Doctoral Dissertation:

Corruption in Developing Countries:
Case Study of Libya

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Corruption in Developing Countries

CASE STUDY OF LIBYA

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Abstract

A major issue that developing countries struggle with is corruption. Majority of these countries grapple with elevated populations and diminished employment rates. The majority of individuals elected to leadership posts in developing countries seem to concentrate of embezzling funds, rather than addressing the electorate's needs. Through the embezzlement of funds, citizens never receive their basic services from governments.

The main common feature among all Arab communities, which has a direct and negative impact on the administrative apparatus and official transactions and thus the outbreak of manifestations of administrative corruption, is the priority of the interest of the family, the clan, and the sect, over the public interest. This characteristic is unparalleled in developed countries.

In some developing countries, corruption has forced the governments to establish institutions to address it. Having been identified as a vice, corruption has attracted the attention of authors who agree about the need for concerted efforts in dealing with corruption. There are suggestions about institutiong and practicing financial transparency as a tool to diminish corruption levels in developing countries. Financial transparency entails the provision of regular updated information about a country's financial objectives and expenditure. Financial transparency, as a corruption-curbing tool, enhances the tracking and monitoring of different institutions regarding their financial expenditure in comparison with the stipulated financial objectives. This paper seeks to reveal whether political goodwill, institutional frameworks and technological advancements, used together with financial transparency, can limit corruption in these countries.

Contents

List of Tables

List of Figures

Chapter One: Introduction

Corruption is the falsification or misappropriation of a process or interaction with one or more persons with the purpose to get specific gains or privileges. It normally contaminates the individual or enriches the fraudulent organization. Corruption can exist in all fields such as trade, business, and politics, amongst others. Corruption is an evil that affects both developed and developing nations and Libya is no exception.

Corruption could be defined as the use of one's position as a manager of public service for personal benefit. Although corruption exists in the public and private spheres, this research focuses on corruption in the Libyan public sectors. Corruption refers to unilateral abuses by state agents (embezzlement, nepotism, etc.), as well as abuses linked to public and private actors (bribery, extortion, influence money laundering, and fraud).

However, it makes it a very clear and simple concept: to use one's position as manager of public service for personal benefit (Rose-Ackerman, 1999). This is the designation that the World Bank (2018) favors; even if some criticize him for taking into account only fraud and embezzlement in the public segment. There are no major differences with additional explanations of corruption. According to the Encyclopedia Britannica, the term "corruption" denotes deceitful, and typically illegitimate conduct aimed at gaining personal or other gains." Almost all of the underlying surveys utilize definitions related to those utilised by Transparency International (2018), namely the misappropriation of his managerial position in the public service for personal benefit only.

One element that contributes significantly to corruption is inefficiency bureaucracy, which diminishes the transparency of regulations, thereby decreasing accountability (Dimant & Tosato, 2017). From this statement, it can be observed that where regulations are less transparent, there are high probabilities of misusing them, which leads to decreased accountability. Individuals accorded authorization responsibilities can easily misuse them

because the responsibilities are not well known to many people. If a significant majority of people are aware of the regulations, then they can ask the authorization officer questions if they feel the regulations have been contravened. Accountability is attained because the authorization officer can be held accountable by the individuals who understand the regulations and how they are supposed to be applied. However, when the regulations are less transparent, the number of people who know about their existence is limited. This means that even when the authorization officer contravenes the stipulated regulations, there may be no people to hold them accountable because the people are not aware of the contents of the regulations.

Lack of press freedom can also significantly contribute to corruption (Dimant & Tosato, 2017). The press has the power to spread and promote anti-corruption norms including augmenting the probability of social cost by publicly shamming corrupt individuals (Dimant & Tosato, 2017). The public display of corrupt behavior can be extremely costly, socially, particularly to the involved individuals, whose image and reputation would be negatively affected for their involvement in corrupt behaviors. Where press freedom does not exist, there is no probability that personalities engaged in corrupt behaviors would be publicly shamed. Therefore, there is no probability of social cost for corrupt individuals because the names of such people would not be published in the media. Therefore, it can be argued that press freedom acts as a deterrence to corrupt behaviors(Dimant & Tosato, 2017).

Economic freedom is also a factor that influences corruption(Dimant & Tosato, 2017). The presence of economic freedom limits the probability of engaging in corrupt behavior. Economic freedom means there are no limitations to how people can generate products, sell, and utilize their resources. With such freedom, there are reduced opportunities for engagement in corrupt behavior(Dimant & Tosato, 2017). Where economic freedom is limited, people may easily engage in corrupt behavior as they try to access the only available

avenues. For example, with limited avenues to sell, people may be forced to bribe in order to ensure that their products are sold through the only allowed channel or platform. However, where there are unlimited avenues to sell, there are limited chances of engaging in corruption because people do not have to compete for a single avenue or platform.

1.1 Background Information

Several scholars have glorified financial transparency as a tangible solution for confronting corruption in developing republics. Findings by Brusca, Rossi, and Aversoni (2017) indicate that financial transparency entails the revelation of crucial financial information to the relevant stakeholders to assist in tracking and monitoring the performance of specific institutions. Several authors also agree that financial transparency is significant in safeguarding against abuse of power by leaders. For example, transparency is associated with the promotion of good governance, decreasing the probability of corrupt behaviors, strengthening reform-initiated objectives, promoting financial tracking by citizens, improving affiliations between government workers and citizens, and enhancing the monitoring and controlling of government employees' behaviors (Bertot *et al.,* 2010). Transparency also plays a significant role in promoting and augmenting efficiency in resources allocation by decreasing principal-agent challenges (del Sol, 2013). Transparency also offers an improved framework for efficiency, development and economic growth by enhancing governance by reducing corruption probabilities (del Sol, 2013). Transparency brings about accountability and reduces corruption because all stakeholders, including the public, are aware of the financial undertakings in the government and its plans on expenditure (Lupu & Lazar, 2015). Transparency ensures that sufficient information is available for outside investors to demand accountability from directors and officers accountable (Malagueño*et al.,* 2010). Additional research also finds that transparency serves as a significant, good financial government

ingredient (Ameen & Ahmad, 2011; Bauhr & Nasiritousi, 2012)).These authors' statements

are founded on financial transparency's reality in enhancing the easy perusal of financial

records by stakeholders including the public, auditors, public and private entities, and the

international community. Neglection of financial transparency can promote a conducive

environment for abuse of power or additional vices such as corruption. Misuse of power by

leaders in most occasions leads to illegal accumulation of wealth, which hinders citizens'

success.

Citizens' development and success cannot be attained because the money intended for

public development is normally diverted to people's pockets. When corruption is manifested,

citizens' access to medical health and additional essential services are highly jeopardized.

Therefore, it is important to ensure that appropriate measures to curb corruption are

implemented. Additionally, governments should embrace and implement the prosecution and

eventual sentencing of corrupt individuals. Olken and Pande (2012) carried out a study that

indicated the prevalence of corruption in countries with diminished institutional transparency

and accountability levels. Interestingly, the majority of such countries are in the category of

developing countries (Peisakhin& Pinto, 2010). Specifically, Olken and Pande (2012)

indicate that transparency in core financial management areas such as procurement, payment,

contracting, and revenue distribution enhances accountability, which in turn lowers

opportunities for engagement in financial impropriety practices such as pilferage, fraud,

bribery, and wastage. Considering that corruption involves people in positions of power, it is

justified to argue that institutional transparency and accountability can be a good solution

towards creating a culture of financial prudence in developing nations (Graycar& Smith,

2011).

The World Bank and other global bodies believe that transparency and accountability

are the panaceas for ending corruption in developing nations. Jim Yong Kim, the President of

the World Bank, has been on record several times calling nations of the world to share more financial information with citizens as a way of discoursing graft related- challenges (Johnson, 2016). Specifically, Kim contends that different institutions, including international and private entities, governments, and civil societies are focusing on a new path that seeks to enhance citizen's quest for accountability and transparency by drawing on available tools and partners (World Bank, 2016). Arguably, this sweeping assertion is based on the reality that the war against corruption is not only a responsibility of the government and that other stakeholders such as members of the general public, civil society, international community, and private sector must equally be active. Ferry and Eckersley (2014), Johnson (2016), and Shah (2007) support this school of thought by showing that financial transparency is built through collaboration and goodwill between stakeholders. For example, a public institution such as parliament or judiciary can enhance its quest towards building high levels of financial transparency and accountability by working closely with regulators such as the office of the auditor general and civil society groups. However, Kim believes that transparency and accountability can be more effective if other factors such as the use of modern technology can be utilized to make it easy for stakeholders to access information regarding public expenditure. He cites the case of India where government officers use biometric smart cards to access and allocate funds for public projects. Specifically, Kim shows that this approach increased service delivery in the county by 35 percent (World Bank, 2016). Overall, financial clearness can be a very effective tool for fighting corruption when combined with technology.

Transparency fights corruption marginally. A recent study conducted by Strimbu and Gonzalez (2018) to investigate whether transparency achieved through monitoring the actions of public officers can reduce incidences of corruption found that indeed corruption is lowered when crucial financial information is available for scrutiny. However, the authors show that such an effect is only at a marginal level. The authors show that corruption is lowered when

public officers are held to account for their actions. There are incidences when the level of corruption goes over the roof, especially when public officers begin to demand high kickbacks to compensate for the high deterrence measures taken. Liu et al., (2017) support this school of thought by showing that such countermeasures could be detrimental if a country lacks other prevention measures such as investigative units, prosecution, and asset recovery bodies. Further, Lopez (2017) shows that corruption levels depend on the level of opaqueness in a country considering that high opaqueness leads to widespread but low-level corruption whereas low opaqueness leads to less widespread but high-level corruption. This argument demonstrates that when there is an increased level of transparency, persons occupying public offices will increase the amount of bribe they take in a less widespread manner.

Even so, financial transparency does not always lead to low corruption levels. On their part, Liu et al., (2017) and Lopez (2017) show that whilst financial transparency is a good thing; there is a dark side to it. They illustrate that rent-seeking bureaucrats use available information to engage in corrupt behavior. In effect, Lopez (2017) contends that this situation increases the costs associated with financial transparency while at the same time promoting more corruption. Arguably, this situation is prevalent in countries that have weak institutional frameworks for fighting financial imprudence. Considering that Olken and Pande (2012) show that developing nations have weak institutional frameworks for fighting financial imprudence, it is justified to argue that financial transparency alone cannot end corruption. At the same time, it is justified to argue that Liu et al., (2017) finding cannot be interpreted to imply that financial transparency is a bad thing for fighting corruption in developing nations. The authors demonstrate that when coupled with institutional frameworks, transparency can play a pivotal role as a panacea for fighting corruption in developing countries. Past works of Graycar and Smith (2011) support this interpretation as

they found that financial transparency brews accountability, which in turn increases the integrity threshold of individuals holding positions of power. For example, the study found that financial transparency is increased when individuals running public organizations such as schools, ministries, and hospitals are held accountable for all their actions. In turn, such increased levels of financial transparency lower the prevalence of corruption in society.

The war against corruption in developing nations cannot be won through a single battlefront. Evidence drawn from a recent policy pull out published on Transparency International's (2020) official website shows that there is no silver bullet for fighting corruption. The article goes ahead to demonstrate that whilst many countries have successfully minimized corruption by using one or several methods, there is no single best practice that can be applied in all situations (TI, 2016). This argument echoes the work of Liu et al., (2017), Lopez (2017), and Strimbu and Gonzalez (2018) in the sense that it acknowledges that financial transparency alone cannot end corruption as persons occupying positions of power will always look for new loopholes to engage in fraud. The article written by Transparency International (2016) goes ahead to show that there are at least five practical approaches that can be utilized by developing countries to fight corruption. These five solutions are embracing transparency and access to information, sealing international loopholes for stashing and hiding stolen funds, empowering citizens to hold public institutions to account, ending impunity through a stringent criminal justice system, and streamlining public financial management systems (TI, 2016). A review of these five solutions makes it clear that the war against corruption cannot be won by a single measure. Just as Liu et al., (2017) and Lopez (2017) argue that there should be robust institutional frameworks that bring together several stakeholders and policies for fighting corruption, it is arguable that TI's solutions are based on the reality that corruption can be effectively fought

when members of the public take proactive roles. However, financial transparency still occupies a salient role in the war against corruption in developing countries.

One significant enabler of fighting corruption in developing countries is government or political goodwill (Yadav, 2011). Many developing countries, such as in Africa, have issues with political goodwill, because of the lack of proper democracy (Asongu, 2013). Where democracy does not exist, it can be challenging for the government to enlighten the public of its intended objectives, or even for the public to stand against irresponsible governance. Many African countries struggle with autocratic leadership, where leaders tend to extend their terms in power by disregarding any constitutional guidelines existing in those countries (Diamond & Plattner, 2010). Furthermore, the majority of the governments in these developing countries tend to concentrate on illegitimate accumulation of wealth without caring about the public. The governing elite tends to become wealthier while the electorate suffers in extreme poverty, lack of education, and poor health outcomes. In many of these countries, citizens' quest for accountability is thwarted using autocratic means such as the use of unnecessary force by the police or even death. Governments tend to oppress the populace without any regard to human rights(Diamond & Plattner, 2010). This in turn leads the leaders to plan on ways of sticking to power to amass more wealth and continue dwelling in affluence while the electorate suffers in poverty.

The presence of political goodwill means that the ruling class is considerate of the issues affecting the public and is ready to work on moderaties that would solve those issues. Where political goodwill exists, governments, or political leaders institute strategies that recognize corruption as a vice(Yadav, 2011). Through political goodwill, governments involve their electorates on the country's financial wealth, the intended objectives, the accomplished and unfinished projects. Through political goodwill, the desire to curb corruption starts from the executives toward the electorate(Yadav, 2011). The government

ensures that other necessary institutions are operational by ensuring they access all their

desired tools and resources. For example, if a country is struggling with valuable and credible

institutional frameworks, governments ensure that the frameworks are instituted (de Sousa,

2010). The government ensures that anti-corruption bodies are operational by ensuring they

have sufficient budget and adequate personnel. From this statement, it can be observed that

political goodwill is linked to other practices that all work toward the attainment of the

objective to curb corruption. Based on the powers accorded governments by the electorate,

the presence of political goodwill ensures that there is cooperation among all involved

institutions toward the curbing of corruption(de Sousa, 2010). Where political goodwill

exists, governments ensure that the anti-corruption agencies are provided with the necessary

powers and independence to operate optimally(de Sousa, 2010). In this sense, political

goodwill translates to the elimination of political bias or government favoritism in fighting

corruption. By providing independence and power to anti-corruption agencies, the

governments ensure that impunity is defeated because corrupt individuals would be treated

impartially (Adaman, 2011). Where political goodwill is absent, favoritism can be

experienced, whereby only a few individuals or entities are prosecuted for their engagement

in corruption. However, where political goodwill is absent, there is selective justice

administration, whereby some people are prosecuted while others are not, even when they

have committed similar crimes (Brown, 2018). In most cases, corrupt government officials

are not prosecuted because they are treated as being above the law. This approach by many

governments in Africa explains the few cases where corrupt government officials are

prosecuted or jailed (Transparency International, 2015).

The element of political goodwill can also not be detached from the need for

independent and robust police force. The police force plays a significant role in investigating

and arresting law breakers(Transparency International, 2016). This means that the police are

highly involved in investigating corrupt individuals and eventually arresting them. However, a weak and corrupt police force is a threat to reducing corruption cases (Transparency International, 2016). In retrospect, a powerful police force may also not be of significance assistance in the fight against corruption if the judicial system is incompetent. The judicial system has a role of making crucial decisions based on the evidence presented by the investigating authorities(Singh, 2015). If a judicial system is weak, there are high probabilities that police efforts would be lost because corrupt individuals may not receive the appropriate punishment (Singh, 2015). If a country's justice system is weak and incompetent, individuals guilty of corruption may not be jailed. The courts may find ways of releasing such people on bail or even finding guilty persons not guilty. Therefore, even with a powerful police force, if the justice system is compromised, the fight against corruption may be jeopardized(Singh, 2015). Many African countries tend to deal with weak justice systems due to the elevated corruption levels (United Nations, 2006). With high corruption levels and extremely large, wealth disparaties among the populace, it is possible for bribery to penetrate the justice system. Political goodwill is related to the justice system because governments are responsible for ensuring that the public receives justice through the appointment of judges and prosecutors. If a government is disinterested in fighting corruption, it will ensure that the judges and prosecuting officers cannot remain independent. It is possible for governments to interfere in corruption cases with the sole intention of defeating justice, particularly where there is no political goodwill. Governments disinterested in fighting corruption can use unethical methods such as threatening of witnesses, prosecutors, and even judges to ensure that those involved in corruption are not punished as expected by law.

From the above findings, it can be observed that fighting corruption is a multi-institutional approach with the major mandate resting with the government. The political class has to have the goodwill to fight corruption in order to equip other institutions with the

necessary resources to fight corruption. Those in governments have to equip the anti-corruption agencies with the necessary financial and human resources to carry out their desired objectives. The government ensures that anti-corruption agencies have sufficient and qualified personnel to carry out investigations and prosecution mandates. Where political goodwill exists, governments ensure that the police are equipped with the necessary tools, financial, and human resources to investigate and arrest offenders. Governments also have a responsible of ensuring that qualified and efficient judges occupy the justice system offices to ensure that corruption cases are handled with strict observance of the stipulated constitutional requirements.

1.2 Statement of the problem

The bulk of the above-reviewed works agree that financial transparency and accountability can address corruption. This is exemplified by the works of Brusca et al. (2017), Graycar and Smith (2011), Ferry and Eckersley (2014), Johnson (2016), and Shah (2007), Peisakhin and Pinto (2010), and Olken and Pande (2012). These studies agree that financial transparency can be more effective in fighting corruption, especially when it is deployed carefully and along side other tools such as political goodwill, technology, and institutional frameworks. Even so, Liu et al., (2017) and Lopez (2017) contend that financial transparency alone cannot solve corruption in developing nations. Arguably, these studies show that financial transparency can only be effective in fighting corruption if it is implemented in environments that embrace political goodwill, technological advancements, and uphold institutional frameworks. Without political support, the fight against corruption will be futile. To this end, leaders of developing nations should initiate the war against graft and seek the support of other leaders. Through this support, it is easy for developing nations to win the war against the vice. Modern technology may play a pivotal role in enhancing

financial transparency. Moreover, institutional frameworks should be put in place to ensure that corrupt leaders are prosecuted. Different arms of government need to work closely to ensure that they fight corruption. These frameworks facilitate the formulation of policies that will make it suicidal for anyone to engage in corrupt activities. This way, most developing nations will be able to curb corruption, thus, ensuring that their populace has decent lives.

Whilst the bulk of these studies were carried out in the context of developing countries, their conflicting findings make it hard to arrive at a conclusive verdict regarding the correlation between financial transparency and corruption in developing nations. Specifically, the conflicting results make it unclear if financial transparency is a good tool for fighting corruption. Notably, corruption has been labeled to be a "cancer" that hinders development in developing nations (Lopez, 2017). Therefore, it is prudent to argue that there is a need to undertake a new study to arrive at a more conclusive finding that policy makers and other stakeholders alike can rely on when developing new models and strategies for fighting the vice. This urgent need forms the basis of this study. Explicitly, the study reviews existing data and uses it to interpret the findings of analyzed data collected from the Transparency International (2018) transparency and corruption indices.

1.3 Purpose of the study

The purpose of the study is the analysis of the factors that lead to corruption in Libya as an example of a developing country. Libya mainly depends on the export of crude oil for the country's economic well-being; Libya's per capita income is one of the highest across the entire continent of Africa (Heritage Foundation, 2019). Yet politically, the country has been plagued by instability especially after its ruler Col. Muammar Gaddafi was overthrown in 2011. Several warring factions vie for power in this country, which creates institutional instabilities and rich opportunities for corruption and other legally doubtful financial

maneuvers (Wijaya & Shariha, 2016). The National Transition Council (NTC) experienced

internal wrangles which culminated into Benghazi clashes in 2012 (Moore,2015).

Additionally, the government struggled to defeat local militia who ruled Zintan in Libya's

western region(Moore,2015). Several challenges such as ineffective state bodies and a

deteriorating security situation in Libya further jeopardized the attainment of tranquility in

the country, forcing the extension of the tenure of the interim Constituent Assembly by a

year(Moore,2015). Before the end of the interim Constituent Assembly's tenure, Zeidan, who

had been elected the first prime minister in Libya to replace Mohammed Magarief in 2011,

had to be dismissed(Moore,2015). Zeidan's dismissal led to the election of Ahmed Maiteg, a

businessman, in March 2014. However, Ahmed Maiteg's election provided an opportunity

General Khalifa Haftar, a self-styled National Army renegade, to convince some members of

the country's armed forces to reject Maiteg, claiming that Maiteg was promoting an Islamic-

majority legislature(Moore,2015). Haftar and his associates planned and carried out attacks in

Benghazi and Tripoli in May 2014. As a rejoinder to Haftar's attacks, Nouri Abusahmain, the

General National Congress (GNC) speaker persuaded the Libyan Shield Forces (LSF) to

protect the legislature, an influence that saw the formation of a Shura Council in Benghazi

with the intention of uniting Islamist militias that were previously disunited(Moore,2015). .

The battles between Hafter's forces and the united Islamist militias contributed to

indescribable institutional and infrastructural damage. Furthermore, the heavy defeat suffered

by the Islamists militias led to internal hostilities among the militias. Militias who pledged

their loyalty to the old parliament fought heavily with those whose allegiance rested on the

of new parliament. Based on the extent of the violence in Benghazi, the GNC chose Tobruk

as their meeting place to decide on the rising hostility. However, Islamic parties and many

parliamentarians such as Misrata perceived GNC's choice of Tobruk negatively because they

perceived it as a Haftar stronghold (Hassan-Bello, 2017). Therefore, Mislate and his

associates declined participating in Tobruk's parliament and joined with parliamentarians who had lost the election to constitute a 'rump parliament' which voted the newly constituted parliament, out. The escalating security issues forced foreign diplomats, foreign workers and United Nations' staff to withdraw from Libya. Libya Dawn, a Misrata-based group took over Tripoli airport, while Ansar al-Sharia, a group that had been responsible for the September 2012 U.S. embassy, won control over large parts of Benghazi(Moore,2015). These events made Libya ungovernable and only contributed to the escalation of tension among country members, who now saw themselves as members of different-group affiliations, rather than Libyans. There were power struggles as each group wanted to claim ownership to the oil resources in the country, which were seen as avenues to wealth and power(Moore,2015).

Thus, it is likely that lack of transparency alone will not account for any level of corruption observed in that country; if the economy and thus the standard of living are instable, individuals - including public administration officials - will be less accountable for their actions, either out of fear from repercussions, greed and the desire to take advantage of the reduced legal oversight, or indifference. Individuals may easily succumb to the desire to keep themselves and their families alive and thus see maintaining accountability for themselves and others as an item of low priority (Heydemann, 2018).

In the same vein, political goodwill is likely hard to come by in a country that is essentially ravaged by Civil War; as a result, we can observe reduced social cohesion, loss of property and way of life, death, hundreds of thousands of internally displaced citizens, and a massive influx of refugees from other war-torn African countries that either pass through on their way to Europe or stay within the country (Fitzgerald, 2018). Besides, it is unclear if and how political Goodwill can be communicated throughout political and governmental hierarchies, from the central down to the local level; despite a brief period of societal peace after Gaddafi's ouster between 2011 and 2014, which can be seen as "a 'golden age' of

constitutional activities" down to the grassroots level, the suggested policies were not persuasive enough to prevent the gathering Civil War from 2014 onwards (Geha &Volpi, 2016).

Institutional frameworks are unlikely to maintain maximum efficiency in politically, militarily, and socially destabilized countries as well. Such frameworks include legal, economic, healthcare, and educational organizations that are provided by the government and form the infrastructure and provide the rules and protocols on how government power gets applied across the country and among citizens; they also determine how individuals will be able to interact with the government. However, it is important to observe that there is a difference in how institutional frameworks are applied across the population. A de jure inclusion refers to implicit inclusivity implemented within an organization; a de facto inclusion refers to inclusion in practice. Genauer (2018) compares power transitions in contested states, using Tunisia, Iraq, Egypt, and, coincidentally, Libya. The author finds that support for any political system is contingent on de facto, not de jure, inclusion. This suggests that items that are 'written into protocols' have a limited persuasiveness and impact; it suggests that corruption can only be fought if institutional frameworks are geared to put their guidelines into practice, which is a challenge in a destabilized nation (Genauer, 2018).

Lastly, the availability of technology has been described as having a potential impact on the level of corruption within a specific country; while technology can be used to make transactions more transparent, it can likewise be used to make those transactions opaquer, which of course increases the risk of corruption to occur. In the context of potential corruption and financial and administrative mismanagement, technology refers mostly to ways in which internet is available across the country, especially in the context of mobile penetration; the level of innovation; public access to information when using digital media; and how the government takes advantage of technology to deliver its services to the public.

Unfortunately for Libya, technological freedom is only partial; only one-fifth of the country has access to the internet, likely at least partially thanks to the ongoing destruction from Civil War activities. Moreover, while the Libyan government does not block access to political content itself, it has the right to prevent certain social media platforms from taking hold, and it even has arrested users in the past for critical comments about the Government. Taken together, technology is neither free nor universally accessible in Libya, which may hamper the further use of technology to decrease corruption (Refworld, 2018).

Taken together, Libya is a good case example to use for our analysis of corruption in developing countries, as many of the factors that potentially contribute to increased corruption are present; the country can, therefore, serve as a positive baseline for how much lack of technological coverage, institutional frameworks, accountability, and transparency may be able to contribute to corruption. Thus, the country can serve as an antipode to intact societal institutions in developed countries, and we can expect developing countries that are not affected by Civil War, such as Angola or Bangladesh to fall somewhere between Libya and a developed, 'Western' country like Switzerland or New Zealand. There are, however, two caveats when focusing the analysis on Libya.

First, even though several of the factors that may increase corruption are present in the country, it is possible that the reality of the Civil War - for example, tribalism and the threat of violence - have an additional effect on corruption, or may act on corruption through an institutional framework. In other words, in our analysis, we may correlate the ineffectiveness of institutional frameworks or other factors with an increase in corruption, when in fact institutional ineffectiveness is only a readout of the chaos that the Civil War has brought about. Second, Libya is just one country, and any linear regression analysis is built on the analysis of multiple independent data. Thus, we need to either compare Libya to other developing countries, or we must analyze the factors that may contribute to corruption in the

country, which may give more specific insight compared to using data from multiple countries.

Another caveat that we have so far completely neglected in our discussion is the impact cultural forces have. It may be, that despite the influence economic factors have on corruption levels in Libya, cultural consideration may have a strong impact as well. For example, it may be that religious consideration will prevent some people from engaging in acts of corruption; after all, undue profit from financial transactions, for example, usury, is frowned upon within the Islamic faith. It may well be that this mindset extends to corruptibility as well (Hasan-Bello,2017).Also, the purpose of this study is to obtain the views of as many participants as possible, in which the researcher's main purpose is to find the most salient aspects of a topic. Hence, it requires constructing the questionnaire (see Appendix) in such a way so that it is specific enough to reveal answers to the questions.

1.4 Theoretical Framework

This study will adopt a quantitative research design. As evidence from the work of Zikmund et al., (2012) shows, a quantitative research design is characterized using scientific or statistical methods to sample, gather, analyze, and interpret data. This design is therefore objective and can reduce researcher biases. Besides, the study's subject area is scientific and as such requires the collection and analysis of quantitative data using statistical methods. As Bryman and Bell (2015) illustrate, such an approach will allow scientific inferences based on the association of the study's dependent variable with several independent variables. Specifically, this study will adopt a correlation-based quantitative design whose core attributes are establishing the association between two or more variables using statistical methods such as multiple regression (Punch, 2013). That way, the study can establish whether financial transparency may help address the runaway challenge of corruption in

developing countries. Moreover, the study will focus on Libya as a model for a developing country.

From the information above, the study's main hypotheses or questions are therefore as follows:

1. What is the impact of financial transparency on corruption?

2. What is the impact of modern technology on corruption?

3. How does political goodwill influence corruption in Libya?

4. What is the role of the institutional framework on corruption in Libya?

1.5 Research Objectives

The objective of this research is to contribute to the understanding of the relationship from the perspective of public officers in the Libyan government department. To pursue this aim, the study solicits opinions of six important groups of respondents namely, (i) the Ministry of Finance; (ii) the Libyan Audit Bureau; (iii) the Libyan Transparency Association; (iv) the Non-tonal Anti-corruption Committee; (v) Central Bank of Libya; and (vi) Academic, Scholar personals.

In line with the above objective, the study endeavors to state the following points of research objectives:

1. To explore whether (and to what extent) financial transparency and accountability can help minimize corruption in Libya one of the African developing countries.

2. To find out wither rent-seeking public officers can utilize publicly available information to devise new ways of perpetuating corruption in Libya as one of the African developing nations

3. To establish if other factors such as technology, political goodwill, and institutional frameworks can help to minimize corruption Libya as one of the African developing countries.

4. To recommend the best course of action that developing nations can utilize to fight corruption.

1.6 Limitation of this research

Time limitation was the core factor behind the decision to utilize secondary data instead of gathering data from the field. As evidence adduced by Bryman and Bell (2015) suggest, secondary data accessed from an authentic source such as TI, World Bank, EIU, World Economic Forum, and US News would be ideal for the study, since time and resource limitations may not allow the researcher to collect primary data from developing countries. Besides, the indices data is updated yearly and as such, it can be utilized to establish corruption patterns across several years, as developing countries increase their levels of financial transparency. TI (2018) shows that the data can be gathered using surveys, which measures the perceptions of experts and business people regarding the level of public sector corruption in their area. Arguably, this makes the survey results/data reliable, and as such, they are trusted upon for this and other studies.

Libya is a country that depends heavily on oil production as an economic resource for its Gross Domestic Product (GDP). As a developing nation, it has a low inequality-adjusted human development index (Paganetto, 2017). The country was selected out of a convenience-based sampling method for oil-rich developing countries mostly located in the Middle East region (Johnson and Christensen, 2012). However, for purposes of creating a comparative effect, the Libya analysis will be compared to analogous data from developed nations, which are defined as nations with a high inequality-adjusted human development index (Paganetto,

2017). This comparison will help to establish whether transparency has the same effect of fighting corruption in both developed and developing nations. This way, the study will effectively address the core limitation regarding conflicting results in the existing studies reviewed in section 1.1 (background), which are summarized in the problem statement.

1.7 Conclusion and suggestions for further research

High levels of transparency among politicians and civil servants combined with accountability among citizens are among the best strategies to curb corruption, subsequently promoting economic development and improving the quality of life for citizens living within the corresponding country. However, it is not entirely clear whether transparency and accountability are the most efficient ways to curb corruption, as these two factors have not yet been thoroughly analyzed quantitatively. New ways need to be developed to engross citizens with improved accountability and to improve the levels of transparency among their leaders and civil servants. These sentiments are echoed in a 2018 article from the *Open Government Partnership* which states that a fight against corruption is the first step to ensuring that financial aid and economic developments lead to the desired improvements in development outcomes.

More research could be conducted about how to improve a community's knowledge about the symptoms of corruption; studies into improving Government Transparency are worth studying. Furthermore, such research should encourage its citizens to take more interest in political activities and holding Government representatives accountable for their actions. In this context, if the state invests in research, science, and technology, both economic powers could be increased while finding ways to mitigate corruption. Importantly, citizens in the third world countries need to be trained on electoral democracy, because this may be the most important factor contributing to the increased corruption cases. Without

democratic electoral systems, it may be challenging for governments in such countries to deal with corruption. On the contrary, corruption may continue being entrenched in the countries' governance systems. Governments must be willing to deal with corruption because it can be observed that corruption is entrenched in the police and judicial systems. Therefore, if corruption is to be defeated in the third world countries, the process must start at the ballot. Efforts need to be made to ensure that the public understands the importance of voting wisely and voting democratically. Without democratic voting systems, corruption would continue to prevail in these countries. More research is needed on the importance of voter training in changing the public's perception about governance and provision of services. Furthermore, the public in the third world countries need to be taught about their electoral rights and the right for an individual to choose their favorite candidate without leaning on tribes or clans. If the public understands their rights and how their voting choices impact their lives, then positive change can be observed in third world countries as they embrace democracy, particularly electoral democracy with the aim of rectifying all sectors by defeating corruption.

The essence of electoral democracy is based on the understanding that a democratic electoral process has the potential of ensuring that only the right candidates win elections. Additionally, there are observations that when the right candidates form the government, economic challenges can easily be solved leading to the improvement of economies, such as the improvements in income earnings. Currently, it can be observed that countries where the population experiences low income levels are extremely poor. Leaders in such countries only think about enriching themselves without establishing policies that uplift the public's way of life. Therefore, by having the right candidates form the government, through a transparent and democratic electoral process, chances for the improvement of economies would be high and the public could start enjoying improved quality of life.

The role of the Extractive Industries Transparency Initiative should be encouraged in developing countries. This initiative aims at boosting governance in these countries as well as fighting corruption and bad leadership. Fighting corruption is also boosted by the *Open Government Partnership* which focuses on transparency and accountability in leaders. An advanced relationship should exist between companies in the private sector, countries that export capital, and global financial organizations. Policies that enhance transparency and accountability should be formulated especially in areas such as extraction, monitoring the flow of revenue, and establishment of independent assessing mechanisms. Also, paying more attention to how to improve the institutional framework and adopting modern technology will have a positive impact on decreasing the corruption level. To assist third world countries to deal with corruption, it would be necessary for the developed countries to establish measures that would motivate third world countries to change their corrupt culture. For example, based on the understanding that many of the third world countries rely on raw materials, engineering and health expertise from developed countries, it would be necessary for developed countries to establish sanctions regarding to the sale of their raw materials or engineering or health expertise to third world countries until governments allow the practice of democracy in their countries. The public in the third world countries need to be allowed to participate in free and fair electoral systems without fear or forms of coercion from the government. With democratic governments, it would be easy for third world countries to embrace change, ethics and professionalism, which could lead to an improvement in their economy due to a reduction in corruption cases.

Chapter Two: Literature Review

2.1 Factors affect corruption in developing countries

The world has become integrated into ways that would have been unimaginable three decades ago due to globalization and the sophistication of technology. Globalization is defined as the process of expanding and integrating markets, regulatory frameworks, and international institutions from country to country to create more integrated world governance and economic framework(Maurer & Degain, 2012). Countries have become interconnected in a way such that an event occurring in a specific country can have ripple effects on other countries in other continents(Maurer & Degain, 2012). For example, the financial predicament witnessed in 2008 affected a significant proportion of countries globally. In the United States, for example, the crisis affected businesses and the entire economy was slugging(Maurer & Degain, 2012). Similarly, Europe also witnessed a decrease of about 16% in its economic growth, which countries in Asia and North America witnessed merchandise exports' decline of 5% and 7% respectively (Maurer & Degain, 2012). The rapidly expanding pace of globalization, driven by factors such as the establishment of the World Trade Organization (WTO) and subsequent lowering of market and competition barriers, has led to increased capital mobility and an increased ability of the financial services sector to meet the needs of individuals and companies around the world. Due to the increasing rate of globalization together with the expansion of technology and other factors, has also increased the rate of corruption and new fraudulent activities. These new fraud opportunities can often be extremely difficult to detect due to their technological sophistication. Other factors that have been observed by Hope (2000) to increase the rate of corruption in less industrialized countries include poor accountability, bad governance, an enormous amount of greed, high quest for wealth as well as unemployment. In this environment, the economy faces significant challenges, and governments spend considerable resources trying to identify and

combat corruption. Examples of these challenges include weak internal controls in businesses and employee collusion. These can often be exacerbated by corrupt political systems and weaknesses in the regulatory and institutional frameworks that are in place. In some countries, there is political interference in the prosecution of corruption, with some lacking the goodwill to prosecute corrupt people and rectify weak institutional structures such as the courts and the Police force. For example, in Singapore, a group of robbers stole 1,800 pounds of opium valued at S$400,000, an equivalent of US $133,000 in 1951. Investigations revealed that three police detectives were among the group of robbers. Further investigations by the Criminal Investigation Department's Anti-Corruption Branch (ACB) within the Singapore Police Force (SPF) revealed that some senior police officers took part in the robbery and importation of the opium (Quah, 2009). After investigations by the ACB, a senior officer was dismissed, while another was retired. However, this outcome did not please the British colonial government and it established a special team independent of the SPF to scrutinize the hijacking scandal. This special team unearthed valuable evidence that the police were involved in widespread corruption and the colonial government realized the significance of instituting an autonomous anti-corruption agency (ACA) (Quah, 2009). The British colonial government believed that an independent agency would be instrumental in fighting corruption because it limits the chances of political interference compared to the CID, which is part of the government. Fighting corruption becomes a challenge if the organizations expected to fight against corruption are influenced by political interference (Ata and Arvas, 2011). Political interference can be applied directly or indirectly (de Sousa, 2010). Direct political interference can constitute threatening to dismiss senior officers or to terminate the work of the agency, reducing the agency's powers and mandate, and reducing the agency's funding. Indirect political influence can constitute inciting additional state organizations to withdrawal their cooperation from the anti-corruption agency or crime investigating agency,

or by magnifying the accountability procedures of multiple institutions to a level that obstructs or slows down its effective response (de Sousa, 2010).

Even where there is significant regulatory support, the regulatory framework of any given country cannot be expected to stop or necessarily reduce the incidences of corruption.

Corruption is the motivation behind a burgeoning body of literature, concerned with defining its bases and ramifications. Corruption has a clear adverse effect on the political system and national confidence in a state's institutions. Experiential evidence has revealed the undesirable relationship between institutional confidence and corruption (Anderson and Consequently, corruption wanes the integrity of institutions by eroding confidence (Bowler and). Beyond the political scope, research has broadly shown that corruption also develops into a major burden for any economy, since it alters the distribution of resources and dents the effectiveness of institutions. Fouladi et al. (2014) supports this argument stating that, corruption is one of the economic deficiencies which can dramatically weaken economic expansion and development. Thus, it is justifiably viewed as a significant impediment to political stability and economic growth, more so in developing nations.

Corruption has also been noted to affect the advancement, success, and fairness of an economy. Transparency is one of the core bases of corruption. While many studies have alluded to this fact, none has provided tested and verifiable findings of it as a cause of corruption. However, according to the research conducted by Hope (2000) which largely involved investigating the connection between corruption and transparency. His findings suggest that the control of corruption index and the political transparency index are positively and relevantly associated. Consequently, this review of literature aims to study and appraise the effect of transparency on the possibility of corrupt behavior within different administrations at local and international levels.

Most third world countries live below the poverty line (Sumner, 2012). In these

countries, the majority of the population earn little income or no income at all. Meeting the

basic needs for the majority of the population is challenging because even the countries'

economic statuses are poor (Sumner, 2012). The countries are governed by inept politicians

who are widely known for embezzling populace funds, aiding in corruption, and interfering

with the autonomy of the judiciary to protect them from incarceration. According to Baku

(2010) in less developed countries resource rents have the propensity to increase the levels of

corruption if their democratic institutions are below a particular threshold level. Various

researchers have tried to find a solution to the menace of corruption. Even though numerous

suggestions and recommendations for curbing corruption have been made, the impact of

corruption is still widely felt in developing countries. This chapter aims at using past studies

to establish the importance of accountability and financial transparency in fighting

corruption. Importantly, implementing transparency always carries the risk that officials and

administrators could use the publicly available information to devise new ways of

perpetuating corruption in their countries. Consequently, this literature review will first give

an overview of the factors that underly corruption in developing nations. It will then

determine whether public availability of information can encourage or reduce corruption

among public officials. The subsequent section will explore whether political goodwill can be

used to reduce corruption in third world countries, and to what extent. Finally, the review will

discuss past studies to determine whether other factors such as modern technology and

legal/institutional frameworks can help to minimize corruption in developing countries.

2.2 Financial Transparency, Accountability and Corruption

Everyone pleads for transparency. This invocation is shared by politicians, jurists,

economists, financiers, public opinion. Transparency, desired by all, and which no one could

escape, has become synonymous with business ethics, specifically for the managers of large listed companies. It would then be a contemporary redemption tool for the market economy. If the imperious transparency has taken so well in collective consciousnesses, to the point of becoming one of these Kantian "categorical imperatives" eligible for universality, it is because the deficiencies in this matter have become particularly glaring from the vast financial deregulation movement of the 1980s. Placed at the heart of the decision-making process in the company, the manager is also placed at the heart of the transparency of a listed company today scrutinized by a crowd of observers.

But what is transparency? As an academic theme that has become classic, it seems possible to define the concept in a neutral way, without prejudging the multiple meanings that different disciplines could attach to it. Transparency is a dynamic, a process; in this measure we must distinguish transparency and information. Information is a message that has no prejudice as to its value. In absolute terms, false information remains information; however, it cannot be assimilated to transparent information. Transparency implies a qualitative dimension. Transparency is a quest for objectivity, which seeks to drive subjectivism out of the author of the information. It is distinguished from communication, in its strategic sense, whose persuasive dimension does not lend itself to transparency. The mere subjectivity of the recipient must count in an approach of transparency; the transparency lifts the veil of the subjectivity of the author of the information, and let's perceive the totality of the object of the information which will be appreciated by its only recipient. Transparency is not translucency: it lets light through, and let's perceive the entire reality of the object.

Transparency measurement methods are based on different types of information. Two main categories are generally established: financial information and non-financial information. Financial transparency mainly concerns the company's accounting information. It sometimes includes elements relating to individual interests in the company, such as stock

options or the remuneration of executives and managers. Non-financial transparency includes narrative type information, such as information relating to corporate social and environmental responsibility, methods of operating the company, or any other information deemed useful by the investor such as state of health of managers.

Authors, majority, and certain organizations such as banks or Standard & Poor's, try to assign an index or an individual transparency rating to companies based on annual reports, company websites and, possibly, on declarations leaders (Botosan and Plumlee, 2002). From a methodological point of view, it is important to note that this measure assesses companies' freedom of information. Several approaches are possible. First measure transparency on the basis of information not required by law. Various criteria are then implemented: does the activity report provide a list of voting rights, a list of members of the audit committee. An alternative is to assess the goodwill with which companies comply with the legislation in force, and the clarity of the information given, a certain margin of interpretation of the legislative mechanism being inevitable.

These transparency measures can be criticized for two reasons. The first is the inevitable subjectivity of the quantification of a transparency criterion, or even the subjectivity of the choice of these criteria. The second, more profound criticism relates to the very object of the measure. It seems that this method excludes any consideration of the effectiveness of the content of the information: society can present a completely satisfactory transparency from a formal point of view, without it being possible to determine the degree of veracity of the information. information communicated. We are therefore moving away from the very concept of transparency highlighted in the introduction.

