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Investigating the Nature of the Correlation between the Level of Corruption and Economic Growth

Is corruption always an inhibitor of economic growth?

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This Research Report is submitted in partial fulfilment towards the degree of Master of Arts (MA) in International Relations in University of the Witwatersrand, Johannesburg.

June 2018

Student Number: 481063

DECLARATION

I hereby declare that this MA Thesis is my own, unaided work. It is being submitted for the Degree of Masters of International Relations at the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination at any other University.



(Signature of candidate)

22 day of June 2018 at the University of the Witwatersrand

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ABSTARCT

This research investigates the nature of the correlation between the level of corruption and economic growth across 211 countries over the period from 1996 to 2006. With this intention, initially it reviews the conventional argument on corruption being regarded as an inhibitor of economic growth. This research also aims to investigate whether there are countries which exhibit good economic growth despite the presence of high levels of corruption. If so, are there other factors which may explain the presence of economic growth in these outlier countries? The findings clearly highlight that there are countries that exhibit good economic growth despite the presence of high levels of corruption. The findings also revealed that there are other factors that may contribute to economic growth despite the presence of high levels of corruption in these outlier countries. These other factors include trade openness, foreign direct investment and government spending. Thus, it appears that corruption is not always necessarily a factor that reduces economic growth in all contexts.

Key Words: level of corruption, economic growth, empirical studies, trade openness, government spending, foreign direct investment.

LIST OF ABBREVIATIONS

ASEAN	Association of Southeast Asian Nations
BI	Business International Index
COC	Control of Corruption
CPI	Corruption Perception Index
DRC	Democratic Republic of the Congo
EQ	Equatorial Guinea
FDI	Foreign Direct Investment
IMD	Institute for Management and Development
IMF	International Monetary Fund
DV	Dependent Variable
IV	Independent Variable
GDP	Gross Domestic Product
GNI	Gross National Income
GNP	Gross National Product
MPLA	People's Movement for the Liberation of Angola
NGO	Non-governmental Organisation
OECD	Organisation for Economic Co-operation and Developme...
PRS/ICRG	Political Risk Service's International Country Risk Guide
UCM	Unobserved Component Model
UNITA	National Union for the Total Independence of Angola
US	United States of America
US$	United States Dollar
WGI	World Governance Indicators

WDI	World Bank Development Indicators
WEF	World Economic Forum
WTO	World Trade Organization

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Chapter 1: Conceptualising the Research Question

This introductory chapter presents an overview of the relationship between the level of corruption and economic growth. This section outlines the problem statement, rationale and significance of the study, research objectives, research questions, as well as the methodology which will guide the study.

Background of the Study

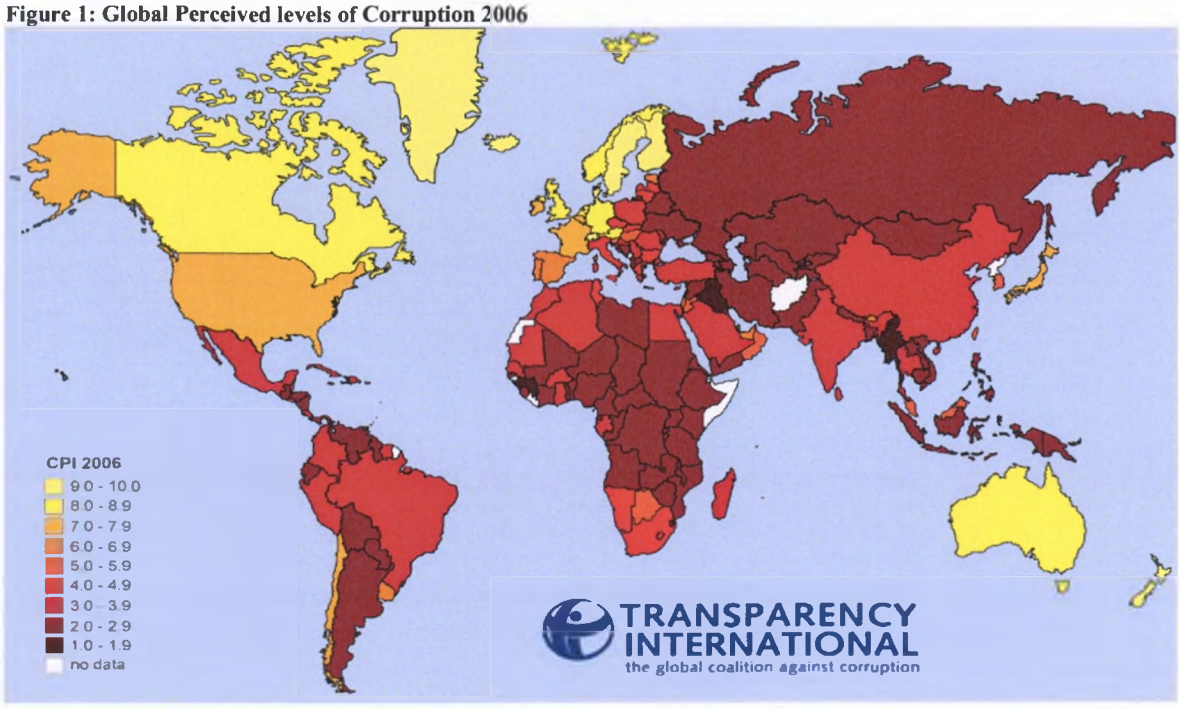
In a press release the World Bank President Jim Yong Kim declared corruption "Public Enemy Number One" (World Bank 2013).

Corruption, or misuse of public resources for private benefit, has been known to be endemic, pervasive and the single most important obstacle to economic growth around the world (Bhargava 2006). This viewpoint has been promoted by international organisations such as the IMF and the World Bank especially from the 1990s onwards (World Bank 2000; Sindzingre and Milelli 2010). In 2004, the World Bank estimated that over US$1 trillion is paid worldwide in bribes annually, while an estimated US$2.6 trillion are stolen through corruption - a sum equivalent to more than 3 percent of the global GDP (Bharagava 2006, 3).

Despite this, for the last two decades various studies have shown an increasing interest in the study of corruption, attempting to clarify that way it is conceptualised (Tanzi 1998; Rose-Ackerman 1999), as well as to identify the various forms that it may take, distinguishing different types and causes (Tanzi and Davoodi 1997) that would enable the analysts to properly map the complexity of this phenomenon. The other stream of research focuses on the consequences of corruption, viewed as detrimental to economic growth. In particular, cross-country empirical studies in the field (Sheifer and Vishny 1993; Mauro 1995; Knack and Keefer 1995; Mo 2001; Tanzi and Davoodi 1997; Gyimah-Brempong 2002; Aidt 2009) have shown that corruption contributes adversely on economic growth. Using cross-data analysis these studies also revealed that corruption lowers rates of investment (Mauro 1995), creates obstcales to do business (World Bank 2000), reduces inflows of foreign investment (Wei 2000), resulting in misallocations of public expenditures and resources (Mauro 1997; Tanzi and Davoodi 1997) and this decelerates economic growth. While other studies (Mo 2001; Lambsdorff 2002; Pellegrini and Gerlagh 2004) point out that corruption through transmission (indirect) channels, in particular investment, trade policy, education and political stability, may adversely affect economic growth.

On the other side, Leff (1964) and Lui (1985) argue that there is a possibility of corruption being a catalyst to progressive economic growth, under certain circumstances. For instance, in allowing firms and individuals the means to avoiding burdensome regluations and ineffective legal systems, trade can be enhanced with less difficulty. These studies also claim that corruption can have a positive impact on the economy as a result of the use of "speed money" allowing entrepreneurs to avoid bureaucratic delays in exchange for money (Abu, Karim and Aziz 2015, 46).

Figure 1: Global Perceived levels of Corruption 2006



Source: Transparency International (2017) *Figure 1 shows the levels of perceived corruption across the world in 2006. The dark red regions indicate the most corrupt countries and these include Haiti, Myanmar and Iraq. Much of corruption is associated with economies in developing societies with low levels of income. The countries associated with the least corruption are painted in light yellow. The top three associated with the least corruption are Finland, Iceland and New Zealand in respective order. The diagram shows that more than two-thirds of countries across the globe are locked in serious corruption problems (Transparency International 2017).*

Problem Statement

A lack of consensus in existing literature that explains the relationship between corruption and economic growth and how poor activity in the former inevitably affects growth in the latter warrants the need for further investigation. This lack of clarity, raises the question whether corruption should be regarded as the major factor that negatively impacts economic growth given that there are many other competing factors that seem to be ignored in the

process. Moreover, some countries that are listed as as high in corruption, also denote steady economic growth. In addition, a lack of analytic attention resulted in a failure to address whether there are other factors that may impact economic growth when high levels of corruption are present. Therefore, this paper seeks to close the gap between the empirical evidence and the theoretical literature by exploring how much corruption inhibits economic growth in relation to other factors.

Reasearch Objectives

The objective of the study is to examine in detail the correlation between corruption level and economic growth. Specifically, to understand how corruption is the paramount inhibitor of economic growth. In doing so, the study uses exiting literature as well as cross-country data from Table B to explore in detail how corruption inhibits economic growth. The study focuses on how corruption is measured and its impacts on economic growth given the varied inconsistencies. It also examines whether there are countries that exhibit good economic growth despite the presence of high levels of corruption and if so, how such factors can explain the presence of economic growth in outlier countries. Based on the empirical framework, the panel data analysis reveals that there is a statistically negative relationship between the level of corruption and economic growth in some countries, but it also shows countries that exhibit good economic growth despite the presence of high levels of corruption. The relationship is directly related to inclusion of other factors that contribute to economic growth. This shows that an investigation of the causal relationship between the level of corruption and other factors on economic growth is important because it provides useful information on how other factors contribute to economic growth despite the prevalence of corruption at present.

Research Question

Is corruption always an inhibitor of economic growth?

Research sub-Questions

This research aims to look at:

- How is corruption measured?
- Is there a correlation between the level of corruption and the lack of economic growth?
- Are there countries which exhibit good economic growth despite the presence of high levels of corruption?

- Are there other factors which may explain the presence of economic growth in these outlier countries?

Variables

Dependent Variable: economic growth

Independent Variable: level of corruption

Intervening Variables: to be investigated, i.e. other factors which may lead to economic growth, despite the level of corruption.

Methodology

Research Design

This research used secondary sources of existing studies as well as summary statistics in Table B constructed using cross-country data on economic growth from the WDI and cross-country data on corruption from the WGI. The analysis examined the average growth rates and average corruption rating over the period 1996-2006 for selected countries of the world. The first step of the analysis of secondary sources dealt with existing studies to evaluate the current state of evidence, but this evidence was shown to be conflicting (Chapter 4), hence suggested the need for further original study (Chapter 5).

This research aimed to use a combination of a quantitative and qualitative approach to investigate whether the level of corruption always inhibits economic growth. The quantitative approach was used to map and analyse levels of corruption against economic growth data. This apprach was also used to examine the relationship between the independent and dependent variable in detail. Outliers were identified, which helped identify the case studies. The qualitative approach was used to find the intervening variables which influence economic growth in countries despite high levels of corruption. These will show an in-depth understanding of the underlying contradictions of corruption being an inhibitor to economic growth (George and Bennett 2005a).

Furthermore, this research used theory development (inductive research design) to see whether other factors may explain economic growth despite high levels of corruption. It also used process tracing in attempts to identify the intervening causal process, i.e. causal mechanisms, between an independent variable and the outcome of the dependent variable (George and Bennett 2005b, 206-207). In this study process tracing was used to trace the effect that these other (intervening) factors have on economic growth.

The usefulness of the theory development approach as well as process tracing is based on the idea that it provides an in-depth qualitative analysis to uncover new or excluded variables (causal mechanisms) that may have an association with the dependent variable/economic growth (George and Bennett 2005b). Using the theory development approach as well as process tracing will prove that the level of corruption is not always the sole factor that affects economic growth. Instead there may be other factors that may significantly correlate with economic growth. Also, using this approach limits the ability to make generalisations and issues of selection bias based upon the findings of the study (George and Bennett 2005a). Most importantly this method will also highlight the contradictions that underpin the conventional argument that high levels of corruption always inhibit economic growth.

Rationale and Knowledge Gain

The relevance of this research stems from numerous studies, both conceptual frameworks and empirical studies, which have been conducted to answer the problem of corruption. As such, there have been opposing views on high levels of corruption always being an obstacle of economic growth around the world. Despite the abundant research done on the impact of corruption on economic growth, limited research has been done to examine other factors that may explain the presence of economic growth despite high levels of corruption. This is because most studies have focused only on the relationship between two variables and none examined or compared the association using other factors. An investigation of the causal relationship between the level of corruption and other factors on economic growth is important because it provides useful information on the role other factors play in contributing to economic growth. This investigation is also important because it provides useful information on which factors and policies the World Bank should emphasise for specific countries that experience high levels of corruption and low economic growth to enhance economic growth. This research contributes to the literature on the economic growth consequences of high levels of corruption.

Structure of the Thesis

The thesis is divided into six chapters. The first chapter is the introduction which introduces the topic, outlines the contextual background as well as the problem statement of the study. It also highlights the rationale and significance of the study as has been demonstrated above. Chapter two contains a thorough review of the literature on corruption, the types, the causes and theories of corruption. It also discusses how corruption is measured, its consequences,

and provides a framework overview of theories and concepts as well as the process in which corruption affects economic growth through transmission channels. Chapter three provides a review and analysis of previous studies and highlights problems with empirical studies. Chapter four describes the source of data, the study of countries as well as a description of how the variables were operationalised. It also presents the findings from data analysis on the effect of high-level corruption on economic growth. Chapter five provides a detailed examination of other factors that contributed to economic growth despite the presence of high-level corruption. Chapter six contains discussion of the main findings, limitations of the study, recommendations for future research and general conclusion on the study.

Chapter 2: Literature Review

This chapter will review the dominant literature around the subject and provide a comprehensive understanding of the relationship between corruption and economic growth. This chapter also provides a working definition of corruption, the categories of corruption, causes of corruption and how corruption is measured, as well as the benefits and negatives of corruption. It also provides a framework overview of theories and concepts that explain the relationship and the process in which corruption affects economic growth through transmission channels.

Conceptualisation of Corruption

The World Bank (1997, 12) defines corruption as the "abuse of public office for private gain". In other words, corruption is defined as a "sale of government property for private gain" (Aidt 2009, 271). The abuse of public office derives from when an official accepts, solicits, or extorts a bribe. It also occurs when private agents actively offer bribes to circumvent public policies and processes for competitive advantage and profit. Public office can also be abused for personal benefit even if no bribery occurs, through patronage and nepotism, theft of state assets, or diversion of state revenues (World Bank 1997). Corruption also includes smuggling, fraud, illegal payments, money laundering, falsification of documents and records, deceit, forgery, concealment, aiding and abetting of any kind to the detriment of another person, community, society or nation (Otite 2000).

