, this debate opens a new question on whether improved women participation in governance and in the labour market can be a remedy for corruption in Africa.

1.1 Research Problem

A global opinion survey of 65 countries has identified corruption as one of the most severe challenges confronting the world today (IMF, 2016; World Independent Network, 2013). Corruption is a major challenge to the UNDP Sustainable Development Goal (SDG) of ending extreme poverty by 2030 and improving collective prosperity for the poor in developing countries. Therefore, reducing corruption is a core instrument in achieving the SDGs and the Finance for Development agenda (World Bank, 2018).

When functions of government are weakened by corruption, it can negatively affect a number of essential economic performance indicators such as human capital accumulation, total factor productivity and even investment (Toole &Tarp, 2014; Mauro, 1998). Research has shown that

investment in corrupt countries is almost 5% less compared with countries that are relatively corruption-free because corruption increases the cost of doing business by up to 10% on average (IMF, 2016). Recently, it was estimated that an average of $859 billion to $1.06 trillion flows out of Africa by corrupt means (UNECA, 2016; Global Financial Integrity, 2013). Even as far back as the 1990s, the African Union estimated that African economies lose about $148 billion per year to corruption, which was about 25 percent of Africa's annual total output. (Kimenyi & Mbaku, 2011). By virtue of this, many developing countries especially in Africa, have enacted policies geared at minimizing corruption in their states. For example, in July 2014, Ghana passed the National Anti-Corruption Action Plan (NACAP) and in 1995, the Committee against Corruption was established to control corruption in Guinea-Bissau (Lindner, 2014).

Moreover, the official theme for 2018 African Union's (AU) Assembly of Heads of States "Winning the Fight Against Corruption: A Sustainable Path to Africa's Transformation" indicates the level of importance attached to the fight against corruption as a pathway to Africa's progress and development. Despite these policies, corruption seems to have worsened in many Africa countries (UNECA, 2009; Transparency International, 2015).

The new trend of debate on women participation in fighting corruption has been affirmed by the World Bank and other empirical works (Jetter and Parmeter 2018, Dollar, Fishman & Gatti, 2001; Swamy et al., 2001). Cross-country, experimental and survey data analysis also support the proposition that greater women representation is associated with less corruption. Thus, women are innately honest and therefore, they can affect corruption when they are in a position of power by enacting and executing strict anti-corruption strategies and practices in their various organizations. Moreover, female participation in the labor force may be prone to a "bribe-giving" or "bribe-

taking" role; therefore, their self-honesty could be a relevant tool in combating corruption. In addition, most countries have the parliament to check on other governmental and non-governmental institutions in the state. Therefore, if women are increased in parliament, it may lead to a more honest government and as a result, reduce corruption (Dollar et al, 2001).

Transparency International's Report 2015 indicated that corruption has increased in Africa over the past year. A review of 53 countries in Africa showed that the average corruption perception index worsened from 33 percentage points in 2012 to 32 percentage points in 2016 (Transparency International, 2017). Further. In South Africa, 4 out of 5 citizens (83%) reported that corruption is on the rise. In Ghana, the institution mandated to interpret the law, (the Judiciary) and the body assigned to enforce the law (Police), were viewed as the most corrupt institutions (Rahman, 2018).

In the midst of increased corruption in Africa, the average women representation in parliament increased from 18.75 percent in 2010 to 23.64 percent in 2015 within Sub-Saharan Africa (World Bank, 2018). According to a reviewed survey on 114 countries, women constituted 40 percent of the workforce in more than 80 countries globally. Unpredictably, the five topmost countries with the highest percentage of female in the labour force are all in Africa: Zimbabwe led with more than 52 percent followed by Malawi with a similar share of female in the labour force, then Gambia (50.8 percent), Liberia (50.6 percent) and Tanzania (50.5 percent) (Dahir, 2017). This raises the ultimate question as to whether increased women participation necessarily reduces corruption even in Africa.

Empirical studies that have looked at corruption and women participation have centered on world-wide cross-country analysis and Europe, with less emphasis on country's and continental diversities especially in Africa (Jetter & Parmeter, 2018; Jha & Sarangi, 2018; Torgler & Valev,

2010; Swamy et al, 2001; Dollar et al, 2001). Nonetheless, Africa's unique cultural, geographical and institutional challenges between and among the various regions are uncommonly factored into some of these studies. To the best of our knowledge, there has not been much work to establish whether indeed women representation reduces corruption in Africa. Therefore, this work is premised on the need to establish the relationship between women participation and corruption in Africa.

1.2 Research Questions

The fundamental issue is whether women participation in the affairs of the state can necessarily lessen corruption in Africa. Specific issues that arise from this subject may be put in the form of research questions which this study intends to address:

a. Does increasing women representation lessen corruption in Africa?
b. What are the impacts of economic and institutional factors (GDP per capita growth, natural resource rent, government effectiveness, press freedom, and urbanization) on corruption in Africa?

1.3 Objectives of the Study

From the research questions above, a set of specific objectives can be formulated for the study. The general objective of the study is to provide policy makers in Africa with an understanding of the role of women participation in governance and in the labour market in the fight against corruption. Specifically, the study seeks:

a. To identify the short and the long-run impact of women participation on corruption.

b. To identify the impact of other variables like institutional and economic factors on corruption in Africa.

c. To draw policy implication on the major findings of this study.

1.4 Relevance/Significance of the Study

With the increased demand for infrastructural amenities, governments are forced to be fiscal discipline and even more importantly, seal leakages within their economies in order to get funds for development purposes. Corruption as leakage in the economy is more prevalent and almost all countries make strives to curb it because of its negative effects on society especially widening poverty and inequalities in countries. Therefore there is a need to find ways to help solve or bring the menace to its barest minimum. Hitherto, countries have adopted several strategies to help in the fight against corruption therefore if women participation, which seems to have taken a stance in countries discourse, normally justified by equality can simultaneously be a cure for corruption, then it is worthwhile. Therefore, the outcome of this research will give governments a rich understanding of what constitute corruption and ways to bring it to its barest minimum. Again, it would provide organizations, companies, and individuals with deeper knowledge on how corrupt activities functions within the organizational setup and even more importantly, how best to manage issues of corruption.

Further, the recommendations made in this research can be adopted to improve the efficiency and effectiveness in the fight against corruption in Africa. Although some studies have been carried out on this subject especially globally, the case of Africa has attracted little literature. Therefore the study seeks to add to the existing body of knowledge on the fight against corruption using

women participation in parliament and in the labour force. This study would also provide a platform for further research by other researchers in this area.

1.5 Organization of the Study

The remaining part of this study is organized as follows: Chapter two discussed the incidence of corruption and women's participation in governance and in the labour market. Chapter three contains a review of related works in the context of the research objectives by examining the theoretical and empirical foundations of other works on women participation and corruption, especially in Africa. Chapter four presents the research methodology and descriptive analysis. It describes the theoretical framework, estimation issues and the model for estimation. It also discusses the definition of key concepts and variables. Diagnosis test on Hausman, endogeneity and a thorough discussion of the empirical findings relative to other studies are discussed in chapter five. Finally, chapter six presents a summary of the work. Based on the findings, appropriate recommendations and a conclusion would be drawn on the gendered argument for fighting corruption in Africa.

CHAPTER TWO

OVERVIEW OF CORRUPTION AND WOMEN PARTICIPATION IN AFRICA

2.0 Introduction

The objective of this chapter is to present an overview of the concept of corruption and women representation with the aim of highlighting its trends in Africa. It also explores the women representation-corruption relation and some other factors found to explain corruption in Africa.

2.1 Concept of Corruption

2.1.1 Definition of Corruption

Corruption may exist in different forms and at several levels depending on how the legal, social-economic and the institutional framework defines the term. Consequently, the main difficulty in the study of corruption rest on how best to define it. Despite corruption's global presence, it is so complex that Heywood (1997, p. 6) ones opined that "it would be impossible to develop one generalizable and uncontested definition of corruption". Although, the term does not have a common definition, the classicalist points that it is "a behaviour which deviates from the formal duties of a public role because of private-regarding (personal, close family, private clique) pecuniary or status gains; or violates rules against the exercise of certain types of private-regarding influence"(Nye 1967, p.419). However, this definition has been criticized on the basis of being too narrow and its extreme focus on the illegality of such practices (Jiang, 2017).

In an attempt to widen the net of corruption, the term has been simply defined as the use of public office for private gains (World Bank, 2013). However, the recent argument on private corruption, shaped by the "public-office-centered" and "public-interest-centered" debate has prompted for a substitution of the term "public office" for "entrusted power" to incorporate corrupt practices that transpires within the private environment, hence defining corruption as the abuse of entrusted power for private gain ((Lambsdorff, 2007; Transparency International, 2013). Nonetheless, the complexity in defining the term is reflected in its numerous forms relative to norms and laws, and the ambiguity in the border between the term "public" and "private" (Saha, 2009).

2.1.2 Forms of Corruption

Studies have acknowledged three main forms of corruption based on the networks among the general public, corporations and the government (Jain 2001; Saha, 2009). Within the government framework: political leaders, administrative elites and the legislative official's connections with the public may yield corruption. This link generates three forms of corruption, namely, political, bureaucratic and judicial corruption.

First, political corruption refers to corrupt acts by political elites in which they exploit their discretionary power or their network contacts for illegitimate personal gains either by making national policies that serve their interest or receiving a bribe for their service (Saha, 2009). This kind of corruption has both material and moral detrimental effect on the political and economic system. Corruption of this nature is typically characterized by higher payoffs, and often long-term mutually-beneficial corruption relations between bribers (usually business representatives) and bribe-takers (government officials) (Mashal, 2011; Saha, 2009). This is manifested in several activities such as public procurement duties where bribed civil servants protect specific business

entities by setting qualification requirements or technical specifications for supplies to favour specific firms (Mashal, 2011; Udenzi, 2014). The more detrimental ones ensue in financial losses through stifling statutory budget allocations which leads to a decline in both foreign direct and domestic investments, distortions in competitive markets and subsequently, weakens economic growth (Udenzi, 2014; Mauro, 1995). Under this circumstance, investments in valuable projects may be shifted to less valuable ones if the latter provides a greater opportunity for corruption (Shleifer and Vishny, 1993). Again, with this type of corruption, public spending is diverted to sectors where corruption gains are high and consequently, paying little attention to the needs of the populace (Porta and Vannucci, 1997).

Second, bureaucratic corruption exists in transactions between bureaucrats and the public or with their superiors. Mostly, the public bribe the bureaucrats to speed up the bureaucratic process or deliver an illegal service (Kaufman, 1997: Bardhan, 1997). While political corruption is commonly associated with grand corruption, bureaucratic corruption is linked to petty corruption (Mashal, 2011).

Lastly, legislative corruption is mostly found in electoral democracies where voting behaviour, law making duties of legislators are influenced by personal gains (Saha, 2009). This particular type of corruption manifests in enacting laws to change the fortunes of a particular interest group or bending procedures for personal gains (Rose-Ackerman, 1999: Saha, 2009). Like Rose-Ackerman (1978) points out that interest groups have adopted making a campaign contribution to political leaders instead of paying illegal bribes which almost serve the same purpose of influencing policy makers to make policies in their favour when elected. In line with this, she argued that the illicitness of bribery and the legitimacy of some campaign contributions make political leaders

embrace the latter by way of protecting their image. This leads to over-protection and preservation of monopolies in order to prevent entry because entry by the elite can expose prevailing corrupt practices and may also reduce their payoff from corruption

Despite that, political leaders who take bribes protect their honour by arranging for bribes to be received by their aides.

2.1.3 Approaches to Corruption

Within the political and economic context, two approaches of corruption are exposed: centralized and decentralized corruption, and well-organized and chaotic corruption (Mauro, 1998; Shleifer & Vishny, 1993). Shleifer & Vishny (1993) defines centralized corruption as concentrating bribes at the government seat where the central government act as a monopolist to maximize the amount of bribes, however, the decentralized corruption deconcentrates bribe receiving points at many government agencies. On the other hand, well-organized corruption is the situation where there is concrete knowledge of the channel and the amount of bribe to obtain a specific favor or service. But, the chaotic corruption has a high degree of uncertainty on whom and how much bribe is involved in the delivery of a particular service (Saha, 2009).

In addition, there are hierarchical structures in which corruption functions: "top-down" and "bottom-up". With the top-down approach, decisions regarding corruption are centralized at the very core authority, who monitors the corruption rent taken by the lower-level officials. The bottom-up situation simply decentralizes corruption at the lower levels where the core authority becomes one of the collectors of the corruption dividends (Gardner, Waller, & Verdier, 2002). Thus, the "bottom-up" shows lower rank officials taking and sharing bribes with their supervisors,

while “top-down” denotes a situation where corrupt superior share with their subordinates just to buy their allegiance (Rose-Ackerman, 1999).

2.2 Incidence of Corruption in Africa

There have been concerns about the incidence of corruption in Africa especially the grand level of corruption. In 2017, 75 million people were estimated to have paid bribes to escape punishment by the police or courts in Sub-Saharan Africa. Moreover, several of these people reported paying bribes as a requirement to receive some basic services that they urgently needed (Transparency International, 2018).

Cases of political corruption have not become uncommon in Africa. These have been estimated to boost the economies of other nations rather than African countries especially when embezzled monies are deposited into foreign banks. For instance in Nigeria, the former President Sani Abacha was suspected to have looted between US$3billion and US $5 billion public money and saved an amount of US $ 100million in a Switzerland account for which $322million was recovered and remitted to the government of Nigeria in December, 2017 (Webby 2018; Transparency International, 2018; Uzochukwu, 2019).

In the southern part of Africa, there have been several cases of corruption existing in many government departments. In South Africa, the Department of Home Affairs recorded 781 cases of corruption in a span of 8 years of establishing the National Anti-corruption complain hotline (Businesstech, 2015). In 2014, the Serious Fraud Office of the United Kingdom convicted two companies for bribing government officials in Mauritania and Kenya. Again, it was reported in 2015, that two affiliates of Goodyear Tire and Rubber Company, located at Angola and Kenya, purportedly paid bribes to government officials so as to increase their sales (Partners, 2015).

2.3 Measuring Corruption

The complexity of corruption is not limited to its definition but also its measurement by virtue of its various forms. Notwithstanding, standards are required in comparing countries corruption levels because of the diversities that exist across countries. For instance, it is emphasized that developed countries are less corrupt than developing countries. Therefore, the ultimate concern arises with how best to measure corruption so that cross-country comparison becomes expressive.

Theories of corruption in the 1970s (eg. Rose-Ackerman, 1978; Shleifer & Vishny, 1993) adopted per unit bribe or total revenue received from bribes as a measure of corruption. With per unit bribe, an increase in the unit of bribe collected was deemed to have increased the level of corruption. The total revenue, on the other hand, considered the total amount of bribes collected and therefore, corruption was said to be high when the total value increased eventhough per unit may remain unchanged. Another key debate was relating corruption gains to the income of the country (Bardhan, 2006). Thus, comparing the extent to which corruption gains choke the welfare and development of a country, which is measured as the amount involved in corruption in relation to the income of the country. However, the difficulty in adopting these approaches is that the extreme secrecy of the activity poses a great challenge in ascertaining the revenue accruing from corruption. Further, the use of total revenue and the marginal analysis for measuring corruption over-simplifies the term and subsequently, equates corruption to only bribery. To this end, it remained problematic to measure the level of corruption across countries for empirical research.

Contemporarily, researchers have developed corruption indices which are based on expert's subjective evaluations and survey respondent's assessment of the level of corruption perceived to be existing in countries. Eventhough these indices are not without challenges, it somewhat reflects

people's experiences in public engagement (World Bank, 2018; Transparency International, 2019). Two of these indices are reviewed below: corruption perception index and control of corruption.