In the face of these difficulties which exist in measuring the transparency of a company based on discretionary criteria and the relevance of which can be debated, some authors abandon this method in favor of event studies. The events chosen have the advantage

of being able to benefit from greater legitimacy as regards the transparency that they are supposed to convey. We are thinking, for example, of legislative reforms which would aim to improve the transparency of firms, or even of the implementation by companies of explicit transparency policies. It is a matter of choosing a time milestone to assess a "before" and "after" in terms of transparency. Many authors compare the data of the company before and after the implementation of the Sarbanes-Oxley Act (Akhigbe & Martin, 2006) or of Regulation Fair Disclosure (Collver, 2007). Other authors propose these intertemporal comparisons, but after a voluntary modification of the transparency policy displayed by the company (Picou and Rubach, 2006). Most of these different methods show that transparency creates shareholder value, and affects the corruption level.

Corruption touches all sectors of the life of society, as well the public sector, the private sector as the political sector. Given the specificity of each of these areas, it acquires its characteristics and takes different forms (public, private and political). Transparency, coupled with accountability, acts as an instrument for preventing as well as repressing corruption, by exposing the acts of agents to the public and by highlighting the facts of corruption. Transparency, in this way, pursues corruption wherever it exists regardless of its form. Thus, in the fight against corruption, by acting as an antithesis, it plays the role of the "anti-form" of corruption, its form adapting to the different forms of corruption that it combats.

However, transparency is not a quick fix and has a specific and limited role in the fight against corruption. It must be supplemented by measures such as criminalization, external and internal control, prevention of conflicts of interest.

Corruption has emerged as a key focus area in recent literature in a quest to understand its contributing factors and costs. Bribery has evident adverse bearings on political systems and public confidence in a nation's institutions. Experiential evidence has

revealed the deleterious correlation between institutional confidence and corruption (Blasko&Januauskiene, 2008). Therefore, corruption deteriorates the integrity of institutions by eroding trust (Shah, 2007). Beyond the civil domain, the literature has comprehensively revealed that corruption likewise becomes a key liability for any economy, since it interferes with the distribution of resources and dents the operational effectiveness of institutions. Corruption also affects the growth, success, and fairness of an economy. A principal aspect that has often been cited by scholars concerning corruption is transparency. However, even though transparency has extensively been deliberated in the literature, it has seldom been confirmed as a contributing or diminishing factor of corruption.

A report by Asunka (2018) on fiscal transparency has been conducted with the basis of finding out how a fiscal transparency sub-strategy can be used to establish accountability in the public sector. It focuses on the promotion of effective strategy at a country level to fight corruption. Asuka explains that the adoption of new international policies and the observation of various international set standards, norms, and procedures fosters and increases government transparency, besides, it reflects responsiveness on issues regarding public interests. Furthermore, the adoption of anti-corruption policies can boost the involvement of citizens in issues concerning public resources, their location, and use. The report focuses on the discussion surrounding the establishment of an environment that is conducive for both internal and external business ventures, with the enhancement of public financial management and outflow of tax revenues.

Asunka (2018) further focuses on public involvement in maintaining financial transparency. For instance, the report includes the analysis of Open Budget Surveys (OBS) in the determination of financial transparency. This embraces public involvement in financial proceedings through publishing financial information. Moreover, the populace is included in the decision process once related to public budgeting. The strategy of enforcing financial

transparency chiefly depends on the improvement of budget index scores to enhance the provision of relevant financial information. The approach also creates a platform for participatory budgeting as a chief aspect of the financial transparency sub-strategy.

The establishment of a government system that involves citizens in its operation has been supported by Slaton and Arthur(2004) focusing on the delivery of public services. It is important to note that corruption adversely affects governance and governments in countries around the globe. Furthermore, it has a disproportionate impact on people below the poverty line because it reduces their access to essential services like education, justice, and healthcare. For example, if corrupt government officials allow the import of counterfeit medication and drugs, impoverished groups within the population experience adverse health outcomes the most (Fisman and Golden, 2017). Moreover, the least affluent classes in society pay the highest portions of their incomes as bribes to access those essential Government services (Harris, 2003). Corruption also leads to the erosion of trust in the Government and the undermining of social contracts. Social transactions are hampered because corruption results in inequality, discontent, conflicts, and eventually violence, among other adverse situations. Also, corruption leads to a decrease in investments and thus a reduction in jobs and economic growth (Fisman and Golden, 2017). Bribery can negatively affect the delivery of services and undermine the process of winning legal contracts, as work is awarded to close friends or family members. It can also affect organizations' operations and their control over society (Fisman and Golden, 2017). access to essential services like health and education among others. Consequently, countries that are capable of confronting corruption usually enjoy an efficient use of their financial and human resources; they can grow their economy and attract foreign investments (Harris, 2003).

The fight against corruption and the analysis of how public finance is utilized is dependent on the number of resources available and those established for them by the

government. A meta-analysis by Slaton and Arthur (2004) established the need to create a platform in which the misuse of public finances and the leakage of public resources are regulated. Among the recommendations highlighted in the report included the closing down of loopholes that exist during taxing to fight the outflow of revenue that is meant for the development of the country. Other recommendations focused on the strengthening of policies that focus on the manifestation of integrity in the management of public finances. This is to be done through the involvement of the civil society advocacy strategy with a focus on media outlets in the investigating and the uncovering of corruption-related activities in issues concerning public financial management.

Financial transparency as a way of fighting corruption is based on several factors as described by Asunka (2018). Several researchers have had their findings aligned with those of Asunka (2018) such as Rothberg (2004) focusing on specific areas concerning public financial management. Rothberg (2004) focused on the establishment and maintenance of transparency during the creation of the budget and the establishment of different policies surrounding the budget. This research concentrated on the formulation of standards and ethics that would result in an operational budget that makes public finance usage transparent to the public. For example, by providing a channel in which the public would access the information surrounding the budget promptly before any decisions or further policies are established. Linz and Stephan (1996) focused on the establishment of a legal framework in which the transactions conducted in the name of providing services or products to the public are accounted for.

In the case of establishing financial transparency during budgeting, it is important to pay attention to the policies being formulated. Rothberg (2004) recommended the construction of an external organization to check and balance the use of public finances. The findings supported the construction of a channel that would allow the public to support

organizations that influence national policies regarding public finances. The Economist Intelligence Unit research of 2005 reflected the thoughts by Rothberg (2004) recommending the support of these external, mostly non-governmental organizations through fostering the monitoring of public financial management and creating accountability and responsibility in fiscal governance. Slaton and Arthur(2004), on the other hand, concentrated on the use of extractives transparency, characterized by the Extractive Industry Transparency Initiative (EITI). Almost half of the entire global population reside in states that produce abundant gas, minerals and oil. Lujala (2018) through good governance the utilization of said resources ultimately leads to the generation of large proceeds that will alleviate poverty and promote economic growth. Nevertheless, in the event that a country's governance is incompetent such resources appropriations may give rise to conflict, poverty and corruption (Johnson & Martini, 2012). The EITI objectives is to enhance the governance of such countries by advancing their accountability and transparency in the extra activities sector. Otusanya et al. (2009) depicts the EITI as an alliance of governments, international organizations, civil societies, investors and corporations. It has designed a vigorous yet flexible procedure for purposes of overseeing and reconciling company pay outs and government proceeds (Batdorj, 2018). In simple terms, the EITI is a globally established model that advances revenue transparency at the local level. The initiative has undergone several changes over time with the focus being placed on subjects such as how intense is public participation in budgeting, the need for transparency in beneficial ownership, and in disclosure of the project-level payment.

Supporting the grounds stood by Rothberg (2004), Colleen and Stephen (2007) focused on the implementation of the EITI and creating awareness in the public to support such projects. Also, they campaigned for the support of those that influence the betterment of the EITI standard as a way of pushing for improvement in the governance extractives sector.

Peters (2007) concentrated on supporting research that focuses on enlightening the public on the existing international standards and norms that govern transparency in public finances and the expectations that need to be met by the existing government. Colleen and Stephen (2007) as well brought a new area of interest while understanding public finances. The research focused on aid transparency. The recommendation included the support of organizations that foster aid transparency such as the International Aid Transparency Initiative (IATI). The discussion focused on aspects such as the creation of a channel in which the aid data will be available to the public.

Slaton and Arthur (2004) supported the recommendations made by Colleen and Stephen (2007) and further focused on the support given to these aids' initiatives. For instance, they focused on the involvement of aid data by the government in the planning of public financial budget. Besides, the aid data should be used by civil society as a channel to monitor government accountability and transparency especially on how the aid was spent. A similar recommendation was suggested by Peters (2007). However, Peters (2007) focused on creating a channel in which the spending can be monitored and tracked. Further, the effects of misusing aid should be made clear to the public especially in the specific effects faced by a specific sector.

Financial transparency is important in creating accountability in fiscal management and equally in the prevention of loss of revenue. Lack of financial transparency easily leads to financial fraud, and fraud can be categorized into three, namely: asset misappropriation, financial statement fraud, and corruption (Puspasari & Suwardi, 2016). Puspassari and Suwardi (2016) opine that the Indonesian Institution of Accountants (IAI) defined accounting fraud as misrepresenting financial accounts through financial omission or misstatements with the intention of using the financial report to mislead its users. Accounting fraud can also be misstatements based on treating assets improperly, which can also be termed as

embezzlement or misuse of assets, associated with the theft of the identified assets and failing to present the financial statements with such assets included or as pertaining to Indonesia's Generally Accepted Accounting Principles (GAAP). Assets misappropriation can be done in several ways such as receipts' embezzlement for money or goods, property theft, or instances where organizations are caused to pay for commodities or services not provided. In some instances, individuals orchestrating assets' misappropriation may attach a falsified document or note to mislead others in believing that the assets have been accounted for or that there are some commodities and services that were provided, and which a specific entity needs to pay for (Puspasari & Suwardi, 2016). Individuals interested in transparency need to understand that accounting fraud, in the fraud triangle, is associated with three factors including pressure, rationalization and opportunity (Puspasari & Suwardi, 2016).

According to Slaton and Arthur (2004), it is important to support researches and advocacy efforts that help in reducing and stopping the outflow of revenues in developing countries. Djankov et al., (2001) recommended the establishment of a system that would promote equal taxation systems internationally and boost private business ventures and practices. This equality in fostering financial transparency should be reflected in journalists and researchers through their ability to investigate and document any mischievous use of public finances or any illegal flow of aid. Additionally, they will create public awareness of any leak regarding public resources and where integrity has been undermined during the management of public finances.

Aid transparency is important to reduce corruption that surrounds aid issuance. The Economist Intelligence Unit research of 2018 recommended the provision of open public contracting. The open public contracting should be made in all the branches and levels of the government. This step is vital in the monitoring of leakage in public resources that have been linked with opaque public contracting. Similar research by Peters (2007) recommended a

focus on beneficial ownership transparency as a way of preventing tax evasion and the stealing of public resources by government officials. It is important to implement beneficial ownership transparency initiatives in developing countries especially in areas concerning public registration of the beneficial companies. Further recommendation by Peters (2007) included the Addis tax initiative that focuses on the improvement of domestic revenue use. Besides, it boosts the tax systems of developing countries by creating a channel that will foster equality, competency, and effectiveness of the tax system.

2.3 Can public officers utilize transparency to devise new ways of reducing corruption?

Transparency has been a topic of concern in many literary works as a means of fighting corruption. With transparency, public officers gain access to information regarding the country's finances and its expenditure and therefore, they can use this information in finding new strategies to embezzle. Few types of research have been conducted that focus on how public officers will use publicly available information if the country's financial management was transparent.

According to Asunka (2018), transparency in public funds management boosts the involvement of citizens in issues concerning the location and expenditure of the public resource (Asunka, 2018). It allows the government to document any activities related to the use and utilization of public resources hence prevent cases of corruption. According to Asunka (2018),this alignment between transparency and public officers creates a favorable environment for both internal and external business investments. This can be attributed to the fact that the regulation and management of public funds and tax revenues are open to public criticism and assessment. Slaton and Arthur (2004) back this claim up by recommending the

creation of a platform that allows the public to identify and control the misuse of public funds. Also, the platform should regulate the leakage of public resources.

The study by Slaton and Arthur (2004) further recommended the involvement of civil society advocacy with particular focus on the media outlets. The partnering of the two should concentrate on investigating and uncovering corruption-related issues. This form of transparency may however devise new ways for the public officers to perpetuate corruption. For instance, media biases may lead to the reporting of propaganda or fake news resulting in the heightening of corruption. Besides, the news shared by various media outlets is usually selected to fit a certain preference by major stakeholders. For this reason, certain information regarding public funds or resources may be hidden from public access or scrutiny resulting in increased levels of corruption.

Concerning the study made by Slaton and Arthur (2004) concerning the perpetuation of corruption, Linz and Stephan (1996) recommended the establishment of a legal framework that would foster accountability. This will include the formulation of standards and ethics that enable public access to the budget. To reduce the prevalence of corruption therefore, this budget will be available for public scrutiny and the decisions made should be after public consultation. In the monitoring of public officers, Jeremy (2004) advised on the involvement of non-governmental organizations in advocating the use of public resources. Non-governmental organizations should be used to monitor the use of public funds and resources as a way of monitoring the government regarding financial responsibility.

Peter (2007) backed the study by Jeremy (2004) by further recommending the creation of a channel in which public officers can be monitored and their expenditure questioned when they seem suspicious. The misappropriation of funds can be further tracked by reviewing expenditure in different sectors of the government. This, as a way of fighting

corruption, will create a punishment that should be given to sectors in which their funds would not have been accounted for. For a more reliable punishing procedure, Stephen (2007) recommended the establishment of an Extractive Industry Transparency Initiative (EITI) to promote public participation in budgeting, the need for transparency, and in disclosure of the project-level payment.

Conclusively, financial transparency is important in the creation of accountability, prevention of revenue loss, and improved financial management (Slaton &Arthur, 2004; Djankov et al., 2001; economist intelligence unit research, 2005).As a way of preventing public officials from further corruption and embezzlement, the focus should be on beneficial ownership transparency as a way of avoiding tax evasion and public fund embezzlement particularly in areas of public registration of the beneficial companies (Peters, 2007). It is important to note that, without specific procedures for both the public and the public officers to foster transparency, accountability, transparency, and sense ownership, these recommendations might foster the prevalence of corruption instead of its eradication.

Government transparency can also be categorized into two realms, namely political and administrative (Meijer *et al.,* 2018). The political realm incorporates participatory democracy and the statutory state (Fung, 2013). The political realm is founded on citizens' right to access to information and to know. When the political realm of transparency is activated, it enhances democracy and motivates the elements of checks and balances, which are aimed to ensure that government officials operate within the stipulated obligations regardless of their ranks in the offices they hold (Meijer *et al.,* 2018).

The administrative realm focuses on managerial issues associated with the "good governance" idea (Meijer *et al.,* 2018). The practice of administrative realm requires that a country adopts the "good governance" idea, which needs to be incorporated in the people's culture. Individuals need to embrace the culture of "good governance" even in the absence of regulations that guarantee effective financial management. However, the "good governance" culture may be challenging to implement if countries have not been practicing democracy. The culture of "good governance" and democracy are interrelated because democracy can be associated with 'good governance'. When a country observes and practices democratic leadership, oppression and related vices such as corruption can be eliminated. The democratic leader ensures that the people have and enjoy their rights as stipulated in the constitution and that citizens have access to relevant information pertaining to the government, its intentions and practices. Therefore, democratic countries can easily institute a culture of 'good governance' compared to undemocratic countries. In such countries, ideas associated with transparency can easily be implemented in democratic counties than in undemocratic countries. To ensure that 'good governance' is implemented, countries need to employ a democratic approach to their national leadership, which in turn, would promote transparency in government institutions and assist in curbing corruption.

Transparency can also be enhanced by having the office of an auditor general, whose responsibilities would be to audit government offices and ministries to ensure that financial accountability is maintained. An auditor for the public service plays significant roles in guaranteeing financial information transparency, mitigating the risk that people with economic power conduct themselves in ethical, legal, and appropriate ways (Malagueño *et al.,* 2010). In essence, auditors make it challenging for organizational

leaders and managers to act contrary to shareholders' expectations. From a country's perspective, auditors ensure that leaders do not abuse shareholder' expectations (anticipation of citizens) by engaging in contradictory activities regarding financial management. The auditors have the power to audit governments and provide the information to the public for the citizens to scrutinize and understand whether their leaders are accountable or otherwise.

It is worth noting that citizens have a right to know how their leaders use the resources they were elected to manage. Therefore, countries need to ensure that the auditor general's office exists and that the auditor has the power to audit all government departments. This statement means that auditors have the right to access all financial statements in all government departments to ensure their work is credible and to make their final decision reliable. Without access to all financial statements, one may provide faulty conclusions, such as stating that finances have been embezzled even when such would not be the case. Therefore, by providing auditors with unrestricted access to all financial records, the risk of making inconclusive statements regarding the use of financial resources at a specific government institution.

2.4 How Political goodwill can affect corruption

The absence of political goodwill is frequently cited as grounds for failure of anti-corruption reforms as well as a significant hindrance to economic performances and the realization of development intentions (Brinkerhoff, 2000). Treadway et al. (2005) state that, political leaders and a dedication to combat corruption at the senior levels is a pre-requisite for launching and maintaining anti-corruption reforms over a period of time, as long as favorable outcomes are achieved. Power holders are presumed to behave for the greater good

and contrary to their self-interest. As they lay down the law and allot the authority, manpower and funding that allow said reforms to be implemented effectively. Thus Alamgir et al., (2006) demonstrate that, political leaders serve as the primary participants who can very well transform a nation's culture of corruption. Moreover, Brinkerhoff (2000) illustrate that, some researchers go so far as to enumerate that the political will has proven to be a paramount constituent for guaranteeing the successful implementation of a thorough anti-corruption strategy mostly in developing countries.

Then again, according to Alamgir et al., (2006) power holders are also potentially the foremost beneficiaries of corruption, armed with the incentives and powers to utilize and sustain the fraudulent practices of their government for their personal gain. Hence, the vital importance of the presence or lack thereof of a political will in the collapse or prosperity of governance and anti-corruption reforms, has been extensively realized in the last few years (Hay, 2002). However, according to Treadway et al., (2005) the notion itself has gotten comparatively little study and continues to be inadequately defined and comprehended mentioned by some authors as the most challenging conception in the policy lexicon. Political will is generally seen as the expressed credible intent of political leadership (Hay, 2002).

Brinkerhoff (2000) elucidates in a more operationally-oriented and elaborate description that, it is the dedication of bureaucrats and political leaders to engage in activities in order to realize a range of objectives as well as to support the costs of those activities over a period of time. They deduce that reconceptualizing about political will as a straightforward, single factor depreciates the sheer complexity of what is concerned.

Corruption has been defined as a dishonest and criminal behavior that is carried out by a person in authority to acquire benefits that are considered unlawful. In this regard, corruption involves activities like bribery, the embezzlement of finances, and engaging in prohibited activities. Corruption is deemed to be unethical because it goes against the set

standards and considered wrong by members of society (Harris, 2003). Fraud takes place on different scales that include receiving small favors to grand corruption cases that are witnessed on a national level. Bribery has become rampant in society and leads to organized crimes in various countries (Fisman and Golden, 2017). However, the manner that corruption manifests itself in different nations varies in proportion and degree, and it is the prerogative of the governments in these countries to regulate or control the occurrence of crime and corrupt cases (Harris, 2003).

Corruption is an unethical practice that adversely affects businesses, society, and the government thereby implying that drastic measures should be initiated to overcome them. A 2001 case study by Lederman et al., (2001) established a link between accountability and corruption. The research focused on establishing the determinants of corruption in political institutions basing it on political accountability. The research was based on the hypothesis that political institutions can prompt corruption with political accountability and the structure in which public goods are provided acting as dependent variables. The findings of the research established that political institutions play critical roles in determining how prevalent corruption would be. For instance, political institutions such as freedom of the press, parliamentary systems, democracy channels, and political stability can reduce the prevalence of corruption. Previous empirical research by Kaufman et al., (2005) to establish the factors that result in the prevalence of corruption established that political variables such as legal tradition and openness do not affect how prevalent corruption.

Recent studies in econometric have recognized the negative effects of associate with corruption when economic outcomes are analyzed. For instance, a similar aspect of Burki et al., (1998) and Mauro (1995) studies identified corruption as an obstacle for private investment, which consequently results to decrease in economic growth. Further, Bai and Shang-Jin(2000) blamed failing economic policies on the prevalence of corruption with

Kaufman et al. (2005) supporting these studies by concluding that corruption affects areas such literacy level of the citizens, per capita income of the government and general mortality. While different researches identify different causes of corruption, the econometric studies however show that corruption is associated with negative effects that befall the economy with different variables under analysis.

Accountability is a vital aspect of any political organization, especially to the citizens. It is the rights of the citizens to know what their government is up to by being in the know of what actions have been taken with them as the stated beneficiaries. Furthermore, it is upon the citizens to determine whether to put an end to a regime because of disrespecting their rights through immoral or illegal actions. To the government, accountability is an important factor as it helps evaluate programs that are failing and those which are working in favor of the current state of the governed. Further, it allows the government to devise new methods to effectively provide services to the citizens. The citizens need to acquire intended public services and products with accountability.

A report by Peters (2007) concerning performance-based accountability emphasized the importance of enforcing transparency within the government and embracing ways of reducing corruption. According to the report by Peters (2007), even though transparency and openness are important factors of running a government, the public sector needs more strategies devised to boost accountability. Accountability is a crucial section of governance that can be fostered through the involvement of an independent external organization. The organization can be regulated by the legislature or even the public. The roles of the organization would be the publishing of an accountability report that is mandated to assess the government objectives and ensure they are reasonable and aligned with the interest of the public. Whether financially based or theoretically based, the report should be able to control the actions of the government in sectors that concern public based interests.

Bovens (1999) on the contrary enforced the need for responsibility as the basis of accountability. Unlike the earlier study by Peters (2007) and Kaufman et al. (2005) that focused on external factors, Bovens (1999) focused on internal factors such as being conversant with the law and the expected office behaviors. However, some factors surround the behaviors of public servants and how they choose to react to different situations. Meyers and Vorsanger (2006) for instance talk about the need for a public servant to fulfill the needs of a client regardless of official acceptable standards. The study by Meyers and Vorsanger (2006) explained the need by civil servants to overlook the office expectations and focus on sensitive bureaucracies.

Political accountability is an important aspect when it comes to a discussion about corruption. Various literature on economics and political sciences have discussed the effects of political accountability on the prevalence of corruption such as studies conducted by Djankov et al., (2001) and Laffont and Meleu (2001). Policies that are not aligned with the interest of the public have been associated with poor accountability, which is further aggravated by certain variables such as the presence of counterchecks, to what extent the various branches of the political systems and how much these branches are balanced in terms of power and resources. Williams (2015) illustrates that, the probability of politicians or public officers doubling in corruption is very high once they become aware that no government or external administration body will call into question their accountability on how they operate their yearly expenditures and revenue.

The situation is further exacerbated by the fact that; most African governments fail to adequately exhibit their approaches in handling their yearly budget hence the likelihood that something was amiss during their tenure in office is high as no one cared to inquire (Shadrach & Ekeanyanwu, 2013). This in turn comes to the conclusion that, the collapsing of economies in the African continent is largely associated with the lack of transparency that looms over it.

The most important step however is the establishment of a platform that allows the punishing of politicians who adopt "bad" policies (Ndaguba *et al.,* 2018).There are times when government officials or institutions mandated to take action against corruption exhibit laxity to prosecute corrupt individuals due to the lack of political will (Akarca & Tansel, 2016). Politial will can be termed as the situation whereby the government decides against taking action in the pursuit of justice, even when evidences exists that an offence was conducted (Post, 2010).In the political realm, governments can have substantial evidence that an offence took place and then show lack of interest in pursuing justice through the prosecution of the suspected individuals. In such instances, the government assumes that no offences were conducted and the suspected individual is left to continue with their activities without being prosecuted. Political will allows a country's government to investigate cases involving corruption and prosecuting those found guilty which instituting measures that would protect public resources from any form of misappropriation by a greedy political class (Post, 2010). However, political will does not always exist. In some instances, those in power may decide, for different reasons, to not to prosecute guilty individuals. Where political will to investigate and prosecute corrupt individuals does not exist, leaders ensure that there is institutional failure. In such instances, governments influence other entities such as the anti-corruption agencies, the police, or judiciary to drop any responsibilities associated with investigating and prosecuting corrupt individuals. Governments can orchestrate institutional failure by interfering with the appointment process of leaders for anti-corruption agencies. Similarly, governments can also interfere with witnesses by threatening them or intimidating them with the intent in of forcing them to recant their testimonies or to fail to provide their testimonies, altogether. Governments can even ensure that the judicial system does not have the necessary resources to carry out its mandate of jailing guilty offenders. Therefore, it can be observed that political will is diverse and it can contribute greatly to the fight against

corruption or lack thereof. If governments decide not to deal with corruption, the public is helpless in fighting corruption because it may lack suitable resources to fight corruption such as those at the governments' disposal.

In Turkey, there was a time that leaders exhibited unwillingness to prosecute corrupt officials, yet the leaders had the power and capacity to prosecute (Akarca & Tansel, 2016). Politicians, normally, appear to enjoy impunity, whereby they are not prosecuted or have their cases delayed or dropped, thus leading to misrepresentation of justice. In Mexico, politicians have been involved in the drug trafficking, whereby the decided how the drugs could be moved, the routes they would take, and when the drugs could be moved (Nieto, 2012). These few examples show instances where those in power decided not to act to prosecute corrupt individuals. In some instances, as is the Mexican case, those to whom power has been bestowed by the public are the same ones engaging in corrupt deals and embracing corruption. Politicians, who have been given the responsibility to pass laws and ensure that governance is implemented justly are responsible for engaging in corrupt deals such as those involving the illicit drug trade.

The ability to control and punish politicians for being irresponsible and not accountable while in office highly depends on the policies in place. A research conducted by Linz and Stephan (1996) established on the importance of peaceful and fair elections on the accountability reflected by politicians. This is further backed up by Rose-Ackerman (1999) who described the electoral system as the check and balance mechanism of how accountable politicians become. A short-term kind of electoral system for politicians increases the room for good governance. Fewer politicians who have several terms but on a short duration increase the chances of having good governance. The spirit of winning the election next time allows politicians to be responsible. Rose-Ackerman (1999) describes this scenario as a rewarding phase for good governance.

Checking and balancing different aspects of the government such as power, according to Rose-Ackerman (1999) helps in the prevention of power abuse. This is because different branches of the government try to discipline each other through the monitoring and the regulation of each other's conduct. Laffont and Meleu (2001) back this study up by establishing the relationship that exists between the different branches of the government and the different stages of executive power. For instance, the existence of a strong parliamentary system results in a legislative branch of the government that is accountable due to regular check and balance mechanisms hence an increased ability to reduce corruption. The division of power, therefore, plays fundamental roles in the punishing of officials who misuse the power granted to them by the people. This creates a balanced equilibrium when it comes to corruption. Linz and Stephan (1996) back these studies up by instituting political stability as a determinant factor in the check and balance mechanism.

2.5 How Modern Technology Affects Corruption

Technology is dynamic. Everyday something new is invented and something old becomes obsolete. In the fight against corruption, technology can be used in tracking and identifying corrupt public officers, it can be used to measure the rate and level of corruption and can be used to establish strategies to curb corruption. Olken (2009) describes technological advancements that enable economists to measure the level and rate of corruption in developing countries. According to Olken's (2009) manuscript, there have been advancements in the measurements of corruption through the estimates of the levels that are still heterogeneous. Olken (2009) explains that technology can positively impact the fight against corruption by providing appropriate communication channels that provide for better monitoring. Olken's (2009) views were echoed by Yang, (2008) whose research provided workable examples. Yang (2008) explains that hiring nongovernmental or foreign inspectors to value shipments before

exporting and verify the tariff classification can improve duty collections and reduce corruption in the sector. Corruption in customs can further be reduced through direct transmission of information from the client government to the foreign firm. Due to direct connection, monitoring ability is increased and the bargaining strength of corrupt customs officers is reduced thereby reducing the time of customs clearance and payments of bribes.

Kleven et al., (2010) backed up Yang's (2008) idea of analyzing the administration and design of tax systems in a country as a means of fighting corruption. Kleven et al., (2010) identifies double reporting as a means to fight corruption. Double reporting involves the comparisons of two independent reports from different subdivisions by the tax department to determine tax performance in the country and identify any discrepancies. The process can be very instrumental in identifying tax evaders. However, the processes have mainly been adopted in developed countries such as Denmark and developing countries are yet to catch up (Kleven et al., 2010). On the same note, Pomeranz (2010) opted to use audits to replace double reporting in hopes of achieving the same results. Pomeranz(2010), in his research established that using audits on the VAT chain had a larger impact where double reporting lacked implying that the on the other parts of the VAT chain, double reporting promoted honestly.

According to Zhang et al., (2010) for some developing countries, corruption is part and parcel of the societal fabric itself although in more industrialized nations it characterized in less blatant forms. Sokim et al., (2015) elucidates that, in this day and age, thanks to the internet, corruption can now surpass state boundaries rendering it all the more difficult to combat. Even so Wickberg (2013) depicts that, the rise of information and communications technology (ICTs) has progressively been deemed by administrations as well as civil societies and activists as essential tools in advancing accountability and transparency. Additionally, they assist in pinpointing corruption and also reducing it (Wickberg, 2013). New technologies, in the nature of applications, websites and mobile phones have been utilized in the facilitation of gaining

access to official information, reporting of corruption incidents along with monitoring the integrity and efficiency of social services (Anokhin & Schulze, 2009). They are also involved in making a nation's political life and financial information more transparent. Sokim et al., (2015) illustrates that, ICTs are capable of promoting campaign efforts and assist in mobilizing the public against corruption. According to Davies and Fumega (2014) in the past decade, governments have initiated a rising number of government measures for the purpose of improving the transparency and efficiency of public administrations as well as enhance their communications with citizens.

Duflo et al. (2010), offers that technology can be instrumental in ensuring that certain processes are followed mechanically. With that regard, Olken (2009) explains that in reducing tax-related corruption and in customs, technology is more efficient than manual. In a manual system, double reported data is matched manually and this can be tedious and challenging. On the other hand, once the information is put in the system, matching is automated which makes it easier and time-saving. Olken (2009) identifies a gap in the implementation of computerized and modernized tax infrastructure in developing countries as compared to developed countries. Since tax evasion is higher in third world countries, technological double reporting could have a significant impact on corruption in the countries.

Mulukutla (2018) joins technology and institutional trust as tools to fight corruption. While researching in east Africa, Mulukutla noticed that despite the relatively free press, decent institutions geared towards fighting corruption, and a vigorous civil society, corruption still prevailed in the region. Corruption was spread in the media, government, and even in NGOs. From her research, Mulukutla recommended that secure management systems that are fully equipped with audit trails should be availed to the public. The scholar also recommends that workplaces must be secured so that investigators can be able to use the tools available without any hitch and believe that no one will undermine or leak their work. This will reduce the

instances of bribery, threatening, and messing with the reports of the investigators (Mulukutla, 2018).

Mulukutla (2018) explains that deterring corruption can prevent corrupt public officers from committing corruption in the first place. According to Mulukutla, a practical implication of the perception was a system that was developed in one of the developing countries (Nigeria) to fight against corruption around the border checkpoints. In Nigeria, border checkpoints (some are government placed while some are fake only placed to extort money from traders) are filled with corrupt officials who stop small traders and truckers to extort money from them. A mobile system (trade route incident mapping system / TRIMS) was created that allowed the traders and truckers to immediately report a corrupt official via the mobile phone. Due to the power of the mobile system, the system gained a deterrent effect such that just with the mere mention of the words TRIMS and mobile phones, they were let go without being extorted.

With technological progressions, procurement systems across the world are done online. Governments, non-governmental institutions, and private owners have appreciated online techniques for conducting business and making purchases. Potentially, online procurement systems decrease corruption by either ensuring transparency of procurement systems or increasing information access. Increasing access to information on procurement further reduced the number of bidding rings hence promoting equality. For instance, a study by Lewis-Faupel et al., (2011) was conducted in India to identify the effects of electronic procurement systems used in road projects. Using reports of independent government audits, the study showed that electronic procurement resulted in better quality roads though the costs were not reduced. The improvement in road quality was attributed to the availability of better contractors who won contracts out of merit and not through corruption (Lewis-Faupel et al., 2011).

Despite this significant progress made, there is insufficient research made accessible on the influence of new technologies on corruption. In addition, Anokhin and Schulze (2009) states that, the use of ICTs in the fight of corruption cannot be viewed as a 'magic bullet'. In order to realize its full capabilities Kim and Kang (2017) illustrates that, it predominantly depends on economic, infrastructural, political and social factors. Considerable challenges with regards to confidentiality, internet access and costs pertaining to the application of ICT solutions have yet to be tackled (Wickberg, 2013). Davies and Fumega (2014) enumerate that, the prerequisite that will enable ICT solutions to prevail is a supportive political environment that encourages and safeguards free speech.

However, ICTs can be abused and exploited for social mobilisation (Sokim et al., 2015). This is seen when case studies of the 2007/2008 Kenyan presidential election crisis demonstrated how effectively digital technologies can act as a stimulus for predatory conduct for instance mob violence based on ethnicity (Davis & Fumega, 2014). Furthermore, Kim and Kang (2017) state that, there is a threat of ICTs being misused by undemocratic administrations for control. Discussions of this matter had risen in Uganda in connection to the controversy surrounding the Interception of Communication Bill. It aimed to permit security agencies to intercept e-mails, postal communications and phones for national security reasons (Anokhin & Schulze, 2009).

The case of Uganda is a clear example of how governments can misuse technology in the fight against corruption (Anokhin & Schulze, 2009). This case also exemplifies the need to have democracies if corruption is to be defeated. Democracy can greatly assist in embedding 'good governance' ideas and culture, leading to corruption-free countries. However, it can be argued that a country needs to first of all, learn about democracy, before they can be expected to practice it. The case of Uganda indicates that even with the right technology, the lack of democratic leadership can greatly hinder the effective measures to curb corruption. Rather than

using technology to make it hard for individuals intending to engage in corruption, the Ugandan government intends to use technology, and even uses a legislative bill to try and infringe on people's rights by citing national security issues. Such technology would have been used to track corrupt individuals through the money-movement trails, rather than trying to unnecessarily subdue citizens for easier management and control. Where fighting corruption is concerned, it can be argued that the use of technology should be based on its capability to identify corrupt deals and to stop the probable perpetuation of corruption. However, it can be observed that without democratic leadership, the use of technology to mitigate against corruption can be easily defeated. Undemocratic leaders can use technology to try and control the populace rather than use it to make it challenging for corrupt individuals to perpetuate corrupt activities.

2.6 How Legal/Institutional Frameworks Affect Corruption

According to Vaal and Ebben (2011), corruption impacts the economic growth of a nation particularly through its effects on institutions. Vaal and Ebben (2011) explain that, even though most researchers have only identified negative ways in which corruption affects growth (due to public goods embezzlement and rent-seeking public officers), corruption can also be beneficial to institutions. The corruption effect on a country's economic growth is hugely dependent on the setting of the institutions. In countries where the institutions are underdeveloped, corruption can be particularly favorable to the growth of the economy. Vaal and Ebben (2011) conclude that the interaction between institutions is significant and it is, therefore, important to regard an institutional setting as a whole both empirically and in theory when discussing corruption (Vaal and Ebben, 2011).

Vaal and Ebben's (2011) study were opposed by a 2010 survey by the International Bar Association, Organization for Economic Co-operation and Development, and United Nations

Office on Drugs and Crime. According to the IBA, OECD, and UNODC (2011), corruption and bribery discourage investment from foreigners. The institution surveyed various countries both developed and developing to determine whether the refusal to pay bribes will repel local or foreign investors. The results of the survey showed that developed countries that participated in the research (Switzerland, Sweden, and Norway among others) supposed that refusal to offer a bride will have no impact on their investment and the foreigners will still invest whether the bride was offered or not. On the other hand, third world countries such as Nigeria, Ukraine, and Venezuela believe that investors will strongly be discouraged when the bride is not offered. Emerging economies such as Russia and China expected that some investors though not all will be discouraged from investing (IBA, OECD, and UNODC, 2011).

The legal institution can be in the frontline of fighting corruption. The IBA, OECD, and UNODC (2011) set the Anti-corruption Strategy for the Legal Profession, which sets guidelines, roles, and responsibilities for lawyers and other members of the legal profession in fighting bribery and corruption in local and international business transactions. Additionally, the strategy was created to determine how legal professionals affect the international anti-corruption systems and the associated implementation of state legislation with an extraterritorial presentation. The institutions however regret that most lawyers in their registration have poor knowledge of the anti-corruption regulatory framework and therefore, they may become implicit in bribery and corruption without their consent (IBA, OECD and UNODC, 2011).

Lawyers are sometimes asked by their clients to get involved in possible corrupt transactions. For example, lawyers can be intermediaries in transactions that are corrupt knowingly or unknowingly and leave them exposed to legal actions (Colares, 2006). IBA surveyed in association with OECD and UNODC to determine what percentage of legal experts would willingly participate in corrupt international transactions. From the survey, about 28

percent of the participants from Africa and other developing countries stated that more than half of the lawyers in their country will willingly participate in corrupt transactions. The statistic is relatively higher as compared to a meager 1.5 percent of respondents from developed countries in the EU, the USA, and Australia that believed more than half of the lawyers in their countries would engage in corrupt transactions (IBA, OECD, and UNODC, 2011).

Similarly, the number of people who have knowledge of the existence of corruption in their countries is higher in third world countries than in developed countries. Another survey conducted by the three institutions revealed that the number of participants in the survey that were aware of legal experts who have participated in corrupt transactions was higher in emerging economies (over 50%) as compared to developed countries (below 20%). In total, approximately a third of the participants were aware of lawyers who had committed international corruption offenses. As a result, less than five percent of lawyers in developed countries believe that they lost a job to other law firms because of corruption. On the contrary, over 50 percent of respondents from different developing countries believe that they lost a client to a competitor because of corruption (IBA, OECD and UNODC, 2011).

Additionally, Neumann, 2018, supports the fact that corruption surpasses a country's borders. Therefore, to reduce corruption across the world regardless of the jurisdiction, Neumann advocates for the sharing of information internationally through reliable systems such as the public registry of the owners who benefit. The information shared could be on aid provided, company ownerships, or public contracts. The availability of such information on public registry makes it easier to identify, compare, and prosecute instances where corruption has been spotted. Furthermore, an open data standard should be set to avoid the constant discussion of what information's public and what should be kept private. Different jurisdictions have different varieties of what information agencies and companies are expected to make

public and what they can keep private. Therefore, setting the standards in advance encourages transparency and as a result, reduced corruption (Neumann, 2018).

2.7 United Nations Convention against Corruption

The United Nations Convention against Corruption (UNCAC) is a milestone global anti-corruption agreement that was adopted in 2003 by the United Nations (Hechler, 2010). The treaty embodies a universal response to the international problem of corruption. The convention bounds 181 nations worldwide, with its provisions recognizing the significance of preventive as well as punitive measures against corruption. Deliberating on(Kubiciel,2009), the treaty seeks to address the issue of international corruption by embracing cross-border cooperation. State parties are required to assist each other in combating corruption via technical assistance (training and research, human resource, and financial). Moreover, the Convention provides for citizens as well as civil society organization participation in processes of accountability while underlining the significance of the general public's access to information.

Reasons for establishing the agreement are the seriousness of corruption and its negative impact on the stability and security of societies, the demolition and undermining of democratic institutions and endangering sustainable development and the rule of law

The seriousness of the links that exist between corruption and other forms of crime especially organized crime and economic crime, including money laundering.

Corruption is no longer a local matter, but rather affects all societies and economies, which makes international cooperation to prevent and combat it necessary, but rather requires the necessity and necessity of putting and harnessing the international community to all technical, information and administrative capabilities to prevent, detect and deter corruption crimes and graft, and support states' recovery of acquired assets. Some of the strategies that could be used to manage and control corruption include:

1. Promoting and supporting measures to prevent and combat corruption more efficiently and effectively.

2. Promoting, facilitating, and supporting international cooperation and technical assistance in preventing and combating corruption, including in the area of asset recovery.

3. Promoting integrity, accountability, and proper management of public affairs and public property, because corruption is a waste of public riches.

Hechler (2010) asserts that the UNAC provisions are centered on five key areas: preventive measures, criminalization and execution of the law, global collaboration, recovery of assets, and technical assistance, and sharing of information. Under preventive measures, the countries that have signed the agreement have the obligation of adopting synchronized policies to prevent corruption. The measure outlined in the Convention covers not only the public but also private sectors (Argandoña, 2007). Some of these measures include sound financial management and transparency in the procurement process, effectiveness in accessing public information, merited civil service, independence of judiciary, active involvement of the public in combating corruption, as well as strategies of combating money-laundering.

Hechler (2010) debates that UNAC member states should incriminate bribery, including public funds embezzlement and attempts to commit corruption-related crimes. According to Hichler, the international cooperation of UNAC provisions requires the States Parties to have mutual assistance regarding international criminal offenses, for instance, assisting the judiciary in collecting evidence on corruption matters. The Convention also outlines that member states have the right to recover stolen public assets through forfeiture, tracing, freezing, and getting back resources acquired through corruption. Finally, the UNAC provides that States Parties should embrace training and research, including the sharing of information with a view of combating the global problem of corruption.

2.7.1 Basic chapters of the agreement

The agreement generally consists of eight chapters, including those related to general provisions, technical assistance, implementation mechanisms, and final provisions. The following is a description of the chapters that contain the essential provisions

Preventive measures

The United Nations Convention against Corruption focuses on developing comprehensive preventive policies through which accountability and transparency are strengthened, it recognizes the importance of preventing corruption and devotes its second chapter to this issue, with measures outlined to both the public and private sectors.

Preventive steps include the existence of independent bodies responsible for combating corruption and overseeing the implementation of anti-corruption policies, developing codes of conduct for public officials, and enhancing transparency in the financing of election campaigns and political parties.

The agreement urges states to seek to subject recruitment and promotion procedures to objective standards, such as merit, fairness, and eligibility, and thus to ensure that public services are governed by principles of efficiency and transparency, and the agreement also calls on states parties to enhance transparency and accountability in public administration matters and to set specific protection requirements and conditions, especially in areas Of greatest importance in the public sector such as the judiciary, public procurement, and public funds management.

Criminalization and enforcement

The United Nations Convention against Corruption includes a comprehensive set of mandatory and optional criminalization provisions, and Chapter Three covers a wide range of acts of corruption. The agreement also offers a program not only to coordinate fundamental national provisions but also to ensure that the minimum level of deterrence is achieved

through certain provisions on the prosecution. , Prosecution, and penalties for corruption-related cases.