There are key problems that arise from how corruption is defined by the World Bank. Bhargava (2006) argues that corruption as a Western concept does not accord with the culture and traditions of some non-Western countries. Whilst other authors argue that corruption is a complex and broad phenomenon with multiple causes and effects, and it takes on various forms and functions in different contexts (Bardhan 1997; Ahmad, Ullah and Arfeen 2012). For Bardhan (1997), the definition also does not clearly distinguish between political corruption and bureaucratic corruption. For instance, this concept does not explain whether striving for private gain includes policies that are primarily orientated to increasing the chances for remaining in office.

Other authors such as Heidenheimer (1989, 6) conceptualise corruption as a transaction between private and public sector actors through which collective goods are illegally converted into private goods. Nye (1967, 416) defines corruption as "behaviour that deviates from the formal duties of a public role (elective or appointive) because of private-regarding

wealth or status gains." Khan (1996, 12) (updated version) defines corruption as a "behaviour that deviates from the formal rules of conduct governing the actions of someone in a position of public authority because of private-regarding motives such as wealth, power or status."

The role of the state in terms of the involvement of the government through its officials is a common feature reflected in the above-mentioned definitions of corruption, which view it as a particular and perverted state-society relationship. This is because the state plays a vital role for the distribution of goods and services, and the rules and institutions which underpin this, allowing markets to improve, making sustainable development, both economic and social, possible (Amundsen 1999). In this case, corruption can be referred to as the private wealth-seeking behaviour of someone who represents the state and the public authority or as a misuse of public goods by public officials for private ends (Ammudsen 1999; Ahmad et al. 2012).

Types of Corruption

Grand Corruption

Grand corruption refers to a form of corruption associated with international business transactions and usually involves politicians as well as bureaucrats (World Bank 1997). This type of corruption occurs at the top level of the state which involves any transaction between private and public sector actors through which collective goods are illegally converted into private benefit. It also involves big government projects and programmes, in which they extract bribes for private gain (Jain 2001). According to Amundsen (1999), grand corruption involves heads of state, ministers, or other senior government officials and serves the interests of a narrow group of business people and politicians as criminal elements. Thus grand corruption functions as a kind of secret illegal exchange by those in top-level power who receive personal benefits of various kinds because of their influence or mandate due to their function. The influence of those in power not only leads to the misallocation of resources, but it also affects the manner in which decisions are made. The laws and regulations pertaining to grand corruption are more or less systematically abused by the political elite, ignored or designed to fit their interests (Johnston, The search for definitions: the vitality of politics and the issue of corruption 1996). Such procedure influences the institutions of government and the political system, and frequently leads to institutional decay. Furthermore, it may/will produce severe consequences for the country (Amundsen 1999). For instance, in the DRC the widespread level of corruption initated by Mobutu from 1961 to 1997 was found to be linked with the diversion of resources away from the state to

fund a patronage system, which eliminated investment in health, education and basic infrastructure (Crockcroft 2014).

Bureaucratic Corruption

Bureaucratic corruption, also known as petty corruption, refers to corruption that takes place within government at both political and bureaucratic levels (World Bank 1997). According to Jain (2001), bureaucratic corruption includes two links, the first is between the political elite and the bureaucrats and the second is low-level corruption which represents the lower levels of the public bureaucracy. A bureaucrat in this instance is a state official who makes decisions taking into account their own preferences. The bureaucrat has the resources of power and the opportunity to exploit these if the political elite does not properly control this apparatus (Buchanan, Toolisson and Tullock 1980). In low-level corruption, corrupted personnel take bribes to perform a service or to speed up a bureaucratic procedure. Furthermore, the bureaucrat can extract bribes to perform tasks that are allocated to them by the political leaders or to perform tasks which they are not delegated to do. Low-level corruption can also be found in the judiciary system where bribes can decrease the expenditure or escape from legal penalties (Rose-Ackerman 1999). Bureaucratic corruption is decentralised[1] in that bribes charged are not coordinated and involve bribe payment to many bureaucrats in order to accelerate a bureaucratic procedure and escape from legal penalty.

Political Corruption

According to Jain (2001), political corruption is the use of state resources for personal use and/or political legitimacy. Political corruption is also referred to as a kind of corruption that affects the voting behavior of the legislators. Powerful groups of people who share common interests can bribe legislators to endorse laws that are favourable to pursue economic rents associated with their activities (Kalombo 2005). Decentralised corruption occurs under this category when there is not only one party receiving bribes but rent-seekers might also be receiving bribes from more than one party. Political corruption also involves vote-buying behaviour, where legislators give or take bribes or perform other corrupted practices in their effort to be reelected (Jain 2001). For example, Yoweri Museveni has been the president of Uganda since he took power in 1986. In the 2011 presidential and parliamentary elections, it

[1] According to Guo (2008), decentralised corruption embraces either politicians or bureaucrats, in particular through the allocation of public financial resources and taxation. It may also take the form of administrative corruption, as in China.

was found that at least 10 million voters received cash handouts, which are reported to have totaled US$750 million (Crockcroft 2014).

This research focuses on grand corruption and bureaucratic (petty) corruption rather than political corruption because the current concern is with corruption in the public sector and at the interface between public and private sector. The other reason is that the World Bank's WGI-Control of Corruption Index measures only the level of corruption but it does not reflect the political voting behaviour of the legislators. The WGI assesses the captures perceptions of the extent to which public office is exercised for private gain, including both petty and grand forms of corruption, as well as capture of the state by elites and private interests (Olken and Pande 2012; World Bank 2017b).

Theories of Corruption

The theories of corruption are based on the analysis between state and society which reveals that in many countries, this relationship benefits one group (Amundsen 1999; Otáhal, Palát and Wawrosz 2013).

Theory of Redistributive Corruption

This theory highlights that the state plays a weaker part in its relationship with society (Amundsen 1999). State failure is caused by the power of patronage networks. According to Amundsen (1999) redistributive corruption is characterised by the dominance of politically strong and organised groups, or economically powerful enough to challenge the state in all its authority. Through bribery, this class derives their benefits of their activities such as requiring officials to work towards their favour. Thus these groups may target particular policy makers, public goods and services, and more privilege in terms of regulation. In return, the policymaker is guaranteed the political support of these powerful lobbies (Amundsen 1999). The main beneficiaries of public resources are not the political and state-based elite, but these resources are distributed by various groups according to power positioning in each country (Otáhal et al. 2013, 97). The effect of redistributive corruption is that the state is regarded less powerful and politically ineffective. It also affects the state's capacity to mobilise revenue, and implement and execute coherent development policies. Otáhal et al. (2013) descibe such a state system as feudalisation. Feudalisation is a term used to describe weak states that are manipulated by strong elites and with the government having lost its control to run the country. In other words, a feudal system refers to the exploitation and manipulation of a majority (state) by the minority group (elites) (Otáhal et al. 2013). In the short run, those in

power may benefit from political support of strong societies in terms of loyalty, but the unity of the state may be highly damaged in the long run (Amundsen 1999; Otáhal et al. 2013).

Theory of Extractive Corruption

In contrast to redistributive corruption, in this theory the state is strongest in the relationship with the society. This theory is dominantly based on the authoritarianism of the ruling class in some countries. The ruling elite uses the state apparatus as a tool for extracting the wealth from society (Iyanda 2012, 40). Political corruption is here regarded as one of the economic cornerstones of the state elite for its domination and survival (Amundsen 1999). The state's resources are not distributed according to the needs of society, investments are not made in productive areas, and promotions and appointments in the public sector are not based on merit but they depend on political and economic interests. Documented cases of extractive corruption exist in undemocratic regimes and neo-patrimonial system present in many African countries, Latin America and Asia. Such cases of extractive corruption have involved political parties (particularly ruling parties, but also prospective parties) and national governments (Amundsen 1997).

Causes of Corruption

The above mentioned section has shown corruption as a multifaceted and complex phenomena based on its many different definitions, and consequently the causes are also expected to be many in number. Therefore, this section will focus on the causes of corruption and factors which may create appropriate opportunities of this phenomenon to take place.

Many theories found many explanations as to the causes of the phenomenon of corruption. These explanations are generally derived from economic, political, institutional and even cultural views (Amundsen 1999). As Nwankwo (2014, 41) also highlighted, corruption is caused by cultural, political and economic development of any nation as well as other factors that can negatively affect the functioning of different organs of government. In an instance of cultural causes, de Sardan (1999, 25) argued that corruption is a continuation from past political behaviour of cultural values inherited from a patrimonial history, such as "negotiations, gift-giving and unconditional solidarity with family, clans and other communal groups." From this viewpoint, it has also been argued that the illegality of corruption varies across countries according to its national legislation and national customs. This assumption may explain the contrast between different countries and regions, highlighting that corruption is indeed a complex phenomenon that varies across different context (Bardhan 1997; Ahmad

et al 2012). However, from the above discussion of definitions and theories of corruption, the economic and political causes of corruption stand out in understanding this phenomenon.

In economic literature, dominant theories that explain the cause of corruption are namely the dependency theory and neoliberalism theory. According to the dependency theory, corruption is considered as a socio-political consequence of the exploitation faced by underdeveloped countries caused by developed countries (Emeh 2013). Neoliberalism theory also explains the presence of corruption in terms of economic underdevelopment, and views economic decline and economic crisis as common explanations to increases of corruption (Amundsen 1999). According to this theory the negative relationship between corruption and economic growth is on the basis of the degree of openness of economies and implementation of neoliberal policies. The more restrictions the government imposes on capital and fiancial markets, the more this creates opportunities of corruption and rent-seeking activities (Graeff and Mehlkop 2003). Corruption is also viewed as one of the main obstacles that transition countries face in attempting to consolidate democratic institutions and open-market economies (Shleifer 1997). According to Rose-Ackerman (2006), extreme levels of corruption are found in countries that belonged to the former communist Soviet bloc. Under communism, corruption helped overcome some of the rigidties of a planned economy. However, during the transition period, these countries have been less successful in limiting corruption and in creating well-functioning markets (Rose-Ackerman 2006, xxvii).

Institutional structure, according to Klitgaard (1998), plays a critical part in creating opportunities for increasing widespread and high levels of corruption. This is because the officials involved in the institutional structure are tempted by bribes and kickbacks because they have low incomes. According to him, there are three dimensions of institutional structure that he considers most critical in facilitating opportunities for corruption. These dimensions are the monopoly power of officials, the extent of discretion that officials are granted to act and the extent to which there are systems of accountability and transparency in an institution (Klitgaard 1998, 4).

Opportunities for corruption for officials depends not only on whether they have monopoly over their particular project, but also upon the rules and regulations regarding the distribution of government goods (Klitgaard 1998). The extent of discretion that officials are permitted to exercise depends on the amount of discretion which is given to an agent. The greater the amount of discretion provided, the more opportunities there will be for agents to decide on

laws and regulations to be applied in favour of themselves in exchange for illegal payments/personal purposes (Klitgaard 1998). The third dimension, the extent to which there are systems of accountability and transparency in an institution, is a critical element in the widespread of corruption. Institutional structures where governmental accountability are weak or absent would likely have greater opportunities for corruption (Klitgaard 1998).

Other literature explains the cause of corruption according to whether the phenomenon is political in nature (Lawal 2007; Khan 1996; Otite 2000). Political corruption is not only influenced by enrichment or need for improved standards of living because these politicians are wealthy and therefore largely immune to these needs. Instead factors that can influence corrupt behaviours from politicians may also include the motive to stay in power, position, electoral campaign status and obtaining gains and benefits (Lawal 2007; Khan 1996; Otite 2000). Del Monte and Papagni's (2007) study assessed the factors responsible for high levels of corruption in Italy during 1963-2001. The results of the study showed that the main causes of corruption include government consumption, political party concentration, and absenteeism in national elections. The problem with this finding is that it does not prove that bureaucrats are less greedy than politicians (Klitgard 1998).

How Corruption Is Measured

Measuring corruption is still an issue for most authors due to the difficulties with definitions. Also different forms of corruption require different objective measures. Needless to say, corruption is most frequently measured using perception indices, in other words, subjective data (Olken and Pande 2012). These perception indices of corruption are routinely constructed by business-risk analysts and polling organisations based on survey responses of business people, country experts and local residences (Aidt 2009). These include the Corruption Perceptions Index (CPI) constructed by Transparency International, the Institute for Management and Development (IMD), The World Economic Forum (WEF), Business International Index (BI), the World Bank's Control of Corruption Index (WGI-COC) and the Political Risk Service's International Country Risk Guide (PRS/ICRG) (Lambsdorff, 2006). The two most commonly used indices to measure corruption are the CPI and the WGI (Aidt 2009). The CPI measures the degree to which a country is perceived to be corrupt only in the public sector. This index is also a reflection of the depth and frequency of corruption, which ranges from 0 (very corrupt) to 10 (very clean) (Abu et al. 2015). The WGI (2017b) captures perceptions of the extent to which public office is exercised for private gain on the variety of different aspects of corruption (both the public and private sector). The score range the WGI

uses to measure and interpret data comes in the standard normal units of governance indicator ranging between -2.5 (weak) and 2.5 (strong) among all countries worldwide. Higher scores correspond to lower levels or no corruption present (Rohwer 2008; Kaufmann et al. 2010; World Bank 2017b).

According to Oken and Pande (2012), perception indices have the advantage of good coverage as it is easier to get people's perceptions than actually measuring it directly. Perception corruption indices also facilitate data availability for larger samples of countries and effectively measure the level of corruption. Furthermore they have been found to be reliable because of their high correlations with economic variables, suggesting that spuriousness is not a problem (Blackburn and Forgues-Puccio 2007). Perception corruption indices have been used in Mauro's (1995) cross-country study of the relationship between corruption and growth.

Despite this knowledge, the main problem with these indices is that they rely on perceptions. Hence they may not measure corruption accurately (Aidt 2009). Also, because basic indicators are constructed based on subjectivity data sources drawn from survey responses of business people, country experts and local residents, they may raise issues of confirmation bias. Furthermore, the data collected from different sources that is combined togther makes it unclear as to what exactly is being measured by the index (Olken and Pande 2012). The United Nations Economic Commission for Africa (UNECA) report (2016) argure that subjective-based measures of corruption are inadequate in providing a credible assessment for cross-country comparisons over time, given the specficities of country context. The perception of corruption varies from country to country which can be found problematic based on how valid these indices measure corruption in a country and to which extent they are relaible measuring intruments to compare the degree of corruption across countries is.