Corruption Perception Index (CPI) is an annual cross-country data developed by Transparency International since 1995. The CPI measures the general perceptions of corruption within countries (Lambsdorff, 2007). The main objective is to create a general awareness of the menace to governments and to empower civil societies and the public to demand accountability from their leaders (Transparency International, 2012). Until 2012, the CPI adopted a two-step standardization model based on the techniques of matching percentiles to average the percentile ranks of each country and indexing their score of corruption from 0 to 100 (Lambsdorff, 2007). Beginning 2012, 12 different surveys were incorporated into the calculation of CPI from 2012 to allow for a more broad base view and enhance the quality of the CPI (TI, 2017).

Control of corruption (COC) is one of the six cross-country indicators in measuring overall governance performance, which is compiled by the World Bank Group led by Daniel Kaufmann (World Bank, 2007; Malito, 2014). The index is compiled using an Unobserved Component Model (UCM) to convert and rescale the evidential data into a standard unit (Kaufmann, Kraay & Mastruzzi, 2007). The generated index lies between - 2.5 to 2.5 which indicates absolutely corruption and no corruption respectively. The indicator used to be a biannual data from 1996 to 2003 but subsequently, it has changed after 2003 (Malito, 2014).

2.4 Legal Frameworks/Policies in fighting corruption in Africa

Over the years, various tools have been used to fight corruption globally and even in Africa. Essentially, there are two basic strategies that are mostly used, namely, the legal frameworks and institutional arrangements. The legal framework includes the laws and treaties and the institutional strategies and most importantly establishment of anti-corruption bodies.

2.4.1 Anti-Corruption Agencies

The anti-corruption agencies are responsible for raising public awareness, preventing, investigating and sometimes prosecuting issues regarding corruption. However, the weight on their work centers on investigation and, more recently, public education, ethics, and procurement activities. The African Association of Anti-Corruption Authorities (AAACA), the body responsible for anti-corruption units and their activities in Francophone, Anglophone and Lusophone countries in Africa presently has about 34 member countries but has not met since 2013 owed to the Ebola outbreak. Apart from this body, the various sub-regions have anti-corruption agencies, eg. Southern African Development Committee Organization of Public Accounts Committees (SADCOPAC), Eastern Africa Association of Public Accounts Committees (EAAPA) and others.

In many African countries such as Ghana, Rwanda, Nigeria, Zimbabwe, and others, commissions on human rights, Crime Units, and other agencies have been established to deal with corruption. For example, the Anti-Corruption Commission in Zimbabwe, the Office of Ombudsman in Rwanda and the Independent Corrupt Practices Commission in Nigeria. Despite this, corruption still persists and has become a critical concern for many African nations (TI, 2018). It is therefore not coincidental that no government in Africa was rated positive on curbing corruption by a clear majority of its citizens. Thus, 18 out of 28 governments, were seen to have completely failed in checking corruption (TI, 2018).

2.4.2 African Union Convention on Prevention and Combating Corruption (AUCC)

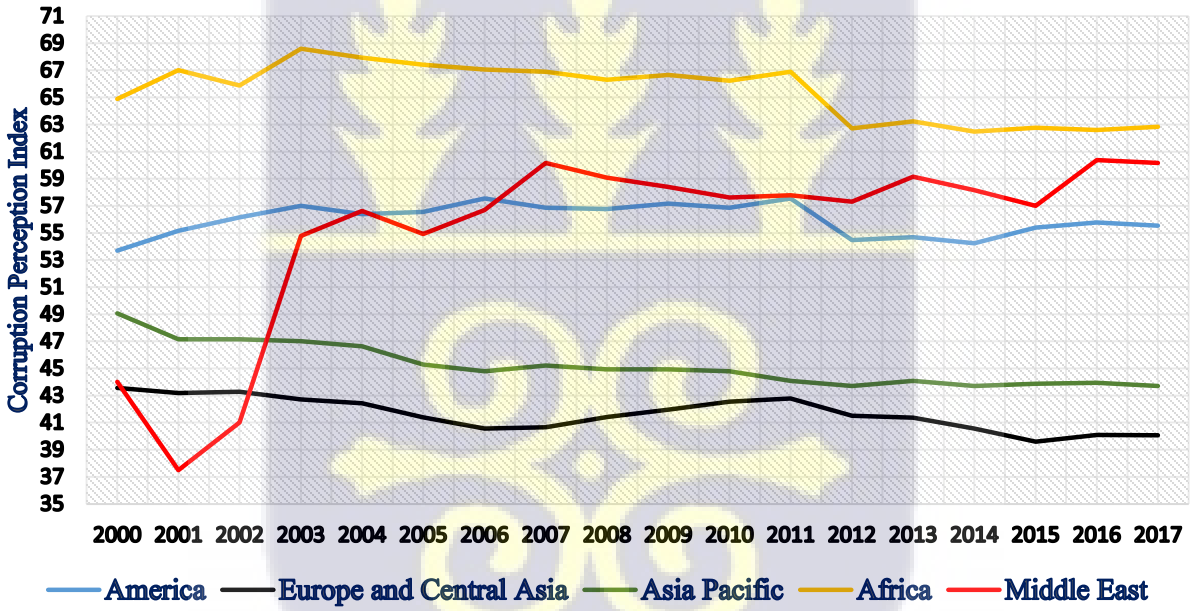
The AUCC came into force on August 05, 2006 to help fight against corruption on the African continent. This convention depicts a regional consent on the criminalization and the prevention of

corruption. Currently, out of 55 countries in Africa, 49 have signed, however, it is only 40 countries that have ratified this treaty (AU Advisory Board on Corruption, 2019). The Convention centers on legislative measures to help curb issues related to bribery (domestic and foreign), money laundering and diversion of resources by public officials and other illicit enrichment. It also enjoins member states to embark on an open investigation on corruption.

2.5 Trends of Corruption Levels in the World

The figure 2.5 below compares the level of corruption existing across various continents such as Africa, America, Middle East, Asia Pacific and, Europe and Central Asia between the periods, 2000 to 2017, as measured by corruption perception index (CPI).

Figure 2.5. Trends in the Level of Corruption across Continents, 2000-2017



Source: Authors computation based on data from Transparency International, 2000-2017

Over the last seventeen years, the index has revealed a more consistent trend in specific continents and sub-regions. Africa stands out as the most corrupt continent. In 2000, Africa recorded the

highest level of corruption accounting for about 25 percent of global corruption. The downward slope of the continent's curve from 2004 even until 2013 shows the strides made in the fight against corruption in Africa. During the same period, representation of women increased and the African Union Conventions on Corruption was enacted and enforced, and therefore it is puzzling to point to the exact condition under which this happened. Although there has been a decline in the level of corruption, however, the level of achievement has been extremely slow from 69 in 2003 to a decrease of about only 6 percentage points in 2017. However, the prolonged upward trend of corruption curve in the Middle East is sometimes characterized by attacks on freedom of expression, civil societies and press freedom which hampers the fight against corruption (TI, 2017).

In 2001 and 2002, the Middle East was part of the least corrupt regions, however, it's been recorded as the second most corrupt region in the world since 2006. There has been a steeper upward movement of the corruption curve from 44 percentage points in 2002 to 60 percentage points in 2017. Eventhough countries like Jordan, Lebanon seemed to have made strives, the internal conflicts within the region such as Iraq war in 2003, Houthi Insurgence in 2004, Iran-Israel proxy conflict in 2006 and many others, assault on freedom of expression and press, civil societies may have propelled a fertile ground for corruption (Le Billon, 2008). All other things being equal, the upward trend of the Middle East and the downward movement of corruption in Africa can render the Middle East as the most corrupt region in few years.

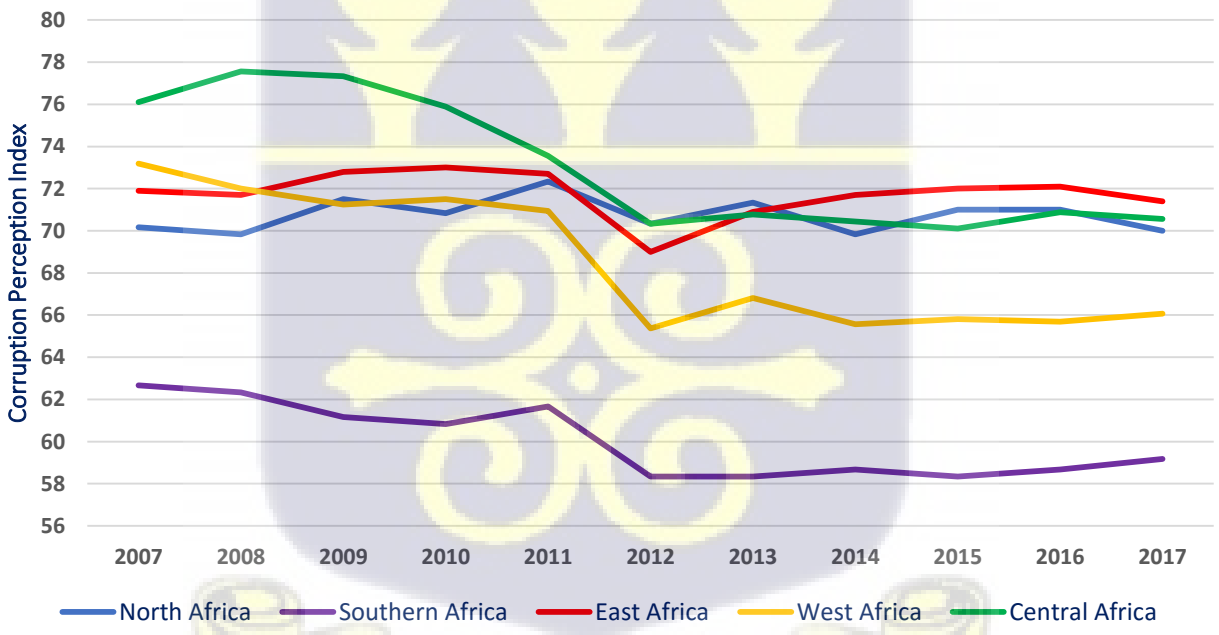
Like Africa, America has steadily increased in the level of corruption following a rise from 2000 to 2006. However, it was not sustainable given in to a slow downward slope from 2011 till 2017. Europe and Central Asia has constantly experienced a downward trend in corruption except for

2009-2011, but the Asia Pacific has been the only region which has experienced a consistent fall in the level of corruption from 2000 to 2017 although very slow. However, this indicates that policies and programs used in curbing corruption have been effective in controlling corruption in the region. On the whole, the world's corruption seems to have been stagnant and much has not been done to eradicate this menace.

2.6 Corruption Levels in Africa

Figure 2.6 below also exhibits the level of corruption within the five regional blocks within Africa: East, West, North, South and Central Africa. Since 2012, the East African Sub-region has experienced an upward slope in the level of corruption which has been associated with the lack of punishment on individuals who indulge in corruption (Kimeu, 2017).

Figure 2.6 Trends in Corruption within the African Sub-regions



Source: Authors computation based on data from Transparency International, 2007-2017

Countries like Seychelles and Mauritius are making strides in the fight against corruption and currently performing above average on the African continent, however, Somalia, Eritrea, and many other countries within the sub-region have not performed much in fighting corruption and therefore causing a deterioration in the level of corruption within the region. Though presently the region is the worst performing region in terms of fighting corruption, other regions like the Central and the North Africa seems to be on the same trend. Currently, the South and the West Africans seemed to have made significant progress in the fight. Though the West African sub-region was the second worse performing region in 2007, there was a steep downward movement in the level of corruption and overtook two regions in the fight by 2012, but subsequently became steady.

Hitherto, countries like Carbo Verde, Ghana and Senegal are making advances in the fight against corruption, eventhough many other countries like Nigeria, Niger, and Guinea have been relatively stable over the years. Central Africa also experienced a sharp downward slope from 2008 until 2012 where the level of corruption became fairly constant, unlike North Africa where the trend has been weaving. Apart from Swaziland, Lesotho, and Angola, the Southern African states such as Botswana, Namibia, South Africa, and others have consistently scored lower in corruption and hence the downward curve for the sub-region.

Lastly, the observed dip in CPI for all regions between 2011 and 2012, is as a result of the incorporation of 12 different surveys in the calculation of the Corruption Perception Index. This was deemed to make the measurement more standardized and absorb a lot of indicators which improves the quality and the measurement of corruption (TI, 2017). By virtue of this, the CPI's transitioned downwards between 2011 and 2012 as can be observed from figure 2.6 above.

2.7 Women Participation (Governance and Labour Market)

The labour market functions as the hub for the demand and supply of labour. Thus, firms interact with both the employed and the unemployed by recruiting and firing employees, negotiating on wages and many others. One of the key indicators for the supply side of the labour market is the labour force (Otoo et al, 2009). The labour force is defined as "people ages 15 and older who supply labor for the production of goods and services during a specified period" (World Bank, 2018).

On the other hand, the concept of governance refers to the "process whereby elements in society wield power, authority, and influence and enact policies and decisions concerning public life and social upliftment". The main duties of most parliaments are to make laws and scrutinize the work of government (IPU, 2019).

The transactions within government and the labour market are prone to acts of corruption; therefore, women within the labour force and those in parliament may either be in a "bribe giving" or "bribe-taking" positions in the discharge of their activities or seeking for public service.

2.7.1 Women in Leadership

Although the subject of women as anti-corruption or remedy to corruption is new, there is a long history of women in traditional leadership and political activities even within the pre-colonial era. It is recorded that, Ethiopia had at least sixteen reigning queens between 260 and 320 BCE and 60 BCE and 80 CE. These women made remarkable contributions to their nations. For instance, the last empress in Ethiopian history, Zauditu, who ruled from 1916 to 1930 was also known to have ushered them into the League of Nations. Women such as Zainab Tanfzawit Nafzouia who ruled

from 1040 to 1147 CE in East Ifriquia, now, Tunisia was known for her immense contribution and many other African countries like Nigeria and Ghana also witnessed females in political and traditional leadership in the past (Oxford Research Encyclopedia of African History, 2017). Even until now, women still occupy the highest seats of authority in some countries and others also have more than 50 percent seats in parliament, especially in Africa. Prominent females like Joyce Banda of Malawi and Ellen Johnson Sirleaf of Liberia are known for their immense contribution in tackling corruption in their respective countries

2.7.2 Women Representation in Ministerial Positions, Parliament and in the Labour force

The roles of women participation under this context have been grouped into two: women in decision making role and those in subordinating role. The women in decision-making role comprise of those in ministerial positions, national parliamentarians and, top and middle-level managerial positions. Whiles the subordinating role is mainly the lower level which barely involves making a decision within the firm. Eventhough, the level of women participation seemed to have slowed down, there has been a massive improvement in some geographical areas, especially in Africa. Nonetheless, the African average has not seen much improvement which suggests less participation in some of the states. For instance, the women participation in the labour force in Africa stood at 42.3 percent in 2002 but showed a slow increase to 43.3 percent in 2016.