The agreement requires states parties to criminalize acts of corruption in their domestic legislation by touching on mentioning these acts such as bribery and embezzlement of public funds, as well as practices related to abuse of power, influence trading, concealment and laundering of the proceeds of corruption, and crimes committed in support of corruption including money laundering Obstruction of justice.

This also provides for the protection of whistle-blowers, witnesses, victims, and experts, stating the necessary measures and guarantees that must be in place to protect persons who do in good faith to inform the relevant authorities of any incidents related to acts of corruption.

International cooperation

Under the Convention, states parties must help each other in the fight against corruption, and this chapter provides standards for mutual legal assistance, cooperation comes in the form of extradition, mutual legal assistance, transfer of person's provisions, criminal procedures, and law enforcement cooperation, which encourages Also, cooperation in civil and administrative matters, as well as the Member States following this chapter, must take the necessary measures that would support the tracing, freezing, seizure and confiscation of proceeds of corruption.

Asset recovery, chapter Five is one of the basic principles of the agreement, as recovering assets obtained from incidents of corruption is a very important issue, especially for developing countries where corruption rates are increasing.

The agreement includes core provisions that establish specific measures and mechanisms for cooperation to recover assets while maintaining flexibility in recovery procedures that may be justified under special circumstances, and those provisions would

support states 'efforts to address the effects of corruption by sending a message to those responsible for committing Corruption acts that there will be no place to hide the illegal assets in the presence of international cooperation based on the recovery of the proceeds of corruption.

Although Libya is a party to the UNCAC (which it signed in 2003 and ratified in 2005), this has not translated into major political actions or measures to combat corruption. While there is generally a lack of data on the quality and effectiveness of the Libyan legal framework, it is possible, however, to draw some conclusions based on the results of existing surveys. Over the past five years, for example, political rights and public freedoms in Libya have been almost non-existent, according to Freedom House's "Freedom in the World" report (see Freedom House (2011) - Libya).

Observers consider that the country needs major institutional reforms producing real and substantial changes in the fight against corruption. To date, existing institutions have been viewed at best as a facade of good governance.

The Revenue Watch report on Libya from 2011 highlights the fact that the government of Muammar Gaddafi has put in place bodies responsible for promoting financial transparency and limiting corruption, such as the Supreme Audit Institution or the Council popular surveillance. The former leader also announced in 2006 that members of the public service should declare their assets to transparency committees set up for this purpose. Gaddafi's clientelist system nonetheless remained dominant, and the application of these measures seemed arbitrary (Revenue Watch 2011 - Libya).

In a post-Gaddafi era, any approach to carry out meaningful institutional reforms must be holistic, taking into account the many factors that led to this extremely corrupt system. Global Integrity calls for vigilance: while the creation of an anti-corruption commission may seem an attractive option, it is important that it is adequately funded and closely monitored to ensure that its establishment leads to real results (Global Integrity, August 25, 2011).

2.12 Impact of UNAC On Libya and its Economy

There are many economic problems that concern planners and manufacturers economic policies in different countries, and among these problems are the financial corruption that all developed and developing countries alike suffer from, as its scope has expanded in recent years, especially in developing countries, which prompted researchers to search for its causes and effects.

And methods of treatment. Where financial corruption, if it spreads in a society, leads to lower rates economic growth and declining rates of economic development, which leads to increased poverty, economic instability, and even political. Libya is one of the countries that suffer from this phenomenon, which has become a pandemic in most institutions of the Libyan state, whose roots since the Libyan state gained independence in the early fifties of the last century, its intensity has increased in recent years, which has become a threat to a constructive future (Vandewalle, 2018). The state, despite the existence of supervisory institutions that lay the foundations for the rule of law institutions and combating corruption in the country.

The effects of financial corruption generally appear on development indicators, and on the competitiveness of the economy, where there is an inverse relationship between the spread of corruption behavior and the ability of the economy to external competition. Also enhancing inflation rates. This is due to the structural imbalance, and the inefficiency of many officials who manage institutions, which contributes to the creation of crises, and to reinforce cases of financial corruption in the state apparatus, thus increasing inflation waves, lower living standards, and unfair wages between residents.

Libya ratified the UNAC treaty in 2003, and through its Constitutional Appeal in 2013, the state established that universal agreements are superior to its domestic legislation (Joutsen, 2011). The UNAC provisions have prompted Libya to adopt comprehensive approaches to

money-laundering offenses, including concealment. Argandoña (2007) asserts Libya's Countering Money-Laundering, and the Financing of Terrorism law of Article 1 criminalizes any laundering act committed either abroad or in Libya regardless of where the act was committed. Also, Article 1 of the Law on Economic Crimes stipulates that the violation of a public office or function by a public officer to obtain personal benefit is a criminal offense.

Furthermore, Argandoña (2007) claim that Libya's Criminal Procedure Code and the National Anti-Corruption Commission provide a broad range of probing strategies for identifying, tracing, as well as freezing crime proceeds and property for confection regarding the Convention. Deliberating of UNAC provisions, Libya has instituted various international cooperation measures to combat corruption. For instance, the country has signed several bilateral and regional extradition treaties while considering the Convention as the extradition's legal basis. Although Libya's Constitution heavily draws from the UNAC's provisions, Joutsen (2011) maintains that corruption remains a major obstacle to the country's economy, with the oil industry and procurement sector being the most affected. Fouladi et al, (2014) note that, in view of recent researches, nations that have an abundant supply of natural resources, that is oil-rich countries have the greatest potential tendency to be corrupt. Oil brings both risks and opportunities. The earnings that are gained from the extraction of oil have the capacity to propel domestic developments to new heights remodeling the country into a major economic participant both globally and regionally (Stevens et al. 2015). However, Benigno and Fornaro (2014) denote that, there is evidence that suggest oil undermines progress as manifestations of the 'resource curse' take root. The expression resource curse is used by multiple scholars to describe why states that have an abundant supply of resources have insufficient performance in economic and social developments (Stevens et al. 2015). The decline in Libya's economy can be attributed to the weak institutional framework in combating corruption and political instability as well as violence that undermines the rule of law.

In compliance the Libyan Audit Bureau, stated in the Charter of the United Nations and regional and international conventions and treaties in the field of legal, judicial and security cooperation in the prevention and combating of crime related to corruption, to which Libya is a party, including the United Nations Convention against Corruption, the Audit Bureau seeks continuously with the agencies responsible for protecting the integrity and combating corruption In the Arab countries to enhance ways of cooperation through exchanging experiences and experiences, and to unify positions and visions in the African countries in matters related to protecting the integrity and combating corruption through:

Effective participation in the meetings of the agencies responsible for protecting the integrity and combating corruption in the states of the Council to discuss the issues of corruption raised and find appropriate solutions to combat them, and to prepare studies and research related to combating corruption.

Activating North African cooperation by proposing effective methods to reduce corruption and combat it in coordination and cooperation with public bodies and institutions that have a role in combating corruption in African countries and exchanging experiences and expertise with them to reduce the phenomenon of corruption.

The practical application of the projects that are approved by the heads of agencies in African countries from the guiding principles and following up the mechanisms of their implementation with the rest of Africa.

Preparing and qualifying employees at the level of anti-corruption agencies by enriching joint training programs, to sharpen their skills and give them practical experience in the field of anti-corruption.

Encouraging individuals and public and private institutions at the level of African countries to participate effectively in combating corruption and enriching the concept of

citizenship and social responsibility through various media to raise awareness of the risks of corruption and ways to combat it.

2.13 Comparing corruption and anti-corruption in Libya with other African nations

Corruption is 'killing' the African continent, effectively weakening the immunity of the continent. It can be observed that in Africa, several authors have argued that many countries in Africa struggle with corruption (Abrisade &Aliyyu, 2018). Further, the researchers contend that some of the major causes of corruption in Africa include greed, bad governance, magnified quest for wealth, unemployment, and poor accountability. Bad governance is associated with the leaders elected or self-imposed on the electorate of specific countries in Africa. In many African countries, elections are not democratic and this means that the process of electing officials is compromised. Without democratic processes, individuals (leaders) can use dubious means such as misusing public resources such as the police and finances to ensure they remain in or attain power. When governments are not democratically elected, they are not guided by the constitution or the desire to meet the needs of the citizens. Once they assume power, the majority of African leaders embark on a looting spree whereby they misuse their specific country's resources for personal gain. Importantly, it is worth noting that most African countries' leaders hold discretionary powers and they manage all their economy's relevant branches such as electoral commissions, civil service, the central bank, media, and security forces (Abrisade & Aliyyu, 2018). With such powers, there is little room for public engagement or transparency and the governments act in impunity. Some of Africa's dictatorial leaders that use their powers to prolong their tenure include Emperor Selassie of Ethiopia, who ruled the country for 44 years, Omar Bongo of Gabon, who ruled for 42 years, Mommar Gaddafi of Libya, who ruled for 42 years,

Gnassingbe Eyadema of Togo, who ruled for 37 years, Felix Houphouet-Boigny of Cote D'Ivoire, who ruled for 33 years, and Hosni Mubarak of Egypt, who ruled for 31 years (Abrisade & Aliyyu, 2018). Others leaders who have ruled for over three decades include Jose dos Santos of Angola, Teodoro Mbasosgo of Equatorial Guinea, Robert Mugabe of Zimbabwe, and Paul Biya of Cameroon(Abrisade & Aliyyu, 2018). Sadly, research finds that these leaders have spent all those years in power enriching themselves rather than developing their respective countries. In addition to personal enrichment, these leaders have also spent much of their time and resources intimidating political rivals, frustrating any efforts toward the attainment of constitutional rule and refusing to observe democratic governance processes (Abrisade & Aliyyu, 2018).

The majority of African leaders also struggle with greed, which can also be associated with the magnified quest for wealth(Abrisade & Aliyyu, 2018). Leaders in these countries exemplify uncontrolled greed for health, which leads them to forsake all ethical and moral guidelines related to administration and the use of a country's resources. This greed sees the majority of leaders in these African countries using their power to influence the flow of resources for personal gain. After assumption of power, these leaders start diverting resources meant for the country's development for personal gains. The diversion of the countries' resources denies the countries' population the opportunity achieves their deserved services such as education or health, among other services. The public is highly affected and demoralized because their rights to access such significant services is denied.

It can be observed that in many of these African countries, the government is not accountable and does not feel any need for being accountable to the public. The government is aloof to the problems affecting the public and does not feel the need to be accountable for its actions. The government acts with impunity and does not care how their actions affect the public. On the contrary, the majority of these government officials are concerned with the

amassing of wealth for selfish gains. For example, some of these leaders are so greedy that they can mismanage their countries to enrich themselves to the extent that they become rich than their country as was the case with Mobutu Seseseko (Abrisade & Aliyyu, 2018). At some point, Mobutu Sese Seko, the president who served as Democratic Republic of Congo's leader for 31 years, had amassed more wealth than his country's wealth (Abrisade & Aliyyu, 2018). This finding shows the extent of greed among some of these leaders who were never concerned how their actions affected their countries. These leaders are so engrossed in corruption that they can place their countries at the brink of extreme poverty for personal gain.

Fouladi et al. (2014) enumerate that, numerous corruptions ranking institutions have universally ranked African countries as having the highest level of corruption that exist in their countries. This is attributed to the fact that, in many African countries, paying off police officials to overlook any offense no matter how tragic or horrific is considered to be as normal as breathing (Williams, 2015). Corruption effectively displays itself in various public offices in Africa as politicians have been known to mishandle as well as redirect public funds for their individual and private use, that would have otherwise been utilized in the continent's development (Asongu, 2013). Geographies of political corruption in Africa have noted that while allegations and evidence of corruption are an entrenched feature of the continent, it manifests differently in different parts of the country, and based on governance and cultural characteristics (Warf, 2017).

It would be important to provide some of the mega corruption scandals experienced in different African countries such as Guinea, Kenya, Uganda, Malawi, South Africa, and Nigeria (Abrisade & Aliyyu, 2018).

In the 1990s, Guinea experienced corruption involving one of its expansive mining projects in the continent based on its value of $20 billion (Abrisade & Aliyyu, 2018). This

project involved the Simandou iron-ore project encompassing the assessment of four mining blocks and railway construction. Initially, the flour blocks' contract had been awarded to Rio Tinto. However, afterwards, there was a withdrawal of two of the four blocks contracts which were awarded to BSG Resources, a company that had not been present during the initial tendering process (Abrisade & Aliyyu, 2018). Investigations revealed that the process was marred by bribes which led to the splitting up of the initial four blocks. BSGR paid bribes to ensure it was awarded the contract of the two blocks, thus denying Rio Tinto discuss (Abrisade & Aliyyu, 2018).

In 2005, Kenya had to deal with a corruption case titled 'the Anglo Leasing Scandal', which entailed the mismanagement of lease financing for security-associated projects' funding (Abrisade & Aliyyu, 2018). Contracts for a new passport-printing system, valued at $100 million, were corruptly awarded to nonexistent firms, which had been established by some government officials. One of the government officials at that time, Chris Murungaru, was found guilty and the United Kingdom government forbade him from travelling to the United Kingdom (Abrisade & Aliyyu, 2018).

In 2010, in Uganda, Muhlbauer Technology Co. Ltd was awarded a contract for national identity cards' printing. However, the awarding process was based on a single source contracting process, which was questionable because even the Public Procurement Authority had advised against the use of a single source contracting process as a contract awarding process (Abrisade & Aliyyu, 2018). Muhlbauer Technology Co. Ltd was given over $100 million to print the identity cards, but two years later, the identity cards printed by the company were fewer than 500 and these were for top politicians only (Abrisade & Aliyyu, 2018).

In 2012 in Malawi, the government had the intention of designing an Integrated Financial Management Information System (IFMIS), in order to monitor the government's

position of their budget and cash. The IFMIS role was to improve on Malawi's weakness in the management of finances and the government had realized that some people were aware of these weaknesses and were taking advantage of them to transfer money to vendor accounts from government bank accounts for never-supplied services and commodities and without any official government authorization (Abrisade & Aliyyu, 2018). After these people have engaged in fraudulent activities, they delete their transactions to avoid detection that they were paid for supplying nothing. Malawi's National Audit Office declared that approximately 6,096,490,705 Malawi kwacha, approximately $15.5 million had been categorized as theft as at 2014 (United Nations Economic Commission for Africa, 2016 in Abrisade & Aliyyu, 2018).

In South Africa, between 1999 and 2000, the Strategic Defence Procurement Package, also referred to as the 'arms deal' worth US$5 billion, proved a corrupt deal and led to a political storm. Investigations into the package revealed that Deputy President Jacob Zuma's financial advisor was involved in the corrupt deal and charged with corruption.

Nigeria's 2013 corruption case involved Mallam Sanusi Lamido, who was Nation's apex bank's former government. Lamido told President Goodluck Jonathan then that NNPC, Nigeria's state oil company, had not paid US$20 billion to the government coffers. However, President Jonathan dismissed Lamido's claim as it was revealed that Lamido had misused the central bank's budget leading to his subsequent dismissal and replacement. Moreover, an investigation was carried out by a Senate and found Lamido's claim lacked substance. The NNPC was audited and the results found that the actual non-remitted revenue was actually US$1.48 billion and not US$20 billion as claimed by Lamido. PwC and Deloitte's audit revealed that nearly $20 billion was unaccounted based on misappropriation (Abrisade & Aliyyu, 2018). From these findings, it can be deduced that Lamido had clearly

misappropriated about $20 billion and was looking for a way out, hence the claim that NNPC

had not remitted about $20 billion, while the amount in question was $1.48 billion.

The intensity, categories and outcomes of corruption varied and somewhat dependent

on regionality, level of civil unrest, functional institutions of democratic governance, and the

cultural embeddedness of expectation of favor (Warf, 2017). Within Africa, nations have

been broadly categorized as the most corrupt, and mostly dysfunctional, using the

Transparency International Corruption Perception Index (Warf, 2017). Index (2018)

describes that, corruption perception index (CPI) concentrates on corruption that occurs in the

public sector and explains that corruption as the abuse of public power for one's own private

gains. Studies or rather surveys employed to collect the index involve questions linked to, for

instance bribery of public officials. The authenticity of (CPI) is distinct depending on the

country which is under scrutiny. In addition, it is heavily influenced by the different number

of data sources that are exploited for the purposes of evaluating the level of corruption (Evans

& Kelikume, 2019). This group includes Libya, as well as neighbor countries Sudan, South

Sudan, Eritrea and Somalia (Warf, 2017). It is notable that while Libya in the only state in

North Africa, it is geographically close to the cluster of challenging governance in

combination with extreme corruption that characterizes the northeastern African region

(Warf, 2017). This is not a coincidence, but rather it reflects the presence of oil reserves, and

it is therefore linked to a variable which has been further correlated with higher levels of

corruption- the presence of a resource-based economy. The northwestern region is

characterized by more moderate, but still endemic, levels of corruption, while the lowest

levels of corruption (but corruption nonetheless) are found in the southernmost region,

including Botswana and South Africa. There are positive exceptions in each region, such as

Tunisia in the northcentral region, and Ghana on the western coastline (Warf, 2017).

Other variables with a high correlation to the level of corruption include the presence of a patrimonial political ideology, clientelism in culture, the literacy rate, per capita calculations of the gross domestic product (GDP), the level of economic disparity, and journalistic freedom (Warf, 2017). In comparison to other African nations and the approaches that they have taken to corruption, the response in Libya has been one that is shared by other African nations which have little transparency, political instability, and volatile economic forecasts. That is, Libya fits a profile of African states that are challenging situations in terms of world ideals of governance. Overall, the profiles of all African nations show high levels of corruption in comparison to developed countries, and they are also in the bottom rankings of social and economic indicators (World Bank, 2020). Libya deviates from the average profile, however, to the extent that the country does have high ongoing revenues due to the largest oil reserves in Africa, and also because for the most part the country has been increasing in its corruption, rather than achieving any kind of control over it (Transparency International, 2020).

As stated before, as with other African countries Libya does have legislation that clarifies the criminal nature of corruption in its public and private sector. The lack of transparency in financial and other processes, however, has meant that the Law on Economic Crimes and the Law on Abuse of Position or Occupation have gone largely without any kind of enforcement. The Panama scandal, where confidential documents revealing offshore banking accounts were released anonymously to journalists, revealed that the Ali Ibrahim Dabaiba, the Director of the Organization for Development of Administrative Centers from 1989 to 2011, had relieved the organization of about $7 billion intended for infrastructure in Libya, which were diverted to his private offshore accounts, and then used to purchase luxury properties in Europe (Obermaier&Obermayer, 2017). There was also evidence that the American firm Goldman Sachs had assisted those corrupt officials who had profited from the

lack of transparency to enrich themselves, including Gaddafi himself

(Obermaier&Obermayer, 2017).

Interestingly, it has been observed that many of the African countries are rich in

minerals but these resources serve as curses rather than blessings for the respective countries

because they are used for corruption purposes (Knutsen *et al*, 2017).These resources become

a curse because of their potential to destabilize the country through rebel groups intending to

cause civil war to take control of these resources (Knutsen *et al*, 2017). Additionally, it can

be observed that the discovery of natural resources introduces the economy to 'high-rent

activities' and augments bribes involving economic actors. In many African countries, natural

resources are government owned and this increases electoral fraud as political parties

compete to form the government in order to manage those natural resources.

Furthermore, based on the lack of democracy in many African countries, fraud exists

even during elections with the aim of interested parties forming the next government to

manage these natural resources, from where they would enrich themselves through corrupt

deals. Where natural resources are involved, corruption starts from the tender-awarding

processes for the resources' extraction (Knutsen *et al*, 2017). The governments in power

would take control of the country's natural resources and then assume control over the

tendering process to award tenders only to those the government deems appropriate, even in

instances where such entities would not have qualified for such tender awards in democratic

countries. Moreover, natural resources can motivate corruption because of their long-term

nature (Knutsen *et al*, 2017).

Knutsen *et al* (2017) continue opining that natural resources can take considerable

time before they become profitable due to the lengthy process involved. For example, mining

of resources starts at the exploration level, whereby the company interested in mining

explores the resources to determine their viability. The exploration process may lead to the

extraction process once the mining entity ascertain the feasibility of the project. Moreover, even after the minerals are extracted, they may need to undergo further processes to refine them to the required state before they are sold in the market, if the mining company decides not to sell them raw to other companies for refining. Therefore, it can be observed that before mining can become profitable, it may take a lengthy process from exploration of the site to excavation and eventual removal of the raw materials from the ground to the making of the final product.

Based on the 'long-term' nature of mining processes (from the time a company under stakes site exploration to excavation and eventual exhaustion of the minerals), corruption can be easily manifested. Government officials can engage in corrupt deals by demanding bribes from companies interested in mining of the identified feasible mines in order to award them the mining licenses. Corrupt government officials may also demand more and hefty bribes based on the acknowledgment that the mining process would be long-term before the minerals are exhausted. Therefore, to the corrupt government officials, the mining company would benefit for in the long term because it may take years before the minerals are exhausted.

Poverty also contributes to corruption in Africa (Justesen & Bjornskov, 2014). Based on the poor economic performances of many African countries, the majority of the citizens also have poor economic statues. These poor statuses make the citizens vulnerable to corruption particularly when they seek government services. When seeking government services from government offices, poor people are subjected to bribery demands because they are desperate for services, and therefore, they may be forced to pay for the bribes in order to receive the intended services. However, the payment of bribes in Africa is not limited to the poor only. On the contrary, even the rich in Africa are engaged in bribery.

An evaluation of the association between income and corruption in Uganda and Peru indicate that the rich have high likelihoods of paying larger bribes. Poor people, too, have to pay bribes, which represent a magnified share of the poor's income. This disparity in incomes and the payment of bribes between the rich and the poor in Africa means that the severity of the burden of corruption is more among the poor than the rich. Therefore, those with within the low-income ranges in Africa are highly affected by corruption because they would have to part with a significant proportion of their income compared to rich people, who already have the money to pay bribes. The income disparity among individuals in Africa leads significantly to the increase in vulnerabilities of poor people in the community. The fact that the poor people's bribe constitutes a large share of their earnings means that the income situations of such people is decreased further. The poor people's vulnerability to bribes as they seek government services continues to increase as more bribes are demanded from them and this increases the people's desperation also.

The pressure to succeed, according to Knutsen *et al* (2017), among the poor people makes them desperate to engage in corruption. The inability to meet basic needs due to deteriorated income levels may force the poor to embrace corruption as a way to succeed and improve their income levels. The poor may be willing to bribe to get better jobs, which they would use to earn more and uplift their statuses, thereby moving out of the poor statues which makes the poor community vulnerable to exploitation.

2.14 Libyan Economy and Corruption Level According to Transparency International and World Bank indicators

Transparency is considered to be a critical component of good governance, and a lack of transparency can be a red flag in relation to corruption (Transparency International, 2020). Transparency International (2020) provides the 2019 Corruption Perception Index (CPI)

indicator for Libya as 18 out of 100, leading to rank of 168th out of 180 nations. While this seems dismal, it represents one of the higher scores of the past several years, since achieving a score of 27 in 2011. Since that time, the CPI indicator has varied from a low of 14 to a high of 21, revealing that corruption, and the perception of it in Libya, is also volatile and subject to great variance (Transparency International, 2020). A different methodology was used between 1995 and 2011, but the greatest difficulty in assessing the trend in transparency for the nations is that Libyan information was not fully captured in data collections until 2011, when it was also assessed as having a CPI with a standing of 168th out of 183 countries (Transparency International, 2020). The lack of data reflects the great challenge and lack of transparency in general of the country under the forty-year rule of Colonel Gaddafi (Transparency International, 2020). It has been argued that habits in governance which obscure, or do not support transparency are a legacy of Gaddafi's rule (Transparency International, 2020).

Table 1: Libya, transparency indicators and ranks

YEAR	CPI	RANK
2007	25	131/180
2008	26	126/180
2009	21	160/176
2010	22	146/178
2011	20	168/183
2012	21	160/174

YEAR	CPI	RANK
2013	16	172/175
2014	18	169/175
2015	16	161/168
2016	14	170/176
2017	17	172/180
2018	17	170/180
2019	18	168/180

Source: Transparency International, 2020

The World Bank (2018) measure of the control of corruption index is significantly correlated with the Corruption Perception Index, indicating that the efforts and political will are major contributors to the severity of corruption (Warf, 2017). The World Bank (2018) Ease of Doing Business index rated Libya as being 186th out of 189 countries, with only war torn Yemen, Eritrea, and Somalia scoring worse on measures such as the east of setting up a business, dealing with construction permits, getting electricity, and similar practical aspects (World Bank, 2019). World Bank (2020) data sheds further light in relation to the context and contributing factors to corruption. What stands out, in terms of many of the social indicators such as school aged children in school or literacy, is the extent to which data is missing (World Bank, 2020). There are some positive indicators, such as a slowly increasing life expectancy, but many of the economic indicators in particular reveal the volatility that has characterized the Libyan economy (World Bank, 2020). The World Bank finds that overall there is little ease of doing business, the nation is a poor choice when considering potential trading partners, and overall the people of Libya face great challenges of underdevelopment that are correlated with each of these situations, including poor health, poor educational

attainment, and poor supporting infrastructure (World Bank, 2020). This general pattern is repeated across African nations that have been identified as having problems with corruption.

Regardless of which indicator or lens that is used, it is clear that Libya falls short in comparative assessments of African nations. The failure to develop good governance, and embedded traditions which became entrenched under authoritarian rule continue to define the normative governance and its level of transparency in Libya.

2.15 Cooperation of African states against corruption

With African states clustered at the bottom end of rankings of transparency and the presence of corruption, it is not surprising that there have been several attempts to cooperate for the purpose of battling corruption, or at least the perception of it. Functional intergovernmental cooperation, however, requires competent governance and administration first within the country, and that is an area where Libya has fallen behind its neighbors (Henneberg, 2019). A comparison is often made between Tunisia and Libya, as both nations were subjected to uprisings in the Arab Spring of 2011 that resulted in the ousting of leaders (Henneberg, 2019). The difference, in the post-uprising administration, was identified as the lack of standing capable institutions and processes in Libya because of the complete control that Gaddafi and his family had during his regime, while in Tunisia functional public institutions remained (Henneberg, 2019). This situation in Libya was compounded by a continuance of previous approaches, mistrust, and a failure to be transparent in dealings (Henneberg, 2019). Since that time, Libya has continued to struggle in terms of good governance and administrative competency (Henneberg, 2019). It is in this context that Libya has taken part in cooperative efforts against corruption, both before and after the 2011 revolution.

Given the pan-African nature of corruption and a lack of transparency, the question of cooperation of African states against corruption raises the question also in relation to cooperation to maintain corruption. It has been alleged that the African Peer Review Mechanism (APRM) has served as such a body, despite its purported aims and goals (Warf, 2017). The APRM was established by thirty founding African nations as a new institution dedicated to monitoring governance and reporting on corruption in member states (Warf, 2017). Despite laudable goals, there have been few victories in terms of fighting corruption, and instead the partnership is traditionally led by those nations, and sometimes individuals, that are known to be implicated in political corruption in Africa (Warf, 2017). As interpreted by most political scientists, political corruption is described as any kind of a transaction that occurs between participants in both the public and private sectors that results in the illicit conversion of collective goods into private-regarded bribes (Mbaku, 2010) In fact, it could be argued that Africa, especially North African states such as Libya, Algeria, and Tunisia, have displayed the potential for cooperation through the networks of trafficking, money laundering, and similar criminal activities, but there has been little success in working together to combat these established operations (Michelsen Institute, 2011).

A counterpoint would be the cooperative agreements and projects meant to facilitate development and prosperity in Africa. Unfortunately, as described by Tshiyoyo (2017), symbols of African unity such as the Africa Agenda 2063 and the Sustainable Development Goals, while laudable and comprehensive, lack political will for implementation. Lack of development continues to be correlated with corruption, although causation is not clear (Warf, 2017). By working towards development, including development of governance and institutional capacities, there may emerge a new and more functional approach to administration and collaboration which can overcome the criminal legacies. Clearly, however, the advancement of development and the continuance of corruption are in tension,

and while development may help to overcome corruption, achieving greater levels of

development despite corruption continues to be a difficult obstacle.

There are other instruments and institutions meant to help support African

cooperation towards the development of Africa and African Unity. One of these is the

African Peer Review Mechanism (APRM) initiated by the New Partnership for Africa

Development (NEPAD), intended as a continent-wide public institution for coordination. The

APRM is a process for supporting self-monitoring, the sharing of results between countries,

the identification of best practices, and collaboration in resolving problems within these

systems. Libya is not a member state of the APRM. It can be noted that NEPAD is a branch

founded by the African Union, and the African Union began in 1999 founded by former

Libyan leader Gaddafi. In recent years, there have been criticisms of Libyan secrecy, and

failure to participate by African Union officials concerned about the continuing civil unrest

and violence, among other problems, in the country (Ekwealor&Uzodike, 2016). The history

of many of these organizations, and the participation by corrupt officials, reveals that these

organizations and instruments may have been intended for purposes other than that which

was purported, and they may have in fact-maintained corruption.

2.16 The African Union Convention on Preventing and Combating Corruption

The African Union Convention on Preventing and Combating Corruption (AUCPCC)

was an agreement established in 2003 for the purpose of a continent-wide protocol in relation

to cooperation and criminalization of corruption as a means of preventing it, addressing it,

and reparations requirements (Ekwealor&Uzodike, 2016). In fact, this agreement was signed

several months before the United Nations Convention on Corruption, which had similar aims

at the global scale. The AUCPCC includes mandatory criteria for the determination of public

and private offences from asset concealment to the acceptance of bribes (Ekwealor&Uzodike, 2016). Many signatory nations have yet to establish legislation or regulations to meet the criteria of the Convention, however the convention has been signed by 49 countries, 46 of which have ratified the agreement internally. There have been no successful cooperative investigations or efforts that have successful met the aims of the convention.

Schroth (2005) took a different approach in explaining why the AUCPCC has not become a valuable tool in cooperating against corruption across the continent, identifying the flaws in the AUCPCC itself as the problem. While Schroth (2005) indicated that the goal of the convention is one that should be supported, the actual provisions of the convention do little to help to achieve it (Schroth, 2005). Basic problems in legal framing were identified, include the violation of the tenet innocent until proven guilty (Schroth, 2005). This was the result of intentions to increase transparency, which required all investigations to be open, and public. Schroth (2005) pointed out how this could be used as a political tool against opponents in political process, rather than as an international tool to prevent corruption (Schroth, 2005). A further issue concerned the use of European languages as the medium of communication. While English, French, and Portuguese remain common languages of business in Africa, they are for the most part second languages imposed by colonial powers. Unfortunately, the negotiation of the convention, and the multilingual nature of the convention, led to great difficulties due to divergence in meaning between language translations, unintelligible provisions, contradictions, and a failure to provide for a common and standard process. (Schroth, 2005). The convention continues to be in effect, however the voluntary participation, lack of enforcement, and previously identified issues with the agreement itself continue to be factors.

The AUCPCC, like the APRM, is based on a significant political will of many in Africa to combat fraud and corruption in governance, and to instead provide for processes

that help to support transparent and accountable governance. Where nations have considerable internal work necessary to not only build the conditions and infrastructure for good governance, but also an acceptance of the idea of transparency and accountability, such regional agreements have a greater chance of success. Unfortunately, as Schroth (2005) has pointed out, such mechanisms can be perverted for political uses that in fact obscure and defeat transparency and accountability due to some of the design flaws and difficulties with the agreement. This continued abuse of instruments to combat corruption as a means of maintaining creates a difficult and sometimes impenetrable obstacle to improved conditions in Libya, and other countries suffering from failures of the state and great disparity despite high levels of resource revenues.

2.17 Libya place of study

Libya is situated in the Maghreb region in North Africa, it borders Tunisia to the Northwest, Algeria to the West, Niger, and Chad to the South, Sudan to the Southeast, and Egypt to the East(Common Market for Eastern and Southern Africa (COMESA), 2020). It is divided into several provinces, the largest being Kufra and Murzuq in the South, and the capital - Tripoli - fittingly situated in the Tripoli District(Food and Agriculture Organization of the United Nations (FAO), 2016). According to 2016 and 2018 census, the country is home to 6.6 - 7.2 million citizens.

Libya has been the home of various religions in the past; after early Roman empire rules, Vandals kept impounding on the area, until Muslim factions brought Islam to the country. During the Second World War, Libya was under Italian control, until it became an independent kingdom in 1951; the rule of King Idris I was overthrown in a revolutionary coup by Col. Muammar Gaddafi, who ruled the country until overthrown - and killed - himself in 2011. After a brief period of peaceful rule, Civil War broke out in 2014; the

country is currently being ruled by a United Nations-backed Government of National Accord (GNA) in Tripoli, a Council of Deputies in Tobruk, and various tribal forces and militias that control several areas mostly in Southern Libya (Marshall, 2016).

Despite the country being overwhelmingly Sunni Muslim, it has seen several significant attacks against its heritage, religious symbols, and societal and Government institutions, mostly by Islamist militias, which have little trouble to operate in a land as vast as Libya, especially when ravaged by Civil War and sectarian strife. Examples for recent acts of violence that received significant international attention were the bulldozing of a Sufi mosque and its graves inside of Tripoli, in the middle of August 25th, 2012; the razing of several statues and religious and historic symbols, including a British burial site from World War II, near Benghazi; and the attack on the U.S. embassy in Benghazi on September 11th, 2012, which killed the U.S. ambassador Christopher Stephens and three marines in the defense of the compound. These attacks are examples of Islamist terrorism and militant ideologies that have found a home in Libya, so much so that Egypt launched airstrikes against ISIL-led groups in the area under control by the Tobruk council. Thus, Libya can be regarded as an at least partially unstable country, that has not been able to unite despite its richness in natural resources such as oil and gas; the difficulties to completely end the Civil War may be due to militant fractions having a home in countries adjacent to Libya, such as Sudan and Egypt; the absence of a functioning infrastructure across the entire country; and several fractions vying for representation in the country's Government. Thus, it is relatively easy for militias to cross over and support sectarian and terrorist activities in the country (Boeke& Roy, 2016).

Also, Libya is a significant transit point for African refugees to cross the Mediterranean Sea into Europe. A consistent influx of foreign citizens - even if only to pass the country - puts additional stress onto the country, both internally, as they use the local

infrastructure without direct financial contribution via taxes or labor, and externally, as European nations put pressure on Libya to reduce or even stop the refugees from entering boats to cross the ocean (Pugliese, 2018).

Libya is a signatory to the Free Trade Zone of the Arab Zone Countries (Gafta) and the Arab Maghreb Union (UMA), and partner of the Community of Sahelo-Saharan States (Cen-Sad) and of the Market common of southern and eastern Africa (Comesa). It thus has a solid framework for regional integration through trade. Libya has also signed bilateral agreements with Morocco and Jordan. In 2008, it entered into negotiations with the European Union (EU), its main trading partner, for a free trade agreement.

As part of the economic reform initiatives launched by the former authorities, since 2003 Libya has undertaken progressive attempts to harmonize tariffs, optimize the clearance of accounts procedures, and, in general, facilitate Business. For example, the country has embarked on several trade reforms, in 2004 it began negotiations for its accession to the WTO (World Trade Organization), and others with several of its main trading partners to conclude bilateral agreements and multilateral free trade. Among these initiatives, the authorities have reduced subsidies as well as the number of public import monopolies while reducing the number of import bans, removing customs tariffs to replace them with a flat port tax, and reducing the list of products subject to import licenses. In 2010, the authorities also clarified the classification of companies authorized to establish themselves in the country and simplified customs legislation.

Despite these efforts, the use of discriminatory internal taxes as a commercial tool continued. Customs duties were frequently changed without transparency, and exemptions granted to certain firms. The interim government has not been able to improve these practices, but its determination to make Libya more competitive in the world economy

supposes that the CNT will take initiatives to improve the country's economic cooperation policies.

Public sector mismanagement is a chronic problem in Libya. Before 2011, there were no checks or balances on the executive, the government made decisions in secret, and special interest groups were very influential. There was no independent press, and the authorities almost prohibited the existence of an independent civil society. In fact, most of the grievances that led to the 2011 uprising were fueled by public sector corruption and the absence of participation mechanisms. Before the conflict, the protection of property rights and contracts posed a major risk. The falsification of these rights and contracts was rampant, the law and regulations rarely applied or enforced. Favoritism more than equity played in relations with the State, and national or foreign enterprises found themselves in difficulty if they came into conflict with the interests of the State.

Although the interim government wants to end the policies of the past, its ability to protect private property and build governance based on the rule of law has been weakened by the conflict. It has become problematic in areas believed to have supported the former regime - often rebel forces have invaded these areas without restriction and barred residents from returning home.

The impact of a new constitution and a new government on the predictability, transparency and impartiality of the Libyan judicial system remains unknown. However, it is obvious that the new government must remedy the legacy of a corrupt judicial system, a difficult reform. The interim government, although it officially not controlling the whole country, is struggling to install its ministries, but this situation should improve in the coming months if the next elections will tack a place.

Taken together, cultural, social, political issues, and geographic forces exert pressure on the Libyan state, which makes it difficult to implement a functional government that can

implement effective strategies against corruption; especially if the incentives are high, as Libya possesses rich resources with high monetary value. In other words, there is a relatively high incentive to accept bribery, while the Civil War has opened enough loopholes to provide an opportunity to cheat the system. This already offers a fruitful ground upon which corruption can bloom. How do the other factors discussed above - technology, political goodwill, transparency and accountability, and institutional framework contribute to the establishment of corruption?

Institutional frameworks in Libya are mostly implemented on a local scale. This includes both civilian councils as well as leaders of armed militias. On the one hand, this organization on the level of local municipalities and districts provides much-needed help, as the centralized Government is neither strong nor efficient enough to provide functioning infrastructures. On the other hand, such local groups and coalitions can often devolve into tribalism and thus promote conflicts rather than solve them. Also, a focus on local governments weakens the state and makes it that much more difficult to implement policies on the national level - this, of course, includes anti-corruption measures as well. Importantly, the concentration of power on the local level is favored by large parts of the population, which means that instead of looking to leverage centralized political power across the nation, it may make more sense to develop models that analyze and guide the implementation of anti-corruption policies on the local level (Fitzgerald, 2018). One of the reasons for favoring local governance is that it provides an antipode to the centralized governance under Ghaddafi, which - is a geographically large country such as Libya - reduces efficiency and increases an organizational burden, as citizens had to travel long distances to Tripoli to settle affairs with the state. Interestingly, e-Governance, i.e. the use of internet platforms to offer government services, is emerging as one possible form of how government affairs can be solved in an efficient manner across the country while maintaining local governance structures. One

example of a successful implementation of online government can be seen in Estonia, where a broad range of government services, from marriage licenses to voting, can be utilized via the internet; indeed, it is also known as e-LocGov as an acronym for electronic local governance, which may significantly align with the Libyan favoritism towards local administrations (Pappel et al., 2019).

After the fall of Gaddafi, the General National Congress (GNC) divided the country into districts, municipalities, and governorates, which were staffed by a governing council that would be elected by the population in the district. One of the problems these local councils faced was a dependence on the Central Bank of Libya for project expenditures, as Libya depends on exports of crude oil, a centralized resource. It is unclear whether the institution of local taxes will help the districts to become more independent from the central bank. Another problem is that military groups, such as the Libyan National Army, seek to establish and entrench their power by utilizing those local governments, which places ambiguous loyalty demands on them. This, in turn, can serve to facilitate local corruption, especially since local leaders often lack the government experience; indeed, the Gaddafi regime did certainly not promote education in political governance (Beger et al., 2016).

More specifically, after Gaddafi's ouster in 2011, the new political leadership created 99 municipalities, most of which are democratically elected in local elections, with a few dozen still comprised of the original councils, as the corresponding municipalities did not provide enough security to ensure fair elections. This, however, also means a lack of accountability, and likely transparency, in those areas. Municipalities were to be constructed of a municipal council and administration; Moreover, the districts were supposed to be divided into several wards that form part of the overall administration. Many of these structures have yet to be implemented; until that time, the accountability of these local councils suffers and can potentially open the door for corruption. In general, political

competencies of local municipalities include the management of urban planning, including the enforcement of zoning laws; promotion of economic development; registration processes for various civil processes; management and issuance of business permits; public health; and social services.

It is important to note that several of these areas of governance are known to suffer from corruption, for example, the issuance of construction or business permits (Chan &Owusu, 2017). The legal ambiguousness and the lack of connection and proper communication and coordination between local and national political institutions as well as between municipal administration and executive bodies has led to inefficiencies and can generate a fertile ground for corruption, bribery and financial mismanagement.

Does the application of technology have the potential to positively or negatively impact the Libyan government? When looking into e-Governance - the electronic delivery of government services - one can recognize three major aspects. *E-citizen and e-services* connect government and citizenry; *e-society* provides ways to integrate societal institutions, non-government organizations, and the private sector; and *e-administration* provides ways to streamline administrative services electronically. Libya's political instability poses several challenges to the successful implementation of e-Governance across an entire country. First, economically, energy crises and a dysfunctional power grid can provide an instable infrastructure for the implementation of e-Governance. Technically, not every part of the country is equally well equipped; especially rural areas may be difficult to reach; and, socially, analphabetism and lack of formal education may make it difficult to install a functional e-Governance system (Saadi&Almahjoub, 2012). In terms of education in the workforce, Libya seems to be well off: there is a 97.7% literacy rate; however, only 3.6% of households have computers, though Libya's growth of cellular phone usage is described as "best in Africa" (Saadi&Almahjoub, 2012). Overall, these observations suggest that Libya

can implement an efficient e-Governance system; however, the reality of the Civil War and local tribalism makes this process challenging. However, experiences from the Estonian model suggest that e-Governance produces moral citizens that are "de-politicized and removed from a social context", yet strongly beholden to national identity (Björklund, 2016). Applied to the Libyan context, this could mean that as local identification vanishes with e-Governance instead of a strong national identity, local tribalism may be reduced, while citizens become more unified on the national level. This, of course, would help to significantly reduce local corruption. Taken together, these observations amount to a net positive effect of technology on corruption and financial mismanagement.

In terms of political goodwill, the situation is much less clear. When the United Nations attempted to end the Libyan civil war in 2015 by providing a conflict-ending framework, the General National Congress (GNC) was dissatisfied with the conditions and stayed away from the signing proceedings. This, of course, constituted an absence of political goodwill and made the agreement mostly void, and significant movements towards an armistice could not be observed (International Crisis Group, 2015). On the other hand, the situation may have changed in a positive direction, as leading politicians call for elections across the nation to provide an end to the Civil War. It remains to be seen whether the warring factions - some of which are currently attempting to take Tripoli - would recognize nation-wide elections as legitimate, especially since negotiations for a ceasefire have so far proven to be without results (News, 2019). Thus, Libya is currently still torn in the civil war and may remain so for the foreseeable future; the absence of the will to end the conflict may well be reflected in an absence of goodwill to mitigate financial mismanagement and corruption. It is possible that in the long run, the application of local institutionalized power and technology may help curb corruption and even end the civil conflicts.