Other attempts were made to measure corruption objectively. These include indicators that use data on the amount of corruption investigation cases, the number of people prosecuted and convicted on corruption and related charges, or by using economic data on government spending or trade to get the total amount of money that is siphoned by bribery and rent-seeking activities (Golden and Picci 2005; Olken 2007; Richey 2010). For instance, Golden and Picci's (2005) study constructed an objective indicator that compared spending on public works in different regions in Italy. Similarly Olken (2007) conducted a study which explored the differnces between estimated and actutal costs of road projects in Indonesia. Using a

different approach, Richey (2010) used state-level data on corruption convictions in the U.S. There are also other recent studies that used survey questions measuring reported experiences with corruption, whether as bribes paid or requests for bribes (Seligson 2006; Treisman 2007; Gingerich 2009; Round, Williams and Rogers 2008).

The objective-based measures of corruption are found useful in exposing cases of corrupt practices found and providing information on people's experiences with corruption. However, objective data is not suitable to measure the real level of corruption in a given country and for comparative purposes (United Nations Economic Commission for Africa 2016). Abu et al. (2014) also argue that corruption is difficult to measure and quantify objectively, because objective data is usualy unavailable and scarce to access. Also, given that most corrupt practices are regarded as unlawful activities, they often occur in secrecy. Hence this makes it difficult to measure and collect objective data on corruption (Abu et al. 2014). Tverdova (2006) also criticises objective measures based persecution and conviction cases as biased and provide inaccurate estimates. For instnace, in more corrupt systems the prosecution and conviction rates may be low due to the participation of the law enforcemnt system in corrupt activities. Objective measures based on experiences have also being criticised for capturing one type of corruption- petty or low level corruption (Tverdova 2006). Regardless of the limitations of subjective and objective measurements of corrruption, researchers have nevertheless been able to use them significantly to advance the study of corruption.

Cosequences of Corruption

According to Amundsen (1999), consequences of corruption are dependent on the form and type of corruption, the way corruption is organised or disorganised and also the level in which corruption is widespread. Organised (controlled) corruption exists in some countries, while disorganised (uncontrolled) corruption exists in others (Amundsen 1999). The difference between controlled and uncontrolled corruption is that the former is calculable and the latter is unpredictable. If businesses are able to assess the level of corruption and able to include it into their calculations as a measurable expense, and if they know that paid bribes have a positive effect, corruption in that case may not harm the economy. On the other hand, if corruption is disorganised, unpredictable and does not guarantee the effectiveness of paid bribes, corruption may be a hindrance to economic growth (Amundsen 1999). The World Bank (1997) claims that the level of corruption in a country can be isolated (rare) or systemic (widespread). In the case where corruption is isolated, consisting of a few individual acts, it is

easy (though not always) to detect. However, in a scenario where corruption is systemic, it is more difficult to control and its effects especially on the economy can be adverse (Amundsen 1999; World Bank 1997).

Theoretically, the effect of the level of corruption on economic growth has been an increasing topical debate. Major international organisations consistently claim that high levels of corruption inhibit economic growth (Rabnawaz 2015). The World Bank (1997) identified corruption as the single hindrance to economic and social development. It hinders development by distorting the rule of law and weakening the institutional foundation on which economic growth depends. Transparency International (1998) similarly views corruption as one of the greatest challenges of the world. It weakens good governance, distorts public policy, leads to the misallocation of resources and harms the private sector and private sector development (Eigen 1998). Despite these claims of corruption having a negative effect on economic growth, the empirical literature has not necessarily agreed with the assumption from these theoretical viewpoints. Several empirical studies have been done on different countries and over different time periods in studying this phenomenon, and the findings show the relationship between the level of corruption and economic growth but with conflicting results (Shera, Dosti and Grabova 2014). The findings instead have resulted in two different views on the level of corruption and its effects on economic growth. The first is the view that high levels of corruption have adverse effects on economic growth, i.e. the sands in the wheels hypothesis, Alternatively, the opposing the view is that corruption can be efficient, i.e. greases the wheels hypothesis (Wright and Craigwell 2013).

Harms of Corruption to Economic Growth

Numerous empirical literature based on the sands of wheels hypothesis has consistently reported a negative correlation between economic growth and the level of corruption (Shleifer and Vishny 1993; Mauro 1995; Wei 2000; Mo 2001; Aidt 2009). These studies show that high levels of corruption negatively impact investments, reduce public expenditure productivity, distort allocation of resources and thus inhibit economic growth (Shera et al. 2014). Shleifer and Vishny's (1993) argue that corruption is harmful for economic growth because corruption supports tax envasions, converts government goals and diverts resources from public purposes for private gain. This in turn negatively influence the allocation of public goods and services and thus hinders economic growth (Shleifer and Vishny 1993).

Corruption may create large opportunities for rent-seeking activities, which may also lead to many consequences. In a corrupt system, according to Lauritzen and Sondergarrd (2012), money is channeled through the industries, sectors or specific positions, where certain government /civil officers or corrupt elites see more possibile private gains. Financial incentives may lead talented people or educated people to particiapte in rent-seeking activities rather than in productive work that would accumulate capital, knowledge and skills (Shleifer and Vishny 1993; Lauritzen and Sondergarrd 2012). Futhermore, they may even be allocated to rent-seeking activities especially in countries where grand corruption is more prevalent. In these countries the corrupt elite may use all the talents to assist them to pursue their rent-seeking activities. In this case, talents will be misallocated based on where the highest rent can be received (Lauritzen and Sondergaard 2012).

Another way that corruption may adversely affect the economy is through investments (Lambsdorff 2006). The general assumption is that countries with better investment climate achieve higher ratios of investments to GDP (economic growth). As such, investment is reported to be an economic variable mostly affected by corruption (Knack and Keefer 1995; Mauro 1995, 1997; Gymaih-Brempong 2002; Rock and Bonnett 2004). For instance, the studies conducted by Mauro (1995) and Wei (2000) found that corruption is negatively associated with FDI and economic growth. The rate of GDP growth depends on the share of investment, which in turn depends on the level of corruption. In other words, high levels of corruption may discourage FDI by raising the cost of public administration and adversely affect economic growth. Bardhan (1997) also asserts that corruption may distort an economy through investments. This is because the bribery cost incurred will increase the cost of investment and thus discourage investment and negatively affect economic performace (Bardhan 1997). Mounts (2010) views corruption acts as an undisclosed tax that is unable to claim a tax return. If an entrepreneur has to offer bribes to set up a business, the cost of bribery cannot be claimed as a loss of profit even if the business is unsuccesful. This shows that the money involved does not utilize in the public sources. In addition, secret bribes also tend to reduce the tax revenue for government (Mounts 2010).

Corruption may also reduce innovation of a country and public government spending diverted away from productive investment projects that contribute to economic growth. Certain investment projects may be favorable based on the potential for private gains to potentially useless projects (e.g. defence) rather than societial gains, such as health care and education (Shleifer and Vishny 1993; Rabnawaz 2015).This corrupt activity in turn leads to inequality

as a result in economic inefficieny, unequal societal income and wealth distribution as well as sabotaging programs designed to help the poor. Such inequality negatively affects the economic growth rate (Rabnawaz 2015; Bagchi and Svejar 2015).

Advantages of Corruption to Economic Growth

In contrast, there have been empirical studies that found the coexistence of high levels of corruption and economic growth. The study builds on and contributes to work based on the assumption that corruption greases the wheels of economic growth. In other words corruption can be efficient in facilitating economic growth (Leff 1964; Huntington 1968; Lui 1985; Friedrich 1972). Leff (1964) and Huntington (1968) theorised that corruption can enhance economic growth by allowing individuals to pay bribes to circumvent inefficient rules and bureaucratic delays. It also removes government imposed rigidities which impede investment and interference with other economic decisions favourable to growth. Corruption is efficiency-enhancing in the sense that it encourages trade that may not have happened otherwise, and promotes efficiency by allowing private sector agents to correct or circumvent regulatory and administrative restrictions and pre-existing government failures of various sorts. This system (the grease process) in turn increases efficiency and FDI and, as a result economic growth (Leff 1964; Huntington 1968; Egger and Winner 2005, 949). Lui (1985) shows that corruption can shorten waiting time in queues as a result of the use of "speed money" allowing entrepreneurs to avoid bureaucratic delays in exchange for money, and thus facilitates economic growth (Abu et al. 2014, 46).

This view has often been used to explain the high rates of economic growth in some countries of Southeast Asia which were found to have high levels of corruption and economic growth. For instance Rock and Bonnet's (2004, 1005) study analysed the strength of the negative impact of corruption on economic growth using four different indexes of corruption in four different time periods: 1980-1983, 1988-1992, 1984-1996 and 1994-1996. The results showed similar negative effects of corruption on growth in most developing countries, but interestingly facilitated economic growth in newly industrialising economies of East Asia including China, Indonesia, Thailand and South Korea (Rock and Bonnett 2004).

From this perspective, corruption acts as a lubricant that smooths operations and hence, increases the efficiency of the economy. Despite this knowledge, this literature fails to take into account that corruption may tend to hurt innovative activities because innovators need government-supplied goods, such as permits and import quotas, more than established

producers do (Mo 2001). Another problem is that people's talents and efforts will be allocated to rent-seeking activities instead of productive investments such as accumulating capital, knowledge and skills (Shleifer and Vishny 1993). Moreover, corruption favours a particular class and creates opportunities for inequality (Blackburn and Forgues-Puccio 2007). In addition, this assumption does not however claim that corruption is beneficial constantly and in any place (Aidt 2009). Furthermore, this perspective does not highlight other factors which may lead to economic growth, despite the level of corruption.

Although these studies show variance between the IV and DV, the empirical literature has not reached consensus on either the theoretical or empirical level of analysis. As such, the mixed results from different studies raise ambiguities of the claim that high levels of corruption always impact economic growth.

Conceptual Framework

Part of the problem in understanding the nature of the correlation between the level of corruption and economic growth is that no one theoretical framework captures the phenomenon at play. Hence this research emphasises numerous relevant theories and concepts that can be used to understand the relationship between the level of corruption and economic growth. This conceptual analysis also unpacks the process of how the channels of transmission affect corruption and the resulting effects on economic growth.

Overview of Theories and Concepts

Rent-seeking

According to Tollison (2012, 73) the concept of rent-seeking is used to describe attempts both to obtain and to maintain wealth transfers. From a theoretical perspective, Graeff and Mehlkop (2003) argue that economic freedom[2] tends to decrease the level of corruption due to a government not intervening in business activities and not imposing any tariff and non-tariff barriers. The less transactions the government manipulates, the less these come with corruption. However, if the government imposes more restrictions of capital and financial markets, then this creates opportunities of corruption and rent-seeking activities (Graeff and Mehlkop 2003). Bhagwati (1982) also suggest that trade restrictions generate a significant amount of rents and rent-seeking activities. These rent-seeking activities include not only

[2] Economic freedom: "The degree of government intervention in the economy, where this intervention could take...many forms, including the regulatory environment, the fiscal burden imposed on the private sector, and trade policies. Societies with less government intervention are presumed to be more "economically free." (Walton 2013, 149)

attempts to bypass tariffs but also when agents compete for "premium-fetching" licences and/or try to appropriate a share of revenue resulting from import restrictions, to when agents lobby for the imposition of protectionist tariffs. Krueger's (1974) study findings estimates that rents generated by government regulation in import licences exceeded 5 percent of Gross National Product (GNP) for India in 1964 and approximately 15 percent of national income for Turkey in 1968, indicating that rents accrued from the imposition of trade regulations are both theoretically and quantitatively significant.

Ross-Ackerman (1999) also concurs that the level of corruption can increase when regulations to economic freedom are imposed. On the contrary, economic freedom can also increase the pressure to use illegal methods to be ahead of (global) competitors. Ross (1999) argues that high levels of corruption are more likely to be found in whichever oil-dependent country due to poor governance and rent-seeking activities. Lambsdorff (2002) argues that in countries where resource rents are high and institutional quality is low, most entrepreneurs and influential social groups are likely to become rent-seekers. Special interest groups such as large corporations and politicians are also known to get involved in rent-seeking activities. Such groups of people tend to pay higher than the opportunity cost to civil servant. Every party involved is likely to receive something extra than opportunity cost, hence rent-seeking activity is high (Lambsdorff 2002). Kolstad and Søreide also assert that individuals or groups seek for extra income for private gain instead of investing their time and skills the right way. Arezki and Bruckner's (2011) study of oil rents on corruption found that higher civil liberties will cause higher oil rents. This is because the political elite do not want to lose rent income hence they will loosen the political rights and get the oil windfalls. Such mismanagement and misallocation of natural resources due to a rent-seeking culture creates a substantial loss for the economy and thus negatively affects GDP growth (Kolstad et al. 2008). This concept is commonly found in empirical studies that confirmed corruption brings negative impact on economic growth (Mauro 1995; Knack and Keefer 1995; Brempong and Camacho 2006).

Queue Model

Leff (1964) and Huntington (1968) theorise that corruption can have a positive impact to economic growth by allowing entrepreneurs to pay bribes to circumvent government imposed rules and bureaucratic delays. Lui (1985) proposed the queue model that shows how positive levels of corruption can shorten waiting times in queues. The model illustrates some of the conditions that drive entrepreneurs into paying bribes to government officials, mostly the need to overcome lost time spent in queues for one to obtain a business licenses or contract

approvals. This system in turn increases efficiency and investment and, as a result, economic growth (Lui 1985). In line with this argument, Acemoglu and Verdier (1998) concur with the idea that corruption enhances economic growth, and found that in an economy where contracts to promote investment are necessary, it might be best to allow certain levels of corruption and not fully implement the property rights.

Transaction Cost Theory

A transaction cost refers to the cost in making economic trade for goods and services through the market (North 1992). Lambsdorff (2002, 221) defined a transaction cost of legal agreements as the cost of searching for partners, determining contract conditions and enforcing contract terms. However, the meaning of transaction cost of corrupt agreement differs from the cost of searching for a partner, enforcing terms and determining contract conditions. In the former, the transaction costs of corrupt agreements must be dealt with in secret due to the possibility that collaborators in the end will disclose the information about each other. For this reason, corrupt agreements are mainly arranged by middlemen or are a result as a by-product of legal exchange (Lambsdorff 2002).

Lambsdorff (2002, 222) also identified two forms of corruption: market corruption[3] and parochial corruption.[4] If transaction costs of corruption are high, parochial corruption becomes a major form of corruption. The increasing cost comes from potential contractors in charge of assessing the quality and competency of each products and individual ability as well as commitment to comply with corrupt products. The number of contractors will stop at the marginal transaction cost of searching additional one partner equal to the estimated gains resulting from a potentially better deal with another competitor. If corruption leads to higher marginal transaction cost, the fewer potential collaborators they seek for, and entrepreneurs can save the capital and invest in another project. As the project succeeds, it will employ human capital to operate the machines and produce goods and services effectively. Thus, the transaction of goods and services will in turn increase economic growth (Lambsdorff 2002).