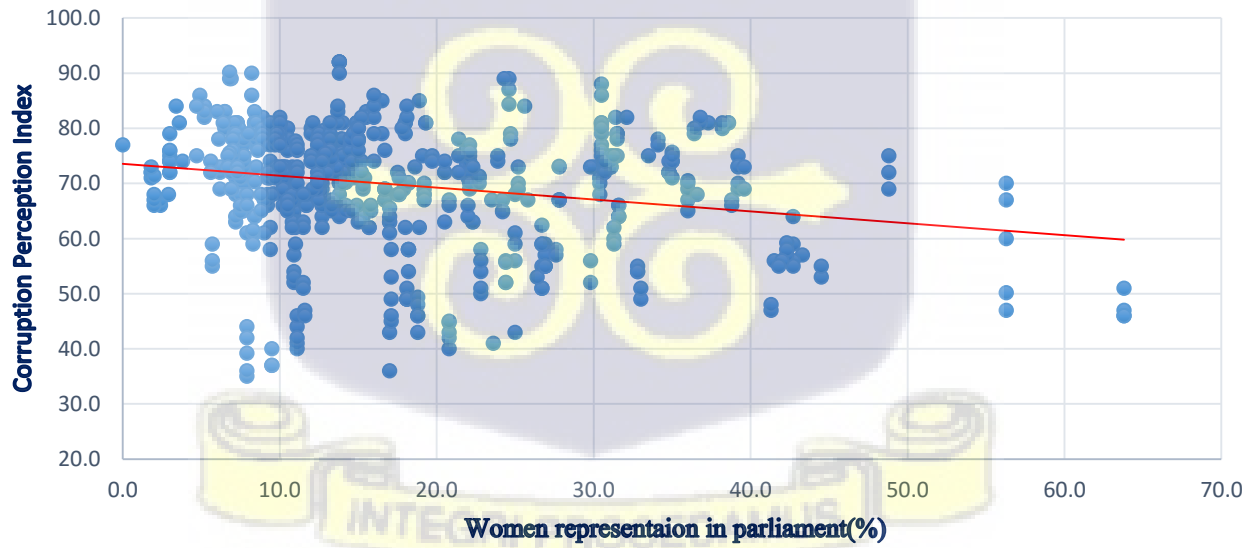
Although men still maintain a majority of parliamentary seats in most countries, the last decade has witnessed a lot of improvement in the representation of women in parliament, especially within the African continent. In 2002, the African average for women representation in parliament was 12 percent as against 21 percent in 2016. Eventhough, the change is not fast, African countries have made strides globally. Currently, 18 countries in Africa have a percentage of women in

parliament above the global average of 23.8 percent (UNwomen, 2019; IPU, 2019). For instance, in 2017, Rwanda was ranked as the highest country in the world with the highest percentage of women in parliament having started from 23 percent in 2002 and reaching a height of 63.8 percent in 2016 and this has been associated with the 2003 constitution of Rwanda, which mandated a quota of 30 percent of women in all decision making organs including parliament. For women in ministerial positions, there has been a slow increase from an average of 15.09 percent in 2005 to about 18.57 percent in 2016 after falling from 19.52 percent in 2014 (World Development Indicators, 2017)

2.8 Corruption Perception Index versus Women Representation in Parliament

The pooled bivariate scatter plot (Figure 2.8) would help understand the association between corruption and women representation in parliament. The scatter plot covers about 47 countries in Africa.

Figure 2.8. **Relationship between corruption and women in parliament, Africa**



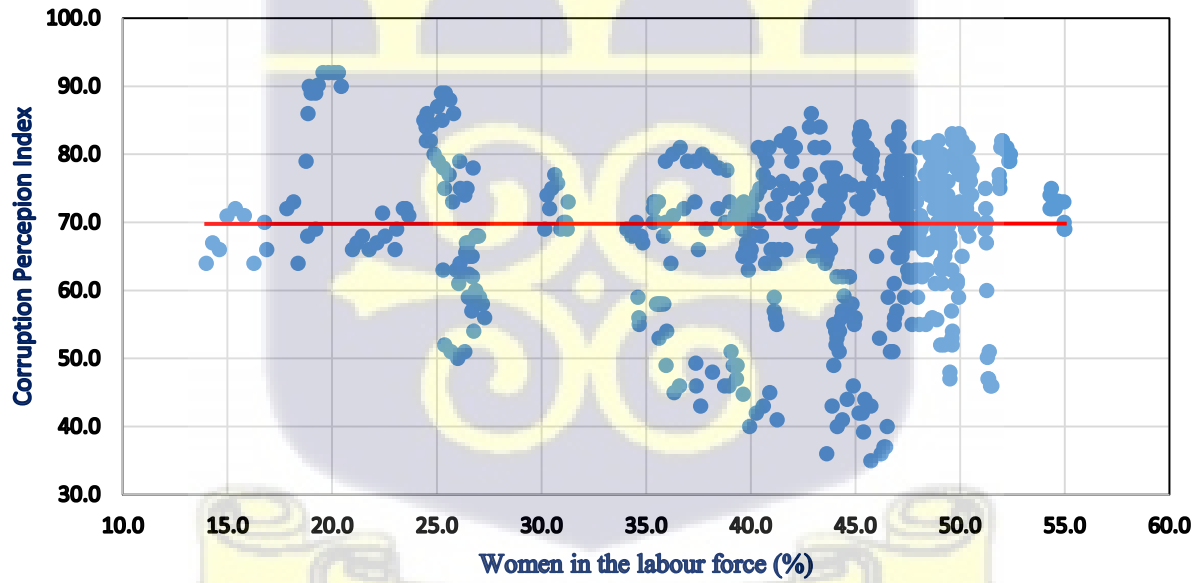
Source: Authors computation based on data from Transparency International, 2007-2017

It indicates a negative linear relationship between the level of corruption and women representation in parliament. This negative trend is underpinned by the fear of victimization, opportunities, and networks and the risk aversion theories. Moreover, the units are concentrated in areas with the highest levels of corruption (between 60 and 85) and the lower levels of women representation (5 percent to 20 percent) as measured by corruption perception index and the percentage of women representation in national parliaments which indicates that most of the corrupt countries have less women representation in parliament. Moreover, the Pearson-wise a significant negative correlation of 0.2198 *(see Appendix IV).*

2.9 Women in the labour force versus Corruption Perception Index

Another variable for women participation which is the percentage of women in the labour force is also plotted with corruption in this pooled bivariate scatter diagram.

Figure 2.9. Relationship between Corruption and Women in the labour force, Africa



Source: Author's computation

It also indicates a linear relationship between women in the labour force and corruption although there seems to be perfectly elastic. Though this is not conclusive, the level of corruption is not sensitive to the level of women participation in the labour force in these countries. However, the real effect and the significance of this relationship would be proven by the data analysis

CHAPTER THREE

LITERATURE REVIEW

3.0 Introduction

This chapter explains the empirical and the theoretical underpinnings of works in the area of corruption and women participation in governance and in the labour market, especially in Africa.

3.1 Review of Theoretical Literature

To theoretically understand the relationship that exists between corruption and women participation in both public and political life, four strands of literature are reviewed: Innate honesty and trustworthiness argument, opportunities, and networks argument, risk aversion argument and the fear of victimization argument.

3.1.1 Innate Honesty and Trustworthiness Argument

Over the past decades, a significant body of work has emerged that found a systematic difference in behavioral characteristics across gender (Dollar et al., 2001; Swamy, 2001; Geotz, 2007). This implies that gender differences may account for a particular behavioural pattern towards certain activities such as corrupt practices. The basic framework proposed by this theory is that women focus on common interest than men. For example, 'women are more likely to show helping behavior' (Eagly & Crowley, 1986.), more truthfulness (Ones and Viswesvaran, 1998), and take a firm position on ethical and moral behavior (Glover et al., 1997; Reiss and Mitra, 1998). To this end, Dollar et al. (2001) theoretically and empirically concluded that women are innately honest and trustworthy. Again, he emphasized that women are more collectively oriented than men. Thus,

women may have higher values of ethical behavior and are more concerned with group interest. Many experimental and survey-based studies in behavioural sciences have proven this finding within the institutional contexts (Swammy et al., 2001;; Ones & Viswesvaran, 1998; Lane, 2012; Dollar et al., 2001).

Honesty varies across nations and they are mostly ascribed to a nation's political and economic systems and culture (Hugh-Jones, 2016: Ariely et al., 2015). Theories in behavioural sciences emphasize that women are likely to be more selfless (Piliavin & Unger, 1985), and people have high expections for them to uphold a greater communal spirit compared to men (Bakan, 1966). Women mostly adhere to these normative gender expectations to avoid being hated or sanctioned (Heilman & Okimoto, 2007; Rudman & Phelan, 2008). These studies seem to support the assertion that women are honest and trustworthy compared to their male counterparts. However, studies have established that the behavioural characteristic of gender towards corruption is not universal. For instance, Atalas (2007) and Alhassan-Alolo (2007) found that gender perception towards corruption had no significant difference in Singapore, India, and Ghana. Within the African context, scholars have argued that society expects certain acts as moral obligation yet they are prone to corruption (Alhassan-Alolo, 2007). Thus, corruption seems to be a transformation of primitive African ethical duties to the modern world. Therefore, the assertion that women are innately honest may be misleading because honesty is not innate but as a result of societal norms and preferences (Geotz, 2007; Grosch & Rau, 2017; Alatas, 2007).

Eventhough social preference affects individual honest behaviour, it may somewhat be dependent on the context being used. For example, in circumstances where there is a higher probability of being caught in dishonest behaviour, individual risk preference might be more predictive for

honest or dishonest behaviour than social preference (Grosch & Rau, 2017). Another contextual predictor of honesty may be the amount of payoff and the strength of societal norm. Thus, individuals might go contrary to the norm (honesty) based on the strength of the norms in the society, the amount of payoff involved and the level of externality imposed on other individuals within the society as a result of engaging in those corrupt acts (Grosch & Rau, 2017; Hugh-Jones, 2016; Ariely et al., 2015).

Based on these deficiencies in the theory of honesty and trustworthiness, the works of Esarey (2015), Armantier & Boly, (2011) and Geotz (2007) brought the opportunities and networks, and risk aversion theories to better explain the non-universality of the relationship.

3.1.2 Opportunities and Network Argument

Most corrupt acts such as bribery, embezzlement, vote-buying, are seen as a crime in most states (Blanes, et al., 2016). This theory which is supported by (Sutherland & Cressey, 1977) explains the rationale and the process through which individuals engage in criminal behaviours. The theory asserts that networks and opportunities of crime are important avenues for an individual's engagement in criminal activity such as corruption (Sutherland and Cressey, 1977). This suggests that people who are corrupt do not only have regular interactions with those that condone such behaviour but also have the opportunity to engage in such acts. This further indicates that individuals may take part in corrupt behaviours when surrounded by colleagues, peers, and superiors who either obey or violate the law. The argument is that individual's engagement in criminal behaviour (in this case corruption) is tied to their exposure or contacts with patterns of criminal behaviour from friends, colleagues or superiors (Alhassan-Alolo, 2007). This shows that networks and opportunities are important determinants of corrupt activities.

With the assumption that greater access to networks and opportunities for corrupt behaviour is more likely to lead to higher levels of corruption than those with limited opportunities, male and female public servant's access to opportunities for corruption are likely to determine how both sexes engage in corrupt behaviour (Alhassan-Alolo, 2007). Goetz (2007), shares that women get political opportunities by virtue of their relationship as daughters or widows of influential men, who were or are in power. This suggests that those women entered into the political arena through their connections or alliance with these men and therefore they may lack the "experience of political building, debate, long-term strategizing, campaign resource generation and policy development" (Geotz, 2007 p.88). This process of recruiting women to leadership positions in public and political life limit their opportunities for involving in corrupt activities (Blanes, et al., 2016). Therefore, the point is not that women are the "fairer sex," but they simply lack the opportunity to engage in corruption owing to their lack of experience in public and political life.

Moreover, the public and political space are historically male-dominated areas and so mostly, women are left out of key social and political networks through which corruption flows (Esarey & Chirillo, 2013). Thus, women usually will not have access to these networks because they are beginners to positions of power in the political, social and economic life (Hossain, et. al., 2010). In addition, political seats are bought and public officials are elected based on often "influential male-dominated networks" and this poses a challenge for females to penetrate these networks. Further, women usually lack resources to buy their way into these political networks and consequently, giving access to only a few women (Stockemer, 2011).

Corruption involves a network of criminal behaviour and therefore it requires trust and privacy and the male-dominated networks do not easily welcome new entrant's especially female

colleagues. To this end, literature reveals that the relationship between increased women participation and less corruption is just a matter of time. Goetz (2007, p. 99) puts it:

> If women do exhibit less corrupt reactions than men to opportunities for illicit earnings, that may simply be a sign of their freshness in office, lack of familiarity with ways of subverting the rules, and an understandable eagerness to prove themselves worthy of public office — effects that can wear off with time.

3.1.3 Risk Aversion Argument

The heart of this theory is on the premise that the relationship that exists between increased women participation in political and public life and less corruption is determined by the risk of being held accountable for the act. According to Esarey (2015), risk is assessed by two main factors: the possibility of a particular act (corruption) being detected and the severity of punishment associated with the act. This suggests that the greater the probability of being caught and the severity of the penalty increases the risk of corruption. Therefore, the higher the risk, the lesser the incentives people have to engage in corruption. There are two main channels through which risk can affect corruption especially within the African setting: firstly, the extent to which gender differences determines risk aversion and secondly, the disparity in the treatment of corrupt men and women by society (Esarey, 2015).

Recent and previous reviews of literature present the same conclusion on gender relation with risk-taking. Their finding has always drawn that men are more risk-prone than women. Thus, women are more risk-averse compared to men (Gary & Gneezy, 2012; Eckel & Grossman, 2008; Croson and Gneezy, 2009; Byrnes et. al., 1999). Although, most of the evidence for women's greater risk aversion in economics comes from laboratory experiments and therefore lacks external validity,

other areas like psychology and sociology who have adopted both survey and experimental data comes to the same conclusion (Bernasek & Shwiff, 2001; Sundén & Surette, 1998; Watson & McNaughton, 2007; Byrnes, et. al., 1999). The reason for women's high-risk aversion is uncertain and believed to be due to some cultural, social and institutional settings women find themselves and functions.

In the public and political arena, the risk of corruption may be in the form of naming and shaming corrupt officers, imprisonment, seizure of assets, losing job and electoral offices, etc. Nonetheless, this is more effective in areas with a high level of individual civil rights, freedom of press, electoral accountability, and effective judiciary system. In states with a high level of aforementioned characteristics, women would be less likely than men to engage in corrupt acts because of the risk in receiving one of these punishments (Esarey, 2015). Moreover, by virtue of the socio-cultural settings of most African societies, women are measured with higher standard, blamed and harshly punished, measured with gender stereotypes for corruption as compared to men, therefore, women will be less likely to engage in corruption since they encounter a greater disadvantage in committing such corrupt acts as compared to their counterparts (Anzia & Berry 2011; Dolan, 2010; Paul & Smith, 2008). This suggests that the extent of the negative relationship between women participation and corruption would be bigger as the risk of corruption increases.

3.1.4 Fear of Victimization

The key assumption in this argument is that an individual's engagement in criminal activities such as corruption is moderated by fear. According to literature, gender remains one of the most constant predictors of personal fear of crime regardless of time, place, social class, race and even ethnicity (Toseland, 1982). However, it remains indisputable that generally, women are more

afraid of becoming a crime victim than men (Lane, 2012: Toseland, 1982). There have been several arguments to explain this theory and how individual differences in fear affects their engagement in corrupt activities. Dominant among them are the vulnerability and the differential socialization argument.

First of all, the basic argument for greater fear among women is that they are physically and emotionally more vulnerable and consequently hurt if they experience victimization. This is due to their generally smaller and weaker statures compared to their male counterparts. Moreover, women are mostly powerless in resisting emotional attack as compared to men (Skogan & Maxfield, 1981). In essence, the assumption is that women are not strong enough against people who might victimize them and are worried about the physical and emotional injury that may be inflicted on them when they are caught engaging in such activities as corruption (Lane, 2012).

Secondly, the differential socialization approach also explains the greater fear in women (compared to men) as the social roles and expectations of both genders. In collectivist societies, the behaviour of a person is principally dependent on beliefs and expectations of the people the individual socially interacts and psychologically identifies with. Although these beliefs and expectations have cultural elements, they also function as an approved pattern of attitude and behaviour knotted to specific gender and positions within the social system (Alhassan-Alolo, 2007). Thus, a given pattern of behaviour is the result of the collective pressures on the person by the society he or she associates. In these societies such as within Sub-Saharan Africa, gender roles are socially constructed, which means that each society assigns roles to men and women according to what they deem appropriate. In Africa, women are trained in subordinating roles such as to be weak, submissive, emotional and physically nurture kids, care for family needs and household

chores (Maqubela 2014; Thobejane & Khoza, 2014) while men are socialized to be dominating: powerful, fend and protect their families (Thobejane & Khoza, 2014; Lane, 2012).