In April 2019, Libya fell back into civil war after an armed offensive to take Tripoli resulted in the postponement by the United Nations of a national conference on the future of the country. This resumption of hostilities hampers economic activity and exacerbates the hardships that the population is going through. Faced with this chronic political uncertainty, the stabilization of the economy is unlikely, and its recovery even more unlikely. Growth remains sluggish in a context of disinflation. Given the rigidity of public spending, budget deficits remain high, even if the restriction on imports contributes to current account surpluses, which eases the pressure on foreign exchange reserves.

Despite the current insecurity, Libya would produce an average of one million barrels of oil per day, which corresponds to the average forecast until the end of 2019. However, due to the conflict and the incompressibility of budgetary expenditure, GDP growth will be negative in fiscal year 2020 (-0.6%) and will stabilize at around 1.4% over the period 2021-22. Disinflation should continue (-2.8% on average), the parallel market rate getting closer and closer to the official exchange rate. Budget deficits will remain high, reaching 10% of GDP on average. Current account surpluses will gradually decline, from around 7.3% of GDP in 2020 to 1.4% in 2022, although the Central Bank of Libya is expected to continue to curb imports . Reserves should thus stand at around 91 billion US dollars over the period 2020-22.

The country must show political determination to carry out the reforms essential for private sector-led growth and job creation, the only possible path to sustainable and shared prosperity.

Public finances are expected to recover slightly, but the rigidity of operating expenditures and the volatility of oil revenues are weighing heavily on the overall fiscal position. Oil revenues are expected to rise this year (to 47% of GDP), without being sufficient to cover the huge and constantly increasing wage bill, which will amount to 48% of GDP.

This swelling of the wage bill can be explained by salary increases and new recruitments, linked to the pressure on the remuneration of public officials, considered as an instrument of stabilization in a context of conflict between many factions. Faced with concerns over possible drainages to pay militias, a central bank audit was called for. At the request of the United Nations, the World Bank decided on the specifications for this audit; it also transmitted its recommendations on the new economic reforms suggested below.

Due to the complexity of the economic and political situation, the share of subsidies should remain large (10.6% of GDP), while the budget deficit remained high in 2018 despite a slight improvement (26% of GDP approximately, compared to 34.5% in 2017). It is expected to be financed by advances from the Central Bank of Tripoli and by the issuance of bonds in the east of the country. The current account, which posted a slight surplus in 2017 (up to 2.5% of GDP), shows a deficit of around 3% in 2018 under the combined effect of a large public deficit and a heavy dependence of the economy on imported consumer goods and intermediate products (including refined petroleum).

Foreign exchange reserves will stabilize on the condition that foreign investment in the oil sector and international oil prices cover most of the current account deficit, preventing the Central Bank from continuing to dip into its coffers. In terms of budget programming, the immediate challenges are twofold: managing the pressures on public spending without giving up the restoration of basic services, which must also be improved.

In the longer term, it will be a question of consolidating institutions with the aim of diversifying the market economy. The World Bank's (2018) strategy in Libya aims to foster the growth of a more dynamic and competitive economy in which the private sector could create jobs and sustainable wealth. It also plans to transform the management of oil revenues so that they are used in the best interests of the country and benefit all citizens equally.

2.18 Corruption in Libyan Oil Industry

Corruption has been described as the greatest impediment to economic, social, and political development among African countries. A report by Transparency International (2019b) indicates that in Africa, corruption has affected the likelihood of many states guaranteeing economic and fundamental freedoms to their people, led to poor governance, and diminished the role of citizens to hold their administrations to account. It has also led to slowed or stagnated economic growth resulting in increased poverty levels for most African states (Transparency International, 2019a). The cost of corruption in Africa is high, especially among the poor as opposed to the rich. Corruption hits the poor harder than the rich (Transparency International, 2019a). Statistics from the Global Corruption Barometer (GCB)-Africa indicate that most Africans feel that the state of corruption keeps getting worse in their states and that their administrations are doing little to arrest the situation. Specifically, more than half of all inhabitants in African countries hold the view that corruption keeps increasing in their respective nations. The same number also blame their administrations for doing nothing to address the problem that has affected the overall wellbeing of people in society. In Africa, 25 percent of the citizens who seek public services pay bribes which translates to around 130 million individuals in around 35 states that the GCB Africa surveyed (Transparency International, 2019b). This section will highlight the issue of corruption in Africa and lay specific emphasis on oil corruption in Libya. It will also consider reasons why oil-producing countries in Africa are utterly corrupt, what their governments have done or are doing to address the menace, and whether their efforts have managed to tackle the vice.

Mbaku (2010) notes that in post-independent Africa, corruption as an institution has enriched a few individuals with influence on political cycles at the expense of the masses. In most African countries, increased corruption has placed the health and welfare of the masses in jeopardy and also impeded the administrations' ability to tackle the menace effectively. Most

policymakers in the African continent concentrate on policies that take care of their welfare and that of a few individuals at the expense of other citizens. The corruption menace is rampant in most African states that produce and export oil. Examples of these states include Libya, Nigeria, Angola, Sudan, Egypt, Algeria, DRC, Equatorial Guinea among the rest. According to Markus (2017), many oil-producing countries in the Sub-Saharan Africa region have witnessed high levels of corruption associated with the production and export of oil and other related products. Many of them have witnessed what can get described as Dutch Disease, which has led to the deterioration of other sectors of the economy. This impacted poor harder than the rich as the elites, and politically-connected individuals proceed stealing from oil and save funds in foreign countries leaving the majority to suffer as a result of the declining economic activity in other sectors of the economy (Ogbeidi, 2012).

In Nigeria and Angola, which are Africa's top oil-exporting countries, several people live in poverty, while a few individuals control over 90 percent of the proceeds from oil (Markus, 2017; Mbaku, 2010). The unequal distribution of the proceeds has led to various social evils in the society with the majority feeling excluded from benefiting from their natural resources. Nigeria's political history demonstrates a country that has struggled much to have any positive and meaningful impact on corruption to minimal success. The military rule from 1966 did not manage to make any progress in fighting corruption in the oil sector, but many scholars regard it as the chief architect of corruption (Mbaku, 2010; Ogbeidi, 2012). Both, General Yakubu Gowon and President ShehuShagar did little to fight the increased corruption in Nigeria, and only General Murtala Mohammed instituted serious reforms to rid the oil sector of corruption but got assassinated after only six months at the helm (Ogbeidi, 2012). The situation was no different in other oil-producing African states, like Angola, DRC, and Sudan. Increased levels of corruption and uneven distribution of wealth amplified the vice, adversely affecting the living standards of people.

Corruption is quite rampant in African countries owing to a long history of impunity and selfish interests. Individuals in powerful positions often use their power to acquire wealth and grab public property. Powerful corrupt officials use their influence to accomplish corrupt business deals and backchannels. Weak judiciary systems make it easy for accused persons and corporations to escape justice. Libya possesses the largest and most extensive oil reserves in Africa (Armitage, 2018a). Notwithstanding this distinction, 33% of Libyan citizens are recognized as poor, while a large percentage of the population lacks access to proper sewerage and clean drinking water (Armitage, 2018a). Such outcomes are attributed to the widespread nature of corruption in the country.

Corruption is the biggest obstacle for firms engaging in business activities in Libya. Although all sectors in the economy of Libya suffer from rampant corruption, the most affected sectors are the oil industry and the public procurement sectors (GAN Integrity Inc, 2019). In Libya, the oil sector is state owned and this means that it is run by the government. In government operated businesses in Libya, such as the oil industry, the government lacks transparency in its under staking including the management of revenue(GAN Integrity Inc, 2019). For example, it is well known that the National Oil Corporation, in one instance, had been asked to release to the public, a report detailing its oil operations in 2013. However, the National Oil Corporation turned-down this request, thereby denying the public the opportunity to learn about the corporation's management of the oil sector(GAN Integrity Inc, 2019). The National Oil Corporation's inability to provide the public with information regarding its oil deals is indicative of corruption. Additionally, the National Oil Corporation's decision to reject the request is indicative of impunity. It can be deduced that the oil corporation does not care about the public or the need for maintaining accountability and transparency in the oil deals. On the contrary, the oil corporation is corrupt and would not want to release its reports lest the public and additional organizations demand transparency and accountability. If the National

Oil Corporation's accounts were scrutinized, it is highly likely that the corporation would be required to show how it had been managing the financial resources emanating from oil deals.

Corruption is even worse in the post-revolution period than it was during the reign of Muammar Gaddafi, whom critics labeled the most corrupt leader. Gaddafi amassed much wealth which he kept in foreign bank accounts thereby denying the Libyans the opportunity to benefit from their natural resources, particularly oil (Wilson, 2013). Libya's oil comes out as a curse than a blessing to the country that has plunged into a civil war since 2014. Libya is the 10th largest producer of oil in the world, but 33.3 percent of its population lives below the poverty line. The country has a weak institutional framework meant to fight corruption, and the increased violence and political instability undermine the rule of law. Besides, there is no functional Constitution as the assembly tasked with the writing of the new Constitution after Gaddafi's ouster has not made any meaningful progress, meaning that only constitutional declarations form the basis of law in the country. Libya's judicial system and security agencies are ineffective in discharging their mandates leading to rampant corruption in the oil industry among other social evils happening in the state (Armitage, 2018a).

Like Libya, other oil-producing and exporting countries in Africa have been faced with a similar challenge of corruption that has seen some of them relying on donor funding and external support or debt to provide basic services to the people. Nigeria, Algeria, and Angola are some of the states that have experienced widespread corruption in their many economic sectors and have seen the widening of the gap between the elites and the poor in society. Foreign companies have gotten blamed for aiding corrupt practices in Africa, especially in the oil business. For instance, companies from Italy, Spain, Britain, Switzerland, Australia, and the US have, in the past, faced scrutiny over their abetting of corruption in Africa. EniSpA and Shell face corruption accusations over an oil deal that saw the company's top executives receiving bribes of up to $1 billion. The OPL 245 oil deal struck between Nigerian authorities

and Shell executives in 2011 involved bribery claims that the government aimed to run into billions of dollars (Gilblomet al., 2019). Other cases involving oil corruption in Africa include the investigation of Spain's state-owned DEFEX for its involvement in corrupt activities in Sierra Leone, Cameroon, and Angola. Glencore has also been accused of corruption in the Democratic Republic of Congo where the country lost over $1.36 billion due to the underpricing of minerals sold to an Israeli billionaire Dan Gertler's companies. In Australia, several companies are facing a trial for abetting corruption in Sierra Leone the Republic of Congo (U.S. Department of Treasury, 2018).

International interference has been another prominent factor contributing to corruption in the oil sector. The United Arab Emirates and Egypt have emboldened the military chief and his allies to maintain control over the oil sector (Stephen &Wintour, 2018). Countries such as France have threatened political consequences if the military chief uses his influence to manipulate the Central Bank. Nevertheless, Egypt and the UAE continue purchasing oil that is produced and distributed without the NOC's control (Stephen &Wintour, 2018). The selfish actions of international players justify and reinforce corrupt schemes in the Libyan oil industry.

The NOC chairman has requested members of the international community to enforce sanctions and restrictions against 46 entities and individuals responsible for running the four ports (Armitage, 2018b). The levels of corruption affecting oil production in Libya can be reduced by subjecting resources to the Government of National Accord and the National Oil Corporation. The US and France have triggered a change in the oil sector by applying political pressure to the military chief (Armitage, 2018b). The sanctions imposed on Iranian oil and the unprecedented increase in oil prices have caused the international community to focus on the Libyan oil crisis. Haftar reluctantly agreed to allow the NOC to regain control of affected ports (Armitage, 2018b). Foreign ministers from the UK and Italy also contributed towards the resumption of normal oil operations. The Libyan parliamentary system has unanimously

backed a wide-ranging corruption probe into the country's oil sector (Armitage, 2018b).

Suspected players, such as the Central Bank, traders, western oil companies, businessmen, and

politicians will be investigated and prosecuted if found culpable. The corruption probe would

be conducted using guidelines established by the UN (Armitage, 2018b). In this manner, tactics

that were previously used to perpetuate corruption would be identified and addressed.

2.19 Corruption in Other developing countries

Countries similar to Libya have adopted specific techniques designed to fight

corruption in the oil sector. Extensive research has been done to examine the prevalence of

corruption in the awarding of licenses and contracts to oil and gas companies

(Eregha&Mesagan, 2016). Past corruption cases have been used to expose patterns of corrupt

behavior in the oil sector. Bribery was quite commonplace in many countries since

corporations made payments or supplied favors to enhance their prospects of winning

contracts or licenses. Fixers and officials with deep political connections often shared their

illegally-acquired revenues with key decision-makers (Sayneet al., 2017). Strong anti-bribery

laws have been established in many countries to expose, prosecute, and convict individuals

that offer and receive bribes.

In some countries, political elites benefited from conflicts of interest to profit from oil

contracts and revenues (Sayne et al., 2017). Secretive structures of ownership, including

nominee shareholders and shell companies, were often used to conceal the owners of corrupt

institutions. Recipient companies could also be located in tax havens to protect the identities

of owners. Politically-exposed individuals relied on proxies to perform their bidding in

financial transactions (Sayne et al., 2017). Countries attempted to identify conflicts of interest

by subjecting decision-makers to intense background checks before the latter could be

granted authority in the oil sector (Eregha&Mesagan, 2016). Any financial deals involving

family members or known associates of politically-exposed individuals were identified and investigated. The professional background and qualifications of corporate executives listed under the profiles of companies were also analyzed (Sayne et al., 2017). Executives that lacked the necessary experience to perform their duties and responsibilities were indicative of corrupt behavior.

Many countries combat corruption in the oil sector by examining the qualifications of corporations that receive contracts or other financial awards (Sayne et al., 2017). If companies were formed a few days before oil contracts were awarded, responsible authorities would investigate. Entities that failed to satisfy established standards for pre-qualification were also subjected to scrutiny. Other potential red flags include organizations without offices or websites and companies lacking the operational capacity to thrive in the oil sector. National governments are required to explain why certain companies merited receiving oil contracts. Unprecedented commercial terms could indicate corruption, especially if the state was forced to pay unusually expensive procurement contracts (Sayne et al., 2017). Oil deals involving middlemen and participants with little technical or financial contributions were indicative of corrupt behavior. Consequently, the examination of entities and individuals reduced the occurrence of systemic corruption.

Political parties, parliamentarians, and independent organizations should be involved in performing oversight. The involvement of multiple organizations creates several protective layers to safeguard against corruption (Sayne et al., 2017). If one of the agencies becomes compromised, other organizations can continue to provide needed oversight. The parties involved should increase their knowledge of potential warning signs to make them more equipped to identify and combat corruption. Special reports or hearings are often commissioned to review the extent of progress in the oil sector (Sayne et al., 2017). During

such meetings, crucial transactions and licensing rounds are examined to determine whether they include corrupt practices.

Corruption poses a number of challenges common to several countries in the region. These include contextual factors such as chronic insecurity, as well as institutional factors such as lack of access to information, weak legal frameworks, or inadequate law enforcement mechanisms. Particular forms of corruption also proliferate in these five countries, such as political corruption, collusion between the public and private sectors, as well as a pervasive nepotism.Despite these common traits, there are cultural, social and political differences within and between these countries, and it is therefore difficult to provide a consistent overview of corruption in the region.

Recurring problems of internal and external insecurity have provided fertile ground for corruption. This instability has reinforced the constant threat of war in many countries, allowing some leaders to take advantage of it to concentrate power in the hands of the executive, leading to increased repression and a lack of accountability (Transparency International , 2015).

Internal insecurity, fueled by social unrest, also appears to be inextricably linked to corruption. The Economist's index of social unrest in the Arab world (2011) shows that countries like Libya and Egypt experience both high rates of social unrest and corruption in the public sector (like the measures the corruption perception index of Transparency International, 2018).

Corruption can take different forms in the region between countries with strong mineral wealth, such as Libya, and others. A 2011 Revenue Watch report on oil wealth and stability in the MENA region indicates that oil revenues "encourage clientelism, fuel corruption and weaken public institutions." Observers agree that oil wealth favors authoritarian regimes, as governments centralize power to keep profits under control.

Numerous publications advance the idea that oil wealth in MENA countries often goes hand in hand with deprivation of liberty, a polarization of inequality, and a limited propensity of the state to be accountable, to the extent that it depend on external revenues (such as royalties paid by multinationals) more than on sums collected at the state level (through taxes for example) (see Dunning, Di John, 2007 and Schwarz, 2008).This theory is not valid everywhere1, but seems to apply to the situation in Libya. The United States Institute of Peace, for example, points out that, before the recent revolution, rentier government was responsible for mass unemployment and widespread poverty. According to this institute, the state's oil wealth was concentrated in the elite through a clientelist system; thus, the majority of individuals without access to oil revenues could hardly benefit from the country's wealth (Gilpin, 2011).

Transparency in the oil sector prevents the undue influence of political actors. Quality information concerning the oil sector is published frequently to encourage constructive and well-informed public discourse (Sayne et al., 2017). In this manner, no one group has the opportunity to advance selfish interests. Activists are empowered to investigate suspicious attributes, participants, or processes whenever contracts or licenses are awarded (Debrah& Graham, 2015). Social and mass media platforms are used to raise questions or share concerns with government officials and members of the public. Collaborations between activists and sector experts allow independent bodies to acquire the technical expertise needed to perform oversight. According to Debrah and Graham (2015), the efforts of journalists and distinguished members of the civil society expose hidden corruption schemes and contribute towards legal action.

Some countries have prioritized their independence and infallibility of the criminal justice system to end the cycle of corruption (Debrah& Graham, 2015). The integrity of law enforcement agencies allows them to investigate reports of criminal activity without

succumbing to external pressure. Judicial officers and prosecutors can probe corruption claims in the oil sector and institute required punitive measures if they exercise independence. The reliability of the judicial system prevents corruption by deterring potential perpetrators. Individuals and corporations that are found guilty of engaging in corruption can serve as warning examples to others (Debrah& Graham, 2015). Appropriate fines and repository schemes have been deployed to recover stolen funds. In this respect, bank accounts are frozen until stolen money is recovered to the fullest extent possible.

Interestingly, corruption in Libya's oil industry does not only affect the neighboring countries, but even those as far as Australia. Crude oil is Australia's major import commodity and it is acquired from various countries globally (McClintock & Bell, 2013). Recently, Australia has considered Africa as an appropriate source of crude oil due to many African countries exhibiting economic recovery, political stability, and an enhanced environment conducive for investment in oil because of the magnification of oil reserves in the African continent (McClintock & Bell, 2013). As of 2011, Ms. Ann Harrap, the Australian High Commissioner to South Africa, opined that Australia had about 220 oil and mining companies established within Africa, constituting about 595 projects in 42 countries (McClintock & Bell, 2013). Of the 42 nations, Libya and Nigeria are the two most significant and valuable destinations for Australian companies due to the magnitude of oil reserves in these countries. However, Libya and Nigeria have similar problems associated with corruption. Libya, for example, lacks a stable government due to the constant wars between tribesmen and militia who fight for control over the rich oil fields after the death of Colonel Gaddafi (McClintock & Bell, 2013). The lack of political stability in Libya has contributed greatly to the thriving of corruption, whereby the police, judiciary, and additional government institutions lack transparency and promote bribery. The oil industry also experiences corruption and lack of transparency such that it becomes challenging for external investors,

such as Australian oil and mining companies to thrive in a serene environment (McClintock & Bell, 2013).

2.20 Efforts by Other Countries to Fight Corruption and How This Can Apply to Libya

Oil-producing states in Africa have instituted mechanisms to fight corruption arising from oil deals. Despite their slow influence on corrupt practices, corrupt government, or private individuals, the mechanisms are expected to help eliminate the vice in the long run. Nigeria, for example, strengthened the Economic and Financial Crimes Commission (EFCC) under the leadership of President Buhari to ensure that it brings to trial those public officers indicted in corruption during the reign of President Goodluck Jonathan. The commission has so far charged high-ranking officials with corruption charges (among them former oil minister Diezani Alison-Madueke and SamboDasuki - a former national security adviser). The country has also initiated radical changes in its Nigerian National Petroleum Corporation which now publishes monthly financial reports as a way of enhancing transparency in its dealings. Past shady deals involving crude oil trade have been renegotiated as a way of enhancing transparency. Third, the Buhari-led administration has arrested former ministers and high-ranking officials in an operation aimed to recover stolen assets due to corrupt dealings (E.A.D.W, 2016). Like Nigeria, Libya can learn from the efforts put in place by the Buhari administration to tackle oil corruption. For example, Libya must strive to ensure that a democratic and functional government gets elected to run the affairs of the country. Once the administration is put in place, it will then draft mechanisms meant to fight and bring corruption in the oil industry to an end by arresting and charging suspects and jailing those convicted. The administration can also strengthen the existing anti-corruption agencies and grant them more power to arrest and charge suspects in court for corruption-related crimes.

The regime can also seek to renegotiate past deals that involved corruption as a way of ensuring that Libya does not lose revenues from its vast oil resources. Doing so will help the country to guarantee its citizens of trickling down benefits from the oil industry.

In Malawi, the issue of an arrest warrant against former president Joyce Banda for her alleged involvement in the Cash gate scandal that saw the government payment system hacked in favor of corruption and fraud by businesspeople was a massive step in the fight against corruption. Malawi has strengthened its judicial system to ensure that the fight against corruption gets boosted, while accountability gets emphasized. Ethiopia's administration has also uncovered a corruption network involving government officers, middlemen, and businesspeople. A total of fifty-five individuals indicted for corruption and corruption-related cases have so far gotten arraigned. The country has instituted mechanisms to fight corruption by strengthening its judicial system and granted it the power to arrest and arraign individuals accused of corruption (Institute for Security Studies, 2018). Like Ethiopia and Malawi's administrations, Libya's government can start a process that will involve the strengthening of its judicial and law enforcement agencies, like the police to combat oil corruption in the country. Strengthened judiciary and law enforcement systems will ensure that the rule of law gets adhered to at all times and the sentencing and jailing of corrupt individuals will send a strong signal to those intending to engage in the practice both, in the present and future.

Libyan administration can also emulate the efforts made by the Kenyan administration in fighting corruption. In the last four years, the Kenyan government, under the leadership of President Uhuru Kenyatta has instituted mechanisms to fight the corruption menace that has affected service delivery to the people of Kenya. The government revamped and gave more impetus to the office of public prosecution to pursue and arraign corrupt officials. So far, several government officials have been charged with cases of corruption, including the Cabinet Secretary for Treasury and Planning who has since been relieved of his

duties. Several other leaders, including governors, have been arraigned with corruption in an operation that appears to get massive support from the general public. Secondly, Kenya is run as a democracy, and as Asongu (2013) argues, the democratization process enhances the fight against corruption. In Africa, democracies permit the public and other leaders to check the actions of top leaders or government officials, and those implicated with corruption cases can be forced out of office by the voices of the majority, as Kichwen (2017) argues.

Libya has had political challenges since the ousting of Gaddafi in 2011, and the country is involved in a fierce civil war that has lasted over six years for now. The authorities in the county must ensure that the country returns to democracy by finalizing the process of writing the Constitution and organizing free and fair elections in the country that will reflect the will of the people. The restoration of democracy will enhance the chances of the state to enhance the efficient and effective use of its oil resources and help in the fight against corruption. Like Kenya, Libya has a higher potential of strengthening its judicial and law enforcement systems in a way that will see the country progress in its fight against corruption in the oil industry.

2.21 Effects of corruption on human rights

Corruption is an explicit violation of human rights, and the requirements of transparency and integrity are supported by the preamble of the United Nations Charter, where we find "we reaffirm our faith in the fundamental rights of the human person and the dignity and worth of the individual and the equal rights of men and women and nations large and small, and to clarify the conditions under which justice and respect for obligations can be achieved "

Human rights mechanisms in the United Nations are increasingly aware of the negative impact of corruption on the enjoyment of human rights, and thus the importance of

effective anti-corruption measures. The Human Rights Council and its special rapporteurs and its mechanism for the universal periodic review, as well as human rights treaty monitoring bodies - especially the Committee on Economic, Social and Cultural Rights and the Committee on the Rights of the Child - have addressed corruption and human rights issues on numerous occasions.

In 2003, the former Subcommittee on the Promotion and Protection of Human Rights appointed a Special Rapporteur whose mission is to prepare a comprehensive study on corruption and its impact on the full enjoyment of human rights, in particular economic, social and cultural rights. This mandate ended in 2006 when the Subcommittee of the Advisory Committee was replaced. In the year 2004.

As a follow-up to this conference, OHCHR, in conjunction with the United Nations Office on Drugs and Crime and the United Nations Development Program, is preparing a guide for human rights and anti-corruption practitioners. Likewise, the link between corruption and human rights appears to be an obvious matter for many, so when laws are salable, and justice has a price, the government's treatment of citizens is determined more and more based on their ability to pay, and not on other fundamental grounds, such as integrity, fairness, and respect for the rule of law.

The High Commissioner said that money embezzled from public coffers can be spent on development needs, lifting people out of poverty, educating children, providing medicines for families, and putting an end to the thousands of deaths and injuries that occur every day during pregnancy and childbirth that can be avoided.

The High Commissioner went on to say further that corruption prevents victims from accessing justice, strengthens inequality, weakens administration and institutions, reduces public confidence, nurtures impunity, undermines the rule of law, and enumerates the

legislative guide - to implement the United Nations Convention against Corruption - some

effects of corruption Among them were:

Corruption by illegally leaking state funds is cut from services that depend on people

with little resources such as health services, education, public transport, or local police

services. Additionally, corruption has far-reaching implications such as social polarization,

lack of respect for human rights, and undemocratic practices.

Foreign companies and capital will not want to invest in societies where there is

corruption. Corruption highly distracts foreign investment because of the relationship

between corruption and lack of transparency (Abotsi, 2015). Africa lags other countries on

foreign investment because of high corruption levels as indicated by the corruption

perception index (CPI). Transparency International's corruption perception index ranks many

African countries at 3.0 or lower. For example, in 2012, Transparency International's CPI

index ranked 77% of the countries at 3.0, in 2011, 2009 and 2008, 87% of the countries

scored 3 or below, while in 2010, 83% of the counties scored 3 or below(Abotsi, 2015).

These rankings indicate the high level of corruption in Africa, which is also a threat to

foreign investment in African countries. The World Bank opines that the value of bribes paid

by firms and individuals globally is about $ 1 trillion each year and that corruption costs

surpass global GDP by more than 5% at $2.5 trillion(Abotsi, 2015). Bribes impact negatively

on a firm's activity at higher magnitudes than taxation impacts. For foreign firms, corruption

(such as bribes) hinder them to maximally use their location advantage in the foreign

economies because of poor institutions such as corruption which makes it challenging for

such firms to utilize available technologies to their advantage (Abotsi, 2015).

Additionally, corruption also affects entry of foreign firms into a specific market

(Abotsi, 2015). Companies intending to expand in specific markets may rethink their

investment intentions if corruption exist in those countries. Corruption, particularly the

procurement of bribes may hinder foreign investments and hinder eventual growth of a country because of its capability to increase costs of operations (Abotsi, 2015). If governments ask for bribes before they allow a foreign company to invest in a given country, the money from such bribes could be computed as part of the costs of establishing a business. Therefore, the more money (in bribes) a foreign firm is expected to pay would count as an addition to the other costs of establishing a business, which include licenses and costs of establishing offices and hiring employees. Therefore, the overall cost of establishing and running a business increases significantly with corruption and this may eventually affect the overall profit margins the foreign company. To avoid having to experience increased costs of business operations due to bribes, foreign companies would thus avoid investing in countries will extremely high corruption levels based on the corruption indexes.

The United Nations Convention against Corruption is a comprehensive agreement, because it included various and updated provisions in the field of fighting the phenomenon of corruption by introducing some legal concepts and mechanisms imposed by this phenomenon, and this agreement came to criminalize the act of corruption and to invite countries to punish violators, and to draw up international cooperation plans in the field of prevention And to follow the criminals, this agreement called on the states parties to establish a comprehensive internal system of control and supervision of the expenses and financial institutions and ordered the development of measures to ensure the protection of witnesses and experts, has emphasized the need to fight corruption, and this agreement has relied on transparency in the liquidation of public interests and state property.

However, despite the positive aspects of the United Nations agreement, several difficulties prevent this agreement from fully fulfilling its tasks, as this agreement neglected some legislative aspects by neglecting computer crimes, and the associated forms of corruption have a great impact on economic activity. Trade takes place electronically,

especially at present. Many international contracts and tenders take place in what is known as an electronic exchange.

As is well known, bank crimes are done through automatic calculation, and the agreement did not expand the concept of leakage, which is a fertile field for crimes of corruption, as this agreement omitted any punitive provisions related to crimes of damaging public money and seizure crimes, in the major international contracts in which they are active. Secret international companies such as oil and gas companies.

There is also a set of difficulties that guide the national judge in implementing the United Nations Convention against Corruption internationally, public international law determines the implications of its conclusion within the state or the extent of the commitment of individuals or courts to it, and is not concerned with how the treaty rules are violated, the rules of internal law It is what determines the effect of the treaty it has concluded, although it is not permissible to rely on internal laws to evade the provisions of the United Nations Convention against Corruption, so the implementation of the United Nations Convention against Corruption internally remains dependent on the internal legal system that the state is independent to apply.

2.22 Conclusion

Indeed, corruption in the Libyan oil industry has contributed to high levels of poverty and embezzlement of public funds. Selfish interests of decision-makers have led to widespread corruption. The proliferation of selfish economic interests has also heightened the pervasiveness of corrupt practices in the oil sector. Officials holding positions of responsibility have been tempted to engage in corruption for self-enrichment. Lack of patriotic concern has motivated people to prioritize their financial goals before the interests of citizens. However, oversight actors in some countries prevent corruption schemes by focusing on both, high-

profile deals and subcontracts. The prices charged by companies in seemingly low-profile segments can reveal the depth of corruption. All financial transactions are mapped across the board to guarantee oversight and transparency.

Importantly, Africa needs to rethink about its corrupt tendencies. Governments have to be based on democracy because nearly every country in the continent is corrupt based on the corruption index levels by the Transparency International. These corruption indexes are affecting the overall growth of the African economy because they hinder the establishment of foreign investments in Africa. Foreign companies intending to invest in African and contribute to the expansion of the continent's economy are turned away by wanton corruption and misuse of resources. It can be observed that the majority of Africans are poor and this makes them more vulnerable to giving bribes in order to change their poor statuses.

The poverty levels make the individuals vulnerable to exploitation and this elevates the community's vulnerability to be asked for bribes and to give bribes in the hope of crossing from the poverty side to riches. If the poverty levels among Africans are improved, there are high probabilities of reducing the corruption indexes. Governments need to strategies on how to minimize and discourage against corruption in order to benefit the lives of their citizens.

Chapter Three: Methodology of Research

3.1 Introduction

Quantitative data about the corruption variable gathered from Transparency International (TI) transparency and corruption indices. As Steinbock (2018) shows, these two indices list most nations. For example, the corruption perception index (CPI) captures the corruption levels of 180 countries, which are surveyed every year, and rates them on a scale between 0 and 100; while 0 is highly corrupt, 100 represents a complete absence of corruption. According to TI (2018), the current rating is from February 21, 2018. It shows

that the average score for all countries was 43, with the highest score 89 (New Zealand) and

the lowest 9 (Somalia). This means that Somalia ranks as the most corrupt nation in the globe

while New Zealand is the least corrupt country. It is interesting to see that the most corrupt

country falls in the developing nations' category. This observation augurs well with this

study's area of focus. See the attached excel sheet for the full data downloaded from the TI

website for the 2017 CPI index.

The data about a country's transparency and institutional frameworks were sourced

from the *Most Transparent Countries ranking published on USA News.* The ranking

characterizes a country based on 65 attributes that are grouped into nine crucial categories -

"movers, adventure, entrepreneurship, cultural influence, open for business, citizenship,

power, heritage, and quality of life" (McPhilips, 2018). For example, Norway was ranked as

the most and Colombia the least transparent country in 2017 (US News, 2018). The value of

these attributes is based on global perceptions taken from 21,000 surveyed participants.

Whilst this index only covers 80 countries, its findings can be considered authentic, given the

large survey sample as well as the methodology used to analyze the data. See attached excel

sheet for the 2017 data downloaded from the US News website.

Moreover, data about political goodwill will be sourced from the *Democracy Index*,

which is published by the UK's *Economist Intelligence Unit* (EIU). As Kekic (2007)

illustrates, this index is based on about 60 democratic indicators, which are categorized into

five broad groups that evaluate a country's political culture, pluralism, and civil liberties.

From this index, countries can be ranked as an authoritarian, hybrid regime, full democracy,

or flawed democracy. For example, the 2017 index shows that Norway was the most

democratic country with a score of 9.87, while North Korea was the most authoritarian

country with a score of 1.08 (EIU, 2018). This index was selected based on the assumption

that a country's form of government and level of democracy directly influences its political

goodwill to fight corruption (Kekic, 2007). Also, the data was selected because of the robustness of the methodology behind it, and the authenticity of the publishing authority. See attached excel sheet for the 2017 data downloaded from the EIU website.

On its part, data about the use of modern technology accessed from the *Networked Readiness Index* published by the World Economic Forum. Basaninyenzi (2013) contends that this ranking cover countries' use of technology, especially in the areas of internet penetration, mobile penetration, innovation, access to public information using digital platforms, and most importantly, the government's use of technology to deliver services to the public. For example, the 2016 ranking shows that Singapore and Finland lead the pack with a score of 6.0 while Chad ranks last with a score of 2.2 (WEF, 2018). As evidence drawn from the work of Punch (2013)shows this data was selected courtesy of its robustness as well as the authenticity of the publishing authority.

Finally, the data about institutional frameworks gathered from the World Bank's *Ease of Doing Business Index*. As previous evidence (2017) shows, this index captures a country's regulatory framework on a score of 0 to 190, where 0 represents countries that pose many difficulties to do business and 190 captures the countries that have business-friendly environments to do business. Environments are categorized according to 10 metrics such as taxation, enforcing contracts, getting electricity, resolving insolvency, and accessing credit. This index shows that New Zealand is the leading country while Somalia is the last country (WB, 2018). See attached excel sheet the 2017 data downloaded from the World Bank's official website.

Also, questionnaires and interviews will be used to collect more information in Libya, which will have an added value, especially that there is a shortage in the information about this country internationally, so this study will defiantly have great contraption for the other scholars.

3.2 Research Method (Design)

Research design is a strategy for the study and the plan which will implement this strategy. It identifies methods and procedures for collecting, measuring, and analyzing data. (Cooper, Donald R. & Pamela S. Schindler, 2014). In this research, the researcher will collect detailed data on the variables under research. to achieve the purpose of this research is to determine the nature of the relationship between the independent variables, and the dependent variable collected and analyzed.

3.3 Population and Sampling

In sample-based studies, the population surveyed is identified and confirmed that the sample provides an accurate representation of the population. The population represents the Libyan government department, and are located in six fields:

1. Ministry of Finance,

2. Libyan Audit Bureau,

3. Libyan Transparency Association,

4. National Anti-corruption Committee,

5. Central Bank of Libya,

6. Academic, Scholar personals.

The number of officials is about 900 people divided into three levels, 90 executive managers and 360 heads of departments, 450 employees.

3.4 Calculation sample size

The sample size was determined by a sample size calculation according to Krejcie – Morgan (1970). In the majority of quantitative studies. A 95% confidence interval and a significance level of 5% was used.

$$n = \frac{Z_{\alpha/2}NP(1-P)}{d^2(N-1)+Z_{\alpha/2}(1-P)}$$

Where:

n: Sample size calculation

N: Population size study

$Z_{\alpha/2}$: at α=0.05=1.96

Prevalence of Transparency International knowledge, P= 50%

d: The error rate allowed d=0.25%.

$$n = \frac{1.96(900)\times0.5(1\text{-}0.5)}{(0.0025)^2\times(900\text{-}1)+1.96(1\text{-}0.5)} \approx 447$$

In this research of about 447 individuals were conducted taking into account the margin of error. Only 430 were received while the valid questionnaires were 406 out of the received questionnaires, which was a good proportion. According to Sekaran&Bougie (2016). we choose a **Stratified random sample** represents managers, heads of the departments, and employees in the Libyan government department were (including 45 managers, 179 heads of department, 223 employees of units) filled 447 questionnaires. Choosing these three sample groups (managers, heads of department, and employees), as survey participants were appropriate for involvement with knowledge about transparency and corruption indices. So, the total sample size is 447, as appearing in Table 3.1.

Table 3.1.

Analysis Showing Population and Sample of Questionnaire Survey

Sr.	Position	Population	Sample Size	Percentage
1	Executive managers	*90*	*45*	10.06
2	Heads of departments	*360*	*179*	*40.05*
3	Employee of units	*450*	223	49.89

Total	900	447	100

Since this study has included all six of the Libyan government department, the sampling method cannot be a critical issue except for taking into consideration bias or missing information. A statistical test was applied to find chances of biases.

3.5 Data Gathering and Measures

The questionnaire was a common method in the social sciences. In this way, the target group answers almost the same questions and is useful for dealing with large numbers of people. This study includes a large population and large data. Therefore, the questionnaire was designed based on measurements in previous studies to obtain information from the Libyan government department targeted by the research. A survey questionnaire converts the concepts into measurable variables, so the questions should be as simple, short, and accurate as possible. The questionnaire was designed to measure the Factors Most Affect Corruption in Libya. The questionnaire (see Appendix) is divided into six broad parts:

Part I respondent's background information including gender, age, experience in the current job, and government department. Part II represents the Financial Transparency block which was composed of four items. Part III concerns with Modern Technology factor, which was composed of three items. Part IV was the Political Goodwill factor that has four statements. Part V represents the Institutional Framework factor which was composed of five items. Part VI concerns with four statements on Corruption as the dependent variable. Likert Scale was used to measure these parts such as (1= Not at all, 2=Small extent, 3=Moderate extent, 4=Great extent, and 5= Very great extent). The reason for grouping the statements into such small sections was to reduce the possibility of boredom, which might induce the

respondents to stop responding to the questions. The questionnaire design assures

respondents' following precise and specified instructions.

3.6 Numbers of Questionnaires in Data Gathering Process

The researcher determined the sample through the distributed and received

questionnaires while the total number of distributed questionnaires was 447. Only 430 were

received while the valid questionnaires were 406 out of the received questionnaires, which

was a good proportion of about (90.83%) and accurate sample representation.

Table 3.2.

Analysis Showing Population and Sample of Questionnaire Survey

Sr.	Position	Distributed questionnaire	Received questionnaire	Valid questionnaire
1	Executive managers	45	43	41
2	Heads of departments	179	171	160
3	Employee of units	223	216	205
Total		447	430	406

3.7 Operationalization of Research Variables

As Figure 1 below indicates, the framework shows that corruption is the dependent

variable while financial transparency, technology, political goodwill, and institutional

frameworks are independent variables. Arguably, financial transparency, technology, political

goodwill, and institutional frameworks are in alignment with the reviewed data in the

background section above. For example, Brusca et al. (2017), Graycar and Smith (2011), Peisakhin and Pinto (2010), and Olken and Pande (2012) found that financial transparency can reduce instances of corruption in developing nations. However, in the same vein, technology, political goodwill, and institutional framework variables fit the findings of Lopez (2017), Liu et al., (2017), Strimbu and Gonzalez (2018), and TI (2016) and the notion that financial transparency alone cannot end corruption in developing nations. Overall, these variables address missing data issues and the limitations identified in the problem statement section above. The four independent variables achieve this objective by covering the conflicting findings of past studies reviewed in the background section above.
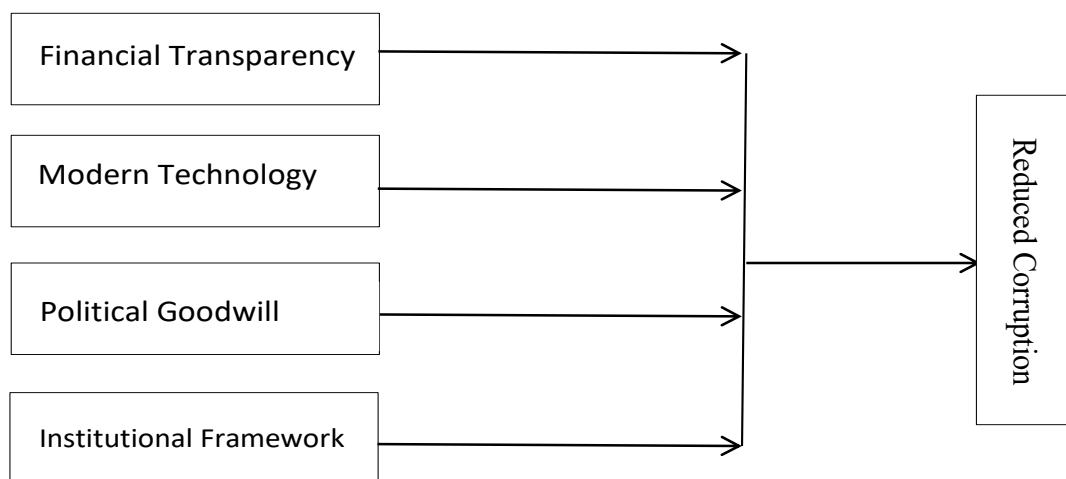
Figure 1.

Conceptual Framework (Created by Author)

The conceptual framework above can be converted into a simple multiple regression model shown by the equation below. In that model, the dependent variable Y (corruption in developing countries) is influenced by four independent variables X_1, X_2, X_3, and X_4 (transparency, modern technology, political goodwill, and institutional frameworks). As expected, the "a" in the equation is the y-axis intercept, "b" is the slope, and "e" is an error

term. According to Cohen et al., (2014), the equation can be used to test the model using multiple regression. This analysis will establish the strength of association (if any) between the dependent variable and each of the four independent variables.

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + e$$

Overall, the results of the multiple regression output will be applied in the above equation to establish the level of corruption in Libya. This will be done to establish if financial transparency has the biggest influence (or otherwise) on corruption in Libya. The overall interpretation of the analyzed data will be done following the specific multiple regression statistics run on the SPSS package and the reviewed data in the background section above. Following our four hypotheses established in the theoretical framework above, we expect that the dependent variable Y will significantly depend on X_1, while we expect that it does not significantly depend on either one of X_2, X_3, or X_4. In this context, there are four main hypotheses:

H$_1$: Financial transparency factor has a significant effect on Corruption in the Libyan government department.

H$_2$: Modern technology factor has a significant effect on Corruption in the Libyan government department.

H$_3$: Political goodwill factor has a significant effect on Corruption in the Libyan government department.

H$_4$: Institutional framework factor has a significant effect on Corruption in the Libyan government department.

H$_5$: A combination of the four factors has a significant effect on Corruption in the Libyan government department.