Transmission Channels

Based on rent-seeking theory, queues model, transaction cost theory and empirical evidences, the above shows that corruption affects economic growth through three channels of

[3] Market corruption refers to a "competitive type of corruption with a high degree of transparency" (Lambsdorff 2002, 222).

[4] Parochial corruption is defined as a "transaction with few potential contractors, and thus restricted competition" (Lambsdorff 2002, 222).

transmission. The transmission channels include: trade openness,[5] government spending[6] and FDI.[7] These channels are commonly found as determinant factors that drive and impact economic growth (Hess and Ross 1997; Tanzi 1998).

Trade Openness

As previously mentioned, Graeff and Mehlkop (2003) suggest that less government imposed restrictions lead to lower corruption and less chances for rent-seekers to receive bribes. Where there are less restrictions by the government, the motive of business is to compete for markets. Krueger (1974) similarly emphasises the involvement of rent-seeking on trade processes. According to the author, the barriers to imports lead to rent-seeking activities due to competition for import licenses.[8] Grossman and Helpman (1994) however pointed out that the problem of rent-seeking, in cases where resources are used to pay bribes to corrupt officials in application processes of certain procurements, bribes are considered a deadweight loss in the economy.

Graeff and Mehlkop (2003) further indicated that weak legal regulations and well as poorly governed trade activities are prone to higher opportunities for corruption. The corrupt officials are often reluctant to promote trade openness because their chances of receiving bribes will decline (Southgate, Cabelos, Saa and Stewart 2000).

Lambsdorff (2002) further mentioned that corruption increase transaction costs, not only through the payment of bribes but also through the risk of building illegal agreements and the possibility of breach of agreement by the other party. Bidders are obliged to accept higher transaction costs and this affects the openness of the economic environment. In turn, this will reduce the incentive for other potential investors from participation in the economy.

Hodge, Shankar, Rao and Duhs (2011) in contrast argue that greater trade openness contributes to higher possibilities of corruption as restrictions on trade such as quotas, tariffs and licenses provide opportunities for rent-seeking activities. These authors suggest that a

[5] Trade openness refers to the removing or reducing tariff policy barriers to international trade (Ulaşan 2012).
[6] Government spending "refers to expenses incurred by the government for the maintenance of itself and provision of public goods, services and works needed to foster or promote economic growth and improve the welfare of people in society. Government expenditures are generally categorised into expenditures on administration, defence, health education, foreign affairs, etc. and has both capital and recurrent components (Aigheyisi 2013, 210).
[7] FDI according to the Word Bank (2017) is defined as "a category of cross-border investment associated with a resident in one economy having control or a significant degree of influence on the management of an enterprise that is resident in another economy".
[8] Import licencing is defined as an official government documentation that allows the import of certain goods or services into a country" (WTO Import Licensing 2016).

movement of improved governance toward trade openness will eliminate the opportunity of corrupt officials to collect bribes, as well as lower corruption. This in turn will increase trade and enhance economic growth (Hodge et al. 2011).

Government Spending

Shleifer and Vishny (1993) view the structure of government spending as always misallocated in favour of civil servant opportunities to engage in rent-seeking activities. Many studies have shown how corruption affects a country public spending (Mauro 1997; Tanzi and Davoodi 1997; Gupta, Mello and Sharan 2001; Wade 1982). Mauro's (1997) study reported that high levels of corruption reduce expenditure for education and health because public expenditure for education and health does not lend itself easily to corrupt practices on the part of those in charge of making budgetary decisions. Gupta et al. (2001) also argue that corruption alters the composition of government spending towards less productive activities. Their study found that corruption reduces allocation of government spending in child healthcare. Wade (1982) found that low quality roads and frequent electricity interruption are due to the presence of corruption in government budgetary allocation.

Corruption is also found to negatively impact the structure of public spending through supply and demand of government project. According to Delavallade (2006, 224), the impact of corruption on government spending occurs through government authorities. Government authorities find themselves in an "oligopsony position", because they have the negotiating power to decide on the allocation of expenditures and contracts that in turn develops rent-seeking behaviour (Delavallande 2006, 224). Government offers a limited and large amount of money contracts, while contractors/firms are willing to accept this government contract. Firms or contracts are more willing to offer high bribes in a bidding contract process with benefit of a huge return from government large scale projects (Becker and Maher 1986; Delavallande 2006).

Furthermore, there is literature that suggest that a reduction of government spending on public sector wages will increase corruption. Rijckenghem and Weder (2001) found that lower wages in the public sector, increase rent-seeking activity such as bribery among civil servants. The solution is in paying civil servants competitive wages to minimise the prevalence of corruption. Baldacci, Hillman and Kojo (2004) study found that a change on public sector wages may slower economic growth.

Other literature suggests that the structure of government spending depends on the size of the government. Alesina and Angeletos (2005) argue that if the size of the government is small, there are less opportunities that a civil servant is involved in corrupt activities. In contrast, Mendez and Sepulveda (2006) argue that a larger size of government creates more opportunity to engage in corrupt activities on government spending.

Foreign Direct Investment

A significant body of literature supports the notion that high levels of corruption reduce investment (particularly FDI) and consequently this affects economic growth (Mauro 1995; World Bank 2002; Wei 2000). In some cases, lack of FDI is associated with higher transaction costs and the uncertainty that corruption creates for foreign capital and assets. According to Mauro (1995), corruption reduces the incentive to investment because higher bribes decrease profitability on productive investment. Investment combined with corruption brings uncertainty to foreign investors because bribe payment is illegal. The increase in uncertainty increases due to the detection of corruption involve penalties that result into a huge loss to the investor if the penalty fee is more than profit earned (Myint 2000).

Another body of literature, in contrast to the dominant narratives, argues that corruption may also promote FDI (Leff 1964; Huntingon 1968; Lui 1985; Beck and Marker 1986; Lein 1986). Leff (1964) and Lui (1985) argue that corruption can enhance efficiency because it removes government-imposed regulations which hinder investment and interference with other economic decisions favourable to growth. The assumption is that when government has a weak set of regulations, then corruption offers a viable alternative to bypassing loose regulations. Based on this assertion, corruption can also help to accelerate transactions, where there is poor governance and in turn increase the rate of foreign direct investment (Leff 1964). Lui (1985) presented a model which shows that corruption in payment of bribes can reduce the cost and shorten waiting time in queues. Payment of bribes can get firm license easily and minimise the opportunity cost of time to enhance investment. Romer (1994) also concurred that the supply of bribes by firms or entrepreneurs is beneficial for investment because bribes speeds up procedure in obtaining government goods.

Chapter 3: Review and Analysis of Previous Empirical Studies

This chapter reviews and analyses whether there is a correlation between the level of corruption and lack of economic growth using the work of previous empirical studies. In addition, this chapter also analyses the effect of other factors –trade openness, government spending and FDI have on economic growth.

Effect of the Level of Corruption to Economic Growth

Numerous empirical studies have discovered that high levels of corruption impede economic growth (Mauro 1995; Knack and Keefer 1995; Gyimah-Brempong 2002). Mauro (1995) reported a linear and significant negative correlation between the level of corruption and economic growth for a cross-section of 58 studies during the period of 1960-1985. The findings of the impact of corruption on economic growth showed that a decrease in corruption index increases annual growth rate by 0.8 percent. The study of Farooq et al. (2013) using time series data from 1987-2009 revealed that corruption lowers economic growth while including financial development and trade openness in the model. Nwanko (2014) also found high levels of corruption have a significant negative impact on economic growth in Nigeria. Despite the country's access to resources, the high levels of corruption resulted in decreasing economic growth.

As much as most of the empirical studies have pointed to high levels of corruption impeding economic growth, due to the use of different methods used to measure this relationship with inconclusive results questions are raised about the authenticity of these results. Whereas other scholars argue that the problem of corruption becomes significant when other factors that impact growth are included. Mo (2001), Pellegrini and Gerlagh (2004) and Pellegrini (2011) found that corruption reduces economic growth through indirect channels: education, investment, trade openness and political instability. However, the direct effect of corruption becomes insignificant after controlling for other variables, in other words including transmission channels. Furthermore, the transmission channels through which corruption affects economic growth are not resolved empirically in these studies. Mauro's (1995) study also reported that the relationship between the level of corruption and economic growth becomes irrelevant after controlling for the investment variable. This shows that the significant relationship between corruption and growth tends to disappear when other controlling variables are included in the regression.

Another reason that cross-county regression studies have been unable to consistently find a relationship between the level of corruption and growth is that they have not adequately controlled for institutions. Considering the institutional framework of countries, numerous studies argue that the quality of institutions can play a critical role in determining whether corruption is beneficial or harmful to growth (Aidt, Dutta and Sena 2008; Mendez and Sepulveda 2005; Heckelman and Powell 2010). Aidt et al. (2008) have investigated how corruption and economic growth are correlated and jointly determined by the quality of political institutions. The findings show that in countries with low quality of institutions, corruption has little impact, while in countries with high quality institutions, corruption has a large negative impact. Heckelman and Powell (2010) also evaluated the critical role of institutions in the relationship between corruption and economic growth. The study found that corruption is positively associated to economic growth in countries where economic freedom is restricted, except that this positive effect tends to decrease as economic freedom increases.

The empirical study of Wang and You (2012) also found that corruption is likely to contribute to a firm's growth such as in China, where financial markets are underdeveloped. According to these authors, low-quality institutions deter economic growth, but their influence could be "diminished" by the presence of corruption (Wang and You 2012, 417). In some countries which have development status (i.e. China) corruption helps to circumvent cumbersome and pervasive regulations as 'speed money' and this in turn improves efficiency and stimulate economic growth. This finding is consistent with the queue model by Lui (1985). Similarly, Leff (1964) and Huntington (1968) viewed that corruption can be beneficial for economic growth by allowing individuals to pay bribes to bypass inefficient regulations, avoid bureaucratic delays and to shorten waiting time in queues in accordance to the queue model. This assumption has often been used to explain the East Asian Paradox whereby countries experience high economic growth despite high levels of corruption (Wedeman 2002; Rock and Bonnet 2004; Blackburn and Forgues-Puccio 2009). Rock and Bonnet (2004) found that corruption facilitates economic growth in newly industrialising economies of East Asia including China, Indonesia, Thailand and South Korea. These East Asian economies are characterised by relatively stable and strong governments with close and corrupt ties to big business. Thus, they concluded that the size of a country, industrial organisation of corruption, amount of state power and long-term strategy of corrupt officials

are important determinants that affect the relationship between corruption and economic growth (Rock and Bonnet 2004).

Problems with Empirical Studies

The establishment of causality and mixed results presented by the above mentioned authors does not necessarily prove or disprove that the level of corruption always has an impact on economic growth. The common problem that is found from these empirical studies is the difficulty to draw comparable conclusions, which are reliable and verifiable to measure the impact of the level of corruption on economic growth. Another problem that was found from the empirical studies was that no analysis was allowed for corruption and economic growth to be endogenous and simultaneously determined (Wright & Craigwell, 2013). In other words, it is possible that economic growth could lead to corruption. Higher economic growth may increase the availability of rents, making corruption more profitable, but also increases the amount of resources that can be devoted to control it. As such the results could be biased and inconsistent (Wright & Craigwell, 2013). Also what was found from these studies was that the outcome of the causal association depended on the methods used to establish causality, such as instrumental variables or transmission channels. It is impossible to control for all factors that might affect economic growth in a single growth regression. This is because some of these omitted factors are likely to be correlated with corruption and the effects of such factors are wrongly attributed to corruption (Aidt 2009: 278). The overall main problem found from all these empirical studies is that they assume that corruption has only a major impact upon economic growth without considering other factors, and therefore they provide an incomplete hypothesis.

In addition, these studies have failed to analyse the presence of economic growth despite high levels of corruption. In other words, limited analysis has been done in investigating other factors that may drive good economic growth despite the presence of corruption. The other factors that are found as influential to generate economic growth include trade openness, government spending and FDI (Goel 2011; Heckelman and Powell 2008). Therefore, this section will review further empirical studies of the impact of other factors have on economic growth.

Effect of Trade Openness to Economic Growth

The relationship between trade openness and its effects on economic growth has also been theoretically and empirically investigated resulting in mixed and inconclusive results.

Theoretically, Smith (1937) and later Ricardo (1973) have confirmed the positive relationship between trade openness and economic growth. According to the authors, open trade can indirectly generate growth through different channels such as technology diffusion, knowledge transfer, efficient allocation and distribution of resources (Smith 1937; Ricardo 1973). However, the theoretical literature lacks concise empirical evidence on the relationship between trade openness and economic growth.

The empirical literature conducted based on time series and cross-country analysis, has mostly found that openness to trade brings positive effects on economic growth (Chang, Kaltani and Loayza 2009; Dollar and Kraay 2004; Frankel and Romer 1999; Freund and Bolaky 2008). The general assumption from these authors is that trade openness helps to improve economic performance by increasing competition and by giving domestic firms access to advanced foreign technology, which is found to improve domestic productivity. Chang et al. (2005) indicated that trade liberalisation encourages exchange in technology and sharing technical knowledge among trading partners to improve productivity which in turn stimulates growth. Yanikkaya (2003) also argued that trading with developed countries have larger benefits in terms of technology advancement.

There are other studies arguing against positive impacts of trade openness on growth as well. Other researchers (Rodriquez and Rodrik 1999; Yanikkaya 2003) disagreed with these studies due to the lack of some factors that researchers do not take into consideration when measuring this relationship between variables. These factors include geographical factors, country size and income (Yanikkaya 2003). Rodriguez and Rodrik (1999) argue that most of these studies (e.g. Dollar and Kraay 2004) have given more attention to the positive relationship between trade openness to economic growth using surveyed analysis (subjective criteria), but the validity of the result may be questioned and based on biased estimations. Yanikkaya (2003) tested the relationship between trade openness on economic growth (GDP) by using trade barriers as measurement for trade openness. The results of the study show that trade barrier is positively affecting economic growth, by which trade openness is negatively affecting growth (Yanikkaya 2003). Similarly, Rigobon and Rodrick's (2004) study concluded that trade oppenness as (trade share in GDP) found that openness of trade has a significant negative effect on the economic growth.

Andersen and Babula (2008) also criticise that as much as there is a positive impact of trade openness in generating economic growth, this causality raises issues of endogeneity between

two variables. It is possible that economic growth may increase trade openness, that is more economic activity in a country leads to increased exchange of goods and services and that in turn can enhance trade volume (Andersen and Babula 2008). Another critique found from these empirical studies is they are deterministic, because they do not consider other determinants that may result in economic growth (Durlauf 2000). There may be a possibility that other omitted determinants may generate more economic growth than trade openness. Very importantly, inadequate information has been provided in analysing how trade openness can generate economic growth despite the presence of corruption.