Moreover, it is facilitated by the individual's perception of appropriate behavior as prescribed by society and the expectation of society on what to do as a public officer (Alhassan-Alolo, 2007). By virtue of these socially constructed roles and responsibilities assigned to women, they tend to fear the repercussions of engaging in corrupt acts. Thus, these socially constructed behaviours inject fears in women and bravely in men. Moreover, these social roles imbibe in women a sense of care and therefore they are more likely than men to take decisions that would effectively ensure collective needs and hence they are less likely than men to engage in corrupt activities. Smith (1989) adds that women's responsibility and concern about their children fuels their fear.

Again, these social expectations make women less corrupt because of the social watch on whether women conform to their roles as caregivers. By virtue of the greater fear of crime, research has shown that women frequently take more precautions than men to protect themselves. Consequently, women are more likely than men to engage in avoidance behaviour to prevent victimization (Lane, 2012). This may include avoiding corrupt activities like engaging in bribery, embezzlement, listing ghost workers on government payrolls, overbilling government contracts, and hiding disappearance of public funds. However, the failure of the theory to distinguish the emotional feeling of fear from the cognitive component of perceived risk and even fears of different offenses limits the arguments posited by this theoretical approach (Ferraro & Lagrange, 1989). Notwithstanding, the argument of whether the display of fear is equal to the actual level of fear in an individual is also worth discussing. As Hollander (2001) emphasized that women might

be more likely to express more fear than they felt and men express less fear than they felt in order to meet society's expectation of how they should be.

3.2 Review of Empirical Literature

The fight against corruption has become a critical concern for almost all countries in Africa because of its detrimental impact on economic growth (Mauro, 1995; Méon & Sekkat, 2005), investment (Wei, 2000; Udenze, 2014), ethnic violence (Bezemer & Jong-A-Pin, 2013), worsening poverty (Justesen & Bjornskov, 2014), and frustrating political stability (Farzanegan & Witthuhn, 2016). One major tool proposed by the World Bank Engendering Report, 2001 in combating corruption is the exploration of the behavioural characteristics of women in both public and political life. Two empirical works studied this relationship between corruption and women in 2001. The first, 'Are Women Really the "Fairer" Sex?' by Dollar et al., (2001) from the World Bank's Development Research Group and the second, 'Gender and Corruption', by Swamy et al., (2001) from the University of Maryland.

Dollar et al., (2001) used a country-level data with a sample of more than 100 countries comprising data of 1985, 1990 and 1995 to evaluate the hypothesis that higher female participation increases the honesty of government. There seemed to be a high raw correlation (0.38) between the absence of corruption scores and increased women representation in the legislature. Using Ordinary Least Square (OLS) estimation, GDP and civil liberties as controls to examine the relationship between women representation in legislature and the level of perceived corruption (measured by Corruption Perception Index and International Country Risk Guide), it was found that at the country level, a 1 percent increase in women representation in parliament will result in a 3.53 percent decline in

corruption and therefore concluded that women are more honest and trustworthy as compared to men.

In an attempt to complement the macro data with micro-data which allows exploration of individual attitudes towards corruption, Swamy et al. (2001), examined a micro-level survey data of 350 firms (2,322 observations) in Georgia and a range of country-level data. Using the World Values Surveys and an ordered probit model on the 2322 observations to assess the frequency with which participants (men and women) provide government agencies with unofficial payments, it was found that approximately 5 percent of the cases they come into contact with government officials, firms owned or managed by men pay twice the amount firms owned and managed by women give to these officials. This they interpreted as: the female owners or managers are less likely to pay bribes as compared to their male counterparts. Thus, all else being equal, the presence of a male owner or manager increases the incidence of bribe-giving by 10.4 percentage points. In the macro analysis, the OLS estimate generated a coefficient of 0.071 (statistically significant) which indicated that a one standard deviation increase in the percentage of women in the legislature is associated with a reduction in corruption of about 0.6 indexes and this is a considerable effect, given an average index of 4.9. In an attempt to test the total validity of his formal finding, Swamy et al., (2001) widened his analysis and incorporated women in the labour force. With a significant co-efficient of 0.34, the same conclusion was drawn that women are innately honest and trustworthy. The findings were consistent with Dollar et al., (2001) that an increased women participation in the legislature reduces the level of corruption in a country.

The major critique on these papers was that the observed gender disparities were determined by the presence of a liberal democracy which simultaneously promotes a high level of gender equality

and low levels of corruption (Rivas, 2013). Like Sung (2003) established that the idea of a "fairer sex" is spurious and therefore an attempt to re-establish the relationship between gender and corruption was necessary. The paper criticized that the negative relationship between corruption and women in the legislature is moderated by a "fairer system" and not necessarily a "fairer sex" as proposed by Dollar et al., (2001) and Swamy et al., (2001). Therefore, Sung (2003) rejected the "fairer sex" proposition and hypothesized that when the strength of liberal democratic institutions are held constant, the negative relationship between corruption and female in both public and political life would be spurious because civil liberties that strengthen institutions such as rule of law, freedom of press, electoral democracy minimizes corruption and simultaneously enhances women participation in public and political life.

The correlation coefficients between the proxies for civil liberty and women participation were statistically significant and positive ranging from lowest of 0.145 between women in sub-ministerial positions and rule of law to 0.515 between women in parliament and rule of law. Again, the multivariate regression analysis supported the hypothesis that the negative correlations that exist between the gender representation variables and corruption were principally regulated by the extent of these liberal democratic principles.

Moreover, it was debated that the observed behavioural gender difference may be caused by reasons other than actual gender differences in corrupt behaviours. For instance, on the field, both men and women may be faced with different opportunities and networks, pragmatic liberal democratic tenets, and risk associated with a particular corrupt act, therefore, controlling these factors through a laboratory experiment could generate an unbiased assessment of the true relationship between gender and corruption (Rivas, 2007; Lambsdorff, 2011). Although the

experimental approach to corruption was quite recent, it gained prominence because of the advantages it has over other approaches in the study of corruption (Frank and Schulze 2000). Majority of these experiments conducted in the laboratory mostly studied two forms of corruption: embezzlement and bribery. Whereas embezzlement experiments used dictator games to study corruption, bribery experiments rely on trust game literature to the study of corruption in a planned environment (Armantier & Boly, 2008).

Rivas (2007) tried to address some of these challenges by conducting a laboratory experiment to observe gender behavioural differences or similitude when faced with the same situation. Like Lambsdorff (2011) puts it, reliable microdata on corrupt behavior are hard to obtain in the field, and available field data are hard to interpret. On this account, Rivas (2013) followed Abbink et al. (2002) experimental game, where a firm(F) had an opportunity to offer a bribe to a public official (who may either be a woman or a man) with the hope of influencing or manipulating the public official's decision in his/her favour.

The experiment revealed that men offer bribes significantly more often, in 6 out of 20 rounds on average, compared to 3.2 rounds for women. Again, bribes that are paid are significantly larger when coming from men (5.11 tokens) compared to 3.38 from women. Both men and women offer less to female officials than to their male colleagues, although this was not significant. The OLS and the probit model adopted gave a similar result. However, the explanation of gender difference in corruption was associated with variations in self-control. Thus, the extent to which people are vulnerable to the temptations of crime is dependent on how well they can restrain themselves from unlawful acts. In essence, this suggests that women have greater self-control than men and

therefore they are more able to refrain from engaging in corrupt behaviours compared with men (Lambsdorff, 2011).

In an attempt to address the issue of external validity which is a main critique of laboratory experiments used in behavioural studies such as on corruption, Armantier and Boly (2008) decided to replicate an experiment from a developed country's laboratory, Canada (Montreal), to the field of a developing country, Burkina Faso (Ouagadougou). In both instances, subjects were employed to grade 20 exam papers.

The study presented a corruption scenario in which a candidate proposed a bribe to a grader in order to obtain a better grade. In the study, banknotes were attached to the 11th exam paper saying "please find few mistakes in my exam paper". This was done by varying the amount of the bribe, wages paid to the graders and the level of monitoring and punishment assigned to various forms of misconduct. It was found that an attempt to bribe was indeed more successful for female graders when they were not monitored. This result is in line with Schulze and Frank (2003), who found that women are highly reactive to monitoring and punishment. This suggests that monitoring increases honesty much more for women than for men.

However, some recent research finds that this relationship is not universal (Alatas et al., 2009; Alhassan-Alolo, 2007). In an attempt to investigate the consistency in the gender difference argument across countries: Australia (Melbourne), India (Delhi), Indonesia (Jakarta), and Singapore, Alatas et al. (2009) adopted an experimental approach to establish the validity or otherwise of the gender behavioural differentials in these four countries.

The selection of these countries was moderated by the idea to avoid selection bias by looking at the incidence of perceived corruption in these countries. For instance, Australia and Singapore are mostly ranked as least corrupt in terms of the corruption perception Index (CPI) scoring 9.4 and 8.7 out of 10 respectively, but Indonesia and India are generally ranked among the most corrupt countries with a CPI score of 2.4 and 3.3 out of 10 respectively (Transparency International, 2006). Using 1326 participants and a three-person sequential-move game, three players evolved: firm(F) who can choose to offer a bribe, a public official (PO) who can either accept or reject a bribe and a citizen(C) who can choose to punish both the public official and the firm for their engagement in such corrupt acts. The multivariate regression analysis which estimated the binary probit models and ordinary least square (OLS) models for the bribe, acceptance, and punishment rates, revealed that Australian women are less likely to tolerate corruption as compared to the men. Thus, females had lower bribe acceptance rate and higher punishment rate compared to males in Australian. For instance, males and females accepted 92.1 percent and 80 percent of the times bribe was offered respectively. Again, females chose to punish 62.6 percent of the times whiles the men chose to punish 49.2 percent of the times people offended and these were statistically significant. However, there were no gender differences in India, Singapore, and Indonesia. This implies that the gender difference in behaviour is not robust as proposed by earlier studies and suggested it may be due to cultural factors.

Within the African context, scholars have argued that society expects certain acts of corruption as a moral obligation (Alhassan-Alolo, 2007). Thus, corruption seems to be a transformation of primitive ethical duties to the modern world. Therefore, the ultimate question is whether these expectations have a different effect on both sexes towards corruption. In Ghana, Alhassan-Alolo (2007) conducted a field survey (questionnaire, interviews and focus group discussions (FGD) to

collect data on 136 (78 males and 57 females) public servants within the Ghana Police Service (GPS) and Ghana Education Service (GES). Respondents were presented with hypothetical public servants' corruption scenarios where they mostly showed their level of agreement or disagreement with those situations based on their experience in the discharge of their duties. The results showed a non-significant difference between gender attitudes towards corruption, which suggested that institutional environment with almost equal pressure on officials may not yield any significant difference in corrupt behaviours between both sexes.

In Nigeria, Okonkwo (2016) investigated selected literature on grand corruption records and concluded gender difference is of no significance in grand corruption. In his conclusion, he points out that both male and female political and public officials mostly depend on godfathers for recommendation, electoral funding, and protection from prosecution for corruption (Global Witness, 2015; Human Rights Watch, 2011; Ribadu, 2010) and hence manipulated by these godfathers into corrupt activities.

Esarey (2015) contributes by arguing that, the negative relationship exhibited in women representation and corruption is not a matter of innate honesty and trustworthy as a nature of women but a matter of risk aversion and accountability. The paper was based on the hypotheses that, the relationship between women's representation and corruption will be stronger in democracies with high electoral accountability, parliamentary system, and greater press freedom. Using multiple imputations with chained equations, a multivariate linear regression with a lagged dependent and a dataset of 78 democracies over 20 years (1990-2010), it was evident that accountability controlled the link between higher women's representation and reduced corruption and the effect was stronger in democracies with high levels of electoral accountability. Similarly,

Azfar & Nelson (2007) finds that elected enforcement officers work harder at reducing corruption relative to those who are appointed to the role. This suggests that corruption will be less in democratic countries as opposed to undemocratic such as autocracy (Gatti, 2004: Kolstad and Wiig, 2016). Nonetheless, the argument of using the risk of corruption being detected and punished by voters at election polls to explain the negative relationship between women's representation-corruption relationship is much justified within the African context.

In Africa, most political officials are concerned only on what would grant them electoral capital in their next tenure. Consequently, several attempts are made by the political and public workers to secure the continuity of their work or tenure. Therefore, policies and activities such as corruption that might affect their electoral fortunes are minimized compared to officials who do not need a renewal of mandate from the polls (Esarey, 2015; Wiig, 2016).

Most works on corruption suffer from three estimation problems: limited data availability, a lengthy list of possible determinants and endogeneity. Firstly, there are a lot of potential determinants of corruption and therefore, different scholars adopt different determinants in their work (Serra, 2004; Jetter & Parmeter, 2018). For instance, (Jetter & Parmeter, 2018) addressed this model uncertainty by using the Bayesian Model Averaging (BMA), to identified possible model on a wide-ranging set of 36 potential corruption determinants. The results highlighted the relevance of selected determinant using the Posterior Inclusion Probabilities (PIP): rule of law (Posterior Inclusion Probability- PIP of 1.00), female parliament seats (PIP of 0.973), and primary education (PIP of 1.00). The probabilities established a conclusive evidence for rule of law and primary education, and a strong evidence for urbanization and female representation in parliament as predictors of corruption.

In addition, government effectiveness was positive and predictive of the levels of corruption (Kass and Raftery, 1995; Eicher et al., 2012; Jetter & Parmeter, 2018). Secondly, national-level data on corruption became available for a bulky number of countries later in the 1990s. For instance, Transparency International's Corruption Perception Index (CPI) and International Country Risk Guide (ICRG) came into existence in the 1995 and 1984 respectively. It has been argued that the annual data may suffer from measurement errors because of the secrecy and unwillingness on the part of perpetrators to disclose corrupt activities and expert's subjective assessment of corruption may also hinder the accuracy of such perceived corruption measurements. Nonetheless, various literature has found a higher correlation between these perceived measures of corruption. The correlation between CPI and ICRG was 0.91 in 2001, which suggest a higher level of consistency and precision at the country level perceived corruption (You, 2015).

Thirdly, literature has revealed evidence of reverse causality between corruption and some of its likely determinants. Thus, corruption has been proven to influence certain institutional, political and economic variables (Mauro, 1995; Mauro, 1998; Bologna, 2016; Lambsdorff; 2005). For instance, public officials can be more opportunistic if there is a high probability of losing their office, however, it is also rational for corrupt governments to stimulate political instability (Serra, 2004). Like Sung (2003) argues that corruption impedes human rights and increases gender inequalities in society (Transparency International, 2000). Empirically, Stockemer (2011) conducted a macro study on the effect of corruption on women representation in the legislature on 44 African countries. The cross-country regression analysis concluded that corruption reduces women representation and this was assigned to the fact that, political offices can be purchased and public officials are voted into power based on male-dominated networks and this process mostly deny them the opportunity to occupy political seats.

Recently two papers, Jetter & Parmeter (2018) and Jha & Sarangi (2018) attempted to solve reverse causality by using an instrumental variable approach. However, the difficulty with corruption literature is finding valid instruments since most of the instruments are proposed determinants of corruption (Mauro, 1995; Jetter & Parmeter, 2018). For example, colonial status and geographical features are regarded as good instruments, but these variables have also been proposed as corruption determinants and thereby discounting the exclusion restriction condition in the use of an instrumental variable (Jha & Sarangi, 2018).

Although, Jetter & Parmeter (2018) conducted an analysis using variables from 2001-2010, however, the suspected endogenous variables were corrected by using lagged values (1991-2000) of the endogenous variables as instruments. The use of lagged values as instruments seems to be popular in the corruption literature. For instance, Bhattacharyya and Hodler (2010) used the lagged values of democracy as an instrument to estimate its impact on corruption and Arezki and Brückner (2011) also employed lagged values of corruption as an instrument to estimate its impact on oil rent. Eventhough, the existence of endogeneity does not affect the Instrumental Variable co-efficient, however, the estimates will be inefficient though consistent in the midst of heteroskedasticity. Moreover, the standard Instrumental Variable estimate of the standard errors would be inconsistent and therefore, prone to invalid inference. However, scholars predict a Generalized Method of Moments (GMM) to be the preferred methodology. Like Baum et al. (2003, p. 2) puts it:

> Efficient GMM brings with it the advantage of consistency in the presence of arbitrary Heteroskedasticity… The conventional IV estimator (though consistent) is, however, inefficient in the presence of heteroskedasticity. The usual approach today when facing

heteroskedasticity of unknown form is to use the Generalized Method of Moments (GMM), introduced by L. Hansen (1982). GMM makes use of the orthogonality conditions to allow for efficient estimation in the presence of heteroskedasticity of unknown form.