3.8 Measures with their Validity and Reliability

In the case of the questionnaire survey, success largely depends on the quality of the questionnaire itself. Therefore, it is necessary to conduct the pilot study to establish that the proposed questionnaire is intelligible and clear to the concerned population. Moreover, researchers must assure total clarity in the questionnaire and its reliability/validity despite using two sources for construct and design it firstly, therefore, the pilot study should be assured that the proposed questionnaire is understandable and clear for the respondents. It is useful to pilot the questionnaire with few respondents to check its suitability for achieving the research objectives. To focus more, we can use another important test for validity which represents is Confirmatory Factor Analysis(CFA), finally, use assessing data reliability before making any statistical analysis.

3.9 Validity by Pilot Study

Usually, the questionnaire undergoes development processes before the final distribution. This draft was later submitted to the supervisor and finally, it was distributed among some Ph.D. scholars for feedback. Also, another objective of piloting is to detect the reliability/validity of our questionnaire. Along with the revised questionnaire, a cover letter with an explanation of the objectives of the research was given to each participant. The reviewers were requested to note their observations, and then give recommendations to develop it for effective data analysis. Many pilot survey participants opined that anonymity should be undertaken and we followed this suggestion. So, it can be said that the items of these fields are consistent and valid to measure what it was set for.

3.10 Validity by Confirmatory Factor Analysis test (CFA)

Using the Structural Equation Model (SEM) of Confirmatory Factor Analysis (CFA), the quality of conformance can be used as one of the structural modeling methods using the Analysis of Moment Structures (Amos). This program uses the SPSS to verify the conformity of the quality of the theoretical model on the collected data. Fitting a model to empirical data means solving a set of equations. By definition, an over-identified model can reproduce the correlation or covariance matrix of the variables. There are several fit indices available to assess the validity of a research model. In sum, these indices are some function of the chi-square and the degrees of freedom. The purpose of these indices is to produce a goodness-of-fit that does not depend on the sample size or the distribution of the data (Hox&Bechger, 1998).

3.11 Reliability Test (Cronbach's Alpha)

Assessing data reliability is important before making any statistical analysis. Reliability depends on the accuracy/precision of the procedure (Sekaran, 2003). More specifically, reliability means generating the same results when used each time. The consistency of the results refers to similar observations undertaken by different researchers (Saunders et al.,2007). Reliable instruments are refined for optimum usefulness under different conditions. Also, reliability used to check our data focuses on internal consistency or homogeneity of statements, which divided the questionnaire statements into groups as mentioned above. Assessing the reliability of the scale is important before making any statistical analysis. The alpha coefficient ranges from 0 to 1, and it is common practice to take 0.70 as the minimum acceptable value of alpha (For more details see Sekaran (2003). In this study, because of practical difficulties in adopting the other methods, we used a co-efficient alpha score (or Cronbach's Alpha) to assure the reliability of the survey questionnaire. The

results of tests will be explained according to each variable of independent and dependent variables according to the following:

3.12 Financial Transparency (or FT)

3.12 .1 *Confirmatory Factor Analysis of Financial Transparency Scale*

As already mentioned, Five-point Likert Scale (1= Not at all, 2= Small extent, 3= Moderate extent, 4= Great extent, and 5= Very great extent) was used in our search. The equivalent analysis conducted a confirmatory factor analysis (CFA).

Table 3.3 provides many indicators of the quality of this conformity are produced of financial transparency scale, and then the scale of data is accepted or rejected. These measures are comparable to R^2 in regression, and they are as follows:

In respect of Root Mean Square Error of Approximation (RMSEA), the model fit values are about 0.034, which indicates that the model corresponds to a large degree of sample data (Good Fit Values) and it can accept the model.

It can be seen from Table (3.3) that Less value of Chi-square/Degree Freedom (CMIN/DF) is one of the most important indicators of goodness of fit since the value of this index is of about 1.152 of the scale of financial transparency, which lies in the range of good fit values and it can be accepted the scale.

Table (3.3) illustrates that the Goodness of Fit Index (GFI) relates to the extent to which the scale of the financial transparency model corresponds to field data (actual), the value of this index reached 0.983 which lies in the range of good fit values. This indicates that the quality of the financial transparency scale is accepting the model.

As shown in Table (3.3) that the Normative Fit Index (NFI) has a value of about 0.971, it lies in the range of good fit values, which indicates a good quality of the scale of the financial transparency with the sample data.

The Comparative Fit Index (CFI) has a value of 0.996 as seen in Table (3.3), it is in the range of good fit values which expresses a better match of the scale of financial transparency with the sample data.

Table 3.3.

Confirmatory Factor Analysis of Financial Transparency Scale

Fit Measures	Good Fit Values	Acceptable Fit Values	Model Fit Values
RMSEA	0.00<RMSEA<0.05	0.05<RMSEA<0.10	0.034
CMIN/DF	0≤ CMIN/DF≤2df	2df ≤ CMIN/DF≤3df	1.152
GFI	0.95<GFI<1.00	0.90<GFI<0.95	0.983
NFI	0.95<NFI<1.00	0.90<NFI<0.95	0.971
CFI	0.95<CFI<1.00	0.90<CFI<0.95	0.996

3.12 .2 *Reliability Analysis of Financial Transparency Scale*

Table 3.4 shows that Cronbach's alpha in the scale of financial transparency is about 0.777. This result indicates that the data obtained from the questionnaire survey of the financial transparency scale are reliable and suitable for further analysis.

Table 3.4.

Reliability Analysis of Financial Transparency Scale

Scale	Items	Cronbach Alpha (α)
Financial Transparency	4	0.777

3.13 Modern Technology on corruption Scale

3.13.1 *Confirmatory Factor Analysis of Modern Technology on corruption Scale*

Table 3.5, provides many indicators of the quality of this conformity are produced of modern technology on corruption scale, and then the scale of data is accepted or rejected. The following table presents the CFA of modern technology on the corruption scale:

Table 3.5 shows that RMSEA has a value of about 0.033 of the scale of modern technology, which indicates that the scale in the range of good fit values, and it can be accepted.

Table 3.5 also indicates that CMIN/DF has the value of this index was of about 1.142 of the scale of modern technology, which lies in the range of good fit values and it can be accepted, model.

Table (3.5) shows that the Goodness of Fit Index (GFI) relates to the extent to which the scale of the modern technology model corresponds to field data (actual), the value of this index reached 0.986 which lies in the range of good fit values. This indicates that the quality of the scale is acceptable for the modern technology scale. As shown in Table (3.5) that the NFI has a value of about 0.979, it lies in the range of good fit values, which indicates a good quality of the scale of modern technology with the sample data. The CFI has a value of 0.997 as seen in Table (3.5), it is in the range of good fit values which expresses a better match of the scale of modern technology with the sample data.

Table 3.5.

Confirmatory Factor Analysis of the Modern Technology Scale

Fit Measures	Good Fit Values	Acceptable Fit Values	Model Fit Values

RMSEA	0.00<RMSEA<0.05	0.05<RMSEA<0.10	0.033
CMIN/DF	0≤ CMIN/DF≤2df	2df ≤ CMIN/DF≤3df	1. 142
GFI	0.95<GFI<1.00	0.90<GFI<0.95	0.986
NFI	0.95<NFI<1.00	0.90<NFI<0.95	0.979
CFI	0.95<CFI<1.00	0.90<CFI<0.95	0.997

3.13.2 *Reliability Analysis of Modern Technology Scale*

Table 3.6 presents that the Cronbach alpha in the scale of modern technology is about 0.694, which above the minimum acceptable value of alpha. This result indicates that the data obtained from the questionnaire survey of the modern technology scale are reliable and suitable for further analysis.

Table 3.6.

Reliability Analysis of Modern Technology Scale

Scale	Items	Cronbach Alpha (α)
Modern Technology	3	0.694

3.14 Political Goodwill Scale

3.14 .1 *Confirmatory Factor Analysis of Political Goodwill Scale*

Table 3.7 provides many indicators of the model quality of this conformity are produced of the political goodwill scale, and then the scale of data is accepted or rejected. The following table summarizes the CFA of political goodwill scale:

Table 3.7 states that RMSEA has a value of about 0.079 of the scale of political goodwill, which indicates that the scale in the range of model fit values, and it can be accepted. Table 3.7 also indicates that CMIN/DF has a value of this index was of about 1.806 of the scale of political goodwill, which lies in the range of good fit values and it can be an accepted model.

Table (3.7) shows that the Goodness of Fit Index (GFI) relates to the extent to which the scale of the political goodwill model corresponds to field data (actual), the value of this index reached 0.974 which lies in the range of good fit values. This indicates that the quality of the scale is acceptable for the political goodwill scale. As shown in Table (3.7) that the NFI has value of about 0.950, it is at low edgewise of the range of good fit values, which indicates a good quality of the scale of political goodwill with the sample data. The CFI has a value of 0.976 as seen in Table (3.7), it is in the range of good fit values which expresses a better match of the scale of political goodwill with the sample data.

Table 3.7.

Confirmatory Factor Analysis of Political Goodwill Scale

Fit Measures	Good Fit Values	Acceptable Fit Values	Model Fit Values
RMSEA	0.00<RMSEA<0.05	0.05<RMSEA<0.10	0.079
CMIN/DF	0≤ CMIN/DF≤2df	2df ≤ CMIN/DF≤3df	1.806
GFI	0.95<GFI<1.00	0.90<GFI<0.95	0.974
NFI	0.95<NFI<1.00	0.90<NFI<0.95	0.950
CFI	0.95<CFI<1.00	0.90<CFI<0.95	0.976

3.14 .2 *Reliability Analysis of Political Goodwill Scale*

Table 3.8 shows that Cronbach's alpha in the scale of political goodwill is about 0.825, which has an acceptable degree of validity. This result indicates that the data obtained from the questionnaire survey of the political goodwill scale are reliable and suitable for further analysis.

Table 3.8.

Reliability Analysis of Political Goodwill Scale

Scale	Items	Cronbach Alpha (α)
Political Goodwill	4	0.825

3.15 Institutional Framework Scale

3.15.1 *Confirmatory Factor Analysis of the Institutional Framework Scale*

Table 3.9 reports that RMSEA has a value of about 0.026 of the scale of the institutional framework, which indicates that the scale in the range of good fit values and it can be accepted with a better picture of this scale. Table 3.9 also suggests that CMIN/DF has a value of this index was of about 1.084 of the scale of the institutional framework, which lies in the range of good fit values and it can be an accepted model. Table (3.9) further indicates that GFI relates to the extent to which the scale of institutional framework model corresponds to field data (actual), the value of this index reached 0.882 which is out the range of good fit values as well as of model fit values. This indicates that the quality of the scale is rejected for the institutional framework scale with this index. As shown in Table (3.9) that the NFI has

value of about 0.889, it is out of the range of good fit values and out of model fit values, which indicates a quality of the scale of the institutional framework with the sample data is rejected with this index. However, that the CFI has a value of 0.991 as seen in Table (3.9), it is in the range of good fit values which expresses a better match of the scale of the institutional framework with the sample data.

Table 3.9.

Confirmatory Factor Analysis of the Institutional Framework Scale

Fit Measures	Good Fit Values	Acceptable Fit Values	Model Fit Values
RMSEA	0.00<RMSEA<0.05	0.05<RMSEA<0.10	0.026
CMIN/DF	$0\leq$ CMIN/DF$\leq$2df	$2df \leq$ CMIN/DF$\leq$3df	1.084
GFI	0.95<GFI<1.00	0.90<GFI<0.95	0.882
NFI	0.95<NFI<1.00	0.90<NFI<0.95	0.889
CFI	0.95<CFI<1.00	0.90<CFI<0.95	0.991

3.15.2 *Reliability Analysis of Institutional Framework Scale*

Table 3.10 shows that the Cronbach's alpha in the scale of the institutional framework is of about 0.929, which has an acceptable degree of validity. This result indicates that the data obtained from the questionnaire survey of the institutional framework scale are reliable and suitable for further analysis.

Table 3.10.

Reliability Analysis of Institutional Framework Scale

Scale	Items	Cronbach Alpha (α)

Institutional Framework	5	0.772

3.16 Corruption Scale

3.16.1 *Confirmatory Factor Analysis of Corruption Scale*

Table 3.11, provides many indicators of the quality of this conformity are produced of Corruption Scale, and then the scale of data is accepted or rejected. The following table presents the CFA of the corruption scale:

Table 3.11 shows that RMSEA has a value of about 0.045 of the scale of corruption, which indicates that the scale in the range of good fit values, and it can be accepted.

Table 3.11 also indicates that CMIN/DF the value of this index was of about 1.552 of the scale of corruption, which lies in the range of good fit values and it can be an accepted model.

Table 3.11 shows that the Goodness of Fit Index (GFI) relates to the extent to which the scale of the corruption model corresponds to field data (actual), the value of this index reached 0.991 which lies in the range of good fit values. This indicates that the quality of the scale is acceptable for the modern technology scale. As shown in Table 3.11 that the NFI has a value of about 0.934, it is lies in the range of acceptable fit values, which indicates a good quality of the scale of corruption with the sample data.

The CFI has a value of 0.911 as seen in Table 3.11, it is in the range of good fit values which expresses a better match of the scale of corruption with the sample data.

Table 3.11.

Confirmatory Factor Analysis of Corruption Scale

Fit Measures	Good Fit Values	Acceptable Fit Values	Model Fit Values
RMSEA	0.00<RMSEA<0.05	0.05<RMSEA<0.10	0.045
CMIN/DF	0≤ CMIN/DF≤2df	2df ≤ CMIN/DF≤3df	1.552
GFI	0.95<GFI<1.00	0.90<GFI<0.95	0.991
NFI	0.95<NFI<1.00	0.90<NFI<0.95	0.934
CFI	0.95<CFI<1.00	0.90<CFI<0.95	0.911

3.16.2 *Reliability Analysis of Corruption Scale*

Table 3.12 presents that the Cronbach alpha in the scale of corruption is about 0.743, which above the minimum acceptable value of alpha. This result indicates that the data obtained from the questionnaire survey of corruption scale are reliable and suitable for further analysis.

Table 3.12.

Reliability Analysis of Corruption Scale

Scale	Items	Cronbach Alpha (α)
Corruption	4	0.743

3.17 Analysis of Questionnaire Survey Data

Saunders et al (2007) data obtained from any research needs analysis for achieving the research objectives and answering research questions. Three different motives for using statistical analysis: first, to reduce data quantity to a limited and comprehensible form, second, to help to study population and samples, thirdly, for assisting decision-making, and

last, to enable the deduction of reliable inferences. The initial part of our study illustrates various data collection methods; however, this section states the statistical analysis used to report the survey responses and to examine significant impact within samples of our data collection of the Libyan government department.

Although the data analysis is conducted after conducting the questionnaire survey, much thought has been given to the testing and analysis of results during the questionnaire design. First, we edited and coded the collected data. The researchers usually evaluate it to assure that it is accurate, consistent, appropriately entered, complete as per basic requirements, and compiled to facilitate coding/tabulation.

The statistical analysis of collected data is used for two purposes, which include descriptive and inferential. The selection of statistical tests for analyzing data depends on some factors that include groups involved (independent variables), subjects in each group, whether the groups were related or independent.

Two broad classifications of statistical analyses are used in data analysis like parametric and non-parametric. Parametric techniques are appropriate when these factors are valid: The observations should be independent of error, should have equal variance in the various populations, should be derived out of normally distributed scores in the treatment of population, and, the variables are measurable through an interval scale. Conversely, non-parametric techniques in the research areas significant as their parametric counterparts are. This technique is considered as distribution-free because it does not depend on the distribution of scores in the population.

The non-parametric techniques do not necessitate measurement on an interval scale and do not require the data to fulfill the strict assumptions of the parametric methods, such as normality/homogeneity of variance. It is clear that depending on the test of normality, which

can be decided to use the techniques in this study. Moreover, the statistical analyses utilized show the information on the scale.

The non-parametric techniques are generally constructed to elude the requirement of numerous statistical assumptions as in the parametric techniques. Having considered that the questionnaire survey responses appear as scale-based options, it was decided that parametric or non-parametric techniques would be used to facilitate statistical analyses. Statistical analysis should involve descriptive/inferential types of analysis. The statistical techniques, which are relevant to this research, are reviewed in the next section.

3.18 Descriptive Statistics

The descriptive statistical technique refers to transforming raw data into a form that is organized and easy-to-interpret for providing descriptive information. This technique normally involves the calculation of mean, median, frequency distribution, percentage distributions, rank, skewness, kurtosis and standard deviation (SD) to help to describe the characteristics or average scores. In this study, 19 statements were analyzed for significance through frequency and percentage distributions.

3.19 Analytical (inferential) Statistics

The analytical or inferential method derives conclusions and generalizations from raw information collection, which is followed by descriptive analysis, and completed by the analysis of significance and differences; therefore, our study employs analytical statistics for examining the responses, and for inferences regarding population parameters from the sample statistics through finding the correlations between variables and regression analysis.

3.20 Finding the correlations between variables

Correlation methods were used to find the relationships between the variables. The parametric method was Pearson Product. Pearson analysis was more suitable for data that were linear and had a normal distribution. For finding the correlations, the researcher carried out two parametric or non-parametric tests depending on the test of normality namely: QQ-plot.

3.21 Regression Analysis

Regression analysis is used to identify the relationship between the dependent variable and one or more independent variable(s). More specifically, regression analysis helps us to understand how the typical value of the dependent variable changes when any one of the independent variables are held fixed (Allison, 1999).

3.21 .1 *Analyzing the significance of test results*

To analyze the statistical test results in Chapter 4, we assumed a 5% level of significance (i.e. a probability or p level of 0.05 or five times per 100 has been considered). When a p-value of a statistic is lower as compared to the significance level, the statistic will be significant. The conventional probability, or p-value, for deciding that an outcome isn't a mere chance, and it should be equal to or lower than 0.05 (i.e. five times in a hundred). If we accept a 5% error chance, we can construct a 95% confidence interval. If the probability is lesser than 0.05, it is thought unlikely to occur. If the probability level is above 0.05, that result is statistically non-significant in the sense that it is considered likely that it is a mere chance. Here, the p-value is true; however, if our p-value were less than 0.05, we would have said that the outcome is significant (at 0.05 level of confidence).

To sum up, our options are: (i) If the p-value is greater than 0.05, Ho is accepted and the result is insignificant. (ii) If the p-value is either less or equal to 0.05 but greater than 0.01, Ho will be rejected, and the result is significant beyond the 5 percent level. (iii) If the p-value is less than 0.01, Ho is rejected and the result is significant beyond the 1 percent level.

Chapter Four Analysis Data of Research and Results

4.1 Introduction

The current chapter presents the responses and analysis of our questionnaire survey then test hypotheses. The following is the structure of the current chapter: The next section shows the Descriptive Statistics about the Sample which includes demographic characteristics of respondents, and then presents the descriptive statistics about Financial Transparency, Modern Technology, Political Goodwill, Institutional Framework, and Corruption Scale. The last section presents findings of correlation and regression analysis.

4.2 Descriptive Statistics about Demographic Characteristics

Introducing the background of respondents is very important to make the readers understand the respondents based on their personal information such as gender, age, and experience. This information has been shown in the following table to create a better understanding of their background. Table 4.1 summarizes these characteristics.

Table 4.1.

Demographic Characteristics of Respondents

Demographic Characteristic	Frequency	%
Gender		

Male	244	60.1
Female	162	39.9
Age Group		
18-25	67	16.5
26-35	206	50.7
36-45	81	20.0
More than 45	52	12.8
Experience		
Less than 1 year	45	11.1
From 1-4 years	121	29.8
From 5-7 years	82	20.2
From 8-14 years	91	22.4
More than 14	67	16.5
Total	**406**	**100.0**

Figure 4.1 shows another way of looking at the demographic characteristics of respondents.
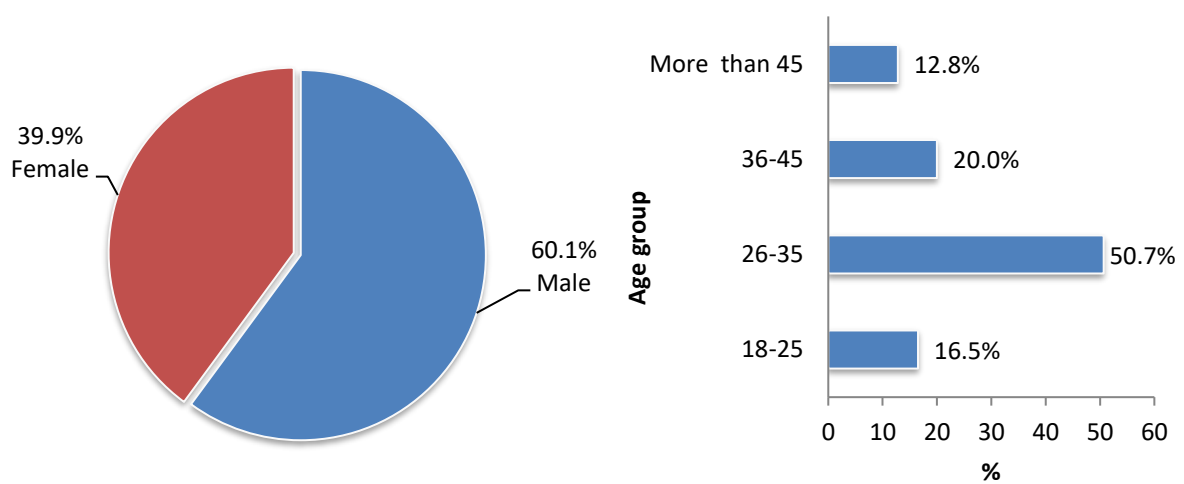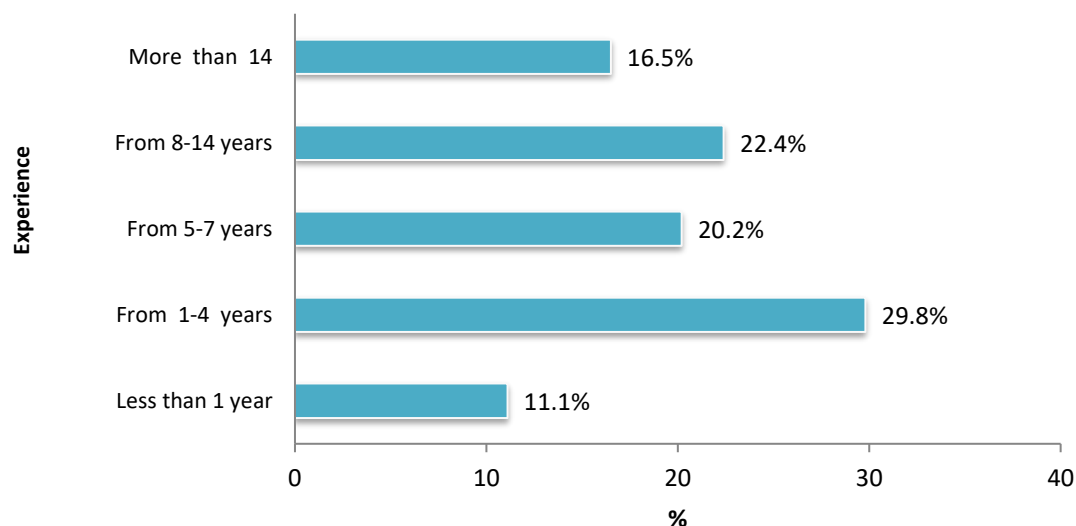
Figure **4.1.**

Distribution of the study sample by demographic characteristics of respondents

Table 4.1 and Figure 4.1 state that 244 out of 406 (or 60.1%) of respondents participating in the survey were males and 162 out of 406 (or 39.9%) females. This table and figure present the majority of respondents participating in the survey (50.7%) from age (26-35) years, followed by (20.0%) and (16.5%) of age from (36-45) years and age from (20-29) years respectively. The minority of participants from age (45+) years of about (16.5%). These results indicate that most of the respondents aged (26-35) years, which may have a good knowledge of corruption in this survey. Regarding the length of work experience, 45 respondents (11.1%) have previous work experience in the related area for one or more years and the 121 respondents (29.8%) have (1-4) years' work experience, whereas 82, 91and 67 of respondents (20.2%), (22.4%) and (16.5%) respectively have previous work experience in the related area for 5 or more years. It is relevant to mention here that the average length of experiences in the related area of the respondents was 6 years (as presented in Table 4.1).

4.3 Descriptive Statistics of the Dimensions of the Research

The descriptive analysis summarizes metadata and display data in charts, tables, and other forms of schematic formats. Therefore, this study aimed to investigate whether transparency achieved through monitoring the actions of public officers using financial transparency, modern technology, political goodwill, institutional framework, which can be reduced incidences of corruption found that indeed corruption is lowered when crucial financial information is available for scrutiny.

4.4 Descriptive Statistics Related to Financial Transparency Dimension

The replies to indices about the financial transparency factor were important index. Table 4.2 presents the mean scores along with the std. of responses against the mentioned indices. Furthermore, the indices were ranked based on the relative importance of the responses.

Table 4.2.

Descriptive Statistics related to Financial Transparency

No.	Statement on Financial Transparency	Mean	Std.	RI[*]	Rank
FT1	Accountability due to Financial Transparency helps reduce corruption.	4.19	.574	83.8	1
FT2	Fiscal Openness and the likelihood of exposure to abuse due to Financial Transparency reduces corruption.	4.05	.725	81.0	4

FT3	Impartial enforcement of rules due to Financial Transparency helps reduce corruption.	4.13	.669	82.6	**2**
FT4	Deliberations and disclosure of information to stakeholders due to Financial Transparency reduces corruption.	4.07	.769	81.4	**3**
	Overall score	**4.11**	**.533**	**82.2**	**-**

* Relative Importance $RI = \dfrac{\text{Mean Score}}{5-\text{point Likert Scale}} \times 100$

It is obvious from Table 4.2 that the index, "Accountability due to Financial Transparency helps reduce corruption" is the most significant factor (mean value 4.19 out of 5-point scale and std. 0.574) which represents index one, followed by the index: the second most influential index is the statement: "Impartial Enforcement of rules due to Financial Transparency helps reduce corruption" (mean value 4.13 and std. 0.669), which represents index 3. As per the responses received regarding the statement of "Deliberations and disclosure of information to stakeholders due to Financial Transparency reduces corruption" having mean value 4.07 and std. 0.769, which represents statement 4 in the table and perceived as 3th most influential index. The least most influential index is the statement "Fiscal Openness and likelihood of exposure of abuse due to Financial Transparency reduces corruption", which represents statement 2 with mean value 4.05 out of 5-point scale and std. 0. 725. Overall score, of the Financial Transparency factor regarding the appropriateness of public officers, was agreed by 82.2% of the relative importance, which was the highest number of agreements about financial transparency.

With an overall mean score of 4.11 out of 5-point scale, the issue of financial transparency is significant although it is relatively lower than 4.19, which was the mean value

for 'Accountability due to Financial Transparency helps reduce corruption'. Its relative importance based on the 82.2% agreement by public officers is an indication of the significance of financial transparency in relation to curbing corruption. This is an indication of the importance of financial transparency in curbing corruption in Libya. An overall mean score of 4.11 based on the inclusion of other factors such as fiscal openness and the likelihood of exposure to abuse due to financial transparency helps reduce corruption, impartial enforcement of rules due to financial transparency helps reduce corruption. However, the mean value of 4.11 is lower than the 4.19, which was the mean value for 'accountability' and its relationship to the eruption of corruption as a component of financial transparency. The reduction of the mean value to 4.11 is attributed to a reduction in the mean value of 'Deliberations and disclosure of information to stakeholders' and its relationship to the reduction of corruption as a component of Financial Transparency. The value of deliberations and disclosure of information to stakeholders due to financial transparency diminishes corruption.

However, the overall standard deviation of 0.533 is just within the half range. This is an indication that the data set are relatively balanced or related to the mean. However, this figure is a slight reduction from the standard deviation of 'deliberations and disclosure of information to stakeholders due to financial transparency reduces corruption' at 0.769. Interestingly, 'Deliberations and disclosure of information to stakeholders due to Financial Transparency reduces corruption 'has the highest standard deviation, which is an indication that the data points are spread out over a wider range of values. Whereas the 'Deliberations and disclosure of information to stakeholders due to Financial Transparency reduces corruption' has the highest standard deviation, it has the second lowest mean value of 4.07, behind 'Fiscal Openness and the likelihood of exposure to abuse due to Financial Transparency', with a mean value of 4.05. A mean score value of 4.05 for 'Fiscal openness

and the likelihood of exposure to abuse due to Financial Transparency, and its association in reducing corruption is quite a contrast. This mean score value of 4.05 is the least among all other mean score values regarding additional components attributed to financial transparency, such as 'financial accountability', 'impartial enforcement of rules due to Financial Transparency' and 'Deliberations and disclosure of information to stakeholders due to Financial Transparency.' Fiscal openness is highly related to financial transparency because it involves being transparent on significant economic factors. Therefore, there may not be a massive variation between financial transparency and fiscal openness, yet the two have diverse mean score values, with fiscal openness attracting the least mean score value. The existing contrast between financial transparency and fiscal openness can also be witnessed in the standard deviation values. The standard deviation of 'accountability due to financial transparency helps reduce corruption' is 0.574, whereas that of 'Fiscal openness and the likelihood of exposure to abuse due to Financial Transparency reduces corruption' is 0.725. This contrast shows that the data sets between the two components of financial transparency are unevenly matched to the mean score values, with that of fiscal openness being higher than the that of accountability. Whereas accountability and openness can be termed as similar, it can be observed that their relative importance is different. Interestingly, accountability's relative importance is higher at 83.8%, whereas that of fiscal openness, is last at 81%.

The statistics also indicate that 'accountability due to financial transparency helps reduce corruption' is of high relative important, after its percentage surpassed that of other variables such as 'Impartial enforcement of rules due to financial transparency helps reduce corruption', 'Deliberations and disclosure of information to stakeholders due to financial transparency reduces corruption', 'Fiscal openness and the likelihood of exposure to abuse due to Financial Transparency reduces corruption.' An analysis of the relative importance Cleary shows that 'Fiscal Openness and the likelihood of exposure to abuse due to Financial

Transparency reduces corruption' is not a highly important valuable in dealing with corruption when compared with the other variables. It is the variable of the least importance, as well as the variable with the least mean value at 4.05.

4.5 Descriptive Statistics Related to Modern Technology

The analysis of the responses might be more facilitated if the mean values with standard deviations of response concerning the indices are reported. Therefore, the following table (Table 4.3) presents the mean scores and standard deviations of the responses towards the 3 indices of modern technology factor.

Table 4.3.

Descriptive Statistics related to Modern Technology

No.	Statement on Modern Technology	Mean	Std.	RI *	Rank
MT 1	Increased Automation and Accuracy due to Modern Technology helps reduce corruption.	4.13	.574	82.6	1
MT 2	Online services by the government due to Modern Technology reduces corruption.	4.05	.725	81.0	2
MT 3	Stronger Social Bonds courtesy of modern technology helps reduce corruption.	3.94	.669	78.8	3
	Overall score	4.04	.571	80.8	-

* Relative Importance $RI = \dfrac{\text{Mean Score}}{5-\text{point Likert Scale}} \times 100$

Table 4.3 shows that means is very different from the responses to the indices on the modern technology factor. The statement, which represents "Increased Automation and Accuracy due to Modern Technology helps reduce corruption" was above all the statements

(mean score 4.13 out of 5-points and std. .574). The statement, which represents "Online services by the government due to Modern Technology reduces corruption" has a mean score of 4.05 and std. 0.725, so it was the second most suggested statement for modern technology. The third statement "Stronger Social Bonds courtesy of modern technology helps reduce corruption" has a mean scoreof3.94 and std. 0.882. Overall score, of the respondents, has mean score of 4.04 out of 5-points and std. .571, which agreed that modern technology can work to help reduce corruption.

It is clear from the results in the table that 'Increased Automation and Accuracy' is significant in   to curb corruption based on its mean value of 4.13 compared to the rest variables such as 'Online services by the government' with a mean value of 4.05, and 'Stronger Social Bonds' with a mean value of 3.94.

The overall mean value score of the '*Modern Technology*' valuable is 4.04, which although measured out of a 5-point scale is lower than 4.13, which was the mean value of 'Increased Automation and Accuracy due to Modern Technology' and its relation to reducing corruption'. The mean value of 4.13 proves higher than that of 4.04 and indicates a higher significance in reducing corruption. Among the other variables related to modern technology and its impact on corruption, the variable of 'Stronger Social Bonds courtesy of modern technology helps reduce corruption,' has the lowest mean value of 3.94.

On standard deviation, the 'Increased Automation and Accuracy' variable has a score of .574, which is relatively balanced. That score indicates that there is not significant difference between the data set and the mean. However, with a score of 0.725, the standard deviation of online services by the government variable, is an indication that the data points are spread out over a wider range of values. This standard deviation is the highest among the variables based on the score of the other two variables with scores of 0.574 and 0.669, representing the 'Increased Automation and Accuracy' variable and 'Stronger Social Bonds'

variables respectively. The stronger social bonds variable, with a score of 0.669 is an indication that data points are spread out over a wider scope of values, but not as the data sets of the online services by the government. Interestingly, just as the variable of 'Stronger Social Bonds' has the least mean value compared to the other variables, so is its relative importance, which is the third best at 78.8%. However, the variable of 'Increased Automation and Accuracy' has a significant relative importance at 82.6%. This percentage is an indication of the high importance between the 'Increased Automation and Accuracy' variable and corruption control.

The overall standard deviation of 0.571 is an indication of a relative balance between the data set and the mean. The overall relative importance score percentage of 80.8 indicates the variable of 'Increased Automation and Accuracy' and its relationship to the reduction of corruption is highly important. A score of 80.8% could be considered high based on the overall score of 100%.

It is interesting that the standard deviation of 'Online services by the government due to Modern Technology reduces corruption' is the highest at 0.725, yet this component of modern technology and its association with corruption, is not ranked the first. At 0.725, the standard deviation of 'Online services by the government due to Modern Technology reduces corruption' indicates that data sets are spread out over a wider assortment of values. However, the spread out of data sets over a wider assortment of values has not assisted the component on 'online services by the government due to modern technology' to be of relative importance. On the contrary, the relative importance of 'online services by the government due to modern technology' is 81% behind automation and accuracy at 82.6%. Even with the standard deviation of 0.725, the component of 'Online services by the government due to Modern Technology,' could only manage the second rank after the concept of 'Increased Automation and Accuracy due to Modern Technology', which was ranked the first.

4.6 Descriptive Statistics Related to Political Goodwill

The third dimension of the questionnaire on Political Goodwill factor was aimed at researching which indices are more important on political goodwill. Table 4.4 presents the responses of this section mean score, standard deviation (std.), relative importance, and then the indices were ranked based on the relative importance of the responses.

Table 4.4.

Descriptive Statistics related to Political Goodwill

No.	Statement on Political Goodwill	Mean	Std.	RI*	Rank
PG1	The provision of necessary powers to the anti-corruption agencies by the government helps fight corruption.	2.17	.586	43.4	4
PG2	Budgeting for the anti-corruption agencies by the government reduces corruption.	3.07	.425	61.4	2
PG3	Ensuring sufficient personnel at the anti-corruption agencies by the government through political goodwill reduces corruption.	3.17	.518	63.4	1
PG4	Maintaining the independence of the anti-corruption agencies by the government due to political goodwill fights corruption.	2.25	.563	45.0	3
	Overall score	2.67	.427	53.4	-

* Relative Importance $RI = \dfrac{\text{Mean Score}}{5-\text{point Likert Scale}} \times 100$

Table 4.4 shows that mean are similar opinions to the responses to the indices on concerned about Political Goodwill factor. The concerning index, which represents "Ensuring

sufficient personnel at the anti-corruption agencies by the government through political goodwill reduces corruption" was above all the concerning statements (mean value 3.17 out of 5-points and std. 0.518). The second concerning index, which represents "Budgeting for the anti-corruption agencies by the government reduce corruption" has a mean value 3.07 and std. .425, and the third of the most suggested index for concerning "Maintaining the independence of the anti-corruption agencies by the government due to political goodwill fights corruption" has to mean value 2.25 std. .563. The latest index on political goodwill, which represents "Provision of necessary powers to the anti-corruption agencies by the government helps fight corruption" has (mean value 2.17 out of 5-points and std. 0.586). Overall score, of the respondents, has a mean score of 2.67 out of 5-points and std. .427, which disagreed that the political goodwill can work to help reduce corruption. This might happen because all of the participating might tend to hide some weaknesses of the opinions on to what extent agree or disagree with some political goodwill indices.

Astonishly, the variable of political goodwill has an overall score of 2.67. Out of a 5-point scale, a score of 2.67 is low although it is just past the half-way score. Compared to other overall mean scores such as modern technology and financial transparency, which are past a score of 4 out of a 5-point scale, political goodwill's mean value of 2.67 is relatively low. On the political goodwill variable, the only other accompanying variable with a higher score that the mean value of 2.67 is 'ensuring sufficient personnel at the anti-corruption agencies by the government through political goodwill', with a mean value of 3.17. However, with mean values of 'provision of necessary powers to the anti-corruption agencies by the government' being 2.17; that of 'Budgeting for the anti-corruption agencies by the government' being at 3.07; that of 'Ensuring sufficient personnel at the anti-corruption agencies by the government' at 3.17 and; that of 'Maintaining the independence of the anti-corruption agencies by the government' at 2.25, were not sufficient to assist elevate the

overall mean value to close to at least 4 as is the case with the other variables of financial transparency and modern technology application.

The overall standard deviation of the variable of modern technology and its relationship to corruption control is 0.427. This score is far lower than the overall standard deviation of other variables such as financial transparency at 0.533 and modern technology at 0.571. This low score of 0.427 in standard deviation is caused by the standard deviation of 'Budgeting for the anti-corruption agencies by the government' at 0.425, which is the lowest among that of other variables with values such as 0.586, 0.518, and 0.563 concerning 'The provision of necessary powers to the anti-corruption agencies by the government', 'Ensuring sufficient personnel at the anti-corruption agencies by the government through political goodwill,' and 'Maintaining the independence of the anti-corruption agencies by the government due to political goodwill' respectively.

Concerning the political goodwill variable, the element of 'ensuring sufficient personnel at the anti-corruption agencies by the government through political goodwill' exhibits the highest relative importance score of 63.4%. Whereas the score of 63.4% is the highest concerning the relative importance of political goodwill, it still lags in comparison to the relative importance of other variables such as Increased Automation and Accuracy, at 82.6% and Accountability due to Financial Transparency at 83.8%. The overall score of relative importance in percentage is 53.4%, which is just above the half-mark. This relative importance percentage indicates a balanced association between the variable of political goodwill and the reduction of corruption.

It is interesting that the component of 'The provision of necessary powers to the anti-corruption agencies by the government helps fight corruption,' is the least important based on relative importance and rank at number 4. One would have thought that providing the anti-corruption agencies with the necessary powers would assist in fighting corruption, hence

would have been of high relative importance. However, the component that is deemed of high relative importance is 'Ensuring sufficient personnel at the anti-corruption agencies by the government through political goodwill,' whose relative importance is 63.4% and ranked number 1. It is also interesting that 'Budgeting for the anti-corruption agencies by the government,' is also deemed of a high relative importance than providing anti-corruption bodies with the necessary powers to fight corruption, whose relative importance is 61.4% and ranked second. The third most important component of political goodwill in fighting corruption is 'Maintaining the independence of the anti-corruption agencies by the government,', whose relative importance is 45%.

4.7 Descriptive Statistics Related to Institutional Framework

The below table (Table 4.5) presents the mean scores and standard deviations of the responses towards the 5 indices on the Institutional Framework factor. Table 4.5 demonstrates that the mean scores with a standard deviation of the responses to the opinions on what extent agree or disagree with some institutional framework indices**.** Therefore, the descriptive statistics of the responses might be more facilitated if the mean values with standard deviations, and then the indices were arranged based on the relative importance of the responses concerning the institutional framework factor.

Table 4.5.

Descriptive Statistics related to Institutional Framework

No.	Statement on Institutional Framework	Mean	Std.	RI*	Rank
IF1	The weak judicial system and political interference allow corruption to thrive in Libya.	2.15	.551	43.0	5

IF2	Lack of trust in the police exposes the business to corruption risks in Libya.	3.05	.347	61.0	2
IF3	Lack of transparency in public service negatively impacts the fight against corruption in Libya.	2.80	.773	56.0	3
IF4	Ineffective tax administration in Libya breeds corruption.	3.09	.394	61.8	1
IF5	Widespread favoritism in the public procurement sector makes it difficult to fight corruption in Libya.	2.76	.788	55.2	4
	Overall score	**2.77**	**.434**	**55.4**	**-**

* Relative Importance $RI = \dfrac{Mean\ Score}{5-point\ Likert\ Scale} \times 100$

The opinion of responses to the statements relating to "Ineffective tax administration in Libya breeds corruption" (mean score 3.09 out of 5-points and std.394) was scored as the first rank with relative importance (61.8%). The statement has ranked the second, which represents "Lack of trust in the police exposes the business to corruption risks in Libya" with mean value 3.05 out of 5-points and std..347 and relative importance (61.0%). The statement relating to "Lack of transparency in the public service negatively impacts the fight against corruption in Libya" has ranked the third with a mean score of 2.82, std. .773 and relative importance (56.0%). The statement has ranked the fourth, which represents "Widespread favoritism in the public procurement sector makes it difficult to fight corruption in Libya" with mean value 2.76 out of 5-points, std. .788 and relative importance (55.2%). The opinion of responses to the statements relating to "Weak judicial system and political interference allows corruption to thrive in Libya" has ranked the last one (43.0%), with a mean score of 2.15 and std..551. Overall score, of the respondents, has a mean score of 2.77 out of 5-points

and std. .434, which disagreed that the institutional framework can help to reduce corruption. This result indicates that the respondents are somewhat effective, but that the level of effectiveness is not up to the mark.

With an overall mean value of 2.77 out of the 5-points scale, the institutional framework variable is low, compared to others such as that of financial transparency whose mean value was 4.11 out of 5-points scale. Although a mean score of 2.77 surpasses the half of 5, it is still low compared to such other mean values as 4 out of 5. Of all the variables constituting to the overall mean score, 'The weak judicial system and political interference allow corruption to thrive in Libya', have the least mean score value of 2.15. This score is lower than 2.5, which is the half of 5. Such a low figure has contributed to the reduction in the overall mean to 2.77. However, even the other variables have also contributed to the reduced figure because they are all below a score of 4 out of 5. For example, 'Lack of trust in the police exposes the business to corruption risks in Libya' has a mean score of 3.05, whereas 'widespread favoritism in the public procurement sector makes it difficult to fight corruption in Libya' has a mean score of 2.76. *Ineffective tax administration in Libya* and its relationship to the breeding of corruption, which leads among the list of components of institutional framework, has a mean score of 3.09. Therefore, none of the components of institutional framework have a mean score of 4 and above. The overall standard deviation of the components of institutional framework is 0.434. This score is less than 0.5, and therefore, the data set points are not spread out over a wider assortment of values. However, there are some components of institutional framework, whose data set points appear to be spread over a wider assortment of values based on their standard deviation. For example, 'Widespread favoritism in the public procurement sector makes it difficult to fight corruption in Libya' has a standard deviation of 0.788. Another component of Institutional Framework with a mean score similar to the aforementioned is 'Lack of transparency in public service negatively

impacts the fight against corruption in Libya', with a standard deviation score of 0.773. The standard deviation of these two components is an indication of data sets being spread out over a wider assortment of values. The component of 'Ineffective tax administration in Libya breeds corruption' has a standard deviation of 0.394, whereas the component of 'lack of trust in the police exposes the business to corruption risks in Libya' has standard deviation of 0.347. There is a great disparity between the standard deviations of the components of Institutional Framework and their relationship to combating corruption in terms of data set arrangement. Some data sets are spread over a wider assortment of values, while others, are not.