Effect of Government Spending to Economic Growth

The relationship between government spending and economic growth has been a subject of analysis and debate both theoretically and empirically, which have also arrived at different and even conflicting results. From a theoretical point of view, Keynesian's theory suggests that an increase in government spending will lead to higher economic growth. This theory implies that government fiscal policy (through intervention) helps to improve the failure that might arise from inefficiencies of the market (Emerenini and Okezie 2014). Easterly and Rabelo (1993), Barro (1990), Barro and Sali-i-Martin (1992) similarly argue that government activities influence the direction of economic growth. According to these scholars, only those with productive government expenditures will enhance economic growth in the long-run. For example, productive government spending on health and education especially increases productivity of labour and will bring a positive significant impact to the economy. Also, productive government spending on infrastructure projects, especially in transport, reduces production costs, increases private sector investments, profitability of firms, which in turn generates economic growth (Barro 1990). Wagner's (1890) theory of increasing state activities, on the other hand argues that government expenditure is an endogenous factor or outcome not a cause of economic growth. Vedder and Gallaway (1998) similarly argue that as government spending increases constantly, the law of diminishing returns begins operating and beyond some point further government spending will result to economic stagnation and decline.

The empirical literature conducted based on time-series and cross-country analysis on assessing the relationship between government spending and economic growth came to mixed and inconclusive results. Bleaney, Gemmell and Kneller (2001) studied the impact of government spending on economic growth on 22 organisations for OECD countries 1970 to 1995. The results of the study showed that productive government spending generates

economic growth, while non-productive spending does not, in accordance with Barro's (1990) argument. Some studies found that both the size and quality of the government are associated with economic growth (Cooray 2009; Abdullah 2000). However, other studies found no significant relationship between most of the components of government expenditures on economic growth (Kormendi and Menguire 1985; Akpan 2005; Olopande and Olapade 2010). While the study of Abu and Abullahi (2010) revealed that government total capital expenditure, total recurrent expenditure and expenditure on education have a negative effect on economic growth. In contrast, government expenditure on transport and health care result in an increase of economic growth. The authors conclude that government should increase its spending in infrastructure, socio-economic projects as well as encourage and support the private sector to drive economic growth (Abu and Abullahi 2010).

Effect of FDI to Economic Growth

Most theory and empirical literature explains that FDI plays an important role to finance a country's balance of payments and it is a determinant for economic growth, productivity and exports (Dritsaki, Dritsaki and Adamopoulos 2004; Zuzana 2014; Pacheco-Lopéz 2005). Zuzana (2014, 124) found that export oriented FDI and economic openness have a positive impact on economic performance. This is because exports increase output level and that leads to economic growth. Bengoa and Sanches (2003, 529) also concur that FDI is positively associated with economic growth, however in conjunction with efficient human capital, trade openness, economic and political stability to benefit from long term capital flows. However, other studies highlight that FDI may also have adverse consequences for economic growth (Boyd and Smith 1992; Vuksic 2005). Boyd and Smith (1992) argued that FDI may negatively affect economic growth because of misallocation of investment capital or certain distortions that exist in the trade. Vuksic (2005) also argued that restrictions on international trade or lack of advanced technology may adversely affect the relationship between FDI and economic growth.

Summary

This research finds that using insights from rent-seeking, queue model and transaction cost theory is useful to investigate the relationship between the level of corruption and economic growth. It also realises the need to explore how other factors, trade openness, government spending and FDI, contribute to economic growth despite high levels of corruption present.

The rent-seeking model and queue model show that there is a unidirectional relationship that runs from corruption to economic growth. The rent-seeking model reveals that corruption may cause misallocation of resources, thus hinders economic growth of a country. In contrast, the queue model argues that corruption can be beneficial to economic growth through circumventing government imposed rules and bureaucratic delays.

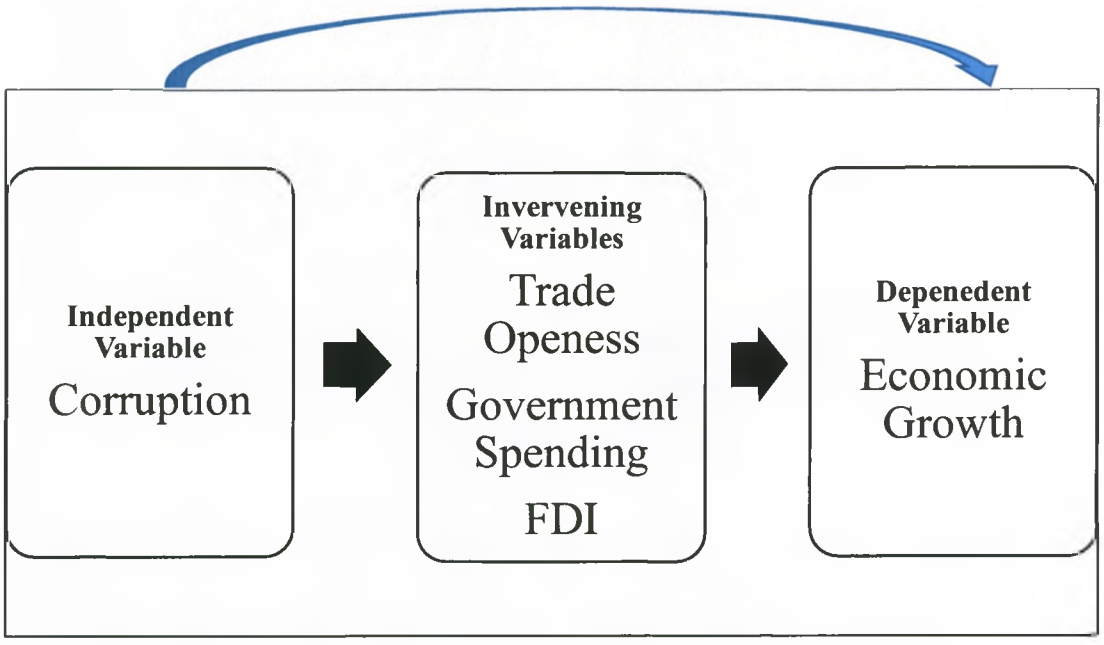


Figure 2: Other channels that may contribute to economic growth despite high levels of corruption present

Figure 2 above illustrates an alternate conceptual framework which this research proposes as an approach. Firstly, it shows that corruption leads to economic growth indirectly through trade openness. A positive relationship was found between corruption and trade openness. The presence of trade restrictions can allow opportunities for rent-seeking activities, as a pronouncement requires bribes as part of the business costs (Graeff and Mehlkop 2003; Lambsdorff 2002). On the other hand, the corrupt parties have resistance to remove quota and restriction as free trade leads to low corruption. Also through trade openness, countries can benefit from sharing technological knowledge, improve production efficiency, encourage global competition and subsequently enhance economic growth (Shahbaz 2012).

Secondly, corruption can also impact government spending through channels such as: transportation, infrastructure, education and healthcare. When corruption is present, government spending becomes unproductive. This is because corruption encourages rent-seeking activities (by public officials) resulting to misallocation of resources. Unproductive allocation of government funds has a negative effect on the country's economic performance.

However, productive government spending leads to a positive impact on a country's economic growth (Easterly and Rebelo 1993; Barro 1990; Barro and Sali-i-Martin 1992; Abu and Abullahi 2010).

Thirdly, FDI is another determinant that contributes to economic growth. Corruption creates uncertainty to invest, because civil servants demands for bribery will increase the transactional costs of doing business and negatively affect economic growth (Mauro 1995; Myint 2000). However, other literature (Leff 1964; Huntingon 1968; Lui 1985; Beck and Marker 1986; Lein 1986) argued that corruption encourages FDI because it removes government-imposed regulations which hinder investment and interference with other economic decisions favourable to economic growth. Yet, using investment as a mediating variable can be problematic because it may be unable to bring long term benefit for entrepreneur and individuals. This is because people's talents and efforts will be allocated to rent-seeking activities instead of productive investments such as accumulating capital, knowledge and skills (Shleifer and Vishny 1993).

Gap of the Study

The highlighted problems found from previous studies indicate that there is lack of empirical research which is solely done on examining other factors that may generate economic growth despite high levels of corruption. Previous research that has found a coexistence between the two variables were mainly focus on the Asian countries and did not consider other countries. Previous research also lacked the analysis of other factors which may generate economic growth despite the presence of high corruption. Therefore the results from empirical studies might be inaccurate due to not considering other factors. The solution to this problem is to investigate prescisely these other factors that may contribute to economic growth despite the presence of corruption. To proof causality, this research will use panel data to highlight countries that exhibit good economic growth despite the high levels of corruption, and investigate the factors as outlined in Figure 2 which may explain the presence of economic growth in these outlier countries.

Chapter 4: Identification of outlier countries

After having examined the inconclusiveness and shortcommings of existing empirical research, this chapter's goal is to identify outlier countries which exhibit high economic growth despite high levels of corruption. To justify the results, detailed explanations are provided in terms of the approach used. Firstly this chapter provides a description of the data (WDI and WGI) including the sampling procedures used in collecting data. Secondly, the chapter presents findings on the correlation between the level of corruption and economic growth from the cross-country panel data. Thirdly, it analyses the results based on whether they correspond with previous literature. Fourthy, it identifies countries that display good economic growth despite the presence of high levels of corruption. The chapter also provides a description of the study of countries and variables that were investigated.

Data

WDI and WGI 2017

The data used for this research was the World Development Indicators (WDI) and the World Governance Indicators (WGI). The WDI (2017a), compiled by the World Bank and international partners includes data from 1960 to present on global development. It includes a broad group of data that consists of over 900 variables for 208 economies; and frames global trends with indicators on popultion, population density, urbanisation, Gross National Income (GNI) and GDP. The database of global economic conditions the WDI measures comprises of six categories: poverty and shared prosperity, people, environment, economy, states and markets and global links (World Bank 2017c, 1). In addition, these indicators provide a comparative and individual insight into all aspects which are linked, measuring the world's economy, achieving sustainable development, providing support for vulnerable populations, and decreasing gender inequalities (World Bank 2017c).

The WGI (2017b), also conducted by the World Bank is a database that reports aggregate and individual governance for 212 countries and territories over the period 1996-2016, for six dimensions of governance. These dimensions include: voice and accountability, political stability/absence of violence, government effectiveness, regulartory quality, rule of law, and control of corruption (Rohwer 2009). The aggregate indicators are based on hundred variables obtained from 31 different data sources, capturing governance perceptions as reported by survey respondents, NGOs, commecial business information provides, and public sector organisations worldwide (Kaufmann, Kraay and Mastruzzi 2010). To measure the

dimensions of governance, the World Bank uses an Unobserved Component Model (UCM). This type of model is used to account for the fact that corruption as well as other dimesions are not observable and one can only approximate it by aggregating the scores from given indicators (Rohwer 2009). The advantage of using database from the WDI and WGI is that both permint meaningful cross-country and over-time comparisons (Kaufmann et al. 2010).

Data analysis was conducted using Microsoft Excel 2016. The aim of the analysis was to investigate the correlation between the level of corruption and economic growth during the period from 1996-2006, using total average estimates. The first stage was to collect the raw data of WDI and the WGI from the World Bank (2017 a; b) website. Both the data sets were obatined from the World Bank databank and downloaded using the Microsoft Excel format. The WDI data was taken from the GDP growth (annual percentage) and selected the time frame 1996 to 2006 for all countries/economies. The WGI data was already accesible to download. The second stage was to recodify the data in Mircosoft Excel. This was done through selecting the countries to be studied for the analysis, which in total were 211; recodfied country codes to match, then calculatating the total averages estimates of the years for each country. The final stage was merging both data sets, to allow for the analysis to be conducted.

Study of Countries

The opening chapter states that the research aimed to investigate whether corruption is always an inhibitor of economic growth of countries included in this study. Therefore, this research used a cross-country panel data set to determine the effects of the level of corruption on economic growth over the period 1996-2006 for 211 countries. The countries are classified according to their income per capita income levels namely: low-income, lower-middle-income, upper-middle-income economies, and high-income economies. The term country is used interchably with economy (World Bank 2017c). The decision to consider the selected years was to exclude the years of the global fiancial crisis of 2007-2008 in order to avoid any skewness of data. Including 211 countries in the analysis that covers the period for 10 years is important because it will not only increase understanding of the relationship between the level of corruption and economic growth but it will also help in investigating the generalised contradictions underlying the conventional argument. Table A below present the

list of the countries included for the study analysis.[9] The data is obtained from the World Bank (2017c)

Table A: List of the countries included in the study analysis according to their income per capita income level

LOW-INCOME ECONOMIES ($1,005 OR LESS)	LOWER-MIDDLE-INCOME ECONOMIES ($1,006 TO $3,955)	UPPER-MIDDLE-INCOME ECONOMIES ($3,956 TO $12,235)	HIGH-INCOME ECONOMIES ($12,236 OR MORE)
Afghanistan	Angola	Albania	Andorra
Benin	Armenia	Algeria	Antigua and Barbuda
Burkina Faso	Bangladesh	American Samoa	Aruba
Burundi	Bhutan	Argentina	Australia
Central African Republic	Bolivia	Azerbaijan	Austria
Chad	Cabo Verde	Belarus	Bahamas, The
Comoros	Cambodia	Belize	Bahrain
Congo, Dem. Rep	Cameroon	Bosnia and Herzegovina	Barbados
Eritrea	Congo, Rep.	Botswana	Belgium
Ethiopia	Côte d'Ivoire	Brazil	Bermuda
Gambia, The	Djibouti	Bulgaria	British Virgin Islands
Guinea	Egypt, Arab Rep	China	Brunei Darussalam
Guinea-Bissau	El Salvador	Colombia	Canada
Haiti	Georgia	Costa Rica	Cayman Islands
Korea, Dem. People's Rep	Ghana	Croatia	Channel Islands
Liberia	Guatemala	Cuba	Chile
Madagascar	Honduras	Dominica	Curaçao
Malawi	India	Dominican Republic	Cyprus
Mali	Indonesia	Equatorial Guinea	Czech Republic
Mozambique	Jordan	Ecuador	Denmark
Nepal	Kenya	Fiji	Estonia
Niger	Kiribati	Gabon	Faroe Islands
Rwanda	Kosovo	Grenada	Finland
Senegal	Kyrgyz Republic	Guyana	France
Sierra Leone	Lao PDR	Iran, Islamic Rep	French Polynesia
Somalia	Lesotho	Iraq	Germany
South Sudan	Mauritania	Jamaica	Gibraltar
Tanzania	Micronesia, Fed. Sts.	Kazakhstan	Greece
Togo	Moldova	Lebanon	Greenland
Uganda	Mongolia	Libya	Guam
Zimbabwe	Morocco	Macedonia, FYR	Hong Kong SAR, China
	Myanmar	Malaysia	Hungary
	Nicaragua	Maldives	Iceland
	Nigeria	Marshall Islands	Ireland
	Pakistan	Mauritius	Isle of Man
	Papua New Guinea	Mexico	Israel
	Philippines	Montenegro	Italy
	São Tomé and Principe	Namibia	Japan
	Solomon Islands	Nauru	Korea, Rep.
	Sri Lanka	Panama	Kuwait
	Sudan	Paraguay	Latvia
	Swaziland	Peru	Liechtenstein
	Syrian Arab Republic	Romania	Lithuania
	Tajikistan	Russian Federation	Luxembourg
	Timor-Leste	Samoa	Macao SAR, China
	Tunisia	Panama	Malta
	Ukraine	Paraguay	Monaco
	Uzbekistan	Peru	Netherlands
	Vanuatu	Romania	New Caledonia
	Vietnam	Russian Federation	New Zealand
	West Bank and Gaza	Samoa	Northern Mariana Islands
	Yemen, Rep.	Serbia	Norway
	Zambia	South Africa	Oman
		St. Lucia	Palau
		St. Vincent and the Grenadines	Poland
		Suriname	Portugal
		Thailand	Puerto Rico
		Tonga	Qatar
		Turkey	San Marino

[9] The countries highlighted are excluded from the data analysis as economic data is not available.