This notwithstanding, Jetter & Parmeter (2018) findings using Instrumental Variable BMA approach to estimate the role of women participation in parliament and in the labour force on corruption were consistent with Jha & Sarangi (2018) who adopted Instrumental Variable Estimation (using a dummy of the number of genders present in a country's dominant language as an instrument) on 17 European countries to show that women have a negative and causal impact on corruption as policy-makers.

Summary

Micro-level data, cross-country analysis, and even experiments have been conducted to examine the contentious relationship between women participation and corruption. Though earlier scholars portrayed women as honest, fear to be victimized, risk-averse and lack opportunities and networks to indulge in corrupt acts (eg. Dollar et al, 2001; Swamy et al, 2001; Thobejane & Khoza, 2014; Lane, 2012). Other scholars such as Esarey (2015), and Geotz (2007) have also shown that the observed relationship is caused by other factors that simultaneously increase women participation and reduce corruption Nonetheless, Alhassan-Alolo (2007) concluded that such relationship is spurious and does not exist using a survey data.

Most cross-country studies on corruption and women participation have adopted an instrumental variable approach to examine the relationship because of endogeneity of corruption determinants (eg. Jetter & Parmeter, 2008; Jha & Sarangi, 2018). But, the persistence of corruption is mostly

not factored into such analysis especially in Africa. Therefore, this thesis seeks to address this by using a Generalized Method of Moment (GMM) to account for the dynamic nature (persistence) of corruption in Africa with a more recent dataset.

CHAPTER FOUR

METHODOLOGY

4.0 Introduction

This chapter presents the models, data and methodological assumptions and approaches in achieving the objectives of the study. It provides the econometric framework, source and definition of data variables, estimation technique, and expresses the expected relationship between the variables.

4.1 Theoretical Framework

To analyse the effect of women participation in parliament and in the labour force on corruption, a dynamic panel model is estimated from the path-dependent model of corruption introduced by Esarey (2015). The model suggests that corruption is a function of its history (lagged of corruption) ($C_{i,t-n}$) and other institutional and economic influences such as press freedom ($Press_{it}$), percentage of women in parliament (Wo_parl_{it}), GDP per capita (GDP_pcg_{it}) women's economic rights (W_{it}), system of governance (S_{it}).

$$C_{it} = f(C_{i,t-n}, Wo\_parl_{it}, Press_{it}, GDP\_pc_{it}, W_{it}, S_{it}) \dots\dots\dots\dots\dots\dots (4.1)$$

Corruption is highly persistent in Sub-Saharan African regions and, Middle Eastern and North African (MENA) countries because of the existence of longstanding corruption networks within governments and institutions (Jha, 2018; Bissessar, 2009). The persistence of corruption emanates from the entrenched "Godfathers" and institutional networks of corruption that are longstanding

within countries especially in Africa (Okonkwo, 2016). This suggests that current scores of corruption would be affected by its past values.

The relevance of this model in assessing the impact of women participation on corruption emanates from the fact that women are innately honest and therefore, they are 'less likely to sacrifice the common good for private gain' (Dollar et al, 2001; World Bank, 2001). Theories in behaviour sciences (*eg. Bakan 1966*) emphasize that, women are relatively selfless and upholds high communal spirit. This implies that women can affect corruption by despising corrupt acts or accepting fewer bribes. Again, public institutions significantly face difficulties in designing strategies to discourage their agents from acting opportunistically at the expense of the public (Dollar et al, 2001). Therefore, if women are innately honest, then they can affect corruption when they are in positions of power by designing, implementing and enforcing firm anti-corruption laws within their respective organizations. Further, female participation in the labor force consists of women in both "bribe-giving" and "bribe-taking" role; therefore, their honest nature could be an important tool in combating corruption.

Moreover, Tishkov (1993) has also maintained persuasively that "women bring enriching values to government" and as a result, it positively influences the behaviour of their male counterparts in a way of limiting, disciplining and encouraging acceptable behaviours. Since many countries have the parliament to check the excesses of government, increasing female participation may lead to a more honest government and consequently, reduce corruption (Swamy et al, 2001; Dollar et al., 2001). Therefore, this model fits the study's quest to examine the effect of women participation in parliament and in the labour force in the fight against corruption in Africa.

This notwithstanding, Jetter & Parmeter (2018), Jha & Sarangi (2018) and Asongu (2018) revealed that factors such as government effectiveness, press freedom, urbanization, GDP per capita, and national natural resource rents have strong predictive power in explaining corruption, especially in Africa. Analysis of the predictive power of these variables showed a more than 0.95 Posterior Inclusion. Therefore, the study adopts and modify Esarey (2013) path-dependent model of corruption by incorporating some of these variables to control for the link between corruption and women participation in parliament and in the labour force. The modified model would be:

$$C_{it} = f(C_{i,t-n},\ W_{it},\ Gef_{it},\ Press_{it},\ GDP\_pcg_{it},\ Tnrr_{it},\ Urb_{it}) \ldots\ldots\ldots\ldots\ldots\ldots (4.2)$$

Where Gef_{it} is government effectiveness, $Press_{it}$ is press freedom, $GDP_{\_pcg}{}_{it}$ is GDP per capita growth, $Tnrr_{it}$ is total natural resource rent and finally, Urb_{it} is urbanization.

4.2 Empirical Model

The model for the study follows the works of (Esarey, 2015; Jha, 2018) on the path-dependent nature of corruption. Therefore, following Jha (2018), the study adopts a base dynamic model of the form:

$$C_{it} = \alpha C_{i,t-n} + \beta W_{it} + \gamma K_{it} + \varepsilon_{it} \qquad (4.3.1)$$

and

$$\varepsilon_{it} = f_i + u_{it} \qquad (4.3.2)$$

where,

$\boldsymbol{C_{it}}$ is the dependent variable, $\boldsymbol{C_{i,t-n}}$ is the lagged dependent variable, $\boldsymbol{W_{it}}$ is the independent

variables, $\boldsymbol{K_{it}}$ are the control variables and ε_{it} is the error term. Moreover, $\boldsymbol{i}$ denotes the number of countries, $\boldsymbol{t}$ denotes the time under consideration and, $\boldsymbol{n}$ denotes the number of lags. However, the error term is decomposed into f_i which is the unobservable country-specific characteristics and $\boldsymbol{u_{it}}$ is the random error term.

The main variable of interest, women representation is measured by the percentage of women in parliament and in the labour force. Literature has indicated that increasing women participation in governance leads to a more honest government because they are risk-averse (Gary & Gneezy, 2012; Eckel & Grossman, 2008). Moreover, they lack opportunities and network to engage in corrupt acts (Esarey & Chirillo, 2013).

The selection of control variables was based on the empirical works of (Jetter & Parmeter, 2018; Asongu, 2013) who identified various economic, political, and cultural factors as effective tools in the fight against corruption. The main control variables would be GDP per capita growth rate, total national natural resource rents, press freedom, government effectiveness, and urbanization. However, time dummies and regional dummies would be used to account for regional diversities and the influence of aggregate trends which have nothing to do with causal relationships. It is worth noting that there are two measures for women participation, first, the percentage of women in parliament in equation (4.3.4) and the percentage of women in the labour force (4.3.5). Therefore, modeling with the independent and control variables, the equation is re-written as:

$$Corr_{it} = \beta_1 Corr_{it-1} + \beta_2 Wom\_parl_{it} + \beta_3 Gef_{it} + \beta_4 Urb_{it} + \beta_5 press\_free_{it} + \beta_6 GDP\_pcg_{it} + \beta_7 TNR_{it} + \varepsilon_{it} \quad (4.3.4)$$

Including the other measure of women participation,

$$Corr_{it} = \beta_1 Corr_{it-1} + \beta_2 Wom\_laf_{it} + \beta_3 Gef_{it} + \beta_4 Urb_{it} + \beta_5 press\_free_{it} + \beta_6 GDP\_pcg_{it} + \beta_7 TNR_{it} + \varepsilon_{it} \quad (4.3.5)$$

$\boldsymbol{Corr_{it}}$ is Corruption Perception Index(CPI) , $\boldsymbol{Corr_{it-1}}$ is the lagged Corruption Perception Index, Wom_part_{it} is the percentage of women in parliament, Wom_laf_{it} is the percentage of women in the labour force, Gef_{it} is the index for government effectiveness, Urb_{it} is the urbanization rate, GDP_pcg_{it} is GDP per capita growth, TNR_{it} **is** Total National Resource Rent and $\boldsymbol{\varepsilon_{it}}$ is the error term.

4.3 Endogeneity

Endogeneity exists when there is a correlation between any of the regressors specified in the model and the stochastic error term. The model (4.3) may be prone to the issue of endogeneity. The problem of endogeneity occurs by virtue of reverse causality within two variables, omitted variable bias or measurement error. When there exist endogeneity,

$$Cov(f_{it}, X_{it}) \neq 0 \quad (4.2)$$

Thus, the regressors (X_{it}) and the time-invariant country level specific effect (f_{it}) are correlated. The use of lagged CPI is deemed to cause endogeneity within the model because corruption is a path-dependent variable and its present depends on its past and therefore, it may correlate with the error terms (Esarey, 2015). Moreover, empirical works have proven, reverse causality between representation women in parliament and corruption (Jetter & Parmeter, 2018; Stockemer, 2011). Thus, women are relatively poor and hence they do not have the means to buy political seats and this indicates why women are less represented in parliament especially in Africa. However, the validity of the theoretically established potential endogenous regressors would be confirmed by

using Durbin–Wu–Hausman (DWH) test, which would be assessed on the residuals of all potential endogenous regressors as a function of the exogenous variables (Alemu and Yokoyama, 2009).

4.4 Description of variables and Data Source

This section describes the countries, years and variables used in the path-dependent dynamic panel model. In all, 46 out of the 54 countries in Africa were selected: Central Africa (10), East Africa (7), West Africa (15), South Africa (8) and North Africa (6) covering 2002 to 2016. The countries that were ignored such as (Cabo Verde, Djibouti, Eritrea, Sao Tome, and Principe, Seychelles, Somalia, South Sudan, and Swaziland) did not have data points for most of the variables used in the model. The choice of these variables was considered critical in fighting corruption, especially in Africa. These include economic factors such as GDP per capita and national natural resource rent and political-economic variable such as women in parliament and in the labour force. In addition, urbanization and institutional factors such as government effectiveness and press freedom were incorporated (Jetter & Parmeter, 2018; Jha & Sarangi, 2018; Asongu, 2013).

4.4.1 Corruption

The dependent variable is the TIs Corruption Perception Index (CPI), an annual cross-country data developed since 1995. TI generates an index from 13 independent surveys such as Global Insight Country Risk Rating, Economic Intelligent Unit, and the World Economic Forum, which are mostly based on experts and business people's general perceptions on corruption in the public sector within these countries (Transparency International, 2016). Until 2012, the CPI adopted a two-step standardization model and applies a beta-transformation to index countries score of corruption from 0 to 10. However, the score of corruption is currently ranked from 0 to 100 since

2012. Therefore, the data from 2002 to 2011 would be converted into percentiles for standardization (Jetter & Parmeter, 2018). Again, the CPI defines 100 as very clean and "0" as highly corrupt. This index clearly indicates how countries are fighting corruption to attain the highest level of cleanliness. For instance, a score of 60 signifies that the hypothetical country is 60% clean and about 40% corrupt. Based on this, the study follows (Jha, 2018; Jha & Sarangi, 2018) to transform the dataset to account for the level of corruption and not their level of effort in fighting corruption. This transformation was done by subtracting the corruption perception index from 100. Therefore, the equation below shows the derivation:

$$New\ CPI = (100 - CPI)$$

Empirical studies such as Jetter & Parmeter (2018), Emerson (2006), You & Khagram (2005), Chowdhury (2004), Ali & Isse (2003), Montinola & Jackman (2002) Fisman & Gatti (2002), Gupta et al. (2002), and Dollar et al, (2001) employed corruption perception index in their empirical studies.

4.4.2 Women Participation

Ideally, women participation encompasses women in managerial positions, ministerial positions, clerical positions, in parliament and many others. However, this study limits women participation to parliament and to the labour force because data for other positions are not collated in Africa. Women in parliament are part of the body (parliament) who make decisions, laws and check mismanagement in the system. It is calculated as the percentage of women in the national parliaments. Equally, the percentage of women in the labour force is used as an indicator for the supply side of women participation in the labour market. Since women participation is in

percentages, it would rank from 0 to 100. However, we expect women participation to have a negative relationship with corruption by virtue of the various theoretical arguments such as honesty, risk aversion, and opportunities and networks (Esarey, 2015; Blanes et al, 2016; Dollar et al, 2001). The two measure of women participation would be interacted to ascertain the joint effect of increased women participation both in parliament and in the labour force. This dataset was taken from the World Development Indicators.

4.4.3 Government Effectiveness

Government Effectiveness is one of the six measures of world governance indicators from the World Bank Group authored by Daniel Kaufmann and Aart Kraay. Government effectiveness uses four different sources of data sources ranging from surveys of household and firms, Public sector organizations, commercial business information providers and Non-Governmental Organizations. It indexes their perceptions and experiences on the quality of civil and public services, and the degree of their independence from political forces and pressures. The index also captures the quality of policy formulation and implementation, and government's commitment to such policies. It evaluates and aggregates a country's score in units of (-2.5) to (2.5). Whereas -2.5 indicates the extreme government ineffectiveness, 2.5 captures an extensive effectiveness of a particular government. Government effectiveness in a way of improving the quality of government service, commitment to formulating and implementing good policies ensures more economic and political freedoms. This commitment would help shape the actions and activities of political leaders and even the bureaucrats and subsequently lead to less corruption (Goel & Nelson, 2005; Chowdhury, 2004).

4.4.4 Press freedom

Press freedom captures the experts' assessment of the laws and regulations that influence media content and the constitutional guarantee for freedom of expression. It also assesses the extent of transparency and political control over the content of the media. These assessments are done by professionals in respective countries: human rights and press freedom organizations, international visitors, using reports of multilateral bodies and governments, domestic and international news media. Countries are assigned a numerical score from 0 (the least free) to 100 (the most free). The press serves as watchdogs over government activities and therefore, it is expected that increased press freedom would reduce corruption (Chowdhury, 2004; Shardow & Asare, 2016).

4.4.5 GDP per capita growth rate

It measures the growth in the nation's economic output that accounts for its population size. This implies that it generates the growth in output assigned to each member of the population. This makes GDP per capita an important measurement of a country's standard of living and economic prosperity. Economic prosperity is perceived to decrease corruption as both the givers and takers of bribe are less in wealthier nations, because the tendency to accept bribe declines with economic growth (Serra, 2006). Again, Triesman, (2000) and Paldam, (2001) assert that 'corruption is a poverty-driven disease that vanishes when countries develop'. Therefore, there seems to be a negative relationship between GDP per capita and corruption. The GDP per capita growth rate dataset was collected from the World Development Indicators from the World Bank Group.

4.4.6 Urbanization rate

Urbanization rate refers to the population living in urban areas as a percentage of the total population. According to the United Nations Population Division, urbanization considers the population size, density, economic occupation of the inhabitants and urban functions to characterize an urban setting. A concentration of the population within the urban areas is likely to increase opportunities for interactions between potential bribe-takers and bribe-givers which would result in more corrupt acts. Conversely, a highly concentrated urban population might indicate a greater chance of serving as surveillance and hence deterring corruption (Billger & Goel, 2009). Therefore, urbanization rate may either have a positive or negative relationship with corruption. This variable was collected from the World Bank's World Development Indicators.