The relative importance of the component 'Ineffective tax administration in Libya breeds corruption' is 61.8 percent. This is the highest relative importance score among all the other components of institutional framework, although it is not close to 100 percent. The next high relative importance component of institutional framework is 'Lack of trust in the police exposes the business to corruption risks in Libya', which has a score of 61.0 percent. The lease component of institutional framework is 'The weak judicial system and political interference allow corruption to thrive in Libya' with a relative importance score of 43percent. In fighting corruption in Libya, the judiciary is not considered significant because it only attracts a 43 percent in terms of relative importance score. Had the judiciary scored over 50 percent in the relative importance score and its relationship to curbing corruption in Libya, it would have been considered of high significant. However, the judiciary performs poorly in assisting in the fight against corruption in Libya.

It is interesting that 'Ineffective tax administration in Libya breeds corruption' is deemed the most important by rank in curbing corruption and as a component of institutional framework. The component of 'Lack of trust in the police exposes the business to corruption risks in Libya' nearly matches that of 'Ineffective tax administration in Libya breeds

corruption' with average mean scores that are nearly similar with the former's average mean score value being 3.05, while the latter's mean score value is 3.09. Similarly, the two component's relative importance scores nearly match with the component of 'Ineffective tax administration in Libya breeds corruption' having a relative importance score of 61.8%, while the component of 'Lack of trust in the police exposes the business to corruption risks in Libya' has a relative importance score of 61%.

4.8 Descriptive Statistics Related to Corruption

The fifth dimension of the questionnaire on the Corruption factor was aimed at researching which indices are more important on corruption as the conclusion of the questionnaire. Table 4.6 presents the responses of this section mean score, standard deviation (std.), relative importance, and then the indices were ranked based on the relative importance of the responses.

Table 4.6.

Descriptive Statistics related to Corruption

No.	Statement on Corruption	Mean	Std.	RI*	Rank
GC1	The provision of necessary powers to the anti-corruption agencies by the government helps fight corruption.	4.11	.626	82.2	3
GC2	Budgeting for the anti-corruption agencies by the government reduces corruption.	4.10	.680	82.0	4
GC3	Ensuring sufficient personnel at the anti-corruption agencies by the government	4.17	.673	83.4	2

	through political goodwill reduces corruption.				
GC4	Maintaining the independence of the anti-corruption agencies by the government due to political goodwill fights corruption.	4.17	.621	83.4	1
	Overall score	**4.14**	**.489**	**82.8**	-

* Relative Importance $RI = \dfrac{\text{Mean Score}}{5-\text{point Likert Scale}} \times 100$

It is obvious from the above table (Table 4.6) that the statements, "Maintaining the independence of the anti-corruption agencies by the government due to political goodwill fights corruption" is the most significant index (83.4%) relative importance with mean score 4.17 and std. .621, followed by the statement: the second most influential index is "Ensuring sufficient personnel at the anti-corruption agencies by the government through political goodwill reduces corruption" (83.4%) relative importance with mean score 4.17 and std. .673. It is noticeable that the above two statements are equal mean scores, but different standard deviation in this situation the priority ranking of indices less standard deviation. The statements of "Provision of necessary powers to the anti-corruption agencies by the government helps fight corruption" and "Budgeting for the anti-corruption agencies by the government reduces corruption" having relative importance (82.2%) and (82.0%) opinions as 3rd and 4th most influential indices. The overall score, of the respondents, has a mean score of 4.14 out of 5-points and std. .489. This might happen because the respondents having a background of corruption are more familiar with the issues covered in the questionnaire and, therefore, their responses were different from the respondents without any background of corruption on to what extent agree or disagree with some corruption indices.

Overall, with a mean score value of 4.4 out of a 5-points scale, the likelihood of reducing instances of corruption in Libya can be said to be high. The high mean score of 4.4 is based on the other components of corruption such as 'maintaining the independence of the anti-corruption agencies by the government due to political goodwill' with a mean score of 4.17; ensuring sufficient personnel at the anti-corruption agencies by the government through political goodwill reduces corruption with a mean score of 4.17; The provision of necessary powers to the anti-corruption agencies by the government helps fight corruption with a mean score of 4.11, and; Budgeting for the anti-corruption agencies by the government reduces corruption with a mean score of 4.10. Therefore, the overall mean value score of 4.4 is attained because all the other components of corruption maintain a mean value score of 4. An overall standard deviation 0.489 is a result of the constant standard deviation score of the other components of corruption having values of about 0.6. The fact that the other components of corruption exhibit a constant figure of about 0.6 is indicative of the balance in the data set and mean. An overall score of 82.8 percent in relative importance is the highest among all the variables associated with corruption. However, the independence of the anti-corruption agencies by the government is higher at 83.4 percent, whereas 'ensuring sufficient personnel at the anti-corruption agencies by the government through political goodwill' also has a similar percent of 84.4. A tie in the percentage (83.4%) is indicative of the weight in importance between the two components of corruption. Guaranteeing the independence of the anti-corruption agencies by the government is of high importance, just as ensuring sufficient personnel at the anti-corruption agencies by the government. However, the provision of necessary powers to the anti-corruption agencies by the government helps fight corruption has a relative importance score of 82.2 percent, thus making it the third largest based on percentages. Budgeting for the anti-corruption agencies by the government has the least relative importance with 82 percent. Of all the variable and components given, budgeting for

the anti-corruption agencies by the government had the least performance based on their presumptions about anti-corruption and budgeting for anti-corruption agencies.

4.9 Assumptions of Hypotheses Analysis:

To test the hypotheses, the first step, especially in surveys starting with some assumptions have to be met. These assumptions are tests of normality, multicollinearity problem, and linearity, which are important to be met to avoid ambiguity findings from multivariate analysis and to increase confidence in the results. These assumptions are discussed in the following sub-sections:

4.10 The Assumption of Normality:

The main statistical methods used in this study are correlation and regression. However, as these statistical methods are based on a basic assumption, that the populations from where the samples are collected are normally distributed, checking the normality assumption is required (Darlington and Hayes, 2017). Normality refers to the degree to which the distribution of the sample data corresponds to a normal distribution. It is one of the most essential postulations in the multivariate analysis, where a large variety of data may hamper all the statistical tests (Field, 2009). One of the initial assumptions of normality test is that normality of the distribution of categories variables (dichotomous variables) cannot be measured (Leftesi, 2008; Field, 2009; and Garson, 2012). Therefore, normality will only be checked for the ordinal variables. In this study, the assumption of normality was inspected using three methods. The first method was examined through Kolmogorov-Smirnov and Shapiro-Wilk tests, the second method was examined through a normal probability plot (Q-Qplot), and the third by evaluating the skewness and kurtosis.

According to Field (2009), the determinant of normality through the Kolmogorov-Smirnov testis that if the value of significance (Sig) or p-values greater than or equal to 0.05, then the data follow the normal distribution. Five dimensions(ordinal variables)in this study were tested. Table 4.7 illustrates that the results of them have ap-value greater than or equal to 0.05 for the Kolmogorov-Smirnov test. The use of parametric techniques is more appropriate in this study.

Table 4.7.

Test of Kolmogorov-Smirnov

Dimension	Kolmogorov-Smirnov		
	Statistic	df	p-value
Financial Transparency	.073	406	.178
Modern Technology	.067	406	.150
Political Goodwill	.039	406	.051
Institutional Framework	.050	406	.068
Corruption	.058	406	.103

Based on this, a second method was used to check the normal distribution by using a normal probability plot (P-P Plot) or a quantile-quantile plot (Q-Q plot). According to Das and Imon (2016), seplotsare a very popular tool for testing the normality assumption. The assumption is fulfilled if the data is falling along the straight line, if it shows another outlook than a straight line, the assumption surmised to be failed. The normal Q-QPlot in Figure 4.1 shows that for all ordinal variable's points follow the line, although some of Political Goodwill and Institutional Framework variables deviate slightly from the line. Thus, normality assumptions were not violated in the present study.

Furthermore, normality was done and checked statistically through the Skewness and Kurtosis value tests. For social science, the acceptable values of skewness and kurtosis should be within the range of -3to +3 (Hair et al., 2010; Garson, 2012; and Won et al., 2017). As shown in Table 4-8 the skewness and kurtosis values of all ordinal variables were found to be in the acceptable range. Therefore, it could be concluded from Skewness and Kurtosis outputs that the normality condition of the variable is met.
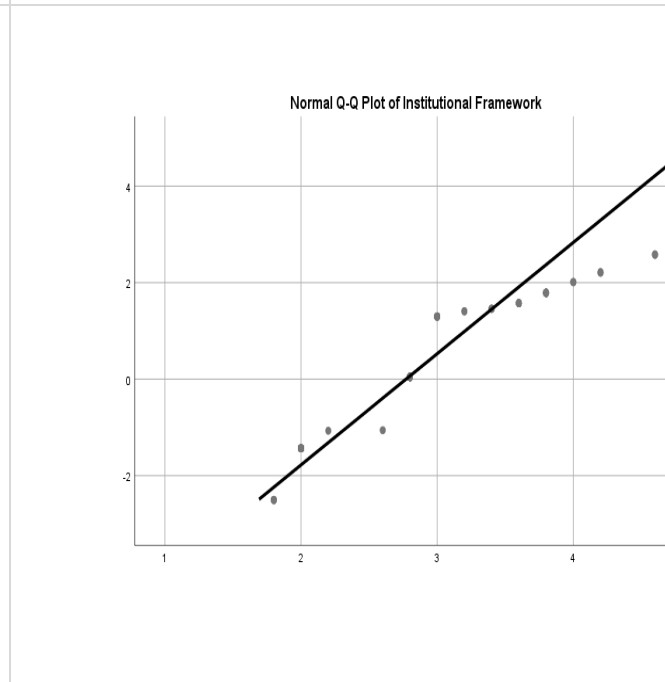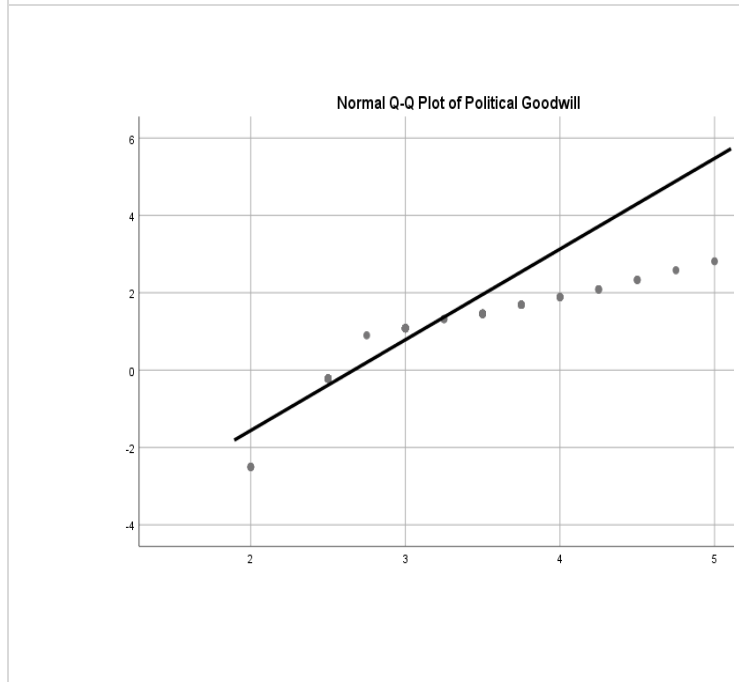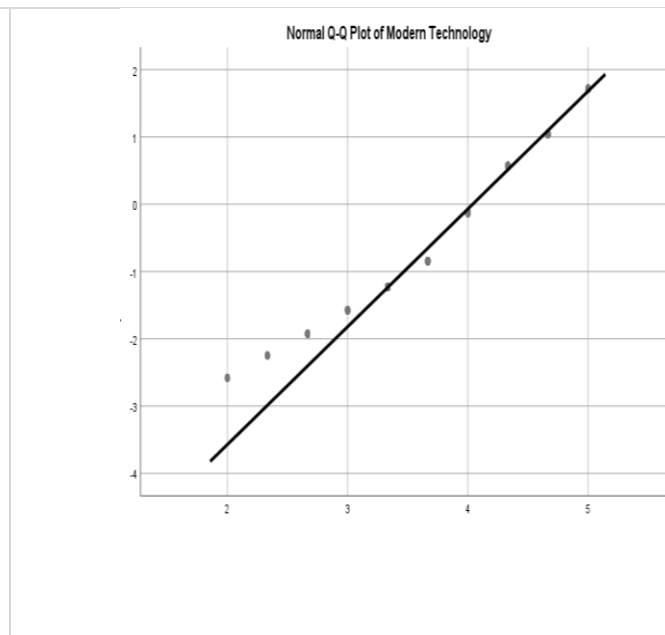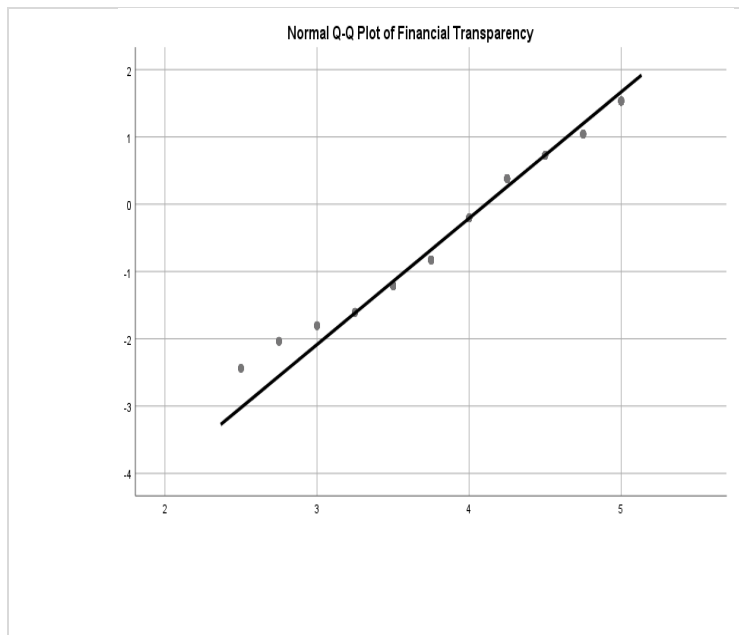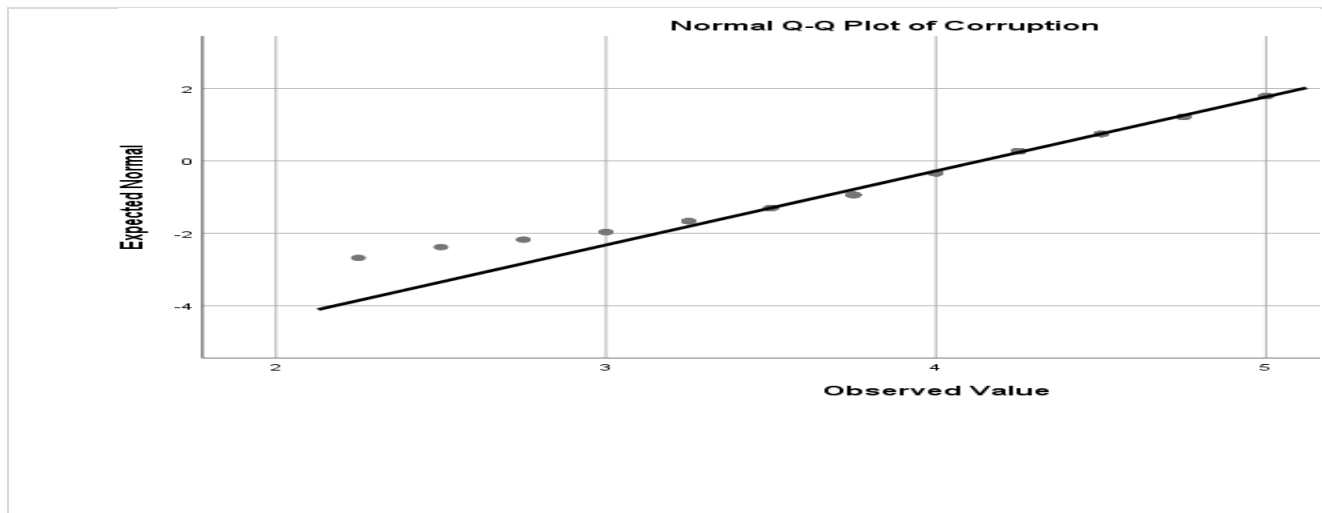
Figure 4.2

shows QQ-plot of five dimensions (ordinal variables).

Table 4.8

Test of Skewness and Kurtosis

Dimensions	N	Skewness		Kurtosis	
		Statistic	Std. Error	Statistic	Std. Error
Financial Transparency	406	-.287		.400	
Modern Technology	406	-.653		1.05	
Political Goodwill	406	1.81	.121	2.02	.242
Institutional Framework	406	.700		2.54	
Corruption	406	-.569		1.13	

4.11 Multicollinearity problem:

Another assumption needs to be met for multivariate analysis is multicollinearity. It is

a situation that occurs when one independent variable is actually a combination of the other

variables or when the independent variables are highly correlated (Hair et al., 2010; and Won

et al., 2017). Under this situation, the variables start canceled out each other which leads to a decrease in the predictive power of the independent variables on the dependent variables (Won et al., 2017). Therefore, to undertake multivariate analysis, multicollinearity should not exist among the independent variables. Two common tests were employed to assess multicollinearity in this study.

Firstly, the correlation matrix of all independent variables was examined. Statistically, a correlation coefficient of 0.65 and above indicates the existence of multicollinearity between independent variables (Hair et al., 2010). The multicollinearity of the regression models has been investigated using the Variance Inflation Factors (VIFs). It should be noted that there is no hard and fast rule regarding VIF value for determining the presence of multicollinearity problem. For weaker models, the researchers paid note if the VIFs were of 4 (four) or more while for stronger models (if explains 50% or more) some researchers accepted VIFs up to 10 (Hair et. al, 1992). In this study, VIFs of 4 (four) or less have been accepted in examining the multicollinearity problem, considering that the regression models are very strong.

Table 0.9

Correlation Matrix between Independent Variables

Independent variables	Financial Transparency	Modern Technology	Political Goodwill	Institutional Framework
Financial Transparency	1			
Modern Technology	.034	1		
Political Goodwill	-.047	.026	1	
Institutional Framework	.0.04	-.058	.337	1

Table 0.10

Tolerance (Tol) and VIF Values of Independent Variables

Independent variables	Financial Transparency		Modern Technology		Political Goodwill		Institutional Framework	
	Tol	VIF	Tol	VIF	Tol	VIF	Tol	VIF
Financial Transparency	-	-	.989	1.011	.997	1.003	.997	1.004
Modern Technology	.990	1.010	-	-	.995	1.005	.999	1.002
Political Goodwill	.590	1.696	.588	1.700	-	-	.997	1.003
Institutional Framework	.588	1.700	.589	1.699	.995	1.005	-	-

Secondly, multicollinearity was assessed by employing the Tolerance and variance inflation factor (VIF) test. The acceptable value of VIF should not be higher than 5 and tolerance value should not be < 0.10 (Hair et al., 2010; Garson, 2012; and Won et al., 2017). Table 4-9 and Table4-10 indicate that there is no violation of multicollinearity since there is no correlation above 0.65 among the independent variables, all VIF values were less than 4 and tolerance values exceeded 0.50.

4.12 Linearity Assessment:

The final assumption to be examined is the linearity of the relationships. The linearity of the relationship between dependent and independent variables represents the degree to which the change in the dependent variable is associated with the independent variable (Hair et al., 2010). The linearity assumption is necessary before performing a linear regression analysis. In this study, the linearity test was conducted through the ANOVA test of linearity. As a rule of thumb, for the linear relationship between the independent variables and the dependent variable, the F significant value should be above 0.05 (Garson, 2012). In this

study, all interactions between the independent variables and dependent variables have significance values greater than .05 Hence, there was the linearity of the relationship between the dependent variable of corruption and the independent variables of financial transparency, modern technology, political goodwill, and institutional framework. The data by this means satisfied the linearity assumption of multiple regressions.

Building on the findings of normality, multicollinearity, and linearity tests, this study used parametric tests to analyze the collected data, since assumptions of parametric data were met. The correlation coefficient test was used to indicate the association or the absence of the relationship between an independent and a dependent variable. Regression analysis is employed aiming to test the research hypotheses that assumed plausible factors that influence the adoption of corruption. therefore, findings from these parametric tests are presented in the following sections.

4.13 Analysis of correlation

The correlation test is used to examine the correlation between each independent variable with the dependent variable. It also used to better understand the relationships by describing the strength and direction of the linear relationship between two variables. A value of the correlation coefficient has to lie between -1 and +1. According to Field (2009) coefficient of +1 indicates that the two variables are perfectly positive correlation, so if one variable increases, then the other increases by a proportionate amount. However, if the value of the coefficient was found to be -1, this indicates that variables are perfectly negatively correlated, so if one variable increases, the other decreases by a proportionate amount. A third possible result that the correlation coefficient equals zero, this means that there is no relationship between two variables, so if one variable changes, the other stays as same. Moreover, the strength of the relationship between two variables can be also different.

Coefficient values of ±.1 represent a small relationship, ±.3 is a medium relationship and ±.5

is a large relationship(Field, 2009).

Moreover, the statistical test is based on information on the scale. After proving that

the data follow the normal distribution, we will find the correlations between variables

according to Pearson correlation depicted shown in Table 4.11 as follow:

Table 4.11.

Correlation Analysis Between Variables of the Research

Variables	ȳ	Std.	Financial Transparency	Modern Technology	Political Goodwill	Institutional Framework	Corruption
Financial Transparency	4.11	.533	1				
Modern Technology	4.04	.571	.034	1			
Political Goodwill	2.67	.427	-.047	.026	1		
Institutional Framework	2.77	.434	.040	-.058	.337*	1	
Corruption	4.14	.489	.602**	.320*	-.048	-.042	1

* p<0.05; **p<0.01

Figure 4.3 shows that another way of looking at the demographic characteristics of respondents.
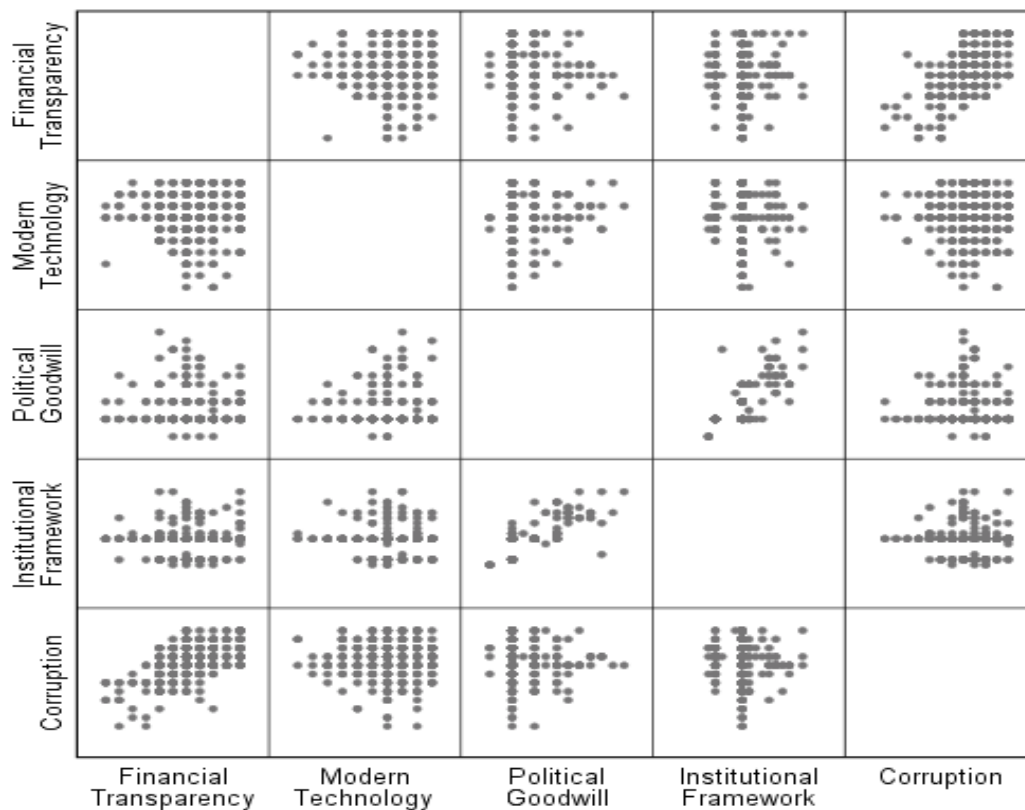
Figure 4.3.

Scatterplot (Matrix) of Variables of the Research

4.14 Regression Analysis

The second objective of this study is aimed to identify the factors influencing the presence of corruption within the six government departments in Libya. After building the research theoretical framework, this objective has been articulated to investigate the relationship between the independent variables (FT,MT, PG, and IF) and the level of corruption(dependent variable). Based on the research theoretical framework five research hypotheses related to the impact of the four factors on corruption and the combination of the four factors on corruption in the Libyan government department (see chapter 3).

In the previous section, the relationship between the independent variables and the dependent variable was examined by applying Pearson's correlation analysis. Although the

correlation analyses provided some information about the relationship between these variables and causality, it is difficult to rely only on correlation to make conclusions about causality. Regression analysis, in contrast, always provides a more detailed description of the relationships between the dependent (response) and independent variables (predictor)(Hair et al., 2010; and Jalaludin et al., 2011). The regression analysis has become one of the most widely used tests in the analysis of data in the social sciences (Bryman and Cramer, 2005; and Field, 2009). Regression analysis is used to test the relationship between the variables in the research to examine the hypotheses(Nair and Nian, 2017). Unlike correlation, regression is concerned with making predictions, and it can express the character of relationships (Bryman and Cramer, 2005).

Therefore, to gain more details about the relationship between these research variables, and simple and multiple regression analyses were carried out to test the relationship between corruption variable and FT, MT, PG, and IF variables and combination to test the research hypotheses. regression is employed to test the relationship between a set of the independent variable and the dependent variable.

In this study, simple and multiple regression models were built, and every model was examined separately to find the effect of included independent variables on a single dependent variable. Model 1, 2, 3, and 4 examined the main effects of four factors on corruption in the Libyan government department. Model 5 examined the main effects of the combination of the four factors on corruption in the Libyan government department. Before conducting a multiple regression, it is worthwhile to review some key terms and present the following statistical criteria (Field, 2009; and Hair et al., 2010):

Evaluate the multiple correlation coefficient **(R),** the R Square **(R^2),** and the adjusted R square **(adj. R^2).** R is considered being one measure of the quality of the prediction of the dependent variable. While R^2(also called the coefficient of determination) is the amount of

variation in the dependent variable that can be explained by the independent variables. R^2 ranges from 0 to +1 and, the larger the R^2, the more the dependent variable is associated with the independent variable that is being used in the model. *Adj. R^2* is a modified measure of R^2 that takes into account the number of independent variables included in the regression model and the sample size.

        The Durbin Watson (DW) statistic is a test to detect autocorrelation (homoscedasticity) in the residuals. A value within the range of 1 to 3 means that there is no autocorrelation detected in the sample, and therefore no inter-item correlation (Nair and Nian, 2017).

        The F-ratio is the result of comparing the amount of explained variance to unexplained variance. This ratio is important to assess the statistical significance (p-value) of the overall regression model and to decide whether the overall regression model is a good fit for the data. The larger the F-ratio, the more goodness fit of the overall regression model. A good model should have a high F-ratio value, more than one at least.

        The unstandardized coefficient *b* and the standardized regression coefficient **beta**. The value of *b* represents the measure that indicates how much the dependent variable change with a unit change in an independent variable when all other independent variables are held constant. It refers to the strength of the relationship between an independent variable and the dependent variable. The coefficient beta represents the impact of the size and the direction of independence on the dependent variable. It presents the degree of change in the outcome variable for every unit change in the predictor variable. According to Hair et al. (2010), beta coefficients use standardized data which can make it easy to compare between the independent variables to determine which has the most influence on the dependent variable. standardized beta coefficients range from -1 to +1. The greater the absolute value of the beta coefficient, the stronger impact of the independent variables on the dependent variable.

The *t*-value and corresponding *p*-value refer can be thought of as a measure to identify which independent variables have statically significant coefficients and to determine the relative influence that the independent variable is having on the dependent variable. The *t*-test assesses whether the beta coefficient is significantly different from zero. The *p* values for the independent variable are considered significant when they are less than 0.05. otherwise, they are not considered significant. In this research, the researcher has assumed a 5% level of significance (i.e. a probability or p level of 0.05 or five times out of a hundred has been considered). When the p-value of a statistic is less than the significance level, the value of the statistic is said to be significant.

The conventional probability, or p-value, for deciding that a result is not due to chance has been set as equal to, or less than, 0.05 (i.e. five times out of a hundred). If we are willing to accept a 5% chance of making an error, we can construct a 95% confidence interval (Weisberg et al, 1996; Cramer, 1998). If the probability is less than 0.05, then it is thought unlikely to have been due to chance. If, on the other hand, the probability level of an outcome is above 0.05, then that result is statistically non-significant in the sense that it is considered likely that it could have been due to chance (Cramer, 1998). In other words, the p-value is the probability that the null hypothesis is true. If the p-value is less than 0.05, we would say that the result is significant at the 0.05 level. To sum up, Kinnear and Gray (2000) posited:

(i) If the p-value is greater than 0.05, H is accepted and the result is not significant;

(ii) If the p-value is equal or less than 0.05 but greater than 0.01, H is rejected and the result is significant beyond the 5 percent level; and,

 (iii) If the p-value is less than 0.01, H is rejected and the result is significant beyond the 1 percent level.

4.14.1 *Regression Analysis of Financial Transparency Factor on Corruption*

The previous sections focused on the descriptive characteristics and finding the correlations between independent and dependent variables and the interrelationship between them. This section analyses the responses for hypotheses as proposed in Chapter 3. It was shown in the previous chapter that the main objective is to examine whether the FT factor has a significantly positive effect on Corruption through search hypothesizes.

In this section, we will use regression analysis. Where regression analysis is used to identify the impact (or effect) between a dependent variable and one or more independent variable(s). More specifically, regression analysis helps us to understand how the typical value of the dependent variable changes when any one of the independent variables is varied while the other independent variables are held fixed (Allison, 1999). This simple regression is used to see the effect of the relationship between FT as an independent variable and corruption as a dependent variable. The Durbin–Watson, DW, statistic was developed to test for the absence of autocorrelation ($\rho=0$).

Table 4.12 shows the model 1 summary. As can be seen, the results of the R coefficient for this model is 0.602, which implies that there is a very good relationship between the dependent and independent variables. This table also shows that the value of adjusted R^2 is 0.361, which indicates that the independent variables (FT factor) that are included in model 1 explains 36.1% of the total variance of the corruption. Thus, the remaining 63.9% of the variation of corruption cannot be explained by the FT factor, which might be accounted for by other variables. Besides, Durbin-Watson for model 1, as seen in Table 4.12 was found to be 2.006 which is within the required range of 1 to 3. This indicates that no autocorrelation was found among residuals, which means the data collected in this study shows that there is no inter-item correlation.

Table 0.1.

Summary of Model 1

Model	R	R Square	Std. The error of the Estimate	Durbin-Watson
1	.602ᵃ	.363	.39081	2.006

a. Predictors: (Constant), Financial Transparency

b. Dependent Variable: Corruption

Table 4.13 shows the ANOVE analysis of model 1. Overall model 1 was found to be significant at .01 level (Sig =.000) with F-ratio = 229.748. Accordingly, model 1 is significant enough to explain the relationship between the dependent variable and independent variables. This also means that this model is valid enough to predict the dependent variable. Therefore, it can be concluded that model 1 is good at predicting the adoption level of Corruption. The results of the coefficients for model 1 are shown in table 4-14. the FT factor has a statistically significant effect relation on Corruption (0.602**) at 0.01 significance level.

Table 4.2.

Analysis of Variance for Model 1

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	35.090	1	35.090	229.748	.000ᵇ
	Residual	61.704	404	.153		
	Total	96.794	405			

a. Dependent Variable: Corruption

b. Predictors: (Constant), Financial Transparency

Table 4.14.

Regression coefficients for Model 1

Model		β	Std. Error	Standardized Coefficients β	t	Sig.
		Unstandardized Coefficients				
1	(Constant)	1.865	.151		12.346	.000
	FT (Financial Transparency)	.552	.036	.602	15.157	.000

Dependent Variable: Corruption

Therefore, from these results, we accept the hypothesis that:

H₁: Financial transparency factor has a significant effect on Corruption in the Libyan government department.

4.14.2 *Regression Analysis of Modern Technology Factor on Corruption*

Table 4.15 shows the Model 2 summary. As can be seen, the results of the R coefficient for this model are 0.320, which implies that there is a positive moderate relationship between the dependent and independent variables. This table also shows that the value of R^2 is 0.103, which indicates that the independent variables (MT factor) that are included in Model2 explain 10.3% of the total variance of the corruption. Thus, the remaining 89.70% of the variation of corruption cannot be explained by the MT factor, which might be accounted for by other variables. Also, Durbin-Watson for Model 2, as seen in Table 4.15 was found to be 1.856 which is within the required range of 1 to 3. This indicates that no

autocorrelation was found among residuals, which means the data collected in this study

shows that there is no inter-item correlation.

Table 0.1.

Summary of Model 2

Model	R	R Square	Std. The error of the Estimate	Durbin-Watson
2	.320	.103	.48948	1.856

a. Predictors: (Constant), Modern Technology

b. Dependent Variable: Corruption

Table 4.15 shows the ANOVA analysis of Model 2. Overall Model 2 was found to be

significant at .01 level (Sig =.009) with F-ratio = 14.19. Accordingly, Model 2 is significant

enough to explain the relationship between the dependent variable and independent variables.

This also means that this model is valid enough to predict the dependent variable. Therefore,

it can be concluded that Model 2 is good at predicting the adoption level of Corruption. The

results of the coefficients for Model 2 are shown in Table 4.17. the MT factor has a

statistically significant effect relation on Corruption (0.320) at a 1% significance level.

Table 0.2.

Analysis of Variance for Model 2

Model		Sum of Squares	df	Mean Square	F	Sig.
2	Regression	2.001	1	2.001	14.19	.009
	Residual	56.793	404	.141		
	Total	58.794	405			

a. Dependent Variable: Corruption

b. Predictors: (Constant), Modern Technology

Table 0.17.

Regression coefficients for Model 2

Model		Unstandardized Coefficients		Standardized Coefficients β	t	Sig.
		β	Std. Error			
2	(Constant)	4.128	.174		23.755	.000
	MT (Modern Technology)	.120	.043	.320	1.98	.009

Dependent Variable: Corruption

Therefore, from these results, we accept the hypothesis that:

H₂: Modern technology factor has a significant effect on Corruption in the Libyan government department.

4.14.3 *Regression Analysis of Political Goodwill Factor on Corruption*

Table 4.18 shows the Model 3 summary. As can be seen, the results of the R coefficient for this model are 0.048, which implies that there is a weak relationship between the dependent and independent variables. This table also shows that the value of R^2 is 0.002, which indicates that the independent variables (PG factor) that are included in Model3 explain 0.2% of the total variance of the corruption. Thus, 99.98% of the variation of corruption cannot be explained by the PG factor, which might be accounted for by other

variables. Also, Durbin-Watson for Model 2, as seen in Table 4.18 was found to be 1.854 which is within the required range of 1 to 3. This indicates that no autocorrelation was found among residuals, which means the data collected in this study shows that there is no inter-item correlation.

Table 0.1.

Summary of Model 3

Model	R	R Square	Std. The error of the Estimate	Durbin-Watson
3	.048	.002	.48892	1.854

a. Predictors: (Constant), Political Goodwill

b. Dependent Variable: Corruption

Table 4.19 shows the ANOVA analysis of Model 3. Overall Model 3 was not found to be significant at .05 level (Sig =.338) with F-ratio = .921. Accordingly, Model 3 is not significant enough to explain the relationship between the dependent variable and independent variables. This also means that this model is not valid enough to predict the dependent variable. Therefore, it can be concluded that Model 3 is not good at predicting the adoption level of Corruption. The results of the coefficients for Model 3 are shown in Table 4.19. The PG factor has not statistically significant effect relation on Corruption (-0.048) at a 5% significance level.

Table 0.2.

Analysis of Variance for Model 3

Model	Sum of Squares	df	Mean Square	F	Sig.

3	Regression	.220	1	.220	.921	.338
	Residual	96.574	404	.239		
	Total	96.794	405			

a. Dependent Variable: Corruption

b. Predictors: (Constant), Political Goodwill

Table 0.20.

Regression coefficients for Model 3

Model		Unstandardized Coefficients		Standardized	t	Sig.
		β	Std. Error	Coefficients β		
3	(Constant)	4.282	.154		27.846	.000
	PG (Political Goodwill)	-.055	.057	-.048	-.960	.338

Dependent Variable: Corruption

Therefore, from these results, we reject the hypothesis that:

H₃: Political goodwill factor has a significant effect on Corruption in the Libyan government department.

4.14.4 *Regression Analysis of Institutional Framework on Corruption*

Table 4.21 shows the Model 4 summary. As can be seen, the results of the R coefficient for this model are 0.042, which implies that there is a weak relationship between the dependent and independent variables. This table also shows that the value of R^2 is 0.002, which indicates that the independent variables (IF factor) that are included in Model 4 explain 0.2% of the total variance of the corruption. Thus, 99.99% of the variation of corruption cannot be explained by the IF factor, which might be accounted for by other variables. Also, Durbin-Watson for Model 2, as seen in Table 4.21 was found to be 1.854 which is within the

required range of 1 to 3. This indicates that no autocorrelation was found among residuals, which means the data collected in this study shows that there is no inter-item correlation.

Table 0.1.

Summary of Model 4

Model	R	R Square	Std. The error of the Estimate	Durbin-Watson
4	.042	.002	.48904	1.849

a. Predictors: (Constant), Institutional Framework

b. Dependent Variable: Corruption

Table 4.22 shows the ANOVA analysis of Model 4. Overall Model 4 was not found to be significant at .05 level (Sig =.338) with F-ratio = .921. Accordingly, Model 4 is not significant enough to explain the relationship between the dependent variable and independent variables. This also means that this model is not valid enough to predict the dependent variable. Therefore, it can be concluded that Model 3 is not good at predicting the adoption level of Corruption. The results of the coefficients for Model 4 are shown in Table 4.23. The IF factor has not statistically significant effect relation on Corruption (-0.048) at a 5% significance level.

Table 0.22.

Analysis of Variance for Model 4

Model		Sum of Squares	df	Mean Square	F	Sig.
4	Regression	.220	1	.220	.921	.338
	Residual	96.574	404	.239		

Total	96.794	405				

a. Dependent Variable: Corruption

b. Predictors: (Constant), Institutional Framework

Table 0.23.

Regression coefficients for Model 4

	Unstandardized Coefficients		Standardized		
Model	β	Std. Error	Coefficients β	t	Sig.
4 (Constant)	4.282	.154		27.846	.000
IF (Institutional Framework)	-.055	.057	-.048	-.960	.338

Dependent Variable: Corruption

Therefore, from these results, we reject the hypothesis that:

H4: Institutional Framework factor has a significant effect on Corruption in the Libyan government department.

4.15 Multiple Regression Analysis of Corruption:

In chapter 3, it was argued that the adoption level of Corruption is likely to be shaped and influence by four factors. In this work, we carried out to examine the relationship between the extent of corruption in the Libyan government department and the four factors including financial transparency, modern technology, political goodwill, and institutional framework factors. To meet this objective to find out the influence of the four factors on corruption in the Libyan government department. The relationship between these factors and corruption can be modeled (Model 5) as follows:

$$y = \beta 0 + \beta 1 x1 + \beta 2 x2 + \beta 3 x3 + \beta 4 x4 + e$$

Based on the above model the influence of the four factors mentioned above on corruption in Libyan government department was evaluated using the model outlined as:

Where y = level of corruption in the Libyan government department;

β_0: is the intercept;

x_1:Financial transparency;

x_2:Modern technology;

x_3:Political goodwill;

x_4: Institutional framework.

e: is a disturbing term.

Table 4.24 shows the model 5 summary. As can be seen, the results of the R-value for this model is .607,which implies that there is a good correlation between the dependent and the independent variables. The table also shows that the value of R^2 is 0.368. This indicates that the independent variables (factors) that are included in model 5 explains 36.8%. of the total variance of the corruption. Thus, the remaining 63.2%of the variation of corruption cannot be explained by these factors which might be accounted for by other variables. Besides, Durbin-Watson for model 5, as seen in Table 4.24 was found to be 1.978 which is within the required range of 1 to 3. This indicates that no autocorrelation was found among residuals, which means the data collected in this study shows that there is no inter-item correlation.

Table 0.24.

Summary of Model 5

Model	R	R^2	Std. The error of the Estimate	Durbin-Watson

5	.607	.368	.39044	1.978

Table 4.25 shows the ANOVA analysis of variance for model 5. The F-ratio of model 5 is 6.736 which was found to be found strongly significant at .01 level (Sig = .000). Accordingly, model5 is significant enough to explain the relationship between the dependent variable and independent variables. This also means that this model is valid enough to predict the dependent variable. Therefore, it can be concluded that the model 5isgoodat predicting the corruption level in the Libyan government department. The results of the coefficients for model 5 is shown in Table 4-26.

Table 0.25.

Analysis of Variance for Model 5

Model		Sum of Squares	df	Mean Square	F	Sig.
5	Regression	35.663	4	8.916	58.485	.000
	Residual	61.131	401	.152		
	Total	96.794	405			

a. Dependent Variable: Corruption

b. Predictors: (Constant), Institutional Framework

Table 0.26.