		Turkmenistan	Saudi Arabia
		Tuvalu	Seychelles
		Venezuela, RB	Singapore
			Sint Maarten (Dutch part)
			Slovak Republic
			Slovenia
			Spain
			St. Kitts and Nevis
			St. Martin (French part)
			Sweden
			Switzerland
			Taiwan, China
			Trinidad and Tobago
			Turks and Caicos Islands
			United Arab Emirates
			United Kingdom
			United States
			Uruguay
			Virgin Islands (U.S.)

Operationalisation of Variables

Economic Growth

Economic growth is defined as an annual increase in a country's real national income aggregate output which can be caused by an increase in the value of goods and services produced by every sector of the economy (Haller 2012). The value of goods and services produced can range from an increase in the quality of resources (such as education), an increase in the quantity of resources to improvements of technology (Haller 2012). Economic growth is often measured by using data on GDP, expressed as an annualised percentage increase. GDP measures the value added of all goods and services produced in the economy during a period measured, which include: personal consumption, government spending, investment and net exports (Freiling 2012). GDP data is often used in time-series data to compare growth of a country over a period of years. It is also used in cross-section data to compare economic growth of countries over time (Haller 2012).

Global organisations such the World Bank have been employing GDP and a measure of economic growth in their development indicators (World Bank 2017a). However, the concept has received criticism for its narrow numerical definition of economic growth as well as its generalised and standardised way it measures growth with the exclusion of all other factors (i.e. non-market activities) (Freiling 2012; Tridico 2007) For example, for as long as economic aggregates remain positive, there is economic growth. Therefore, for as long as corruption does not impact negatively on the numbers, the World Bank approach would ignore all other factors including corruption and the rest of the economy. Despite this criticism most researchers find the World Bank Development Indicators (WDI) reliable

because it provides the most current and accurate global development data available, and includes national, regional and global estimates (Aidt 2009).

This reasearch measured economic growth from the period of 1996 to 2006. The average estimate percentage that this study will use as a standard ideal economic growth will range from 5% and above.

To obtain the average estimate covering each year, it was perfomed using this formula below:

$$Average\ \ economic\ growth = \frac{\sum annual\ econmic\ growth\ (\%)}{number\ of\ years} \quad [1]$$

Level of Corruption

The level of corruption is represented by the World Bank's WGI Control of Corruption Index (World Bank 2017b). The WGI captures perceptions of the extent to which public office is exercised for private gain, including both petty and grand forms of corruption, as well as capture of the state by elites and private interests (2017b). This index also incorporates a variety of different aspects of corruption, ranging from the frequency with which firms make "additional payments to get things done" to the effects of corruption on the business environment and measuring grand-corruption in the political arena (Olken and Pande 2012, 5; World Bank 2017b; Kaufmann et al. 2010). The data sources are drawn from survey responses of business people, country experts and local residents in all countries. It also uses perception indexes that contain useful information for assessing the quality of control of corruption in different countries from their point of view. All indicators from the data sources are combined into a single indicator (Kaufmann, Kraay and Mastruzzi 2010). The score range of the WGI measures and interprets data and comes in a standard units of governance indicator ranging between -2.5 (weak governance) and 2.5 (strong governance), among all countries worldwide. Higher scores correspond to better outcomes, i.e. less levels of corruption (Rohwer 2008; Kaufmann et al. 2010 and World Bank 2017b). This study will measure for 6 periods 1996, 1998, 2000, 2002, 2004 and 2006. For this study's analysis, the average estimate score used to identify as high levels of corruption are the ranges below -1.

To obtain the average estimate covering for each year, it was perfomed using this formula below:

$$Average\ level\ of\ corruption = \frac{\sum annual\ corruption\ estimate}{number\ of\ years} \quad [2]$$

Using the average estimates to analyse the relationship between the level of corruption and economic growth for a ten year period assited on investigating the general assuption of corruption regarded as always an inhibitor of economic growth. It also helped in finding countries that exhibit good economic growth despite the high levels of corruption present. Table B below shows summary statistics of the average estimates of both variables in each country. The data is obtained from the World Bank (2017).

Table B: Average estimates of economic growth and level of corruption across countries

Years 1996-2006

Country/Territory	Country Code	Growth Average (millions)	Corruption Average
ZIMBABWE	ZWE	-2.489	-1.027
AMERICAN SAMOA	ASM	-0.804	0.635
MARSHALL ISLANDS	MHL	-0.303	-0.619
SOLOMON ISLANDS	SLB	0.017	-0.656
MICRONESIA, FED. STS.	FSM	0.242	-0.260
CONGO, DEM. REP.	COD	0.470	-1.566
GABON	GAB	0.647	-0.688
GUINEA-BISSAU	GNB	0.687	-1.042
HAITI	HTI	0.807	-1.452
BURUNDI	BDI	0.881	-1.058
JAMAICA	JAM	0.951	-0.387
PAPUA NEW GUINEA	PNG	1.151	-0.936
JAPAN	JPN	1.174	1.125
GERMANY	DEU	1.469	1.941
PARAGUAY	PRY	1.515	-1.270
ITALY	ITA	1.520	0.488
DJIBOUTI	DJI	1.590	-0.685
CÔTE D'IVOIRE	CIV	1.592	-0.782
PALAU	PLW	1.638	0.000
TONGA	TON	1.763	-0.721
GUAM	GUM	1.765	0.656
TUVALU	TUV	1.837	-0.068
URUGUAY	URY	1.870	0.846
KIRIBATI	KIR	1.881	-0.043
CENTRAL AFRICAN REPUBLIC	CAF	1.952	-1.193
BRUNEI DARUSSALAM	BRN	1.960	0.348
DOMINICA	DMA	2.061	0.559
GUYANA	GUY	2.069	-0.459
SWITZERLAND	CHE	2.089	2.123
FIJI	FJI	2.277	-0.074
FRANCE	FRA	2.293	1.344

DENMARK	DNK	2.334	2.433
MONTENEGRO	MNE	2.362	-0.469
BELGIUM	BEL	2.370	1.359
PORTUGAL	PRT	2.391	1.198
OMAN	OMN	2.442	0.474
AUSTRIA	AUT	2.462	2.031
VIRGIN ISLANDS (U.S.)	VIR	2.466	0.748
MONACO	MCO	2.525	
ERITREA	ERI	2.543	0.153
LEBANON	LBN	2.550	-0.519
MOLDOVA	MDA	2.561	-0.623
GREENLAND	GRL	2.570	
BARBADOS	BRB	2.624	1.320
BRAZIL	BRA	2.639	-0.025
VENEZUELA, RB	VEN	2.677	-0.908
ARUBA	ABW	2.683	1.232
MACEDONIA, FYR	MKD	2.734	-0.644
PUERTO RICO	PRI	2.784	0.936
COMOROS	COM	2.814	-0.922
EL SALVADOR	SLV	2.816	-0.543
COLOMBIA	COL	2.828	-0.255
VANUATU	VUT	2.841	-0.321
NORWAY	NOR	2.871	2.164
NETHERLANDS	NLD	2.900	2.141
TOGO	TGO	2.943	-0.812
UNITED KINGDOM	GBR	2.953	2.055
ARGENTINA	ARG	2.980	-0.378
BAHAMAS, THE	BHS	3.014	1.362
INDONESIA	IDN	3.114	-0.898
ECUADOR	ECU	3.129	-0.870
LESOTHO	LSO	3.156	-0.189
MALAWI	MWI	3.222	-0.555
KENYA	KEN	3.233	-0.934
CZECH REPUBLIC	CZE	3.236	0.403
CANADA	CAN	3.237	2.061
SWEDEN	SWE	3.251	2.248
ROMANIA	ROU	3.259	-0.337
FRENCH POLYNESIA	PYF	3.280	
ST. LUCIA	LCA	3.291	0.511
THAILAND	THA	3.320	-0.173
UKRAINE	UKR	3.336	-0.924

UNITED STATES	USA	3.352	1.656
MADAGASCAR	MDG	3.382	-0.059
SEYCHELLES	SYC	3.390	0.309
SWAZILAND	SWZ	3.394	-0.306
GUINEA	GIN	3.410	-0.764
BOLIVIA	BOL	3.414	-0.642
NEW ZEALAND	NZL	3.417	2.336
MALTA	MLT	3.440	0.839
MEXICO	MEX	3.520	-0.282
SOUTH AFRICA	ZAF	3.524	0.529
CONGO, REP.	COG	3.551	-0.988
GAMBIA, THE	GMB	3.561	-0.524
BULGARIA	BGR	3.572	-0.180
SURINAME	SUR	3.652	0.087
HUNGARY	HUN	3.662	0.616
GUATEMALA	GTM	3.663	-0.679
AUSTRALIA	AUS	3.673	1.922
NIGER	NER	3.675	-0.949
TIMOR-LESTE	TLS	3.706	-0.642
SYRIAN ARAB REPUBLIC	SYR	3.775	-0.735
SPAIN	ESP	3.780	1.273
CYPRUS	CYP	3.815	1.212
HONG KONG SAR, CHINA	HKG	3.822	1.710
PERU	PER	3.826	-0.275
FINLAND	FIN	3.858	2.462
BERMUDA	BMU	3.863	1.322
ST. VINCENT AND THE GRENADINES	VCT	3.933	0.422
SAUDI ARABIA	SAU	3.941	-0.324
GREECE	GRC	3.945	0.527
SERBIA	SRB	3.970	-0.720
ISRAEL	ISR	3.984	1.111
NEPAL	NPL	4.036	-0.470
CROATIA	HRV	4.044	-0.112
ST. KITTS AND NEVIS	KNA	4.049	0.415
SLOVENIA	SVN	4.090	0.988
ALGERIA	DZA	4.094	-0.691
CAMEROON	CMR	4.103	-1.058
NICARAGUA	NIC	4.104	-0.606
HONDURAS	HND	4.111	-0.861
SAMOA	WSM	4.152	0.039
PHILIPPINES	PHL	4.198	-0.472

SENEGAL	SEN	4.223	-0.108
CHILE	CHL	4.224	1.433
SAN MARINO	SMR	4.236	
GRENADA	GRD	4.240	0.654
SIERRA LEONE	SLE	4.284	-0.899
PAKISTAN	PAK	4.327	-0.931
RUSSIAN FEDERATION	RUS	4.340	-0.860
COSTA RICA	CRI	4.357	0.554
POLAND	POL	4.363	0.372
LIECHTENSTEIN	LIE	4.397	1.327
BENIN	BEN	4.430	-0.685
NAMIBIA	NAM	4.513	0.296
YEMEN, REP.	YEM	4.550	-0.802
KYRGYZ REPUBLIC	KGZ	4.590	-0.864
EGYPT, ARAB REP.	EGY	4.590	-0.398
IRAN, ISLAMIC REP.	IRN	4.635	-0.477
TURKEY	TUR	4.642	-0.283
ICELAND	ISL	4.668	2.183
SLOVAK REPUBLIC	SVK	4.687	0.280
BOTSWANA	BWA	4.801	0.843
MAURITIUS	MUS	4.805	0.481
SRI LANKA	LKA	4.811	-0.216
TUNISIA	TUN	4.811	0.085
MOROCCO	MAR	4.828	-0.057
GHANA	GHA	4.836	-0.197
UZBEKISTAN	UZB	4.882	-1.019
BAHRAIN	BHR	4.904	0.387
MAURITANIA	MRT	4.916	-0.181
MALAYSIA	MYS	4.942	0.377
LUXEMBOURG	LUX	4.965	1.920
MONGOLIA	MNG	4.983	-0.310
PANAMA	PAN	4.990	-0.323
ANTIGUA AND BARBUDA	ATG	5.053	0.894
KOREA, REP.	KOR	5.063	0.376
JORDAN	JOR	5.097	0.137
BANGLADESH	BGD	5.114	-1.119
ZAMBIA	ZMB	5.194	-0.830
LIBYA	LBY	5.258	-0.858
TAJIKISTAN	TJK	5.300	-1.116
SÃO TOMÉ AND PRINCIPE	STP	5.364	-0.437
KUWAIT	KWT	5.369	0.832

CUBA	CUB	5.484	0.391
TURKMENISTAN	TKM	5.568	-1.116
BELIZE	BLZ	5.619	-0.200
SINGAPORE	SGP	5.653	2.265
ALBANIA	ALB	5.659	-0.848
TANZANIA	TZA	5.660	-0.765
DOMINICAN REPUBLIC	DOM	5.737	-0.512
UNITED ARAB EMIRATES	ARE	5.903	0.670
MALI	MLI	5.950	-0.515
ANDORRA	AND	6.108	1.299
ETHIOPIA	ETH	6.111	-0.733
LITHUANIA	LTU	6.283	0.137
LAO PDR	LAO	6.427	-0.970
BURKINA FASO	BFA	6.547	-0.098
AFGHANISTAN	AFG	6.557	-1.610
SUDAN	SDN	6.577	-1.161
INDIA	IND	6.676	-0.385
UGANDA	UGA	6.781	-0.811
KAZAKHSTAN	KAZ	6.855	-1.019
GEORGIA	GEO	6.883	-0.729
VIETNAM	VNM	6.936	-0.600
ESTONIA	EST	6.974	0.681
BHUTAN	BTN	7.112	0.617
LATVIA	LVA	7.163	-0.041
BELARUS	BLR	7.224	-0.747
NIGERIA	NGA	7.295	-1.192
WEST BANK AND GAZA	PSE	7.442	-0.896
MACAO SAR, CHINA	MAC	7.473	0.544
IRELAND	IRL	7.500	1.537
KOSOVO	XKX	7.567	-0.596
ANGOLA	AGO	7.687	-1.278
TRINIDAD AND TOBAGO	TTO	8.395	0.100
CAMBODIA	KHM	8.574	-1.030
CAPE VERDE	CPV	8.840	0.253
RWANDA	RWA	8.916	-0.607
MALDIVES	MDV	8.973	-0.122
CHAD	TCD	9.067	-1.110
ARMENIA	ARM	9.091	-0.612
CHINA	CHN	9.535	-0.439
MOZAMBIQUE	MOZ	10.313	-0.485
IRAQ	IRQ	10.648	-1.420