4.4.7 Natural Resource Rent

Total natural resources rents are the sum of mineral, coal (hard and soft), forest, natural gas, and oil rents of a country. This measures the total revenue generated from the extraction of natural resources as a percentage of a country's Gross Domestic Product. Existing literature such as Samreth & Okada (2017) and Sachs & Warner (1995) have shown that natural resource abundance worsens corruption and have argued that, this may be as a result of the 'resource curse phenomenon'. Therefore, a positive association may exist between high resource rents and increasing corruption. This dataset was also collected from the World Development Indicators from the World Bank Group.

4.4.8 Sub-regional dummies

The study introduced a locational dummy to control for cultural differences that exist within the various regions in Africa on the impact of women participation in the fight against corruption. The regional dummies consist of West Africa, East Africa, Central Africa, North Africa, and Southern Africa. They are generated such that countries within the specified region assume "1" whiles the other countries take zero (0).

4.4.9 Year dummies

Year dummies would be controlled for in the model to account for the influence of aggregate trends which may have no connection with the relationships. Like the sub-regional dummies, a dummy would be created for the various years such that a particular year would assume "1" and all other years would assume zero (0).

***Table 4. 1*: Summary of Regressors and their Expected Signs**

Variable	Indicator	Expected Sign
lagged Corruption	lagged Corruption Perception Index(CPI) (0 to 100)	Positive
Women Participation	Women in Parliament/ Women in the labour market (% of Total Representation)	Negative
Government Effectiveness	Index of Government Effectiveness (-2.5 to 2.5)	Negative
Press Freedom	Press Freedom (0 to 100)	Negative
GDP per capita growth	Real GDP per capita growth rate	Positive/Negative
Urbanization rate	Urban Population (% of total Population	Positive/Negative
Natural Resource Rent	Total Natural Resource rent (% GDP)	Positive/Negative

4.5 Estimation Technique

The reverse causality existing between corruption and women representation and other corruption causes such as government effectiveness and GDP per capita in the model would render Ordinary Least Square (OLS) co-efficients biased and inconsistent. Although, other econometric estimation technique like Instrumental Variable (IV) approach and two-stage Least Square (2SLS) estimation techniques could be used to solve the problem of endogeneity. However, these estimation techniques which could be used to resolve the endogeneity problem in the regression model employ external instrument which must meet the orthogonal and correlational conditions.

However, the challenge with using external instruments in the corruption literature is the extreme difficulty in finding a valid instrument that would satisfy the correlational and orthogonal conditions with suspected endogenous variable and the stochastic error term (Jetter & Parmeter, 2018). Consequently, IV estimator and the 2SLS would yield unbiased but inconsistent estimates. Moreover, dynamic panel models are associated with panel biases and this renders Instrumental Variable estimation inefficient, and OLS would generate bias and inconsistent estimates because the lagged dependent variable is associated with the error term.

In the presence of endogeneity as a result of a lagged dependent variable, Arellano and Bond (1991) recommended the use of difference GMM technique. The difference GMM estimator removes the fixed effects by transforming the model and addresses the endogeneity issue by using lagged levels as internal instruments. Assume Y_{it} is the dependent variable, Y_{it} is the lagged dependent variable, X_{it} is the regressor, f_i is the fixed effect and e_{it} is the error term. With the initial model or original model in (4.3.1)

$$Y_{it} = \delta Y_{it-1} + \gamma X_{it} + f_i + e_{it} \quad \text{.....4.3.1}$$

The transformed model for the differenced GMM estimator would be:

$$\Delta Y_{it} = \delta \Delta Y_{it-1} + \gamma \Delta X_{it} + \Delta e_{it} \quad \text{.....4.3.2}$$

Nonetheless, Blundell and Bond (1998) show that the difference GMM is inefficient, especially when the variable is persistent and almost a random walk. In this case, the lagged levels may not be valid instruments for first-differenced variables. Moreover, when the number of time periods is small relative to the number of entities (like this dataset), and the dependent variable is highly persistent like corruption, the difference GMM may suffer from huge sample bias (Alonso-Borrego and Arellano, 1999; Bissessar, 2009). Because difference GMM uses the difference between the contemporaneous and the previous observation, it may magnify the gaps and subsequently bias the estimates, especially in an unbalanced panel.

In addressing this, (Arellano and Bover, 1995; Jha, 2018; Blundell & Bond, 1998), proposed the augmented version which is the system GMM. Like the difference GMM, the system GMM also uses the difference equation, however, it generates lagged difference to assess the level equation (both equation 4.3.1 and 4.3.2). Thus, System GMM uses both lagged levels as well as lagged differences as internal instruments for the differenced equation and the level equation respectively (Mileva, 2007). For example, at $t = 6$, the valid instruments for the differenced equation variable ($\Delta Y_{i5} = (Y_{is} - Y_{i4})$) will be Y_{i4}, $Y_{i3}. Y_{i2}. Y_{i1}$ because these past values are orthogonal with the differenced error term($\Delta \varepsilon_{i5}$). Likewise, (Y_{i5}) can be instrumented with (ΔY_{i5}) because it is uncorrelated with the error term (ε_{i5}).

This ensures that system GMM solves the issue of endogeneity, improves efficiency and yield consistent estimates. Though system GMM is efficient, however, the two-step system GMM has been deemed to be more efficient than the one-step system GMM (Jha, 2018; Heid, 2015; Blundell & Bond, 1998). This makes the system GMM more preferred in our analysis as opposed to difference GMM.

Nonetheless, the reliability and the consistency of the system GMM technique would depend on the validity of the specified instruments which is accounted for by the Hansen test of over-identifying restrictions.

4.6. Descriptive Analysis

This section discusses the descriptive statistics for the variables under consideration for forty-seven (46) countries in Africa covering the period of 2002 to 2016. The analysis discussed include the mean, standard deviation, minimum and the maximum values of the variables.

Table 4. 2: Descriptive Statistics of Corruption and its Determinants from 2002 to 2016

Variable	Obs	Mean	Standard Deviation	Minimum	Maximum
Corruption Perception Index (CPI)	634	69.95	10.05	35	89
Women in Parliament (%)	666	17.11	11.35	1.2	63.8
Women in the labour force (%)	705	42.88	8.81	13.99	55
Government Effectiveness	703	-0.74	0.59	-1.89	1.05
Real GDP per capita growth (% annual)	705	2.13	7.06	-62.23	122.97
Urbanization rate	705	41.5	17.36	8.68	88.56
Total National Resource Rent(% GDP)	694	14.8	13.38	0.0011	63.49
Press Freedom	688	57.64	17.4	19	96

Source: Authors calculation

Over the period 2002–2016, the average Corruption Perception Index for the selected African countries was 69.95 percentage points. A minimum level of 35 and a maximum of 89 percentage points level of corruption was recorded. The range suggests a moderately higher value of corruption existing on the African continent. Nonetheless, few countries had their levels of corruption below the continent's average in specific periods. The data shows that countries such as Botswana (40.1), Mauritius (49.7), Namibia (53.2), South Africa (54.6), Tunisia (56.5), Ghana (60) and Morocco (65.13) made strides and recorded below the average corruption level of approximately 70 percentage points in the specified research period. Though, on the whole, other countries like Malawi (61.6), Lesotho (61.6), Senegal (65), Madagascar (67) and Liberia (67.9) scored better than the average, they only recorded below the average figure from 2010 to 2016. Moreover, Botswana had the minimum level of corruption (35 percentage points) in 2012 and Sudan recorded the maximum (89 percentage points) in the dataset in 2013.

Meanwhile, the average women participation in parliament and in the labour force over the same period was 17.11 and 42.88 percent respectively. The data showed a minimum of women participation of 1.2 and 13.99 percent and a maximum of 63.80 and 55.00 percent in parliament and in the labour force respectively. Likewise, countries like Mozambique (36.37), Tanzania (31), Uganda (30.64), Rwanda (53.76), Burundi (29.03), Senegal (28.14), Guinea (20.275), and South Africa (37.68) recorded above the average over the periods in terms participation in parliament. Within the labour market, countries like Mozambique (54.65), Tanzania (50.04), Angola (49.9), Madagascar (49.14), Zimbabwe (48.89), Malawi (48.73), Congo(48.72), Namibia (48.08), Liberia (47.87), Kenya(47.72), Lesotho (47.59) Zambia (47.48), Uganda (47.46), Ethiopia (46.86), Central African Republic (45.65), Chad (45.37), Botswana (45.21) and South Africa (44.37) also recorded above the average.

CHAPTER FIVE

RESULTS AND DISCUSSION

5.0. Introduction

This chapter presents the various estimations and discussions of the results. Stata version 13 was used for the empirical estimations. The three main sections under this chapter provide a descriptive analysis of the variables under consideration, the results of some diagnostic tests, and a thorough discussion of the empirical findings.

5.1 Diagnosis Test

This section presents a test on fixed and random effects, -Durbin-Wu- Hausman test of endogeneity and the validity of the internal instruments used.

5.1.1 Fixed Effects or Random Effects

The Hausman test is used to determine whether the fixed or random-effects model fit the data for estimation.

Table 5.1: Hausman test for Fixed versus Random Effect

Test:	Ho:	difference in coefficients not systematic (Random effect)
		chi2(7) = (b-B)'[(V_b-V_B)^(-1)](b-B)
		= 144.22
		Prob>chi2 = 0.0000
		(V_b-V_B is not positive definite)

Source: Authors calculation

With a null hypothesis of non-systemic difference in co-efficient, the test rejects the null hypothesis at a significance level of 0.10, 0.05 and even 0.01. This endorses the suitability of fixed-

effects model over the random-effect model. The selection of a fixed-effect model (unobserved country-specific effects vary across countries) is consistent with the results of Breusch–Pagan/ Cook-Weisberg test for heteroscedasticity which indicated the presence of heterogeneity across countries (see Appendix III).

The result of this diagnosis test favours fixed effects which is a requirement in the use of system GMM technique. Therefore, system GMM is an appropriate estimation method for the model to yield consistent and reliable estimates.

5.1.2. Endogeneity Test

Besides the theoretical foundations of the presence of endogeneity in the lagged dependent variable and the bi-directional causality between corruption and women participation, government effectiveness and GDP per capita, the study adopted the Durbin-Wu-Hausman (DWH) test to authenticate the existence of endogeneity.

Table 5.2: Durbin-Wu-Hausman (DWH) Test for Endogeneity

Null Hypothesis	**P-value (Prob>chi2)**
Lagged of CPI is uncorrelated with the error term	0.000
Government effectiveness is uncorrelated with the error term	0.001
Real GDP per capita growth is uncorrelated with the error term	0.027
Women in parliament is uncorrelated with the error term	0.053
Women in the labour force is uncorrelated with the error term	0.093

The residuals of the variables were predicted and tested for significance by regressing them on the other exogenous variables.

Source: Authors calculation

This was undertaken by applying a regression test on the residuals of suspected endogenous explanatory variables as a function of all other exogenous variables. Accepting the null hypothesis of uncorrelation between the variables and the error term displays exogeneity and the suitability of OLS. However, rejecting the null hypothesis signifies the presence of endogeneity and the appropriateness of the system GMM estimation, which corrects endogeneity effects (Yokoyama and Alemu, 2009). The results of the Durbin–Wu–Hausman (DWH) test indicated that women in parliament and in the labour force, government effectiveness and real GDP per capita growth were endogenous.

The endogeneity of these regressors implies that the assumption of strict exogeneity of the independent variables and the error term, no longer holds, therefore appropriate instruments must be adopted to correct it. In the midst of difficulty in getting appropriate instruments, system GMM approach yields consistent and efficient estimates.

5.1.3 Validity of Over-identifying Restrictions

The various instruments used in the two-step system GMM for the models are tabulated in **Table 5.3** below. The instruments include the lagged levels of endogenous variables for the differenced equation and the difference of the endogenous variables for the levels equation.

Table 5.3: **Internal Instruments for the two-step System GMM**

Differenced Equation	
Endogeneous Variables:	**Internal Instruments**
Lagged Corruption	$Corr_{i2002}, Corr_{i2003}, \ldots\ldots, Corr_{i2014}$
Women in parliament	$Wo\_parl_{i2002}, Wo\_parl_{i2003}, \ldots\ldots, Wo_{parl_{i2014}}$
Women in the labour force	$Wom\_laf_{i2002}, Wom\_laf_{i2003}, \ldots\ldots, Wom\_laf_{i2014}$
GDP per capita growth rate	$GDP\_pcg_{i2002}, GDP\_pcg_{i2003}, \ldots\ldots, GDP\_pcg_{i2014}$
Government Effectiveness	$Gef_{i2002}, Gef_{i2003}, \ldots\ldots, Gef_{i2014}$

Level Equation	
Endogeneous Variables:	**Internal Instruments**
Lagged Corruption	$\Delta \text{Corr}_{i2002}, \Delta \text{Corr}_{i2003} \ldots\ldots\ldots\ldots \Delta \text{Corr}_{i2016}$
Women in parliament	$\Delta \text{Wo\_parl}_{i2002}, \Delta Wo\_parl_{i2003} \ldots\ldots\ldots\ldots \Delta Wo\_parl_{i2016}$
Women in the labour force	$\Delta \text{wom\_laf}_{i2002}, \Delta wom\_laf_{i2003} \ldots\ldots\ldots\ldots \Delta wom\_laf_{i2016}$
GDP per capita growth rate	$\Delta \text{GDP\_pcg}_{i2002}, \Delta GDP\_pcg_{i2003} \ldots\ldots\ldots\ldots \Delta GDP\_pcg_{i2016}$
Government Effectiveness	$\Delta \text{Gef}_{i2002}, \Delta Gef_{i2003} \ldots\ldots\ldots\ldots \Delta Gef_{i2016}$

The validity of the instrument is a key condition for the usage of the system GMM estimation technique since it is deemed to yield consistent estimates. The Hansen test which is used for testing for over-identifying restrictions shows a p-value of *(0.185, 0.290, 0.800, 0.196, 0.565, 0.858 and 0.933).* These p-values show a failure to reject the null hypothesis, thereby indicating the validity of the instruments in all the models. The Hansen test together with the evidence of no serial correlation demonstrates that the instruments are valid for system GMM to generate consistent and reliable estimates.

5.2. Empirical Results

Table 5.4 shows the results of the dynamic panel models using the two-step system GMM technique in forty-six (46) African countries for the period 2002-2016.

The first to third regression models used women participation in parliament as the independent variable with all other control variables while using the regional and year dummies in model 2 and 3 respectively. Likewise, the models 4, 5 and 6 indicates a regression with women participation in the labour force as the main independent variable with all the other control variables. However, model 5 and 6 were controlled with regional and year dummies respectively. Lastly, the two

measures for women participation (percentage of women in the labour market and in the parliament) were interacted to ascertain the joint effect in model 7.