Multiple Regression coefficients for Model 5

Model	Unstandardized Coefficients β	Std. Error	Standardized Coefficients β	t	Sig.
(Constant)	2.093	.244		8.584	.009

5	FT (Financial Transparency)	.558	.037	.609	15.243	.000
	MT (Modern Technology)	-.171	.034	-.125	-1.962	.045
	PG (Political Goodwill)	.049	.060	.042	.816	.415
	IF (Institutional Framework)	-.107	.059	-.095	-1.826	.069

Dependent Variable: Corruption

Table 4.16. showed financial transparency and modern technology have an effect relation on the level of corruption. It is obvious that FT has statistically significant effect relation on corruption (β=.609**) at 1% significance level, it means that positive effect relationship of financial transparency on corruption, and MT (β= -.125*) 5% significance level, it means that negative effect relationship of modern technology on corruption. Although there was a weak effect relation for political goodwill and institutional framework factors effect on corruption, both(β = .42, β = -.095) were non-significant respectively.

Therefore, from these results, we accept the hypothesis that:

H5:A combination of the four factors has a significant effect on Corruption in the Libyan government department.

4.16 Analysis of Research Data and Results

The research involved 447 individuals, out of which only 430 were received. However, out of the 430 received questionnaires, valid questionnaires were 406. The participants involved in the research included 45 managers, 175 heads of department, and 223 employees of units. This category of participants was relevant because it was knowledgeable about transparency and corruption indices.

There is also a need to identify the various hypotheses to evaluate whether they were confirmed by the research or otherwise. The hypotheses included:

H1: Financial transparency factor has a significant effect on Corruption in the Libyan government department.

H2: Modern technology factor has a significant effect on Corruption in the Libyan government department.

H3: Political goodwill factor has a significant effect on Corruption in the Libyan government department.

H4: Institutional framework factor has a significant effect on Corruption in the Libyan government department.

H5: A combination of the four factors has a significant effect on Corruption in the Libyan government department.

The correlation matrix between the provided independent variables can be used to evaluate whether they agree with the hypotheses. For example, it can be observed that financial transparency and modern technology has a coefficient of 0.034. Whereas this figure is positive, it indicates a relatively low relationship between the two variables. Such a figure indicates that modern technology does not influence financial transparency highly. Had the correlation matrix between financial transparency and modern technology been 1, it could have been deduced that the two are highly related. It would have been an indication that modern technology guarantees financial transparency. However, with a correlation of 0.34, it can be deduced that there are other factors which influence financial transparency. The figure indicates that modern technology does not necessarily translate to financial transparency. It is highly likely that a country may have the most modern technology, but still fail to attain financial transparency. On the findings of the correlation matrix alone, it can be argued that the presence of modern technology in Libya does not guarantee financial transparency. This figure can also explain Libya's poor ranking in terms of transparency and corruption as per the transparency index. However, the use of regression coefficients with financial

transparency being held at a constant with standardized and unstandardized coefficients, it can be observed that financial transparency positively influences corruption in the Libyan government department. The use of the regression coefficients appears to answer to the hypotheses that financial transparency has a significant effect on corruption in the Libya government department. This can be an indication that the practice of financial transparency can lead to reduced instances of corruption, whereas lack of financial transparency can lead to augmented corruption cases. From the available literature regarding financial transparency, it can be deduced that the reduced financial transparency in Libya government departments contributes greatly to corruption. Without financial transparency, individuals operating in government offices are highly likely to engage in corruption cases, because they have dimmed the probability of accountability. Without financial transparency, it becomes essay for government officials to embezzle financial resources for personal gains and deny the populace the right to relevant development.

The correlation matrix between political goodwill and financial transparency is -0.047. Based on the observation that the figure is negative, it can be deduced that there is a negative relationship between political good will and financial transparency. This negative figure is an indication that as one variable increases, the other variable tends to decrease.

The application of the regression analysis is also significant in determining the relationship between financial transparency factor and its influence on corruption. The thesis intended to find out whether financial transparency has a significantly positive impact on corruption. Therefore, the employment of the regression analysis would determine whether a positive effect exists between financial transparency and corruption. Through the regression analysis, findings indicate that the coefficient of the two variables is 0.602. This figure is above 0.5, which can be deduced as a good relationship between the variables. An adjustment of R2 gives a value of 0.361, which translates to 36.1%. Whereas the value of R could be

deemed significant at 0.602, the value of R2 is 0.36, translating to 36%, which is below 50%.

At 36%, the figure is low to make a significant impact because there is an additional 64%,

which is not influenced by the known variable. Therefore, it can be deduced that there are

other factors contained in the 64% that influence corruption and not necessarily the financial

transparency factor.

In Libya, the issue of modern technology seems to be relevant where corruption is

concerned. A regression analysis of the modern technology factor on corruption reveals

interesting results. For example, the factor has an R coefficient of 0.320, which is an

indication of a positive, but moderate link between the independent and dependent variables.

The significant of a positive variable is the acknowledgement that when one variable

increases, for example, dependent, the other variable would also increase. However, based on

the findings that the R coefficient is 0.32, the relationship is moderate. Had the coefficient

been 0.8, for example, the relationship could have been said to be highly positive because of

its proximity to 1. However, at 0.32, the coefficient is below 0.5, which may be considered

the half mark, hence the declaration that modern technology has a moderate positive

relationship with corruption where the regression analysis and the value of R coefficient are

concerned. However, the application of the ANOVA analysis finds that model 2 is relevant

for identifying the relationship between modern technology and corruption. The evaluation of

the variables using ANOVA analysis indicates that modern technology has a significant

impact on corruption in the Libyan government department. There are indications that the use

of modern technology effectively can greatly reduce corruption. However, the presence of

modern technology alone does not constitute a significant effect on corruption. It is possible

for a government to have modern technology and still engage in corruption. For example, it

can be argued that the effectiveness of modern technology is highly dependent on its

operators. From this statement, it can be deduced that there has to be effective persons to operate modern technology in order to have positive gains over corruption.

On financial transparency, 310 of the participants (76.35%) declared that they believed that accountability due to financial transparency assists in the reduction of corruption at a very great extent (this was indicated by assigning number 5 to the question which represents 'Very Great Extent' on the scale). About 200 participants (49.26%) believed that fiscal openness and the likelihood of exposure to abuse due to financial transparency decreases corruption. Regarding the impartial enforcement of rules due to financial transparency, about 250 participants (61.57%) declared that they believed it assists in reducing corruption. About 400 participants (98.5%) believed that deliberations and disclosure of information to stakeholders assists in the reduction of corruption to a very great extent.

On modern technology, about 381 participants (93.8%) believed that augmentation automation and accuracy due to modern technology assists to reduce corruption to a very great extent. These findings appear to coincide with the case of Albania that investigated how e-government can be an effective tool to reduce corruption by automating government offices (Hasani&Beleraj, 2013). The automation process allows the technology to carry out the intended objectives and hinders unauthorized manipulation of financial transactions, which may promote corruption.

Similarly, about 400 participants (98.52%) believed that online services by the government (the implementation of modern technology) assist to reduce corruption to a very great extent.

About 300 participants (73.89%) believed that stronger social bonds due to modern technology assist in the reduction of corruption. Therefore, on technology, it can be deduced that an increased proportion of the participants believed that technology can play a significant

role in the reduction or deterrence of corruption. The association of technology with a reduction in corruption also appears to coincide with the proposed hypotheses that modern technology has a significant effect on corruption in the Libyan government.

On the significance of political goodwill in reducing corruption, about 399 participants (98.27%) believe that provision of necessary powers to the anti-corruption agencies by the government assists in fighting corruption to a very great extent. The belief that the government's provision of necessary powers to anti-corruption agencies can assist in reducing corruption coincides with the findings by Kuris (2015) regarding the significance of provision of powers to anti-corruption agencies. With sufficient powers, anti-corruption agencies can significantly deal with corruption by prosecuting individuals and entities associated with corruption. Therefore, the giving of powers to such agencies provides them with the necessary mandate, obligation, and instruments of power to investigate and charge those involved with corruption. Therefore, the provision of powers to anti-corruption agencies acts as deterrence to corruption.

Based on the significance of budgeting for the anti-corruption agencies by the government, about 390 participants (96.05%) declared that budgeting is significant in the reduction of corruption to a great extent. This is an indication that many people value budgeting and associate it with a reduction in corruption cases if the anti-corruption cases are appropriately funded. This finding appears to coincide with those of other researchers regarding the importance of budgeting and provision of the necessary financial resources to anti-corruption agencies to assist in fighting corruption. With sufficient financial resources, anti-corruption agencies are empowered to investigate and charge corrupt individuals.

The issue of ensuring sufficient personnel at the anti-corruption agencies by the government was also fronted to the participants. About 400 of the participants (98.52%) agree that ensuring sufficient personnel at the anti-corruption agencies by the government

through political goodwill reduces corruption to a very high extent. Six participants (1.48%) agreed that ensuring sufficient personnel at the anti-corruption agencies by the government through political goodwill decreases corruption to a great extent. All the participants' perceptions were between 4 and 5 on the provided scale, with 5 being the highest (very great extent) and 4 being the second highest (great extent). From these findings, it can be observed the participants believe that the issue of having sufficient personnel at the anti-corruption agencies, through political goodwill reduces corruption. None of the participants moderately agreed that the presence of sufficient personnel at the anti-corruption. However, all of them appeared to strongly agree or agree that the provision of sufficient personnel to the anti-corruption agencies assists to reduce corruption to a very great extent and a great extent. These findings appear to coincide with the researchers' observations regarding the presence of sufficient personnel at the anti-corruption agencies and how it leads to the reduction of corruption. The presence of sufficient personnel is an indication that the anti-agencies have enough people to investigate and charge corrupt individuals.

Regarding the necessity of the independence of anti-corruption agencies in fighting corruption, about 399 of the participants (98.27%) agreed that it fights corruption to a very great extent. Seven participants (1.73%) agreed that maintaining independence of the anti-corruption agencies by the government through political goodwill fights corruption to a great extent. Regarding this hypothesis, it can be observed that all the participants associated the independence of the anti-corruption agencies with fighting corruption to a great extent. This is an indication that the executive managers, heads of departments and employees (who were involved in the research) believed that anti-corruption agencies need to have powers if corruption is to be reduced. The participants also agree that budgeting for anti-corruption agencies plays a significant role in reducing corruption. The issue of having sufficient personnel also appears to be highly considered by the participants in its contribution to the

reduction of corruption. The participants also appear to believe that if anti-corruption agencies are independent, they would fight corruption.

On a weak judicial system and political interference and how it allows corruption to thrive in Libya, 400 participants (98.52%) very strongly agrees with this hypothesis. This proportion of participants agrees that a weak judicial system and political interference permits the thriving of corruption to a very great extent. Six participants (1.48%) agreed that a weak judicial system and political interference permits the thriving of corruption in Libya to a great extent. From these participants' findings, it can be deduced that the executive managers, heads of departments and employees, associate a weak judicial system and political interference with augmented corruption.

Regarding the lack of trust in the police and how it exposes businesses to corruption risks in Libya, 224 participants (55.17%) agree that it does to a very great extent. Additionally, 178 participants (43.84%) of the participants agreed that lack of trust in the police exposes businesses to corruption risks in Libya to a great extent. Four participants (0.99%) agreed that lack of trust in the police exposes businesses to corruption risks in Libya to a moderate extent. With the least percentage of participants agreeing that lack of trust in the police exposes businesses to corruption risks in Libya to a moderate extent, then it can be deduced that the participants agree about the significance of trust in the police and its relationship to corruption risks. The majority of the participants seem to agree that corruption in Libya thrives where lack of trust in police exists. Without trusting the police, then it appears that people can easily engage in corruption practices. It can be argued that the police may be expected to provide security to the people and their businesses. Therefore, if the police cannot be trusted, then it can be argued that people may devise their own ways to seek security, which may elevate corruption risks.

Regarding lack of transparency in the public service and how it negatively influences the fight against corruption in Libya, 224 participants (55.17%) agree that it does to a very great extent. Additionally, 170 (41.87%) of the participants agreed that lack of transparency in the public service negatively influences the fight against corruption in Libya to a great extent. Six participants (1.48%) agree that lack of transparency in the public service negatively influences the fight against corruption in Libya to a moderate extent. Six participants (1.48%) agree that lack of transparency in the public service negatively affects the fight against corruption in Libya to a small extent. On this hypothesis about lack of transparency in the public service and how it negatively influences the fight against corruption in Libya, it can be deduced that it is significant. The lowest percentage constituted the agreement that lack of transparency in the public service negatively affects the fight against corruption in Libya to a small extent. This finding means that the majority believe that transparency is highly significant in the public service to the extent that if it lacks, corruption would thrive. This finding is an indication that the managers, head of departments and employees perceive transparency highly in its relationship to corruption. These participants believe that if transparency exists in the public service, corruption cases would be significantly reduced.

On effective tax administration in Libya and how it breeds corruption, 369 participants (about 90.89%) agree that it breeds corruption to a very great extent. An additional 20 participants (4.93%) agree that ineffective tax administration in Libya breeds corruption to a great extent. An additional 17 participants (4.18%) agree that ineffective tax administration in Libya breeds corruption to a moderate extent. From these findings, it can be deduced that the majority of the participants believe that an ineffective tax administration in Libya is responsible for the elevated corruption cases because such a tax administration influences corruption.

On widespread favoritism in Libya's public procurement sector and how it hinders corruption fighting, 354 participants (87.19%) agree that favoritism hinders corruption fighting in Libya to a very great extent. Ten participants (2.46%) agree that widespread favoritism in the public procurement sector makes it difficult to fight corruption in Libya to a great extent. Forty-two participants (10.35%) agreed that widespread favoritism in the public procurement sector makes it difficult to fight corruption in Libya to a moderate extent. These findings indicate that the participants agreed on the significance of favoritism in the public procurement sector in hindering the fighting of corruption in Libya.

It was necessary to understand the participants' perception about several other issues such as their perception about the extent of corruption involving the Libyan government, the corruption of some governmental departments in Libya, and the corruption of government agencies.

On whether the Libyan government is corrupt, 300 participants (73.89%) agreed that the government is corrupt to a very great extent. Fifty participants (12.31%) agreed that the Libyan government is corrupt to a great extent, whereas as another fifty participants (12.31%) agreed that the Libyan government is corrupt to a moderate extent. Six participants (1.48%) agreed that the Libyan government is corrupt to a small extent.

On whether some departments of the government are corrupt, 250 participants (61.58%) agreed that they are corrupt to a very great extent. One-hundred participants (24.63%) agreed that some departments of the government are corrupt to a great extent. Forty-nine participants (12.07%) agree that some departments of the government are corrupt to a moderate extent. Seven participants (1.72%) agreed that some departments of the government were corrupt to a small extent.

Regarding whether the participants believed that all government agencies were corrupt, 248 participants (61.08%) agreed that they were corrupt to a very great extent.

Seventy participants (17.2%) agreed that all government agencies were corrupt to a great extent. Eighty participants (19.7%) agreed that all government agencies were corrupt to a moderate extent. Eight participants (1.970%) agree that all government agencies were corrupt to a small extent.

Regarding the lack of corruption in Libya, 406 participants (100%) disagreed with the statement. This disagreement can indicate that all the participants believed that there was corruption in Libya, regardless of its magnitude. The question about corruption's inexistence in Libya can play significant roles in defining Libya and its approach toward corruption. The responses to such a question can be used to reveal the culture of a given country or community. Therefore, the participants show that the issue of corruption in Libya is prevalent.

Chapter 5: Discussion, Conclusion, and Recommendation

5.1 Introduction

High levels of transparency among politicians and civil servants combined with accountability among citizens are among the best strategies to curb corruption, subsequently promoting economic development and improving the quality of life for citizens living within the corresponding country. However, it is not entirely clear whether transparency and accountability are the most efficient ways to curb corruption, as these two factors have not yet been thoroughly analyzed quantitatively. New approaches need to be developed to engross citizens with improved accountability and to improve the levels of transparency among their leaders and civil servants. These sentiments are echoed in a 2018 article from the *Open Government Partnership*, which states that a fight against corruption is the first step to ensuring that financial aid and economic developments lead to the desired improvements in development outcomes.

On the bases of previous literature, it is important to note that the factors that trigger corruption are often multidimensional. These factors are subject to the environment on which corruption occurs. Libya specifically holds factors limited to the developing world spectra. As was earlier, ascertained Libya stands as no exception to the multidimensional aspect of factors influencing corruption. This study hence limited the factors to a conventional list of four factors, each related to a unique theme in the country. Financial transparency, Institutional framework, modern technology, and political goodwill constituted the set of determining factors relevant to the scope of corruption in Libya. Some factors express independent impacts on corruption, while others assume a combined interaction effect on corruption (Kolstad&Wiig, 2009). Either way, the underlying factors able to reduce corruption, if considered in moderation, are of key importance to this study. The main interactive effect of these factors significantly influences corruption in Libya being indicative of most resource-rich developing countries (Kolstad&Wiig, 2009). Each factor, however, accounts for the variability in corruption by a unique percentage.

Although different factors are specific to a certain geography or state, politics, and the overall geopolitical mapping across a region were affirmed as prominent factors in influencing eth state of corruption in a country (Türedi&Altıner, 2016). The different themes adopted in selecting the factors have a dynamic dimension to them. Their influence may hence be periodic depending on the presence of other underlying factors advocating for their existence. Ideally, some factors depend on the complementary effect of other factors in expressing the scope of the influence.

Most developing countries expressing a high affinity towards corruption are, in most cases, linked to the political sector as most operations have turned into assuming individualism. Here the political elite has a self-implicated mandate to manage and control vast resource rents (Kolstad&Wiig, 2009). Politics is, however, a rather broad topic that

encompasses other different themes. The study's conclusion on financial transparency, having significant positive effects on the state of corruption in Libya, was in line with previous literature proposing financial transparency as the best remedy to a corruption engraved state.

Key proponents of this notion are of the contention that if financial transparency can be consumed and moderated as an independent variable, then countries like Libya are in a position to control the adversity of corruption. For instance, given the case of a potentially corrupt tax filing agent, there are two fundamental options that the agent can take– either becoming transparent with the actual revenue from a company or modifying the actual value in a bid to evade the imposed tax (Chen &Neshkova, 2020). Since the latter is based on personalized objectives, the agent will demand a bribe as compensation for the bribe. From such a simple case, it follows that a combination of bribes, low wages, and lack of security about corruption are the most significant factors stimulating corruption in this environment (De Simone et al., 2017). It ideally follows that a modification of each of these factors will result in better corruption postures.

Corruption is often regarded as a key characteristic in defining low and middle-income countries. If the validity of this perspective is affirmed, it would have to be comprehended that there exists a close and rather strong link between economic growth and corruption. Economic growth, by contrast, works as an integrated platform accommodating different perspectives of the financial society. Gaeta et al., (2017) suggest that the underlying factors in economic growth can be used to explain the variability not incorporated in financial transparency. Besides, following assertions from the analysis, financial transparency only accounts for less than half of the high variability evident in corruption across different geographies (De Simone et al., 2017). The availability of free, non-biased information regarding the use of public budgeted funds is negatively but highly correlated with political corruption. Failure to monitor the collection of taxes, fees and other public revenues is

considered one of the most important factors; Increase financial corruption in companies and public institutions.

Uncertainty about observing all the regulations and regulations of the public stores and their branches and the safety of their application all of this increases financial corruption in those of public companies and institutions.

The lack from Libyan Auditing Bureau to conduct the necessary investigations to investigate the reasons for the inadequate performance of work in the fields of production, distribution and services, which leads to an increase in administrative corruption in public institutions and companies.

The laws and legislations of the Libyan Auditing Bureau did not contain the necessary procedures that the Bureau must perform in order to conduct electronic audit.

Public administration has, for a long time, defined the political history of Libya. The system has over time in structure from a monarchy-based system to the Gaddafi rule before adopting the transitional government thereafter (Sawani, 2018). Of key importance to this study is high regard the country often holds towards its leader. Gaddafi, for instance, was well known beyond the national boundaries of Libya, as a result of gaining adequate recognition from his citizens. While adopting a socio-economic perspective, political goodwill can be limited to defining the bi-faceted nature of leaders: either being conservative or liberal. While previous studies suggest the existence of a close link between political goodwill and corruption, the results of a contrary opinion (Türedi&Altıner, 2016). Political goodwill highlighted weak regression traits with corruption, implying a very minimal effect.

Political goodwill is perceived as a descriptive trait rather than being analytical. Despite relaying a contradicting assertion on the relationship between political goodwill and corruption, many researchers still contend on the fact that political goodwill has a high potential of triggering factors that directly impact corruption (Türedi&Altıner, 2016;

Zalmanovitch& Cohen, 2015). The main effect of political goodwill is hence considered secondary. It is assumed that as long as correlation is ascertained on factors, modification can always be made to change the effect of one on another.

According to Matland (1995), the view on political goodwill can be diversified to narrow the scope of the topic to policy implementation. In cases where the leader does not guarantee adequate support from its citizens, not many people will adhere to policies. Corruption will hence be a typical operation in the social, administrative, and political corridors. These diversities in overall perception might even trigger secondary conflicts creating more political unrest. The severity of these conditions is most dominant in developing countries where democracy has been slowly turned into modern-day individualism (Sawani, 2018). Here, the political elite with shallow degrees of goodwill often controls both public and private resources. Contrary to the pre-asserted hypothesize, political goodwill is not correlated to the corruption on an independent platform. The combined interaction effect of political goodwill and other defining factors, however, significantly affects the state of corruption in Libya.

While Libya's position at the horn of Africa might have significantly contributed to improved economic postures, it is worth noting that the country is still developing from external aid. The country has also learned to appreciate technology evidenced by its mass adoption across different sectors. Technology has, on the other hand, adopted within the scope of corruption to incept new strategies against its dominance. Results affirm the existence of strong correlation traits between modern technology and corruption. Perhaps the best paradigm to this affirmation is the inception and adoption of electronic payment systems. Unlike the case, as mentioned earlier, modeling financial transparency, modern technology eliminates the need for a payment filling mediator (Okunogbe&Pouliquen, 2018). All processes are automated, leading a clearer assertion of the imposed tax on every business. A

similarly-aimed study conducted by Okunogbe&Pouliquen (2018) concluded on the e-filling having a significant impact on financial transparency. Although this aspect highlights a secondary benefit, it is essential to note that technology is a multidimensional factor and can have its effect working as a combined interaction.

Following a series of civil wars and political unrest during Gaddafi's reign, NATO had to intervene in an attempt to create a conducive political environment (Traina, 2020). Various humanitarian programs also aided in the fight against the civil wars. Several monetary aids were, as a result, availed to Libya's government. It is, however, unclear where this money was invested or in what programs it was injected. Victory towards a condition does not ascertain immunity, and the country is as much vulnerable to a reoccurrence as any other country. Technology has been proven to increase the efficiency of cash transfer programs to the vulnerable by the elimination of middlemen. The automation of these services also assures every resource is accounted for. More than 19 billion individuals from the developing world benefit from social safety net programs (Hana, 2017). These programs emphasize on providing basic needs rather than monetary resources. Surprisingly, high levels of corruption still counter humanitarian need to stifle the efficiency of these programs. Various scholars have, in the past, provided solutions to this menace by advocating for modern technologies that are safer and easier to track. Muralidharan et al., (2016) in a recent paper, affirmed that the use of modern banking systems could help significantly reduce corruption in cash transfer programs (Hana, 2017).

Every community or state holds its values that determine the ethicality of common operations. It is with such interest that institutional frameworks exist to define how resources will be distributed and used. Even in the cases of informal institutional frameworks, key statutes are guided by ethics (Uberti, 2016). Earlier references to previous literature expressed a high correlation between institutional frameworks and corruption. Major world

organizations like the World Bank have, in the past, asserted this notion by the inception of better institutional frameworks aimed at curbing corruption (Tung, 2002). Considering the democratic state of Libya, statutes guiding the institutional frameworks cannot be biased towards the benefits of a leader. This is preferably the rationale behind contradicting results. While previous scholars had succeeded in asserting a high correlation between institutional frameworks and corruption, the analysis advocated for an otherwise conclusion, showing no significant impact on corruption from institutional frameworks (Uberti, 2016). Besides, institutional frameworks also accommodate the informal norms guiding eth ethics of a culture. Seldom will there be a community requesting for unequal rights?

While institutional frameworks may not have significant effects on corruption, a combined interaction of various factors based on a specific framework can significantly affect the corruption posture of Libya (Uberti, 2016). As was earlier ascertained, most developed countries, with the inclusion of Libya, are managed by politically advantaged individuals. Residents in such countries are often exposed to the corruption that it has become a culture. Government policies have eventually been weakened to accommodate demands from this menace. The change in policies does not directly impact corruption. Change in policies and obstructs to the development of both public and private sectors are encompassed within a conventional phenomenon of transparency (Transparency International, 2016). To every theme that affects corruption, there must exist statutes or policies guiding its ethics. If these statutes are manipulated wrongly, they easily trigger other much more defining factors into causing corruption.

Each factor defining the onset of corruption can have a combined interaction where other factors are accommodated in the effect analysis. In this case, only two of the pre-determined factors expressed an independent effect on corruption. Besides, the two factors able to show a close link with corruption were only able to show variability to some point.

The other extends not catered for was presumed to be for the other factors, which after further analysis were too evident, leaving the combined interaction effect as a viable factor in affecting corruption. All the other two did not satisfy their hypothesis; it was assumed that their combined interaction effect could change their state. In this case, the combination of all the four factors was of high priority as the primary question on financial transparency had already been answered. The results were in line with the hypothesis, indicating a combined interactive effect of financial transparency, modern technology, institutional framework, and political goodwill on corruption.

5.2 Discussion

Findings indicate that the majority of the participants (managers, departmental heads, and employees), believe that if the government practiced financial transparency, corruption would be decreased significantly. These perceptions seem to coincide with findings from several researches regarding the positive association between financial transparency in governments and reduced corruption. For example, in one research, the researchers identified that where governments were transparency with their financial objectives including budgeting, they were forced to be accountable to the public because the citizens could scrutinize the government's financial approach and expenditure (Cucciniello et al., 2017). Similarly, researchers found that transparency acts as a form of information provision to citizens and allows the public to monitor their government's activities, which leads to a reduction of corruption because the government feels accountable (Benito et al., 2015).

Benito et al., (2015) found that transparency provides citizens with valuable information regarding governments' plans and responsibilities, and the awareness that the public knows what the government intends to do (with the financial resources available), forces governments to be accountable, hence contributing to the reduction of corruption.

Governments are aware that they can be held accountable because the public is aware of relevant information such as the amount of money collected by the government, the amount of money the government allocates to specific projects, and the amount of money that remains after the accomplishment of the stipulated projects. With such information at the citizen's disposal, governments feel obligated to use those resources as stipulated, which reduces embezzlement and additional acts of funds misappropriation.

Some of the way's governments ensure that their information is easily accessible by citizens include websites and data portals (da Cruz et al., 2015). Transparency also appears to contribute to a reduction in corruption because it ensures the government can justify all their decisions (Bauhr& Grimes, 2017). This statement means that where transparency is promoted, the government is forced to ensure that its expenditure actions can be justified. Based on the information on the websites and data portals indicates the amount of money on the government's disposal and the expenditure intentions, the government has to be sure that it sticks to the intended expenditure objectives.

However, the fact that only 76.35% of the participants believed that financial transparency contributed to the reduction of corruption to a very great extent means that the other 23.65% of participants believe otherwise. This disparity in the belief that transparency could reduce corruption was also evident in other research, whereby researchers found that transparency is not guaranteed to achieve positive outcomes always (Cucciniello et al., 2017). Cucciniello et al., (2017) continue to assert that transparency alone may not lead to reduced corruption because it does not mean that the government can be trusted or that the government is legitimate. From this statement, it can be deduced that governments can still promote corruption by providing misleading financial information in their portals, which in turn misleads the public about the government's transparency (Cucciniello et al., 2017). The observation that transparency does not guarantee positive results always may explain why

only 73.65% of the participants considered transparency a very effective tool in reducing corruption and not all the participants (100%).

Interestingly, research also finds that the presence of transparency laws may not lead to reduced corruption if such countries do not have media freedom, several relevant non-governmental organizations (NGOs), and elevated political participation competitiveness (Vadlamannati&Cooray, 2016). Therefore, to ensure that transparency leads to reduced corruption, governments have to allow for media freedom, which increases government's accountability because the media can highlight instances of perceived corruption for the public's scrutiny. However, these challenges cannot dispel the fact that transparency plays a significant role in reducing corruption by increased public awareness and elevating governments' accountability levels.

On modern technology, nearly all the participants (93.8%) believed that technology reduces corruption to a very great extent, particularly due to automation and accuracy. This percentage is significant in defining how the participants perceive technology and its effectiveness in curbing corruption. The high percentage appears to coincide with research findings related to technology and its impact on corruption. For example, governments are motivated to employ technology the United Nations (UN) E-government Readiness Reports, which evaluates the usefulness, relevance, and quality of the provided information and services, including the countries' willingness to engage their citizens in public policy through the application of several e-government inventiveness (Srivastava et al., 2016).

The UN evaluates governments concerning the application of information technology in their systems and provides the findings in its Readiness Report (Srivastava et al., 2016). Governments can assess their rankings and take appropriate measures based on their performance on the report and determine whether they can be classified as open governments or otherwise. Open governments are those that generate and institutionalize a culture of

collaboration, participation, and transparency where the use of information and computer technology (ICT) is concerned.

The application of technology plays significant roles in enhancing efficiency and quality of services delivery to the people by the government (Park & Kim, 2019). Brazil, for example, introduced "Comprasnet", which is an electronic procurement system aimed at providing crucial information to the public concerning outsourced services' prices (Park & Kim, 2019). This system provided Brazilian citizens with the opportunity to access relevant information from government portals, thus gaining awareness. Albania also employed technology in trying to reduce corruption through the automation of government offices(Hasani&Beleraj, 2013). The Albanian case showed that an automation process allows the technology to carry out the intended objectives and hinders unauthorized manipulation of financial transactions, which may promote corruption(Hasani&Beleraj, 2013). The public came to learn what the government intended to achieve and how it planned on achieving the intended objectives. Technology is related to transparency because when the public accesses important government information, they can feel that the government is not intending on hiding information from the public (Park & Kim, 2019). Relevant research indicates that the use of technology contributes greatly to the reduction in corruption by enhancing transparency(Hasani&Beleraj, 2013). The public can access and monitor governments' dealings and evaluate whether the governments' objectives coincide with the public's needs or whether the government projects constitute extravagance.

The fact that 93.8% of participants believed that technology contributes to a reduction in corruption to a very great extent is an indication of the belief about technology's effectiveness. Unlike humans, technology, such as computer, cannot be bribed (Srivastava et al., 2016). There are several countries that have applied technology as e-government tools

and succeeded in reducing corruption by ensuring that systems are efficient to deter and prevent misappropriation of finances.

It can also be observed that 98.27% of participants believed that political goodwill contributed greatly to the reduction in corruption. This finding indicates that managers, departmental heads and employees believe that political goodwill is necessary in combating corruption. Based on the observation that the study is about corruption in Libya, the link between politics and corruption is evident. If a country intends to eliminate corruption, its political element has to be committed to eliminating corruption (Mazzi et al., 2018). The association between politics and corruption eradication is based on the understanding that the political class holds the power such as investigative authorities, arresting authorities, anti-corruption bodies, and the judicial authorities to tackle corruption. These findings about political goodwill and its relationship to corruption reduction seem to coincide with those of a research about the desire to curb corruption and an organization's commitment to ensure that the objective is attained. For example, in organizations intending to curb corruption, the management has to show commitment to curb corruption by making it mandatory for the disclosure of relevant financial information (Mazzi et al., 2018). Through mandatory disclosure, the public and interested stakeholders can access relevant information about a firm's financial performance in terms of profits or losses(Mazzi et al., 2018). Stakeholders, therefore, can use that information to make crucial investment decisions. Therefore, firms committed to curbing corruption establish various mechanisms including policies to ensure that all parties abide by the objective to reduce corruption.

Similarly, governments committed to curbing corruption have to stipulate mechanisms that would achieve those objectives. Political goodwill entails the establishment of policies and mechanisms to deter corruption and to legally deal with corruption cases (Ndaguba et al., 2018). Political goodwill in curbing corruption can entail the establishment

and empowering of anti-corruption agencies and the empowering of corruption-prosecution authorities. With sufficient powers, anti-corruption agencies can significantly deal with corruption by prosecuting individuals and entities associated with corruption (Makowski, 2016). Therefore, the giving of powers to such agencies provides them with the necessary mandate, obligation, and instruments of power to investigate and charge those involved with corruption. One of the ways through which governments can show goodwill to dealing with corruption is by ensuring that the anti-corruption agencies receive sufficient budget to carry out their mandate (Makowski, 2016).

The government can also ensure that anti-corruption agencies have sufficient personnel to carry out their mandate of investigating and prosecuting corrupt individuals. This statement is based on the finding that 98.52% of the participants believed that the presence of sufficient personnel at the anti-corruption agencies contributes greatly to the reduction in corruption. A government's commitment to fighting corruption should be illuminated by their dedication to ensure that the anti-corruption bodies have sufficient and experienced personnel (such as auditors and investigators) to ensure that corruption investigations and prosecutions are carried out as expected without hitches. Without sufficient and qualified personnel, it may be challenging to deal with corruption issues because corruption cases may not be appropriately investigated or prosecuted (Osrecki, 2015). Such challenges may lead to increased impunity and lack of deterrence toward corruption.

The reigning government and additional government arms have to show a commitment to dealing with corruption by avoiding bias when prosecuting cases and dealing with impunity (Kuris, 2015). Therefore, where governments exhibit a willingness to deal with corruption, corruption cases are reduced. Therefore, political goodwill, through the

empowering of anti-corruption and investigative bodies, contributes greatly to the reduction in corruption.

The majority of the participants (98.27%) indicated they believed that the independence of anti-corruption agencies assists in fighting against corruption to a very great extent. From this finding, it can be deduced that the anti-corruption agencies need to be independent if corruption is to be defeated. If governments interfere with anti-corruption agencies, defeating corruption would be a problem (Osrecki, 2015). These beliefs about the essence of the anti-corruption agencies' independence in fighting corruption coincide with the findings of other researchers. For example, research finds that the independence of anti-corruption agencies mean they are not afraid to investigate even senior officials in government. Where corruption-investigating agencies are not independent, they may be afraid to investigate and pursue cases involving prominent personalities(Kuris, 2015). If the investigation of corruption cases is partial, justice may not be attained because such a process may lack fairness. Without fairness, some people may be investigated, whereas others might not.

The independence of anti-corruption agencies guarantees equality such that all citizens are treated equally where corruption is concerned. The investigation and eventual prosecution of senior government officials or prominent individuals in society may act as deterrence to other citizens to engage in corruption.

The responses from the majority of the participants (98.52%), establish that a weak judicial system and political interference allows the thriving of corruption. This statement coincides with additional relevant research findings about how judicial systems can deter or motivate corruption behaviors. In a research regarding the influence of judicial system and corruption, findings indicated that weak judicial systems contribute do not deter corruption(Aranha, 2017). For example, the Federal Justice in Brazil is criticized for the way

it deals with corruption cases such the treatment of some citizens as 'special' public servants by providing them with the privilege to be judged (in a special way) based on the office they hold(Aranha, 2017). Such 'specially treated people', who include politicians, get forum protection and they normally get immunity from prosecution, leaving those without similar social status in society to be jailed (Aranha, 2017).

In addition to a weak judicial system, the lack of trust in the policy also leads to increased corruption. Over half of the participants (55.17%) believe that lack of police trust contributes to corruption to a very great extent. When the police cannot be trusted, corruption may thrive because the police can easily be compromised. If the police cannot be trusted, it means that the public cannot trust the police to arrest corrupt individuals. Additionally, such a police force can also be compromised through bribes, leading to impunity.

It can also be observed that lack of transparency in the public service also negatively influences corruption. The public service, which is majorly concerned with serving the public, can greatly be compromised if there is no transparency (Vadlamannati&Cooray, 2016). The lack of transparency means that the public may not be aware of the public service's objectives and undertakings. Without having an idea about what the public service's plans and objectives, the public service may engage in unnecessary activities, thus misappropriating funds assigned for public service for private purposes. The carrying out of private objectives using public funds or undertaking projects other than those planned for can be termed as corruption. It can be argued that it is easy to misappropriate funds when the public is not aware of what had been intended to be accomplished by a specific entity.

It can also be observed that the way tax is administrated in Libya also contributes to corruption. This is based on the 90.89% of participants who agree that tax administration in Libya contributes to corruption to a very great extent. When tax is administered in an ineffective way, there may be likelihoods of engaging in corruption, such as avoiding paying

of tax altogether. There is a need to ensure that tax administration is carried out in an efficient manner in order to avoid loopholes which may promote corruption. It can also be observed that favoritism plays a major role in encouraging corruption, particularly in the public procurement sector. The majority of the participants (87.19%) agree that favoritism in Libya's public procurement sector hinders corruption fighting in the country, to a very great extent. These findings resonate with the ones indicating that favoritism denies genuine and reliable individuals to provide the necessary materials and resources required in the public sector. When there is favoritism, particularly in a procurement process, it is possible to have unqualified individuals being assigned the responsibility of providing important materials or resources to the government. Assigning inept individuals with the responsibility of providing important materials or resources to the government, denies qualified and deserving individuals the opportunity to provide quality materials and resources. Eventually, the inept individuals would get paid for their ineptitude, whereas there were qualified individuals or organizations capable of delivering quality materials, but were denied the chance.

It can also be observed from the study results that a corrupt government can greatly contribute to corruption. When the government is corruption, all government departments are corrupt and this means that the attainment of quality services from the government is hindered (Aranha, 2017). Corruption can easily thrive in a corrupt government because the probability of engaging in corrupt deals is high when the government is corrupt. Government officials can be easily compromised when the government is corrupt and the provision of quality services to the public, as well as the effective financial management, would be negatively affected.

5.3 Conclusion

The topic of corruption should be directed mainly to the summit of power, for reform to begin from there and then to be reflected strictly downwards according to objective criteria that apply to all without exception, and it should be pointed to other types of political and political structures prevailing in the prevailing political (Such as sectarianism, sectarianism, tribalism, and racial intolerance) that must be addressed through political reform, as they constitute in their entirety the most important incubators of corruption in Libya that were produced during the practice of political action.

The ruling political elite, starting with the royal era and to this day, to varying degrees. The potential for political corruption increases in countries that suffer from political instability and the successive change of government regimes, especially the coercive changes that occur as a result of the use of violence, and the lack of accountability and accountability systems in the process. What is not surprising is the pervasive phenomenon of corruption in the countries that are experiencing the posthumous democratization. In Libya, organized political change after 2011 weakened social, political, and legal institutions, which opened the door to new and previously unfamiliar spoilers. There is no doubt that the high level of corruption in any society is a reflection of the absence of good governance in it, as it implies several constituents that if available in any political system that makes corruption a limited practice. Among these elements are rationality in decision-making and its higher levels in particular, and the availability of transparency, accountability, and accountability. Political corruption is one of the indications of an imbalance in the administration of the Libya state since its inception, resulting in dangerous effects that made the task of building democracy in the Gadafi era difficult and ended with the beginning of after the revolution that was marked by aggressiveness, so there is no militarization of the struggle. Perhaps the most important reasons lie in the quality of the ruling elite.

As most developing countries, including Libya, strive to grow by external aid, it is vital to uphold clean and good governance as the base for legitimacy. Corruption has been taking a high toll across the developing countries region. It can be observed that developing countries have suffered greatly from corruption by reducing or limiting foreign investment in their countries. Foreign companies intending to invest in Africa have been discouraged by the high corruption levels as outlined by the corruption index ranks conducted by Transparency international. With the majority of African countries being ranked at 3.0 or below in the corruption index, the number of foreign investors intending to invest their money in such economic environments is highly reduced. The lack of foreign investment contributes to the delaying of economic growth and contributes to the continued prolonging of poverty among African communities because they cannot access employment. Many African governments are only concerned with self-enrichment rather than improving the economy. Therefore, foreign companies which could, otherwise, have provided employment to the populace are discouraged against establishing businesses in Africa due to corruption.

Inclination towards individualism, as expressed by the political elites of these states, guarantees a flawed system of governance. Various factors have evolved to be key influencers of a good corruption posture owing to the cross-sectional nature of corruption. In this case, the main elements – institutional frameworks, political goodwill, financial transparency, and modern technology have different independent effects on corruption. On the contrary, some do not significantly affect corruption. These factors, however, utilize the impact of other external factors in assuming a combined effect on corruption. Thus, financial transparency can effectively work in curbing corruption if combined with other external factors.

This study has been able to achieve its main objective. It has also been able to answer all of the research questions posed. More specifically, the study has comprehensively

investigated the corruption level in Libya. It has also identified the crucial factors that affect

corruption in Libya's effectiveness. Essentially, this study has taken a holistic view to

describe the corruption in Libya on the bases of the effectiveness model as depicted in

Chapter three. The model has been thoroughly used in both data collection and data analysis

of this study. The results of the regression analysis also indicate the soundness of the

effectiveness model. Overall, the model has been very useful in achieving the objective of

this study. This study will hopefully add to the literature on corruption study from the

perspective of public officers in the Libyan government department.

Five anti-corruption policies are considered basic directions and preventive measures,

as follows:

1. Administrative and legal remedies: which depend on the enactment of clear laws and

    advanced administrative organizations, as well as the establishment of high executive

    and supervisory institutions and devices

Efficiency is backed by firm political will

2. Media treatments: This approach depends on ways to enhance transparency in the

    work of government bodies and agencies, and to raise awareness among citizens

    about decision-making processes, and to detect corruption and then fight it.

3. Structural Reform: Consolidating Policies: If the most successful methods of anti-

    corruption are addressed, address the causes created for it by reforming the

    institutions of government and establishing rules.

4. Fair accountability is in line with the public interest.

5. Giving broad powers to a single independent oversight body in the control of the three

    authorities, and periodic reports that are within the reach of citizens of different

    partisan and political affiliations, members of legislative councils, party leaders, and

    all civil society institutions, that they have the powers of investigation and annexes

between jurisdiction. And more important keeping all the leaders of political parties away from this anti-corruption body.

According to of the interview with some of the high ranked personalities in the Libyan Bureau of auditing, policies were put in place to confront corruption called (the comprehensive and permanent confrontation of corruption) based on the fact that administrative corruption is linked to a set of concepts that need to be taken into consideration in developing a strategy to confront corruption, and they are represented by the following:

1. Accountability: It means accountability for people who hold public office and is done through three aspects: legal follow-up, administrative follow-up, and moral follow-up.

2. Accountability: It means the need for the persons responsible to submit continuous periodic reports and in periods to be agreed upon.

3. Transparency: It relates to two aspects: The first relates to the clarity of work within the organization and the clarity of the relationship with the citizens who benefit from its services. This applies to all the work of the government in its various ministries.

4. Integrity: The system of values related to honesty, honesty, and sincerity in work, despite convergence between the concepts of integrity and transparency, but integrity relates to moral values, while transparency relates to a system and procedures.