MYANMAR	MMR	10.916	-1.434
QATAR	QAT	11.280	0.627
AZERBAIJAN	AZE	12.582	-1.071
BOSNIA AND HERZEGOVINA	BIH	17.089	-0.322
LIBERIA	LBR	17.404	-1.286
EQUATORIAL GUINEA	GNQ	40.314	-1.489
KOREA, DEM. REP.	PRK		-1.588
NAURU	NRU		
ANGUILLA	AIA		1.126
CAYMAN ISLANDS	CYM		1.316
COOK ISLANDS	COK		0.100
FRENCH GUIANA	GUF		0.849
MARTINIQUE	MTQ		0.861
SOMALIA	SOM		-1.682
SOUTH SUDAN	SSD		
TAIWAN, CHINA	TWN		0.703

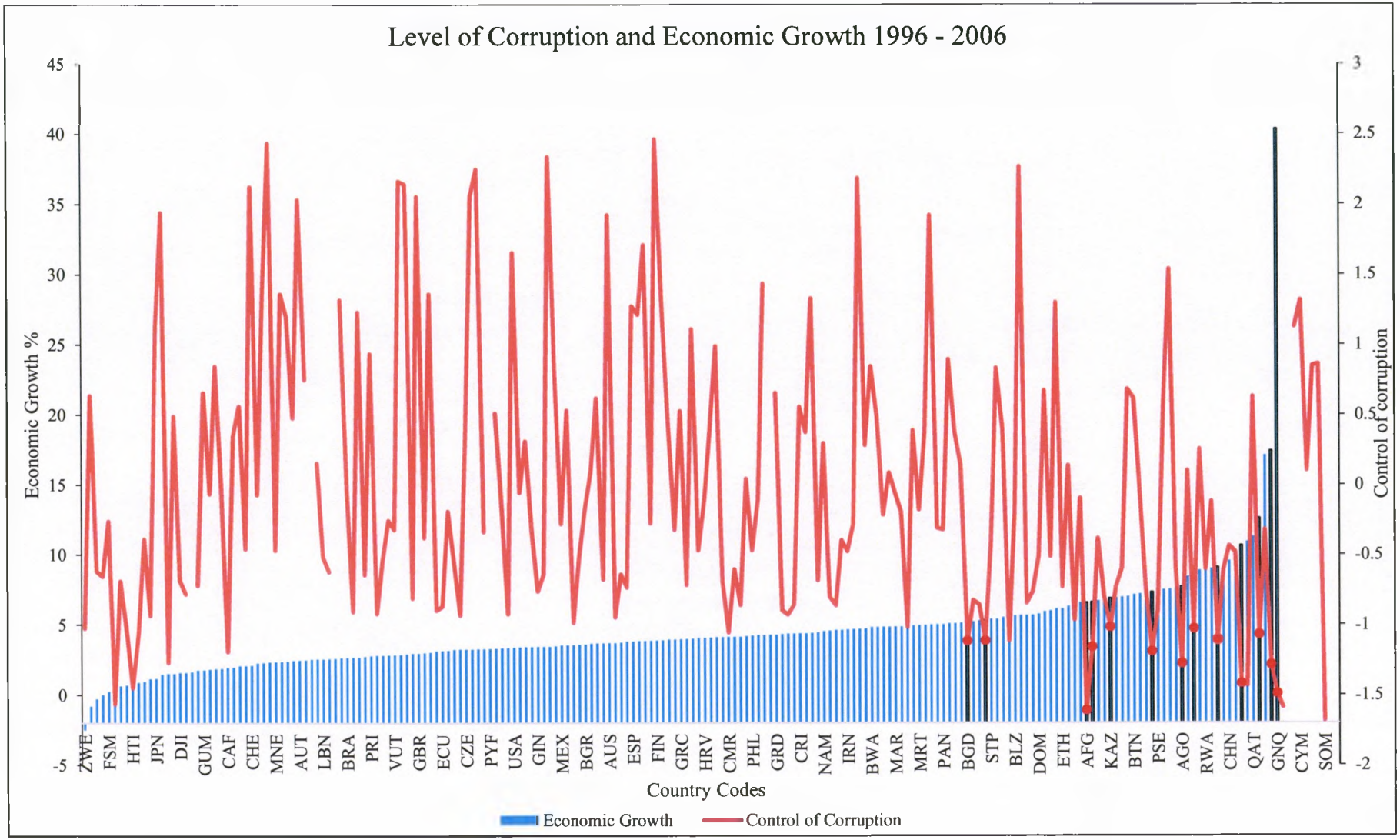


Figure 3: Patterns of levels of corruption

This graph shows the relationship between high levels of corruption and economic growth of 211 countries from 1996-2006. This graph highlights that high levels of corruption impede economic growth in some countries. However, the graph also shows countries that experienced good economic growth despite high levels of corruption present in that period (World Bank 2017a; World Bank 2017b).

Findings on the correlation between the level of corruption and economic growth

Results from Table B strongly offers support of the conventional argument that high levels of corruption inhibits economic growth especially in developing countries. This finding is consistent with several studies (Sheifer and Vishny 1993; Mauro 1995; Knack and Keefer 1995; Mo 2001; Tanzi and Davoodi 1997; Gyimah-Brempong 2002; Aidt 2009, World Bank 2000). This finding is found in Sub-Saharan Africa, Latin America and most communist countries (Gymaih-Brempong 2002; Powell and Nair 2010).

The results from Table B also supported the cross-country study on corruption and economic growth by Rock and Bonnett (2004), in which their findings show that corruption has adverse effects to small and developing countries such as Malaysia, but generates growth in large East-Asian newly industrialsed countries such as China and Thailand. For example, Table B reveals China's average corruption level to be -0.439 (which is high) and yet its economic growth is high as 9.535 percent. Besides the 1997 Asian economic crisis, China still managed to have strong economic growth despite systematic corruption.

Despite this knowledge, the results may be called into question. This is because the findings also reveal countries that witness good economic growth despite high levels of corruption such as East-Asian countries and the countries highlighted on Table B. Hence it raises the question of whether coruption should be considered as an inhihitor of economic growth, as much as the data shows different outcomes. The idendified problem found when analysing the correlation between the level of corruption and economic growth was the difficulty to demonstrate and establish a direct causal relationship (OECD 2013). Sindzingre and Milelli (2010) argue that the lack of establishing direct causalality when analysing the correlation between the level of corruption on economic growth stems from the methods of measurements which are based on the use of indices, modelling and econometric techniques. These methods are criticised as inappropiate for a concept such as corruption, due to its complexity and heterogeneity, which makes it difficult to include in a single and stable

definition. Another problem found was difficulty in finding a clear correlation based on the excessive use of econometrics and cross-country regressions between variables that are often vaguely defined. In addition, correlations between concepts that are ill-defined, referring to a complex phenomena, are not always comparable across time and space are not likely to show a significant correlation (Sindzingre and Milelli 2010).

Other issues underlying the weakness of a the relationship between the level of corruption and growth when analysing the findings from the data in Table B as well as other research was the dependence of causal processes on specific context (Sindzingre and Milelli 2010). The causal processes that may lead to the effects of corruption on an economy depend on other factors such as: history, economic structure, political economy, types of institutions, as well as how corruption is organised, which may vary across countries and regions. As much as the causal links between the level corruption and economic growth may exist, they are non-linear and controlled by threshold effects. According to Sindzingre and Milelli (2010) certain thresholds, which are built by specific contexts (i.e. the combination of contextual factors, political, economic or institutional), corruption can be harmful to growth. But on the other hand the impact may be limited before reaching these threasholds. For example, the existing corruption in East-Asia can be characterised as controlled, governed by strong states and channelled to growth objectives. In contast to Sub-Saharan Africa, corruption is uncontrolled governend by weak states, resulting to creation of poverty traps, inequalities and negative economic growth (Sindzingre and Milelli 2010; Rock and Bonnett 2004).

The overall main issue found when analysing the relationship between the variables as well as empirical studies was the assumption that corruption has a major impact upon economic growth without a consideration of other factors, and therefore the findings prove the ambiguity of the conventional argument. This is because the empirical literature has treated this impact as a differentiated phenomenon depending on the extent of the corruption and not examining other factors (intervening variables) which may lead to economic growth, despite the level of corruption. The solution to this problem is to investigate other factors that may contribute to economic growth despite the presence of corruption. To proof the possibility of causality, the next section of this research will explore the highlight countries that exhibit good economic growth despite the high levels of corruption, and investigate factors which may explain the presence of economic growth in these outlier countries.

Countries with Economic Growth and High Level Corruption

When looking at the relationhsip between the level of economic growth measured in GDP annual percentage and perceived corruption level across countries in Table B, the negative relationship is especially strong mostly in poor countries. However, on the other hand, when examining the relationship between the level of corruption and rate of economic growth across countries, the results from the panel data shows that growth rates diverge more for countries with high level corruption. In other words, while highly corrupt countries have low economic growth rates, there are countries that have achieved good economic growth under rampant corruption. This suggest that there are countries that exhibit good economic performace despite high levels of corruption. These countries include; Bangladesh, Turkmenistan, Tajikistan, Afghanistan, Sudan, Kazakhstan, Nigeria, Angola, Cambodia, Chad, Iraq, Azerbaijan, Liberia, Myanmar and Equatorial Guinea.

Table C: Countries with good economic growth and high-level corruption

1996-2006

Country/Territory	Country Code	Growth Average (millions)	Corruption Average
BANGLADESH	BGD	5.114	-1.119
TAJIKISTAN	TJK	5.300	-1.116
TURKMENISTAN	TKM	5.568	-1.116
AFGHANISTAN	AFG	6.557	-1.610
SUDAN	SDN	6.577	-1.161
KAZAKHSTAN	KAZ	6.855	-1.019
NIGERIA	NGA	7.295	-1.192
ANGOLA	AGO	7.687	-1.278
CAMBODIA	KHM	8.574	-1.030
CHAD	TCD	9.067	-1.110
IRAQ	IRQ	10.648	-1.420
MYANMAR	MMR	10.916	-1.434
AZERBAIJAN	AZE	12.582	-1.071
LIBERIA	LBR	17.404	-1.286
EQUATORIAL GUINEA	GNQ	40.314	-1.489

Figure 4: Countries which exhibit economic growth despite high levels of Corruption

1996-2006

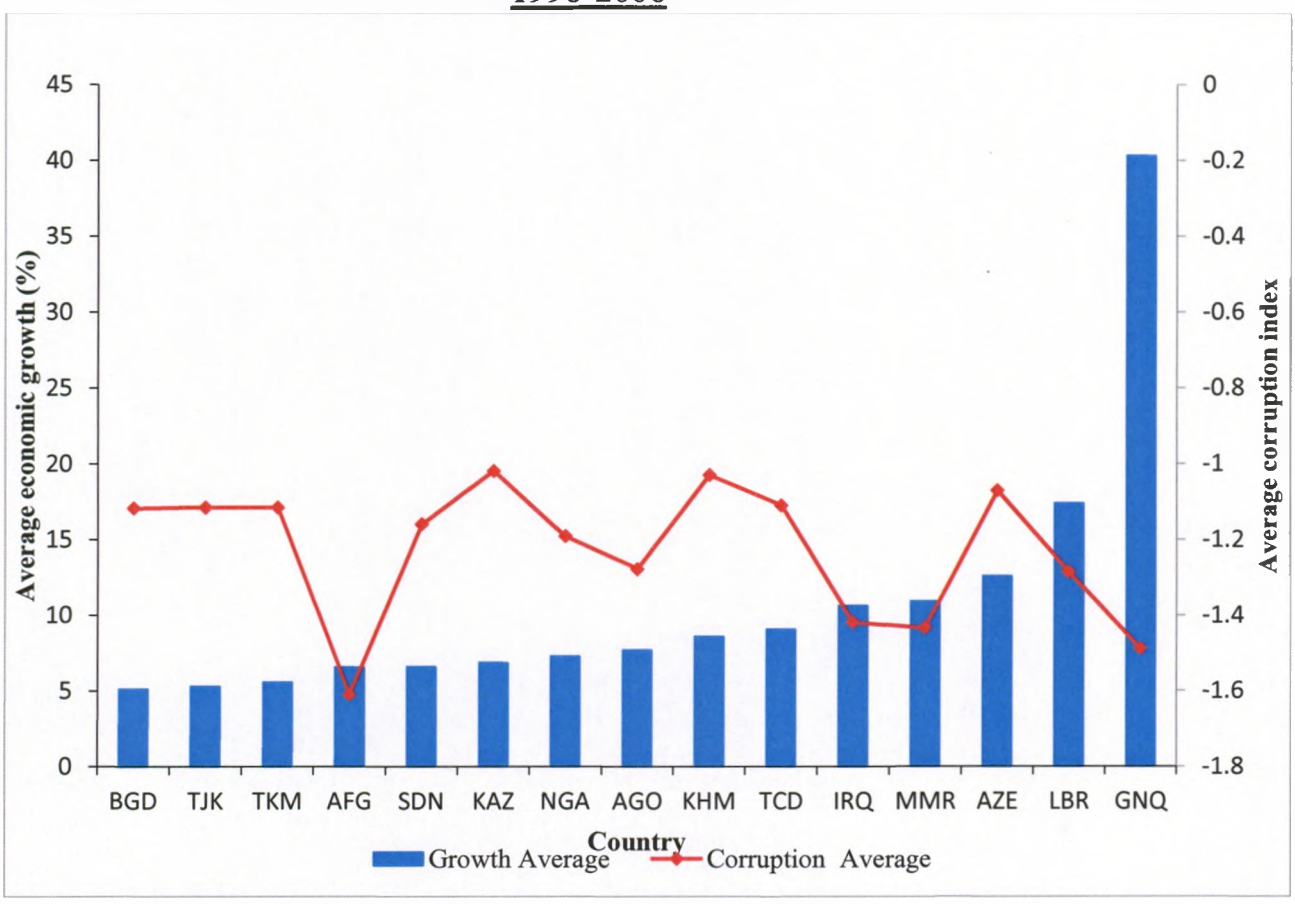


Table C and Figure 4 show countries with very high levels of corruption below -1 and good economic growth rates above 5 percent. This finding indicates that there are countries that exhibit good economic growth despite high levels of corruption. Colombatto's (2003) study similarly found that in some countries corruption has a positive impact on the rate of economic growth. Li and Wu (2010) argue that in countries with higer level of trust, corruption tends to be less harmful to economic growth. Barreto (2001) also found a significant positive direct relationship between GDP growth and corruption. Swaleheen's (2011) study tested the relationship beween the level of corruption and growth and the results showed that corruption is not growth reducing at all levels and it significantly increases growth even at a higher level of corruption. This finding is consitent with the 'grease-in-the-wheel' argument that in high-level corruption countries corruption stimulates growth by helping firms to get things done or use 'speed money' to get around rigid laws and burdensome public policies (Leff 1964; Huntingon 1968; Lui 1985). Despite this knowledge as well as the main finding, the underlying problem is that lack of analysis has been made to

investigate other factors which may explain the presence of economic growth despite the high-level corruption in these outlier countries.