From Table 5.4, the significant Wald Chi-squared for all the regressions shows that the explanatory variables are jointly significant

Table 5.4: Twostep System GMM based on the modified Model of Esarey(2013)

VARIABLES	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Lagged corruption perception index	0.547***	0.543***	0.369*	0.782***	0.766***	0.474***	0.536***
	(-0.0998)	(-0.0998)	(-0.193)	(0.0949)	(-0.0921)	(-0.151)	(-0.0848)
Women in Parliament (%)	-0.138**	-0.124*	0.00262				
	(-0.0666)	(-0.0637)	(-0.128)				
Women in the labour force (%)				0.109	-0.135	0.024	
				(0.239)	(-0.373)	(-0.227)	
Women in Parliament (%)*labour force (%)							-0.00316*
							(-0.00171)
Real GDP Per Capita Growth (%)	-0.239*	-0.223*	-0.131	-0.149**	-0.144*	-0.114	-0.224
	(-0.136)	(-0.127)	(-0.0834)	(0.0693)	(-0.079)	(-0.0794)	(-0.145)
National Resource Rent (% GDP)	0.0238	0.0404	-0.0294	-0.0293	0.0173	-0.0548	0.0404
	(-0.0619)	(-0.0444)	(-0.0402)	(0.0570)	(-0.0406)	(-0.0595)	(-0.0599)
Press freedom	-0.0680*	-0.0423	-0.0256	-0.0133	-0.00299	0.0089	-0.0731*
	(-0.0381)	(-0.048)	(-0.0238)	(0.0471)	(-0.054)	(-0.0486)	(-0.0363)
Government effectiveness	-3.549	-4.077	-9.402***	-4.187*	-3.818*	-9.854***	-2.992
	(-2.873)	(-2.964)	(-3.277)	(2.480)	(-2.078)	(-3.526)	(-2.885)
Urbanization	-0.0613*	-0.0645*	-0.043	0.0182	-0.0422	-0.0282	-0.0829**
	(-0.0359)	(-0.0364)	(-0.0266)	(0.0683)	(-0.0495)	-0.0522	(-0.0407)
Constant	37.31***	34.83***	41.30***	7.734	20.61	30.76**	39.09***
	(-8.328)	(-9.233)	(-11.33)	(16.41)	(-24.9)	(-24.34)	(-7.82)
Sub-regional dummies	-	Yes	-	-	Yes	-	-
Year dummies	-	-	Yes	-	-	Yes	-
Wald Chi -squared	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Hansen test (Prob > Chi2)	0.185	0.290	0.800	0.196	0.565	0.858	0.933
Arellano–Bond [AR(2)]	0.838	0.879	0.760	0.537	0.102	0.885	0.203
Observations	544	544	544	565	565	565	544
Number of Instrument	35	39	48	35	39	48	35
Number of Countries	46	46	46	46	46	46	46

Note: The dependent variable is Corruption which is measured by Corruption Perception Index (CPI). Figures in parenthesis are the standard errors of the estimates and ***, ** and * refers to statistical significance of the estimates at 1%, 5% and 10% respectively

Source: Author's calculation, 2019

5.3 Discussion of Results

As hypothesized in section 1.4 in the first chapter, the study sought to analyse the effect of women participation on corruption in Africa with specific objectives of examining the short and long-run relationship between women participation and corruption over a period of 15 years (2002-2016). It also investigates the impact of other economic and institutional factors on corruption in Africa. It is worth noting that, the interpretation of these results is in relation to perceptions of corruption. Despite this fact, evidence points out that corruption perception is highly associated with actual corruption, as individuals' choices are built on perceptions (Kaufmann et al., 2011; Jha & Sarangi, 2018). Moreover, the analysis was undertaken in relation to the research objectives and the findings are summarized below:

In line with expectation, there is a significant negative relationship between women in parliament and corruption. The coefficients of women in parliament in the regression model (1) and (2) shows that a percentage increase in women in parliament generates a 0.138 percentage decrease in the level of corruption existing in the selected Africa countries. Moreover, the effect is robust to the inclusion of sub-regional dummies but not year dummies. This outcome of a negative relationship between the percentage of women in parliament and corruption is consistent with several works in the corruption literature. Many works such as Dollar et al, (2001), Swamy et al, (2001), Geotz (2007), Agerberg (2014), Esarey (2015), Jha & Sarangi (2018) and Jetter & Palmer, (2018) found a significant negative relationship between corruption and women in parliament in their survey and cross–country analysis. This finding suggests that African countries with a higher level of women participation in parliament are more likely to have lower levels of corruption and subsequently reduce corruption.

Conversely, the coefficient of women in the labour force in the regression models (4)-(6) are not significant. This implies that there is no evidence of a reduction in corruption as a result of the presence of women in the labour force. This finding supports the evidence by Alatas (2007) and Alhassan-Alolo (2007) who found a non-significant gender behavioural difference towards corruption. This result diverges from the worldwide cross-country works of Dollar et al (2001), Jha & Sarangi (2018) and Jetter & Parmeter (2018), who concluded and associated women as innately honest and hence their presence is an antidote for corruption. This notwithstanding, the two variables for women participation are jointly significant, though the innate honesty theoretical arguments could not be established in this study because of the insignificance of the percentage of women in the labour force.

Following the claim by Goetz (2007, p. 99) that "If women do exhibit less corrupt reactions than men to opportunities for illicit earnings, that may simply be a sign of their freshness in office, lack of familiarity with ways of subverting the rules, and understandable eagerness to prove themselves worthy of public office -effects that can wear off with time" intrigued for a long run analysis to ascertain the validity of this claim in the case of the selected African countries. However, the long-run analysis showed a much more significant reduction in corruption to 0.170 percentage points as a result of a percentage increase in women in parliament (see Appendix II). This indicates that women in parliament would still be very relevant in combating corruption in Africa in the short and long run. This contradicts Geotz (2009) assertion of the ineffectiveness of women in parliament in fighting against corruption in the long run.

The negative significant relationship between corruption and urban population share under the system GMM indicates that rapid urbanization reduces corruption in Africa. Indicatively, a

percentage increase in urbanization results in a 0.0613 percentage decrease in corruption in selected countries. This is also robust with the inclusion of sub-regional dummies. The results suggest that when more societies are urbanized, there would be a decline in the level of corruption. This conforms to the findings of prior empirical studies by Asongu (2013) and Jetter & Parmeter (2018) who found that urbanization has a higher predictive power of corruption in developing countries. Conversely, Billger & Goel (2009) found that a greater concentration of the population associated with urban centers affords them a higher gain to "jump the queue" and it also increases opportunities for interactions between givers and receivers of bribes. This notwithstanding, the study supports the findings by Jetter & Parmeter (2018) that a highly concentrated urban population might indicate a greater educated and enlightened population who would serve as watchdogs and more importantly, challenge the excesses of government officials and institutional activities within the country and hence reducing corruption in the country.

Throughout the regressions, the coefficient of the GDP per capita growth was negative, and statistically significant at 5 percent and 10 percent except in model (1, 2, 4 and 5) (*see*, Table 5.4). Specifically, a percentage increase in GDP per capita growth reduces corruption by 0.239 and 0.131 in both model (1) and (4) respectively. This was still significant after the inclusion of sub-regional dummies. This reveals that countries with higher real GDP per capita growth have the propensity to be less corrupt. This results is in line with the theoretical predictions of the economic approach of addressing corruption which involves improving the standard of living and economic prosperity of the people which the study measured by using real GDP per capita growth. It also endorses the findings by Esarey (2015) and Rehman & Naveed (2007) who declared that economic prosperity reduces corruption.

The variable, government effectiveness has a negative relationship with corruption, and it remained highly significant in the regression models (3, 4, 5 and 6). Explicitly, a unit index increase in government effectiveness significantly reduces corruption by 4.187 percent reduction in corruption. More so, this result is highly significant and robust to the inclusion of year and sub-regional dummies. This finding, therefore, suggests that the effectiveness of government in making good policies, reducing regulation burdens and wastefulness, ensuring transparency and the efficiency of legal frameworks and above all enforcing these policies (Schwab and Sala-i-Martín, 2013; Lee & Whitford, 2009; Portes & Haller, 2010; Schwab & Sala-i-Martín, 2015) significantly reduces corruption even in Africa.

Whilst the formulation and implementation of good policies ensure institutional efficiency, the independence of institutions from political pressures also ensures competition and consequently, reduces the tendency for people to take advantage and exploit the system. Most importantly, the quality of policy formulation and implementation, and the government's commitment to such policies reduces corruption in the system (Kapoor & Ravi, 2009; Transparency International, 2018). This finding supports the research by Jetter & Parmeter (2018), Kapoor & Ravi (2009) and Asongu (2013) that the effectiveness of government is an inevitable tool in the fight against corruption in Africa.

Moreover, the coefficient of press freedom showed a significant negative relationship with corruption. The significant relationship of the variable in the fight against corruption matches most empirical works that were reviewed (eg. Brunetti & Weder, 2003; Sung, 2003; Esarey, 2015; Shardow & Asare, 2018). Besides, the negative association between the extent of press freedom

and the level of corruption across countries suggest that freedom of press represents an important check on corruption (Brunetti & Weder, 2003). Though a percentage point increase in press freedom induces a 0.068 percentage reduction in corruption, this relationship is less strong. Unlike Brunetti & Weder (2003) who found press freedom to be highly significant, the study found this variable to be significant only at 10 percent and the significant relationship vanishes with the introduction of year and sub-regional dummies. The weak significance of the variable in the selected African countries may be attributed to the nature and the extent of press freedom (Shardow & Asare, 2018).

The nature of partisanship and ownership structures reduces the watchdog role of the media in Africa. Most African press are owned by governments, private persons and individual politicians and therefore, those who tend to align with government operate freely while those who support rival parties tend to be relegated to a marginalized position (Friedrich-Ebert-Stiftung, 2007; Shardow & Asare, 2016). Sometimes, the fear of losing advertisement from governments cause the media not to investigate alleged corrupt acts of government (Herman & Chomsky, 2006). Even those that are owned by private persons and politicians are allowed to serve as watchdogs only if the target is a rival to their owner's political camp. These challenges reduce the effectiveness of the press in exercising their duties as watchdogs over the excesses of government, especially in Africa. (Shardow & Asare, 2016; Friedrich-Ebert-Stiftung, 2007).

Lastly, the study finds no evidence of the "resource curse phenomenon" as in the case of other research works like (e.g., Leite and Weidmann, 2002; Sala-i-Martin and Subramanian, 2003; Isham et al., 2005). However, the study finds a significant correlation of 5 percent (see Appendix IV)

CHAPTER 6

SUMMARY, CONCLUSIONS AND POLICY RECOMMENDATIONS

6.0 Introduction

The summary and policy recommendation are provided in this chapter based on the findings of the study. The section also discusses areas that would be relevant for further studies and finally draws a conclusion.

6.1 Summary and Conclusions

The controversial linkage of women participation and corruption was pushed to the forefront of anti-corruption policy campaigns following the published articles of Dollar et al., "Are women really the 'fairer' sex?" and Swamy et al., "Gender and Corruption" in 2001. These two papers laid the foundation for the debate around women and corruption. By establishing a significant relationship between higher women participation in public life and lower levels of corruption, they authenticated the adoption of women as an anti-corruption tool. These papers conclusively supported policy measures that enhance women participation in governance and even the labour market and almost all sphere of life with the apparition of dealing with the menace (Sim et al., 2017).

Over time, these papers attracted various academic and scientific works in this area. Some of which used a micro-level data, cross-country analysis and even experiments to establish the accuracy of this findings (see Alhassan-Alolo, 2007; Alatas, 2007; Esarey, 2015; Jha & Sarangi, 2018; Jetter & Parmeter, 2018 etc). While some papers claim the regression is spurious due to the absence of

certain political, institutional and cultural differences which might alter the significance of the relationship between these variables(Geotz, 2009; Alatas, 2007), many other studies have also supported this findings based on their empirical works (Esarey, 2015; Jha & Sarangi, 2018). This notwithstanding, the findings provided the basis for many policy decisions around the world on the campaign ticket of increasing women representation as an antidote for corruption. For example, the Mexican City's police chief constituted a female force, in an attempt to attack corruption within the police service in 1999 (Washington Post, 1999; Sim et al., 2017).

Africa being the worse in terms of corruption, yet using women participation as an anti-corruption agents have received less attention on the continent. Therefore the main objective of the study is to assess the impact of women participation in governance and in the labour market on the fight against corruption and also to test the relevance of other economic, and institutional factors in combating corruption in Africa.

To empirically assess the impact of women participation on corruption, the study followed the Esarey (2015) path-dependent dynamic model which the study estimated using the system GMM procedure. This technique corrects the challenges common with other estimation methods like IV, OLS and other traditional panel estimations.

The results of this study show a significant negative relationship between women participation in governance and corruption. Interestingly, women participation in governance became highly significant even in the long-run. This contradicts the findings of Geotz (2009) and supports the Jetter & Parmeter, (2018)

However, the other measure of women participation adopted in this study: women participation in the labour force was not significant, but it still showed a negative relationship with the measure of corruption. This lack of significance in the relationship suggests that women are not innately less corrupt as proposed by Dollar et al., (2001) and Swamy et al., (2001). The estimation also shows that women negatively impact corruption when they are representatives of parliament. This implies that the impact of women in combating corruption is effective in policy-making. The study further tests the assertion by Goetz (2007) on the disappearance of the negative effect over time. The paper again finds that the negative effect of women in parliament on corruption is still and highly significant in the long run.

Except for total national resource rent, that seemed to be insignificant in explaining corruption in Africa, institutional, and economic factors like government effectiveness, real GDP per capita growth and urbanization are important factors that could help in the fight against corruption in Africa.

6.2 Policy Recommendations

The main conclusion drawn in this study is that women participation in parliament help reduces corruption in the selected African countries.

First of all, the study proposes that there must be initiatives and policies geared at increasing women representation in parliament to minimize corruption in Africa. It is recommended that governments in Africa should implement the quota system of representation. Women quota system promotes the reservation of a certain number of positions for women. This policy tool was used by Afghanistan, Lesotho, Rwanda and other countries to increase women's political participation

(TI, 2016). Notwithstanding these findings, governments in Africa should weight the right mix of women representation in parliament in order to make it representative, rather than disproportionately increasing them.

Further, it is recommended that governments need to create and support a favourable environment for effective law enforcement to thrive. Government effectiveness in the form of effective law enforcement is critical to ensuring that corrupt acts are punished to serve as a deterrent to others in order to break a cycle of impunity. The success of the enforcement strategies lies in the strength of the legal framework, law enforcement agencies, and an independent court system. Therefore, governments in Africa need to equip and empower law enforcement agencies and the court system without interference from the political elites.

Again, there must be a deliberate reforms and credible auditing system geared towards safeguarding and improving the financial management system of countries within the continent in order to curb corruption (Transparency International, 2016). African governments need to build transparent, proficient and accountable institutions and also, implement anti-corruption programs that fit their culture (World Bank, 2018). Governments must deliberately increase access to information. This will increase the responsiveness of governance bodies, while simultaneously having a positive impact on the level of public participation especially women. Again, there must be a conscious effort by governments in Africa in empowering citizens to hold government machinery accountable for their spending and activities in order to reduce leakages and improve the quality of government service. This can be done by embarking on sensitization programs on the right of citizens to hold their leaders to book on the day-to-day management of their respective economies.

The fear of losing advertisement from governments and the ownership structure sometimes causes the media not to investigate alleged corrupt acts of government (Herman & Chomsky, 2010). Therefore, there must be a deliberate effort by the country-specific media commissions to innovatively assist the press financially so that they can carry out their mandate as watchdogs over government activities. One of these strategies can be government subsidies to media institutions. Again, like Shardow & Asare, (2016) opined that press freedom is not enough until it is liberated from partisanship and its dependence on the ownership structure. Therefore, there must be legal structures to detach ownership from the press in order to make the media's work effective.

The GDP per capita growth of a country represents the standard of living of the people within the country. Since GDP per capita is significant in the fight against corruption, governments must embark on policies that aim at improving the standards of living of the people by engaging in developmental projects and improving the minimum wages and salaries within their respective countries.

To ensure that the benefits of urbanization in the fight against corruption is fully achieved, policies meant to increase urbanization needs to ensure the accessibility of infrastructure and amenities to complement urbanization. Again, social services like housing, health care, decent work, safe environment and most importantly education, must also be provided for the vulnerable. This would help enlighten them to constructively criticize activities regarding corruption.

6.3 Areas for further research

This work finds women participation in the labor force not significant in combating corruption. Nonetheless, women in the labour force give a broad category and this poses a difficulty in accounting for the relevance of duty and power divisions in the fight against corruption coupled with the homogeneous groupings of women (eg. educated and non-educated women). For instance, the relationship between women in clerical positions, senior-level, decision-making, subordinating positions and corruption, could not be accounted for. Again, the heterogeneous nature of women Therefore, future researches may focus on the relationship between corruption and different levels of women participation in terms of their respective duties and level of power holding within the labour force such as clerical positions, senior-level, decision-making and other subordinating positions accounting for culture and other relevant factors purported to fight corruption in Africa.