More research could be conducted about how to improve a community's knowledge about the symptoms of corruption; studies into improving Government transparency are worth studying. Furthermore, such research should encourage its citizens to take more interest in political activities and holding Government representatives accountable for their actions. In this context, if the state invests in research, science, and technology, both economic powers could be increased while finding ways to mitigate corruption. With very few defining factors related to economic growth, researchers should expand their knowledge

and study scope to accommodate any viable aspect of economies that could affect corruption (Türedi&Altıner, 2016). For instance, how does the existence of external factors like GDP openness affect corruption? The economy is a vast subject, and if a certain aspect of it has been proven to affect corruption, it is only relevant that the whole topic is assessed for further consideration.

The role of the Extractive Industries Transparency Initiative should be encouraged in developing countries. This initiative aims at boosting governance in these countries as well as fighting corruption and bad leadership. Fighting corruption is also promoted by the *Open Government Partnership*, which focuses on transparency and accountability in leaders. An advanced relationship should exist between companies in the private sector, countries that export capital, and global financial organizations. Policies that enhance transparency and accountability should be formulated, especially in areas such as extraction, monitoring the flow of revenue, and the establishment of independent assessing mechanisms. Besides, paying more attention to how to improve the institutional framework and adopting modern technology will have a positive impact on decreasing the corruption level. It is hoped that future researchers will be able to carry through the issues highlighted by this study, modify the model of effectiveness, and also extend the avenues that the study has opened up.

Finally, Corruption thrives in Libya. In Libya, there is no equality in the judicial process because some citizens (prominent individuals) receive special treatment when faced with corruption charges. Libya lacks financial transparency, which promotes corruption by allowing misappropriation of funds. When the public is unaware of the government's financial plans, including the amount of money collected from tax and the budgetary process, it is easy to misappropriate funds. When the public is aware of the government's intentions, accountability increases. The level of impunity in Libya is high based on the observation that the judicial system has a way of providing a special forum to prominent persons when

accused of corruption. To ensure equality in the justice system, Libya has to promote political goodwill. Political goodwill would ensure that all government institutions work as they are expected to and that all individuals are treated equally before the law.

5.4 Recommendations

The Libyan government needs to practice accountability as one of the components of financial transparency in order to reduce corruption. This recommendation is based on the finding that managers, departmental heads and employees find accountability highly important in reducing corruption. Additionally, other research findings have also revealed the significance of financial accountability in reducing corruption. If the government employees and practices financial accountability, there are high probabilities that corruption cases would diminish in Libya. Where accountability is practiced, the government is forced to act within the stipulated objectives because the public and additional stakeholders have been made aware of the government's financial standings, its intended objectives, and overall expenditure. Accountability motivates ethical spending in government and also deters misuse of public funds. To guarantee accountability, the Libyan government needs to ensure that there are easy ways through which the public and other stakeholders can access information concerning the government's financial resources, its intended objectives, and the attained projects. When the stakeholders have access to such information, the government would become accountable because instances of engaging in illegal financial activities would be avoided. With many people having information regarding the government's financial resources and intentions, there are high probabilities that many would question the government if it emerges that there were instances of embezzlement.

Libya should also ensure that it employs an impartial enforcement of rules. The impartial enforcement of rules means that favoritism is eliminated. Favoritism has been

shown to hinder the effective elimination of corruption because punishment was meted on some individuals and not all who had engaged in corrupt behaviors. If Libya implemented impartial enforcement of rules, all corrupt individuals would be handled equally. Regardless of one's status in society, corruption cases would be dealt with equally when there are impartial rules. Impartiality of rules would ensure that some people do not feel immune to prosecution as has been observed with the current state in Libya where corruption cases are handled unfairly. Without impartiality, Libya would never win over corruption and the country may continue performing poorly on the corruption and transparency indexes. All citizens need to understand that engagement in corruption would be costly and that none of the citizens would be immune to prosecution regardless of their social statuses.

It would also be important for Libya to ensure that deliberations and information disclosure are implemented if corruption is to be decreased. Information disclosure can greatly reduce corruption because it would make the government accountable. As more citizens get to know about the government's plans including the amount of financial resources and the intended expenditures, there would be less motivation to engage in corrupt activities. Lack of information disclosure means that few people are aware of the government's intentions, and therefore, there is a high probability of the government officials engaging in corrupt activities. If the public is not aware of the government's intentions, it cannot ask questions if it feels the government is contradicting its objectives. Moreover, the public would also not know whether the government has contravened any of the intended objectives because of lack of public awareness. Practicing public awareness means making the government's intention known, and this also puts the government on alert because of the possibility of being brought into accountability. Any time there are temptations to engage in corrupt activities, government officials would think against it because of the knowledge that corrupt activities would be questioned. The Libyan government can establish government

portals from where citizens can access all information related to the government's projects and financial resources. The Government can ensure that its websites are fully accessible and operation to guarantee disclosure. In addition to accessible and functional government websites, the government can also ensure it provides regular press briefings informing the public about its developmental plans, funding, and intended expenditure. The availability of such information would keep the public informed, which could elevate the government's accountability. If Libya implements these practices to stakeholders, corruption can be greatly reduced because of elevated accountability.

The Libyan government also needs to employ modern technology to enhance the elimination of corruption. Technology can entail automation processes, which can also lead to improved accuracy. Through automation, government processes are programmed to ensure they cannot be compromised to enhance funds misappropriation. Uncompromised processes play significant roles in limiting unethical deeds because they only operate as programmed. When the financial processes are programmed to meet the stipulated projects, they cannot be compromised for illegal channeling of financial resources to inappropriate use. Through automation, the process becomes foolproof such that financial trails can be traced in order to identify all activities and the individuals behind them. Without an automation process, it is possible to misappropriate funds because of the susceptibility of the manual, financial resources allocation, to manipulation. It is possible to misuse funds that were intended for public development for private purposes if the process of money allocation is manual. However, where the process is automated, there are limited opportunities of inappropriate misallocation of financial resources because the entire process is predetermined and programmed to ensure that only the stipulated processes and transactions are allowed.

The Libyan government could also ensure that it provides online services as a measure to curb corruption. Online services can provide significant benefits to the populace,

particularly by providing avenues through which government activities can be accessed and monitored. The public can easily monitor its government's activities through online access. If all government activities are placed online, corruption can easily be controlled. For example, if services such as tendering could be accessed online, all people could get to know how the process was implemented and those that won the process. With online services, all the information is made public due to the ease in which it can be accessed by all. Such information becomes hard to be manipulated because it is already there. By using online services, the Libyan government could ensure that all information pertaining to its financial activities is accessible to the public. The public can scrutinize the information and ensure that the government remains accountable in all the financial undertakings.

The Libyan government also needs to ensure that anti-corruption agencies are working optimally by ensuring they receive sufficient personnel. Findings have indicated that the lack of sufficient personnel at the anti-corruption agencies can greatly hamper the fight against corruption because insufficient workers can easily be overwhelmed. Findings have shown that anti-corruption agencies play significant roles in reducing corruption by investigating and prosecuting corrupt individuals. Anti-corrupt agencies can also work with other organizations to investigate and ensure all corrupt individuals are prosecuted. However, it can be challenging for the anti-corruption agencies to attain their objectives if they are under-staffed. Therefore, Libya needs to ensure that all the anti-corruption agencies have sufficient and qualified personnel to assist in their mandate to fight corruption. The need to have sufficient personnel is significant in Libya because it ranked number one in the participant's perceptions about its importance in fighting corruption. Interestingly, the majority of the participants involved in the study believed that having sufficient personnel at the anti-corruption agencies was more important than even giving powers to the anti-corruption agencies to carry out their mandates. Therefore, the recruitment of the personnel

should be based on the most qualified, particularly in investigating and prosecuting corrupt individuals. The anti-corruption personnel should have the capability of evaluating cases and identifying instances where they believe that corruption has been carried out. Based on the understanding that corrupt individuals, sometimes, invest heavily in trying to defeat justice by covering their corrupt activities, the personnel should have the capability to evaluate all activities and detect corrupt activities disguised as legal. The personnel of these agencies should exhibit high intelligence levels and should not be easily comprised for corruption to be defeated. Having sufficient personnel at the anti-corruption agencies and yet such individuals can be easily compromised, would not attain the desired objectives of curbing corruption. Therefore, those responsible for recruiting the people to serve in the anti-corruption agencies should ensure such individuals have incorruptible characters. It is worth noting that corruption cases can involve high financial resources from embezzlement and such resources can be used to try and defeat justice by bringing investigating officials or even the justice system. Therefore, if Libya intends to succeed in fighting corruption and improving its corruption rankings as stipulated by the Transparency International (2016), it has to ensure that anti-corruption agencies have sufficient and qualified personnel who exhibit high integrity levels.

The Libyan government also needs to ensure that the anti-corruption agencies receive sufficient funding. Findings have indicated that funding provides the anti-corruption agencies with the necessary resources to fight corruption. In contrast, the lack of sufficient funding would greatly hamper the effective fighting of corruption. Without the necessary funds, investigating corrupt cases may be challenging, particularly based on the assumption that embezzlement or misappropriation of financial resources involved money. Therefore, if the corrupt individuals have money, they can use it to try and engage in cunning behavior in attempts to defeat justice. Anti-corruption agencies' personnel need to have sufficient funds

to investigate and even to protect witnesses. It is highly possible for the anti-corruption agencies' personnel to meet individuals who may be willing to testify against corrupt individuals. In such instances, it may be necessary to protect such witnesses to ensure that they are safe and available during the anti-corruption case against corrupt individuals. With sufficient funds, it would be possible for the personnel to provide haven to all those involved in the fight against corruption. In contrast, the lack of sufficient funding would deem the anticorruption agencies helpless without the necessary resources to fight the vice. The government, therefore, should ensure that the budgetary process is carried out effectively to guarantee the appropriate distribution of financial resources to different ministries and organizations.

It is also recommended that the anticorruption agencies should be made independent. The government needs to ensure that anticorruption agencies are left to make their decisions without interference from the government or other influential entities. If Libya ensures that anticorruption agencies are independent, the fight against corruption can be won because there would be no favoritism. Currently, Libya is struggling in the fight against corruption because not all corrupt individuals are prosecuted. Furthermore, different approaches in fighting corruption are implemented differently. For example, prominent individuals in society are taken before a special forum where their cases are heard by special juries, eventually leading to lenient sentences. If the anticorruption agencies remain independent, they can investigate and adjudicate cases without interference, regardless of the social status of the individuals involved. With the political instability in Libya, it is possible to engage in corrupt activities because political instability contributes to unstable organizations. Therefore, Libya needs to ensure that anticorruption agencies remain independent from political interference.

The independence of anticorruption agencies may not be achieved if there is no political goodwill. Therefore, Libya also needs to have the political goodwill if it has to achieve its objective of curbing corruption. The political goodwill will have to start by ensuring that the country holds credible elections. The entire electoral process needs overhaul to guarantee the effective execution of justice. The public needs to be enlightened on their choice of leaders with integrity. Additionally, mechanisms should be put in place to ensure that governments can be checked to avoid corrupt behaviors.

Additionally, Libya needs to ensure that the police force improves its reputation by ensuring that those who are recruited have integrity. A police force with integrity would contribute greatly to the fight against corruption and would assist Libya in improving the reputation of the police.

Importantly, it would also be necessary for Libya to ensure that the justice system is improved by appointing only those people with integrity to head the system. The special 'forum' that has been use to try people of high societal status should be abolished. All people should be treated equally under law and this would play significant roles in eliminating impunity. The judiciary should be independent of any influence from the government and additional organizations. If all citizens are treated equally and the 'forum' is abolished, the engagement in corrupt behaviors can be avoided.

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Appendices

A.1: Survey Questionnaire

Topic: Factors that Most Affect the Corruption in Libya

Section A: Informed Consent

This study and the researcher request your accord to contribute to a study regarding corruption in Libya. This consent letter seeks to permit the investigator to record and observe the audience and to utilize your remarks to improve understanding of this subject. The consent note also seeks your authorization to use connected interpretations, images, or responses as data in this inquiry. This consent note inquires whether you opt to stay anonymous or to let the surveyor use your name and your department or government agency that you work for and to quote your responses directly. The researcher intends to inform you that participation in this work is voluntary. If you opt not to take part, there will be no adverse penalties. Please let it be understood that if you agree to contribute, you have a choice to discontinue your participation at any instance as easily select the questions to answer.

Section B: Demographic Information

Please indicate your gender (Tick (√) one)

Male ☐   Female ☐

Please indicate
your age ☐   Experience in
years ☐

What government department do you work for?

Ministry	Tick One (√)
Ministry of Finance	
Libyan Audit Bureau	
Libyan Transparency Association	
Nontonal Anti-corruption Committee	
Central Bank of Libya	
Academic, Scholar personals	

Section C: Financial Transparency

To what extent do you agree with the following statements concerning the impact of financial transparency on corruption?

KEY: **5 = Very great extent, 4= great extent, 3= Moderate extent, 2= small extent, 1= Not at all**

Statement on Financial Transparency {Tick One (√)}	5	4	3	2	1
1. Accountability due to Financial Transparency helps reduce corruption.					
2. Fiscal Openness and the likelihood of exposure to abuse due to Financial Transparency reduces corruption.					
3. Impartial Enforcement of rules due to Financial Transparency helps reduce corruption.					
4. Deliberations and disclosure of information to stakeholders due to Financial Transparency reduces corruption.					

Section D: Modern Technology

To what extent do you agree with the following statements regarding the impact of Modern

Technology on corruption?

KEY: **5 = Very great extent, 4= great extent, 3= Moderate extent, 2= small extent, 1= Not**

at all

Statement on Modern Technology {Tick One (√)}	5	4	3	2	1
1. Increased Automation and Accuracy due to Modern Technology helps reduce corruption.					
2. Online services by the government due to Modern Technology reduces corruption.					
3. Stronger Social Bonds courtesy of modern technology helps reduce corruption.					

Section E: Political Goodwill

To what extent do you agree with the following statements concerning the influence of political goodwill on corruption in Libya?

KEY: **5 = Very great extent, 4= great extent, 3= Moderate extent, 2= small extent, 1= Not at all**

Statement on Political Goodwill {Tick One (√)}	5	4	3	2	1
1. Provision of necessary powers to the anti-corruption agencies by the government helps fight corruption.					
2. Budgeting for the anti-corruption agencies by the government reduces corruption.					
3. Ensuring sufficient personnel at the anti-corruption agencies by the government through political goodwill reduces corruption.					
4. Maintaining independence of the anti-corruption agencies by the government due to political goodwill fights corruption.					

Section F: Institutional Framework

To what extent do you agree with the following statements concerning the influence of the institutional framework on corruption in Libya?

KEY: **5 = Very great extent, 4= great extent, 3= Moderate extent, 2= small extent, 1= Not at all**

Statement on Institutional Framework {Tick One (√)}	5	4	3	2	1
1. Weak judicial system and political interference allows corruption to thrive in Libya.					
2. Lack of trust in the police exposes business to corruption risks in Libya.					
3. Lack of transparency in the public service negatively impacts the fight against corruption in Libya.					
4. Ineffective tax administration in Libya breeds corruption.					
5. Widespread favoritism in the public procurement sector makes it difficult to fight corruption in Libya.					

Section G: Conclusion

To what extent do you agree with the following statements concerning corruption in Libya?

KEY: **5 = Very great extent, 4= great extent, 3= Moderate extent, 2= small extent, 1=**

Not at all

Statement on Corruption {Tick One (√)}	5	4	3	2	1
1. The Libyan Government is Corrupt.					
2. Some Departments of the Government are Corrupt.					
3. All Government Agencies are Corrupt.					
4. There is no corruption in Libya.					

Thank you for kindly participating in this questionnaire
Appendices A.2

Appendices B:
Appendix 1: SPSS Output

Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Female	162	39.9	39.9	39.9
	Male	244	60.1	60.1	100.0
	Total	406	100.0	100.0	

Age Group

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18-25	67	16.5	16.5	16.5
	26-35	206	50.7	50.7	67.2
	36-45	81	20.0	20.0	87.2
	46 or above	52	12.8	12.8	100.0
	Total	406	100.0	100.0	

Experience

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than 1 yr	45	11.1	11.1	11.1
	1-4 yrs	121	29.8	29.8	40.9
	5-7 yrs	82	20.2	20.2	61.1
	8-14 yrs	91	22.4	22.4	83.5
	15 or more yrs	67	16.5	16.5	100.0
	Total	406	100.0	100.0	

Appendix 2: SPSS Output

```
RELIABILITY
  /VARIABLES=FT1FT2FT3FT4
  /SCALE('ALL VARIABLES') ALL
  /MODEL=ALPHA.
```

Reliability

Scale: ALL VARIABLES

Case Processing Summary

		N	%
Cases	Valid	406	100.0
	Excluded[a]	0	.0
	Total	406	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.777	4

```
RELIABILITY
  /VARIABLES=MT1MT2MT3
  /SCALE('ALL VARIABLES') ALL
```

```
/MODEL=ALPHA.
```

Reliability

Scale: ALL VARIABLES

Case Processing Summary

		N	%
Cases	Valid	406	100.0
	Excluded[a]	0	.0
	Total	406	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.694	3

```
RELIABILITY
  /VARIABLES=PG1PG2PG3PG4
  /SCALE('ALL VARIABLES') ALL
  /MODEL=ALPHA.
```

Reliability

Scale: ALL VARIABLES

Case Processing Summary

		N	%
Cases	Valid	406	100.0
	Excluded[a]	0	.0
	Total	406	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.825	4

```
RELIABILITY
  /VARIABLES=IF1IF2IF3IF4IF5
  /SCALE('ALL VARIABLES') ALL
  /MODEL=ALPHA.
```

Reliability

Scale: ALL VARIABLES

Case Processing Summary

		N	%
Cases	Valid	406	100.0
	Excludedª	0	.0
	Total	406	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.772	5

```
RELIABILITY
  /VARIABLES=GC1GC2GC3GC4
  /SCALE('ALL VARIABLES') ALL
  /MODEL=ALPHA.
```

Reliability

Scale: ALL VARIABLES

Case Processing Summary

		N	%
Cases	Valid	406	100.0
	Excludedª	0	.0
	Total	406	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.743	4

Appendix 3: SPSS Output
```
DESCRIPTIVES VARIABLES=FT1FT2FT3FT4
  /STATISTICS=MEAN STDDEV.
```

Descriptive

Descriptive Statistics

	N	Mean	Std. Deviation
1. Accountability due to Financial Transparency helps reduce corruption.	406	4.19	.574
2. Fiscal Openness and the likelihood of exposure to abuse due to Financial Transparency reduces corruption.	406	4.05	.725
3. Impartial enforcement of rules due to Financial Transparency helps reduce corruption.	406	4.13	.669
4. Deliberations and disclosure of information to stakeholders due to Financial Transparency reduces corruption.	406	4.07	.769
Valid N (listwise)	406		

```
DESCRIPTIVES VARIABLES=MT1MT2MT3
  /STATISTICS=MEAN STDDEV MIN MAX.
```

Descriptive

Descriptive Statistics

	N	Mean	Std. Deviation
1. Increased Automation and Accuracy due to Modern Technology helps reduce corruption.	406	4.13	.725
2. Online services by the government due to Modern Technology reduces corruption.	406	4.05	.747
3. Stronger Social Bonds courtesy of modern technology helps reduce corruption.	406	3.94	.703
Valid N (listwise)	406		

```
COMPUTE Ave_MT=MEAN(MT1,MT2,MT3).
VARIABLE LABELS  Ave_MT 'Modern Technology'.
EXECUTE.
DESCRIPTIVES VARIABLES=Ave_MT
  /STATISTICS=MEAN STDDEV MIN MAX.
```

Descriptive

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Modern Technology	406	2.00	5.00	4.0402	.57116
Valid N (listwise)	406				

Descriptive

Descriptive Statistics

	N	Mean	Std. Deviation
1. The provision of necessary powers to the anti-corruption agencies by the government helps fight corruption.	406	2.17	.586
2. Budgeting for the anti-corruption agencies by the government reduces corruption.	406	3.07	.425
3. Ensuring sufficient personnel at the anti-corruption agencies by the government through political goodwill reduces corruption.	406	3.17	.518
4. Maintaining the independence of the anti-corruption agencies by the government due to political goodwill fights corruption.	406	2.25	.563
Valid N (listwise)	406		

```
COMPUTE Ave_PG=MEAN(PG1,PG2,PG3,PG4).
VARIABLE LABELS  Ave_PG 'Political Goodwill'.
EXECUTE.
DESCRIPTIVES VARIABLES=Ave_PG
  /STATISTICS=MEAN STDDEV.
```

Descriptive

Descriptive Statistics

	N	Mean	Std. Deviation
Political Goodwill	406	2.6656	.42651
Valid N (listwise)	406		

Descriptive

Descriptive Statistics

	N	Mean	Std. Deviation
1. The weak judicial system and political interference allow corruption to thrive in Libya.	406	2.15	.551

2. Lack of trust in the police exposes the business to corruption risks in Libya.	406	3.05	.347
3. Lack of transparency in public service negatively impacts the fight against corruption in Libya.	406	2.80	.773
4. Ineffective tax administration in Libya breeds corruption.	406	3.09	.394
5. Widespread favoritism in the public procurement sector makes it difficult to fight corruption in Libya.	406	2.76	.788
Valid N (listwise)	406		

```
COMPUTE Ave_IF=MEAN(IF1,IF2,IF3,IF4,IF5).
VARIABLE LABELS  Ave_IF 'Political Goodwill'.
EXECUTE.
DATASET ACTIVATE DataSet1.
```

Descriptive

Descriptive Statistics

	N	Mean	Std. Deviation
Institutional Framework	406	2.7714	.43384
Valid N (listwise)	406		

```
DESCRIPTIVES VARIABLES=GC1GC2GC3GC4
  /STATISTICS=MEAN STDDEV.
```

Descriptive

Descriptive Statistics

	N	Mean	Std. Deviation
1. The Libyan Government is Corrupt.	406	4.11	.626
2. Some departments of the Government are Corrupt.	406	4.10	.680
3. All Government Agencies are Corrupt.	406	4.17	.673
4. There is no corruption in Libya.	406	4.17	.621
Valid N (listwise)	406		

```
COMPUTE Ave_GC=MEAN(GC1,GC2,GC3,GC4).
VARIABLE LABELS  Ave_GC 'Corruption'.
```

```
EXECUTE.
DESCRIPTIVES VARIABLES=Ave_GC
  /STATISTICS=MEAN STDDEV.
```

Descriptive

Descriptive Statistics

	N	Mean	Std. Deviation
Corruption	406	4.1361	.48887
Valid N (listwise)	406		

Explore

Tests of Normality

	Kolmogorov-Smirnov[a]		
	Statistic	df	Sig.
Financial Transparency	.073	406	.178
Modern Technology	.067	406	.150
Political Goodwill	.039	406	.051
Institutional Framework	.050	406	.068
Corruption	.058	406	.103

Lilliefors Significance Correction

Financial Transparency

Normal Q-Q Plot of Financial Transparency

Modern Technology

Normal Q-Q Plot of Modern Technology

Political Goodwill

Normal Q-Q Plot of Political Goodwill

Institutional Framework

Normal Q-Q Plot of Institutional Framework
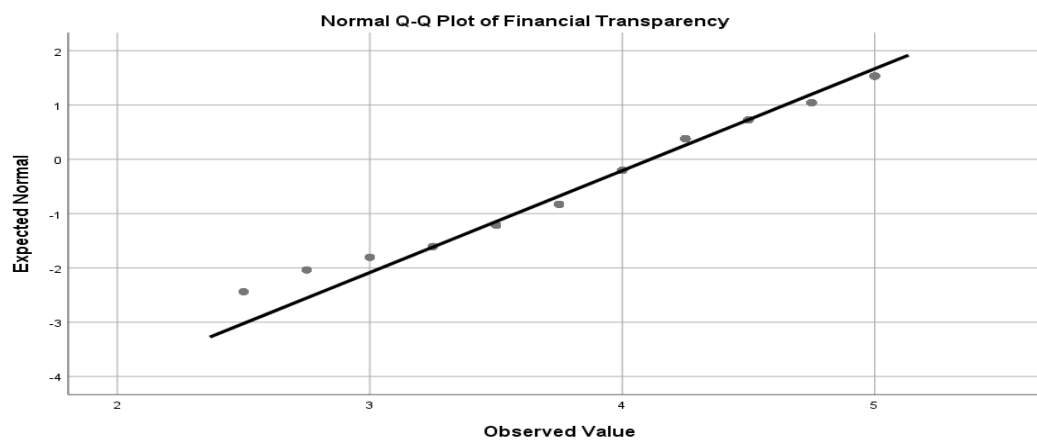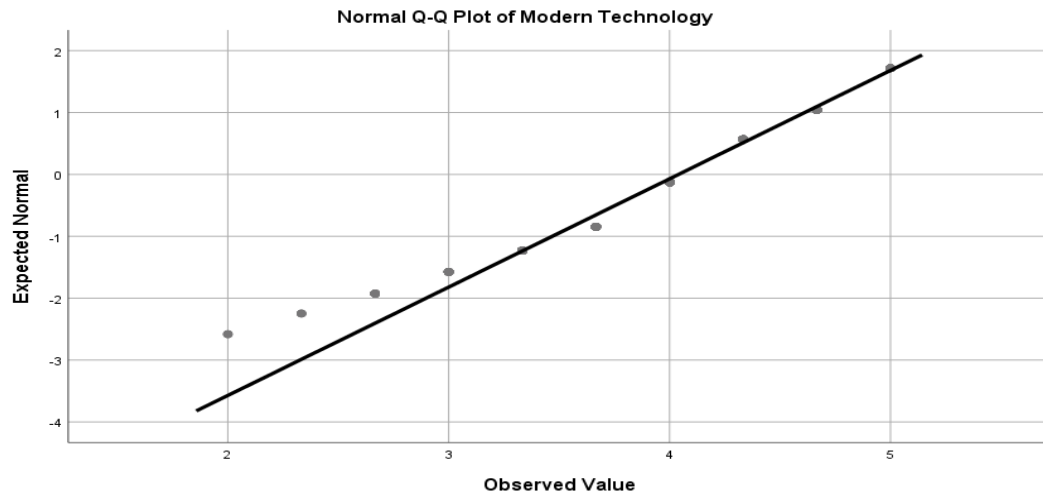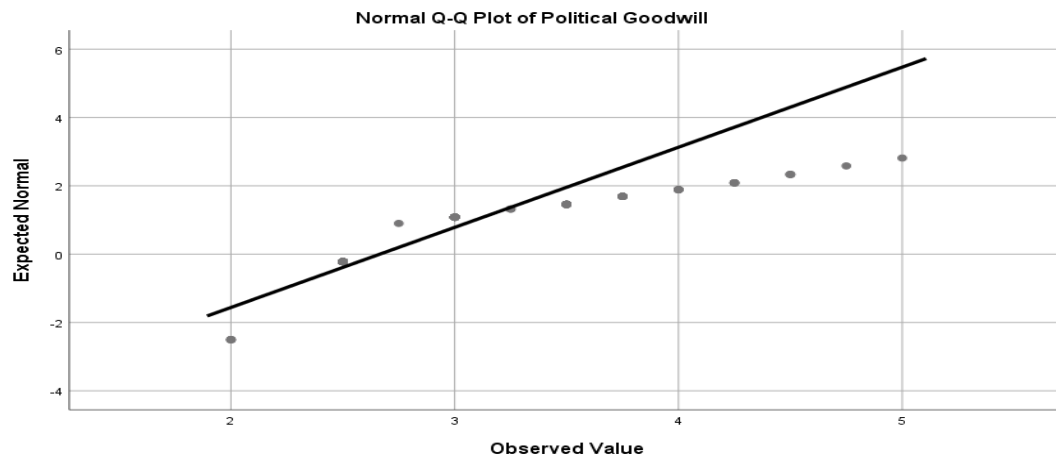
Corruption
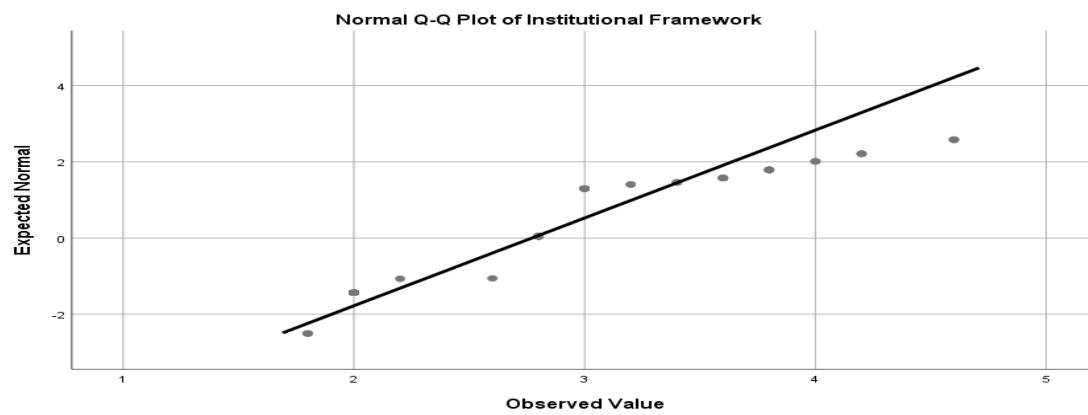
Normal Q-Q Plot of Corruption
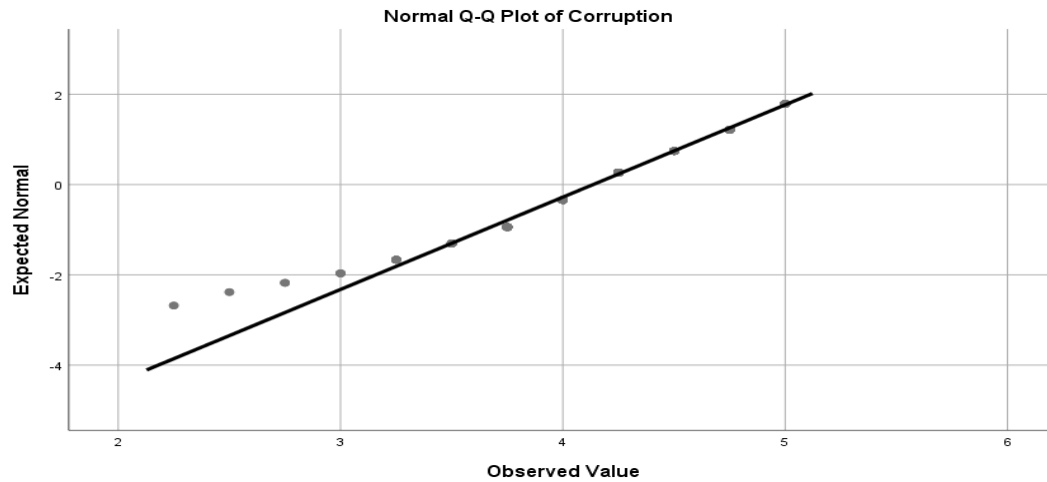
Explore

Descriptive

			Statistic	Std. Error
Financial Transparency	Mean		4.1115	.02645
	95% Confidence Interval for Mean	Lower Bound	4.0595	
		Upper Bound	4.1634	
	5% Trimmed Mean		4.1325	
	Median		4.0000	
	Variance		.284	
	Std. Deviation		.53291	
	Minimum		2.50	
	Maximum		5.00	
	Range		2.50	
	Interquartile Range		.50	
	Skewness		-.287	.121
	Kurtosis		.400	.242
Modern Technology	Mean		4.0402	.02835
	95% Confidence Interval for Mean	Lower Bound	3.9845	
		Upper Bound	4.0960	
	5% Trimmed Mean		4.0666	
	Median		4.0000	
	Variance		.326	
	Std. Deviation		.57116	
	Minimum		2.00	
	Maximum		5.00	
	Range		3.00	
	Interquartile Range		.67	
	Skewness		-.653	.121
	Kurtosis		1.049	.242
Political Goodwill	Mean		2.6656	.02117

	95% Confidence Interval for Mean	Lower Bound	2.6240	
		Upper Bound	2.7073	
	5% Trimmed Mean		2.5989	
	Median		2.5000	
	Variance		.182	
	Std. Deviation		.42651	
	Minimum		2.00	
	Maximum		5.00	
	Range		3.00	
	Interquartile Range		.00	
	Skewness		1.810	.121
	Kurtosis		2.022	.242
Institutional Framework	Mean		2.7714	.02153
	95% Confidence Interval for Mean	Lower Bound	2.7291	
		Upper Bound	2.8138	
	5% Trimmed Mean		2.7475	
	Median		2.8000	
	Variance		.188	
	Std. Deviation		.43384	
	Minimum		1.80	
	Maximum		4.60	
	Range		2.80	
	Interquartile Range		.00	
	Skewness		.700	.121
	Kurtosis		2.54	.242
Corruption	Mean		4.1361	.02426
	95% Confidence Interval for Mean	Lower Bound	4.0884	
		Upper Bound	4.1838	
	5% Trimmed Mean		4.1544	
	Median		4.0000	
	Variance		.239	
	Std. Deviation		.48887	
	Minimum		2.25	
	Maximum		5.00	
	Range		2.75	
	Interquartile Range		.50	
	Skewness		-.569	.121
	Kurtosis		1.127	.242

Appendix 4: SPSS Output
Correlations

Correlations

		Financial Transparency	Modern Technology	Political Goodwill	Institutional Framework
Financial Transparency	Pearson Correlation	1	.034	-.047	.040
	Sig. (2-tailed)		.496	.340	.422
	N	406	406	406	406
Modern Technology	Pearson Correlation	.034	1	.026	-.058
	Sig. (2-tailed)	.496		.604	.245
	N	406	406	406	406
Political Goodwill	Pearson Correlation	-.047	.026	1	.337[**]
	Sig. (2-tailed)	.340	.604		.000
	N	406	406	406	406
Institutional Framework	Pearson Correlation	.040	-.058	.337[**]	1
	Sig. (2-tailed)	.422	.245	.000	
	N	406	406	406	406

[**]. Correlation is significant at the 0.01 level (2-tailed).

Regression

Coefficients

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.	Collinearity Statistics Tolerance	Collinearity Statistics VIF
1	(Constant)	3.924	.297		13.204	.000		
	Financial Transparency	.048	.053	.044	.890	.374	.989	1.011
	Political Goodwill	.149	.087	.111	1.717	.087	.588	1.700
	Institutional Framework	-.172	.085	-.130	-2.017	.044	.589	1.699

a. Dependent Variable: Modern Technology

Collinearity Diagnostics

Model	Dimension	Eigenvalue	Condition Index	(Constant)	Financial Transparency	Political Goodwill	Institutional Framework
					Variance Proportions		
1	1	3.959	1.000	.00	.00	.00	.00
	2	.026	12.286	.02	.30	.15	.10
	3	.009	21.129	.04	.01	.65	.90
	4	.006	25.169	.94	.69	.20	.00

a. Dependent Variable: Modern Technology

```
REGRESSION
  /MISSING LISTWISE
  /STATISTICS COEFF OUTS R ANOVA COLLIN TOL
  /CRITERIA=PIN(.05) POUT(.10)
  /NOORIGIN
  /DEPENDENT Ave_GC
  /METHOD=ENTER Ave_MTAve_PGAve_IF.
```

Regression

Variables Entered/Removed

Model	Variables Entered	Variables Removed	Method
1	Institutional Framework, Modern Technology, Political Goodwill	.	Enter

a. Dependent Variable: Corruption
b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. The error of the Estimate
1	.050[a]	.003	-.005	.49008

a. Predictors: (Constant), Institutional Framework, Modern Technology, Political Goodwill

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.243	3	.081	.337	.798[b]

Residual	96.551	402	.240		
Total	96.794	405			

a. Dependent Variable: Corruption

b. Predictors: (Constant), Institutional Framework, Modern Technology, Political Goodwill

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	4.297	.246		17.443	.000		
	Modern Technology	.002	.043	.002	.045	.964	.990	1.010
	Political Goodwill	-.040	.074	-.035	-.544	.587	.590	1.696
	Institutional Framework	-.022	.073	-.020	-.301	.764	.588	1.700

a. Dependent Variable: Corruption

Collinearity Diagnostics

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions			
				(Constant)	Modern Technology	Political Goodwill	Institutional Framework
1	1	3.956	1.000	.00	.00	.00	.00
	2	.028	11.881	.02	.36	.10	.12
	3	.009	20.852	.09	.04	.88	.53
	4	.007	24.180	.89	.59	.01	.35

a. Dependent Variable: Corruption

```
REGRESSION
  /MISSING LISTWISE
  /STATISTICS COEFF OUTS R ANOVA COLLIN TOL
  /CRITERIA=PIN(.05) POUT(.10)
  /NOORIGIN
  /DEPENDENT Ave_GC
  /METHOD=ENTER Ave_FTAve_PGAve_IF.
```

Regression

Variables Entered/Removed

Model	Variables Entered	Variables Removed	Method
1	Institutional Framework, Financial Transparency, Political Goodwill	.	Enter

a. Dependent Variable: Corruption

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. The error of the Estimate
1	.606[a]	.368	.363	.39014

a. Predictors: (Constant), Institutional Framework, Financial Transparency, Political Goodwill

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	35.605	3	11.868	77.972	.000[b]
	Residual	61.189	402	.152		
	Total	96.794	405			

a. Dependent Variable: Corruption

b. Predictors: (Constant), Institutional Framework, Financial Transparency, Political Goodwill

Coefficients

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.	Collinearity Statistics Tolerance	Collinearity Statistics VIF
1	(Constant)	2.010	.203		9.877	.000		
	Financial Transparency	.557	.037	.608	15.242	.000	.989	1.011
	Political Goodwill	.045	.059	.040	.766	.444	.588	1.700
	Institutional Framework	-.103	.058	-.092	-1.774	.077	.589	1.699

a. Dependent Variable: Corruption

Collinearity Diagnostics

Mod el	Dimensi on	Eigenval ue	Conditi on Index	Variance Proportions			
				(Consta nt)	Financial Transparen cy	Political Goodwill	Institutio nal Framew ork
1	1	3.959	1.000	.00	.00	.00	.00
	2	.026	12.286	.02	.30	.15	.10
	3	.009	21.129	.04	.01	.65	.90
	4	.006	25.169	.94	.69	.20	.00

a. Dependent Variable: Corruption

```
REGRESSION
  /MISSING LISTWISE
  /STATISTICS COEFF OUTS R ANOVA COLLIN TOL
  /CRITERIA=PIN(.05) POUT(.10)
  /NOORIGIN
  /DEPENDENT Ave_GC
  /METHOD=ENTER Ave_FTAve_MTAve_IF.
```

Regression
Variables Entered/Removed

Model	Variables Entered	Variables Removed	Method
1	Institutional Framework, Financial Transparency, Modern Technology	.	Enter

a. Dependent Variable: Corruption
b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. The error of the Estimate
1	.606ᵃ	.367	.363	.39028

a. Predictors: (Constant), Institutional Framework, Financial Transparency, Modern Technology

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	35.562	3	11.854	77.823	.000ᵇ
	Residual	61.232	402	.152		

Total	96.794	405						

a. Dependent Variable: Corruption

b. Predictors: (Constant), Institutional Framework, Financial Transparency, Modern Technology

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	2.139	.237		9.031	.000		
	Financial Transparency	.556	.036	.606	15.243	.000	.997	1.003
	Modern Technology	-.019	.034	-.022	-.553	.581	.995	1.005
	Institutional Framework	-.076	.045	-.068	-1.701	.090	.995	1.005

a. Dependent Variable: Corruption

Collinearity Diagnostics

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions			
				(Constant)	Financial Transparency	Modern Technology	Institutional Framework
1	1	3.955	1.000	.00	.00	.00	.00
	2	.023	13.050	.00	.01	.30	.63
	3	.017	15.390	.00	.61	.35	.11
	4	.005	28.179	1.00	.38	.35	.25

a. Dependent Variable: Corruption

```
REGRESSION
  /MISSING LISTWISE
  /STATISTICS COEFF OUTS R ANOVA COLLIN TOL
  /CRITERIA=PIN(.05) POUT(.10)
  /NOORIGIN
  /DEPENDENT Ave_GC
  /METHOD=ENTER Ave_FTAve_MTAve_PG.
```

Regression

Variables Entered/Removed

Model	Variables Entered	Variables Removed	Method

| 1 | Political Goodwill, Modern Technology, Financial Transparency | | . | Enter |

a. Dependent Variable: Corruption

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. The error of the Estimate
1	.603[a]	.363	.358	.39157

a. Predictors: (Constant), Political Goodwill, Modern Technology, Financial Transparency

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	35.155	3	11.718	76.425	.000[b]
	Residual	61.639	402	.153		
	Total	96.794	405			

a. Dependent Variable: Corruption

b. Predictors: (Constant), Political Goodwill, Modern Technology, Financial Transparency

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	1.984	.237		8.368	.000		
	Financial Transparency	.552	.037	.602	15.094	.000	.997	1.004
	Modern Technology	-.015	.034	-.017	-.439	.661	.998	1.002
	Political Goodwill	-.021	.046	-.019	-.468	.640	.997	1.003

a. Dependent Variable: Corruption

Collinearity Diagnostics

Mod el	Dimensi on	Eigenval ue	Conditi on Index	(Consta nt)	Variance Proportions Financial Transpare ncy	Modern Technol ogy	Political Goodwill
1	1	3.954	1.000	.00	.00	.00	.00
	2	.023	13.057	.00	.11	.12	.75
	3	.017	15.042	.00	.43	.60	.00
	4	.005	28.167	1.00	.46	.28	.25

a. Dependent Variable: Corruption

Correlations

Correlations

		Financial Transpare ncy	Modern Technolo gy	Political Goodwill	Institution al Framewor k	Corrupti on
Financial Transparency	Pearson Correlation	1	.034	-.047	.040	.602**
	Sig. (2-tailed)		.496	.340	.422	.000
	N	406	406	406	406	406
Modern Technology	Pearson Correlation	.034	1	.026	-.058	.002
	Sig. (2-tailed)	.496		.604	.245	.961
	N	406	406	406	406	406
Political Goodwill	Pearson Correlation	-.047	.026	1	.337**	-.048
	Sig. (2-tailed)	.340	.604		.000	.338
	N	406	406	406	406	406
Institutional Framework	Pearson Correlation	.040	-.058	.337**	1	-.042
	Sig. (2-tailed)	.422	.245	.000		.397
	N	406	406	406	406	406
Corruption	Pearson Correlation	.602**	.002	-.048	-.042	1
	Sig. (2-tailed)	.000	.961	.338	.397	
	N	406	406	406	406	406

**. Correlation is significant at the 0.01 level (2-tailed).

```
GRAPH
  /SCATTERPLOT(MATRIX)=Ave_FTAve_MTAve_PGAve_IFAve_GC
  /MISSING=LISTWISE.
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Graph