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Appendix I:

Table I: List of the 46 African countries used in the study

Central Africa	Ethiopia	**Southern Africa**	Cote d'Ivoire
Burundi	Kenya	Angola	Gambia
Cameroon	Madagascar	Botswana	Ghana
Central African Republic	Mauritius	Lesotho	Guinea
Chad	Tanzania	Malawi	Guinea Bissau
Congo	Uganda	Mozambique	Liberia
Congo, Dem. Rep.		Namibia	Mali
Equatorial Guinea	**North Africa**	South Africa	Mauritania
Gabon	Algeria	Zambia	Niger
Rwanda	Egypt	Zimbabwe	Nigeria
Sao Tome and Principe	Libya		Senegal
	Morocco	**West Africa**	Sierra Leone
East Africa	Sudan	Benin	Togo
Comoros	Tunisia	Burkina Faso	

Source: United Nation classification of countries

Appendix II

Table II: Long-run GMM for the significant independent variable (Women Participation in Parliament)

VARIABLE	Model 1	Model 2
Women in Parliament (%)	-.3045**	-.2717**
	(.1409)	(.1331)
Sub-regional dummies	-	Yes

Long-run estimates (Captured from stata 13)

(a) Estimate for model 1

```
. nlcom (_b[wo_parl])/(1-_b[L1.ncpi])

       _nl_1:  (_b[wo_parl])/(1-_b[L1.ncpi])
```

ncpi	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
_nl_1	-.3044713	.140901	-2.16	0.031	-.5806322	-.0283103

(b) Model 2 -with the sub-regional dummy

```
. nlcom (_b[wo_parl])/(1-_b[L1.ncpi])

       _nl_1:  (_b[wo_parl])/(1-_b[L1.ncpi])
```

ncpi	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
_nl_1	-.2717509	.133081	-2.04	0.041	-.5325848	-.0109169

Appendix III

Pooled bi-variate scatter plot for the relationship between Corruption Perception Index and the other control variables.

Table III(a): Bi-variate Relationship between Corruption and Urbanization

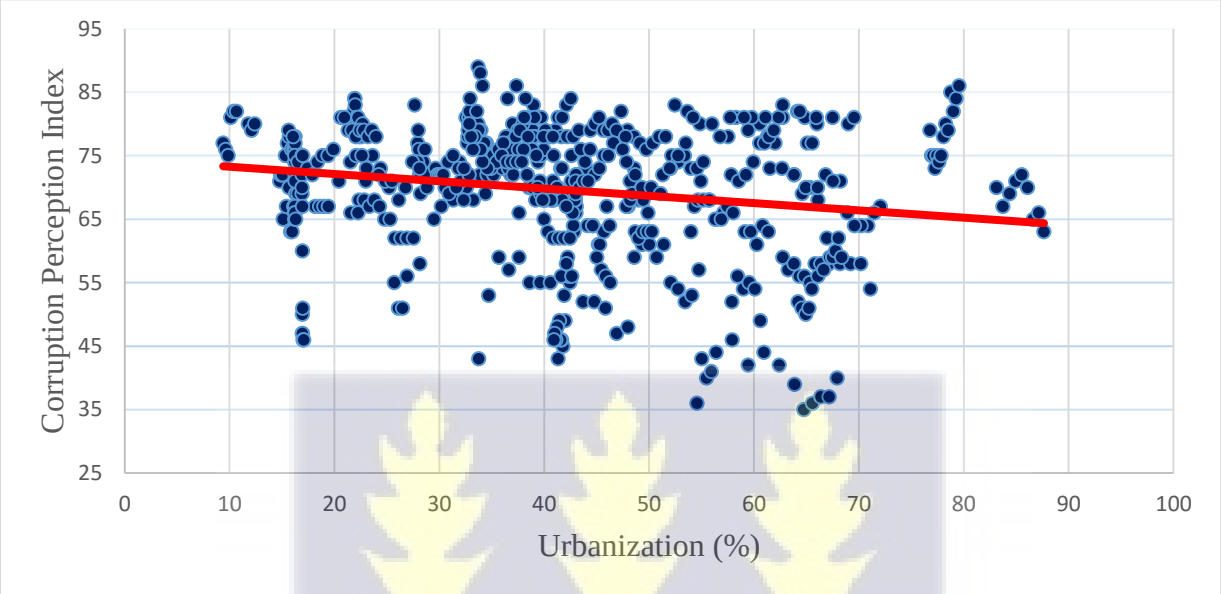


Table III (b): Bi-variate Relationship between Corruption and Government Effectiveness

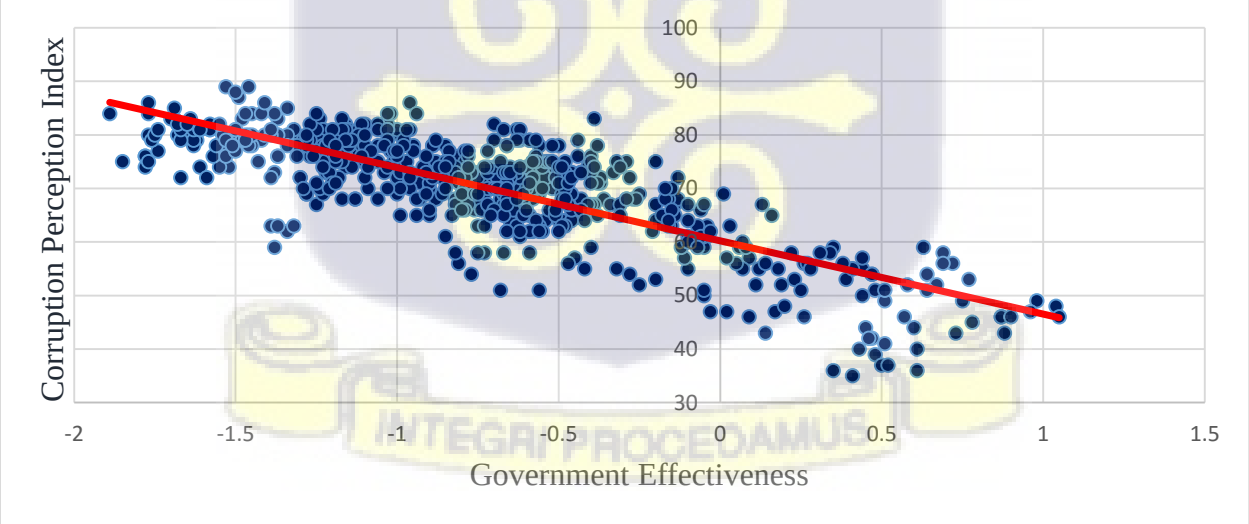


Table III(c): Bi-variate Relationship between Corruption and Per capita growth rate

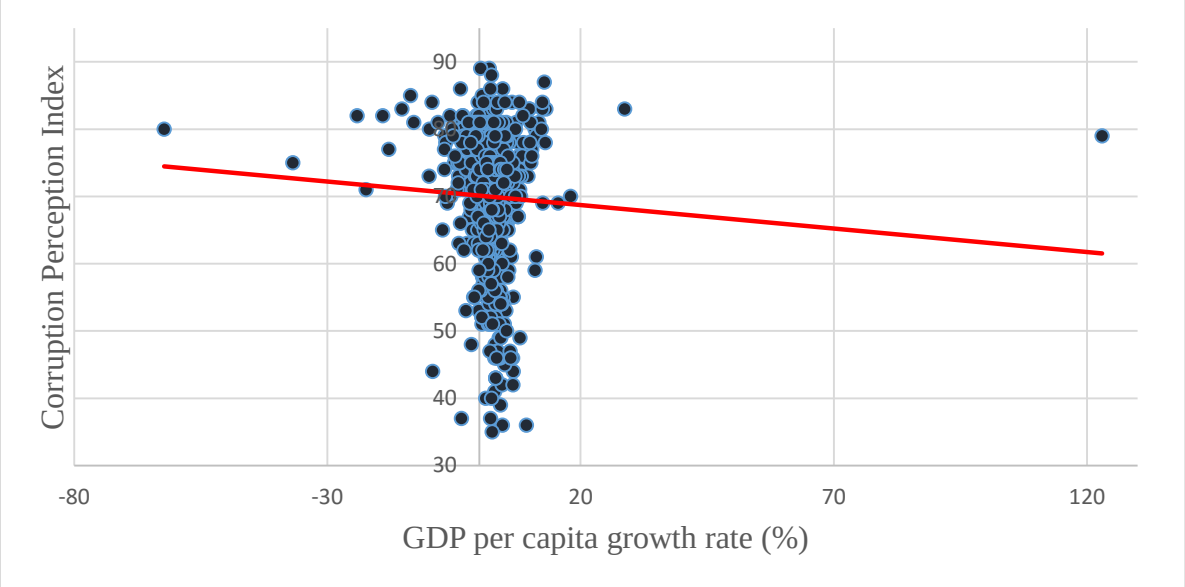


Table III(d): Bi-variate Relationship between Corruption and Natural resource rent

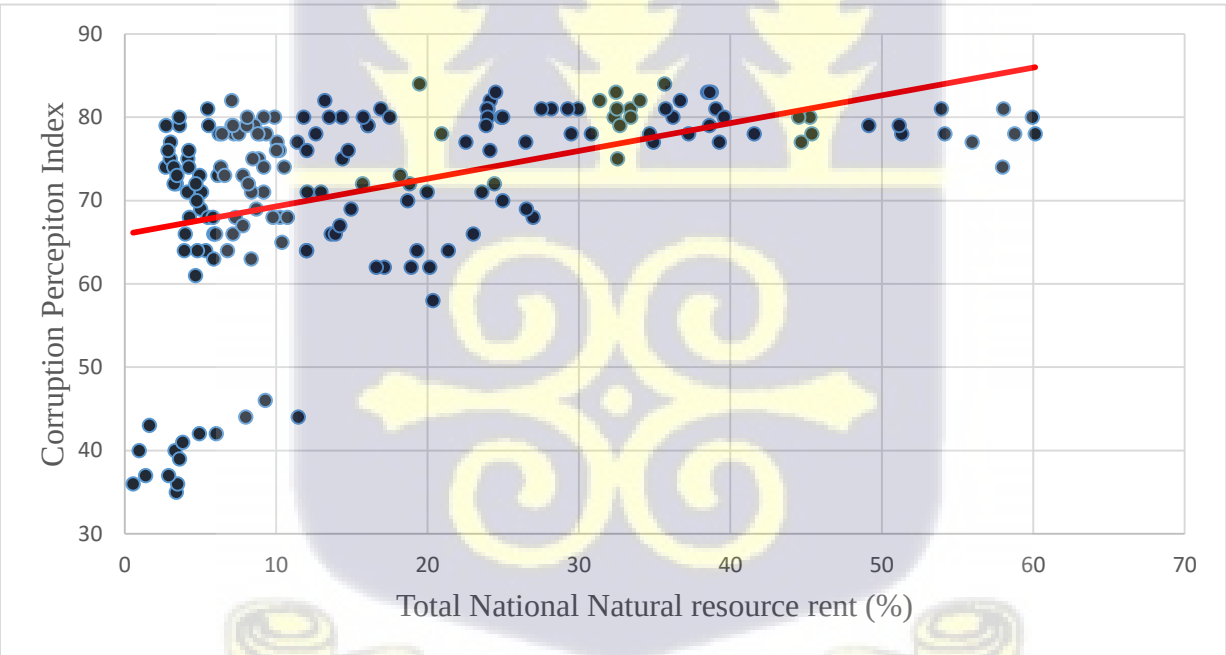
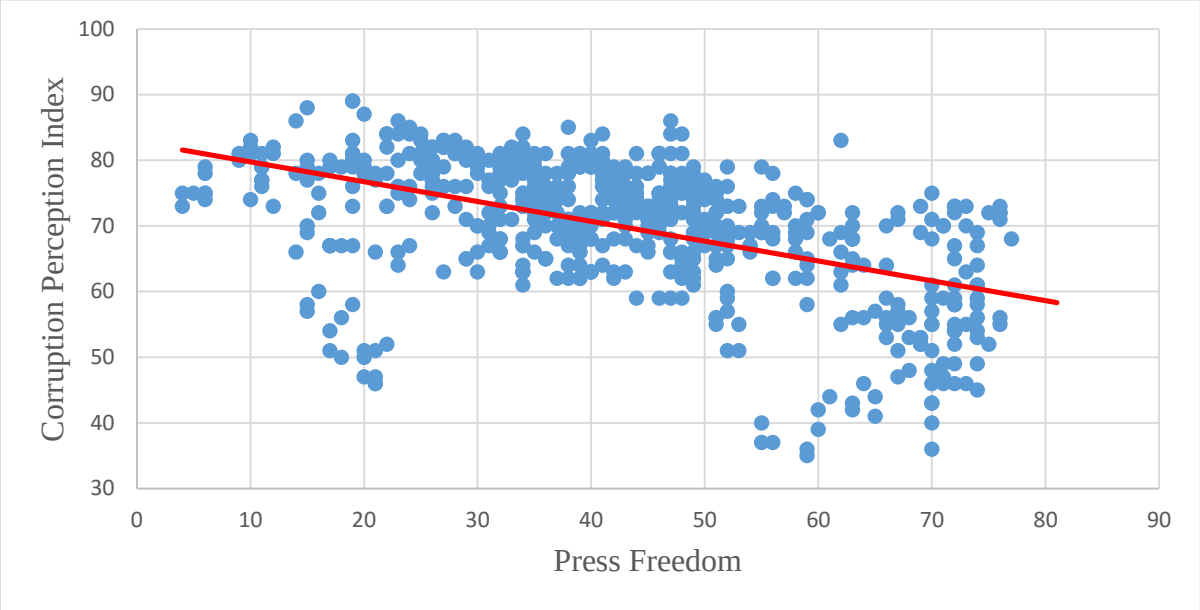


Table III (e): Bi-variate Relationship between Corruption and Press Freedom



Appendix IV

Table IV: Correlation Matrix									
	cpi	l.cpi	wo_parl	wo_laf	gdp_pcg	gef	urb	pf	nrr
Corruption Perception Index (CPI)	1								
Lagged Corruption Perception Index	0.9599*	1							
Women in Parliament (%)	-0.2197*	-0.201*	1						
Women in the labour force (%)	0.0779	0.085*	0.189*	1					
GDP per capita growth	-0.049	-0.035	0.050	0.003	1				
Government effectiveness	-0.8114*	-0.809*	0.287*	-0.134*	0.091*	1			
Urbanization	-0.2032*	-0.209*	-0.167*	-0.4643*	-0.051	0.099*	1		
Press Freedom	-0.5124*	-0.513*	-0.0636	0.1159*	0.036	0.522*	0.011	1	
National Resource rent	0.3887*	0.385*	-0.1333*	0.0282	-0.031	-0.484*	0.264*	-0.398*	1
Source: Author's calculation									

Appendix V

Table V(a): Test for the significance of Sub-regional dummies

testparm _Iregion*

(1) _Iregion_CA = 0
(2) _Iregion_WA = 0
(3) _Iregion_SA = 0
(4) _Iregion_NA = 0

chi2(4) = 12.6
Prob > chi2 = 0.0134

Source: Author's calculation

Table V(b) Test for the significance of year dummies

testparm _Iyears*

(1) _Iyears_2003 = 0
(2) _Iyears_2004 = 0
(3) _Iyears_2005 = 0
(4) _Iyears_2006 = 0
(5) _Iyears_2007 = 0
(6) _Iyears_2008 = 0
(7) _Iyears_2009 = 0
(8) _Iyears_2010 = 0
(9) _Iyears_2011 = 0
(10) _Iyears_2012 = 0
(11) _Iyears_2013 = 0
(12) _Iyears_2014 = 0
(13) _Iyears_2015 = 0

chi2(13) = 154.61
Prob > chi2 = 0.000

Source: Author's calculation