Chapter 5: Other Contributing Growth Factors

After identifying the outlier countries from the previous chapter, this chapter aims to examine whether there is sufficient evidence to lend support to the three intervening variables as identified in the preceding chapter, namely, trade openness, government spending and high levels of FDI in terms of having explanatory power. This is done to provide a foundation for understanding the possible limitations and gaps of this study contained in the last section of the next chapter.

1. Other Contributing Growth Factors: Natural Resources

When examining the factors that contribute to economic growth despite high levels of corruption on these outlier countries, natural resources are predominately found to play a role in most of these countries' GDP (Gylfason and Zoega 2001; Paltseva and Roine 2011). According Gylfason and Zoega (2001) natural resources are found to play an important role in the economy of many countries to a large extent that most of the empirical studies seemed to indicate that economic growth since 1965 has been linked with natural resource abundance. Natural resources, especially oil and gas products, are found as a major contributor to economic growth despite the high prevalence of corruption present in these countries.[10] Countries such as: Equatorial Guinea (EQ), Azerbaijan, Iraq, Chad, Angola, Nigeria, Sudan, Kazakhstan, Myanmar and Turkmenistan have economic growth largely based on oil resources overriding the high levels of corruption present (Trading Economics 2017).

Turkmenistan for example has been known as one of the fastest growing economies in the world. The country's economic growth has been driven by increasing oil and gas revenues (BTI- Turkmenistan Country Report 2016). However, despite its economic progress, this country's economic growth was still hindered by pervasive corruption, inefficient economic and public structures, inspired by Soviet models. The country's economy was dominated by large-owned companies with the state controlling the resources and revenues. Trade was restricted and its regulatory system lacked transparency (U.S. Department of State 2015). Similarly, Myanmar's natural resource industries were controlled by state-owned enterprises and the business climate in the country enabled corruption through poor licencing procedures, low regulatory quality and lack of transparency. In addition, import and export licences were

[10] This assumption however does not apply in all economies/countries as showed in Table B panel data results. There are resource-rich that display lack of economic growth and high levels of corruption.

often obtained through the payment of bribes and high transaction costs (Saw 2015). Kazakhstan was also one of the countries that experienced economic growth despite high levels of corruption. The country's economic growth was largely driven by oil exports and mineral deposits. Increasing economic freedom also played a significant role in increasing FDI flows into the country (Waikar, Jepbarova, Lee, Gardner, Johnson 2011). Despite this, Kazakhstan was faced with corruption, especially in the oil sector, putting businesses entering at risk. Specifically, the country suffered from corrupt government officials responsible for customs enforcement and regulation for exports and imports (Index of Economic Freedom 2017). Also in Azerbaijan's case, regardless of its economic progress through production sharing agreements with oil foreign companies and FDI, corruption and nepotism were major difficulties faced and found to impede the business environment and had a negative impact on non-oil economic growth (Asian Development Bank 2014; Blaauw 2011). Despite these major problems, these countries' economies continued to grow.

The graph in figure 4 also displayed Equatorial Guinea (EQ) as a country with the highest GDP and the second most corrupt country in the world. Despite this result, this small sized country was rated as the third-largest producer of crude oil in Sub-Saharan Africa, after Nigeria and Angola (Global Security 2017). The exploitation of oil and gas deposits, beginning in the 1990 and early 2000s, has driven economic growth in EQ accounting over US$12 billion in US investment (Department of State 2014). Oil accounted for more than 81 percent of government revenue. According to the Global Security (2017), since 1991 the EQ government had sold some state enterprises, and the country's economic policies include an open investment regime, liberalised trade regulations, eliminated quota restrictions, reduced tariffs and privatised distribution of petroleum products. Despite an increase in oil and gas production during those periods, corruption and resource mismanagement were major problems facing this country (Index of Economic Freedom 2017). This is because during the commodity boom it was found that the government misused oil revenues and other natural resource earnings to subsidise strategic sectors and divert them to their own benefit (Index of Economic Freedom 2017).[11] Also, corruption was found in the trade sector in instances of regulations were not consistently applied (Department of State 2014).

[11] The government, economy and legal system of EQ was controlled by President Teodoro Objang Nguema Mbasogo and a small number of group at the top of Equatoguinean society and family elite (Open Society Justice 2010).

The case of Nigeria and Angola, also oil depended states which divert oil revenues not only through corruption but primarily in use to finance military and state security apparatus (Kurečić, Lulić and Kozina 2015). According to Kurečić et al. (2015) countries that are depended on oil exports from the Gulf of Guinea[12] region tend to have higher levels of corruption through corruptive behaviour of the political and military elites. For instance, it was found in Nigeria that most portion of oil revenue was used to finance the military (Kurečić et al. 2015). In relation to Angola, Global witness research carried out in 1995-1996 demonstrated both sides in the Angolan Civil War (UNITA and MPLA government) had drawn oil and diamonds revenues to fund their military campaigns (Cockcroft 2012, 150). Even the IMF audit revealed that US$4.2 billion in oil revenues went missing between 1996 and 2001 (Schubert 2006, 9).

Other countries such as Sudan, Chad and Iraq also managed to achieve rapid economic growth, mainly due to mineral wealth, despite events of civil war and political violence, as well as the widespread corruption. In the case of Iraq, oil revenues were being sold on the black market, and being used to purchase weapons to be used against the established government, its people and against the US troops (Spiers 2007). Corruption in Chad was also dominant around oil deals with companies and the government (Chad Corruption Report 2016). Similarly, Sudan was found with lack of transparency in dealing with oil revenue. For instance, the Heritage Foundation (2010) found that relatives of high government officials own oil companies that do business with the government and usually provide their relatives in the government with kickbacks in exchange for government business. Even the President of Sudan Omar al-Bashir was also believed to use oil revenue for private gains (Martini 2012). Although most of these countries experienced disruptions of war, their economic growth has been strong because of oil production during the period under review.

2. Other Contributing Growth Factors: Trade Openness

When examining further Table C and Figure 4, there are non-oil countries that exhibit a positive relationship between high-level corruption and economic growth. These countries include Bangladesh, Tajikistan, Afghanistan, Kazakhstan, Cambodia and Liberia.

Trade openness was found as the other contributing factor that fostered economic growth in non-oil and gas countries despite high levels of corruption. In Bangladesh's case, the positive

[12] Countries in the Gulf of region consists of five important oil producers and exporters: Nigeria, Angola, Gabon, Republic of Congo and EQ (Kurečić et al. 2015).

correlation between corruption and economic growth has been significant since the mid-1980s when the country shifted its strategy from import-substitution and government control regime towards a liberalised trade and market oriented regime (Haq 2008; Sultan 2008; Manni, Siddiqui and Afzal 2012). According to Manni et al. (2012) the country's economy was characterised by a expansion of export-oriented garment industry, textiles, high-yeild rice production, tea and remittances. This resulted in rapid economic growth in Bangladesh (Sultan 2008). For instance, the World Bank 2006 Report findings showed that Bangladesh managed to achieve an average annual growth rate of 5.4 percent during 2001 to 2005 (Haq 2008, 20). Furthermore, there is also empirical studies that found a positive impact of trade openness on generating economic growth in Bangladesh (Rashid 2000; Nath and Mamun 2004; Haq 2008; Manni et al. 2012; Ali, Alam and Islam 2016). These empirical studies similary support the findings reported by Dollar and Kraay (2004), Chang et al. (2009), Frankel and Romer (1999) and, Freund and Bolaky (2008). Despite this evidence, these studies lack to explain how trade openness generates economic growth despite high-level corruption in Bangladesh. Paul (2010) argued that both corruption and economic growth increased with the rate of privatisation and the market economy in Bangladesh. According to the author, much of the country experienced economic growth due to trade opennes, but failed to implement corresponding reforms in the bureaucracy (Paul 2010). Yunis and Mostafa (2000, 221) also pointed out that bureaucracy in Bangladesh has been charcterised by inefficiency, indiscipline, inadequate management lack of accountability and corruption. Therefore the role of corruption in this case did not promote growth, it instead "greases the wheels of Bangladesh's heavy regulations that would otherwise impede business" (Paul 2010, 246).

Cambodia's economic growth was also underpinned by open trade policies in 1998-2006 after the domestic conflict (genocide) the country experienced during the mid-1990s (Hill and Menon 2014). According to Hing (2013), the growth in this country during that period was driven by four sectors: garments, tourism, construction and argriculture. Both tourism and garments were heavily export-oriented. Vutha and Rethy (2013) pointed out that the country not only achieved its economic transition successfully but also managed to make trade into a driving force for economic growth through opening to investmnet and opening up to regional and global cooperation. For instance, in 1999 the country became a member of ASEAN and in 2004 became a member of WTO (Hing 2013). As much as Cambodia experienced economic growth through trade openness, the country also faced trade policy challenges

which included: high transaction costs, a weak beaucratic capacity and high levels of corruption. For instance, it was reported that the country has unrecorded trade flows (i.e. smuggling) especially with its two neighbouring countries: Thailand and Vietman (Hill and Menon 2014). Inspite of this barriers, the role of open trade has played a contributing factor that increased and sustained economic growth in Cambodia.

In the case of Tajkistan, trade openness has played an increasing role in fostering economic growth since the end of the civil war in 1997 (World Bank 2005). According to the Tajikistan Mission (2009) the liberalisation of trade comprised of all export categories, except for cotton and aluminium. It was during the country's second stage of development 1996-1997, the government opened trade in those two sectors. As a result, Tajikistan has maintained a positive trade balance and economic growth (Tajikistan Mission 2009; Bobokhonov, Pokrivcak and Rajcaniova 2017). However, there were major challenges that the country had faced with regards to trade. They included: informal barriers, poor governance resulting in red tape and widespread corruption. Also, lack of transparency and a poor business climate were found as obstacles for importers and exporters in Tajikistan (World Bank 2005). For example, the World Bank Report (2005, 26) found that the customs approval in Tajikistan took anything from approximately 3 to 28 days and customs processing appeared to be less efficient than in any other Central Asia country. Despite of the prevalence of corruption, Tajikistan has been found to have the highest degree of trade openness during the period of study (World Bank 2005).

Trade openness also had a significant role in Afghanistan. As reported, that country was ranked as the largest and fastest-growing economy in the world (Tahiri 2017). According to Tahiri, (2017) the Afghan economy improved significantly since the fall of the Taliban regime in 2001, largely because of international assistance, and the recovery of the agricultural and service sector. Therefore, most of the economic growth in Afghanistan has been driven by increases in agricultural output. The country was also the world's largest producer of illegal opium, but the opium exports were not recorded in the official trade statistics (The World Bank 2013). However, despite Afghanistan's growth in exports, the country's ability to trade was hindered by cumbersome import and export procedures (Afghanistan Economic Performance Assessment 2007). Foreign firms reported corruption as their biggest obstacle to doing business, whether in permitting and licensing, government procurement, meeting regulatory requirements, or taxation. For instance, Afghan officials collected bribes in exchange for undervaluing or not scanning shipments, which facilitated

smuggling of illegal goods and illicit trade of legal goods (Afghanistan- Corruption 2016). Furthermore, the official records of imports and exports do not capture the total of imports and exports that go unrecorded (smuggled). The Afghanistan Economic Performance Assessment Report (2007, 24) found that the unrecorded exports (i.e. opium) in 2005 approximated 37 percent of Afghanistan's GDP for 2005-2006. Despite these barriers, the total of exports was one of the contributing factors of economic growth in Afghanistan.

In the case of Liberia, since the civil war ended in 2003, the country achieved significant economic growth. Compared to other countries that perused their growth through open trade policies, Liberia's followed a market-based export-led growth strategy which was highly depended on trade in primary products (Liberia National Trade Policy 2014-2019). Liberia's main exports included rubber, timber, iron, coffee and cocoa (Economy Watch 2010; Ndlovu 2012). For instance, it was reported that Liberia's economic growth increased from 15.5 percent in 2004 to 31.4 percent in 2006 (Ndlovu 2012, 10). However, according to Ndlovu (2012) the major obstacles that affected Liberia's trade were corruption and cumbersome bureaucratic procedures. In addition, the country did not have a comprehensive national trade policy that could stimulate economic activities and foster economic growth. Regardless of these obstacles, export-led trade had a contributing factor in Liberia's economic growth (Andrews 2015).

3. Other Contributing Growth Factors: Government Spending

As highlighted from the literature, government fiscal policy was found to have a positive effect on economic growth through decisions based on public spending on productive sectors such as: transportation, infrastructure, education and health care (Barro 1990; Barro and Sali-i-Martin 1992; Easterly and Rabelo 1993; Muktdair-Al-Mukit 2012). However, when corruption is present, the composition of government spending gets allocated towards less productive activities resulting to a negative effect on the country's economic growth performance (Shleifer and Vishny 1993; Mauro 1997; Tanzi and Davoodi 1997; Gupta et al. 2001; Wade 1982). In the case of Bangladesh, research has showed that government spending had a positive impact on the country's economic growth during the period of study (Muktdair-Al-Mukit 2012; Rana 2014). Muktdair-Al-Mukit's (2012) study using time series data from 1995-2009 found a positive long-run relationship between government spending on education sector and economic growth in Bangladesh. The study findings revealed that between the years 1995 to 2009, the annual government spending on education increased at an average of 6.31 percent and contributed an annual average of 3.91 percent to the country's

ecounic growth. This implies that incresed spening in education is linked with higher returns in the labour market and higher productivity in the argricultural sector (Muktdair-Al-Mukit 2012, 13). In contrast Rana's (2014) study, using yearly data for the period of 1973 to 2012, found that GDP growth played a significant role in risisng government spending in Bangladesh. The study findings showed that the increasing government spending in all productive sectors contributed in maintaining an average GDP growth rate of 5 percent. Based on the findings from these empirical studies indicate that government spending played a role on fostering economic growth in Bangladesh.

Tajikistan in contrast followed a contractionary fiscal policy[13] (decreasing of government spending) as means to stimulate the country's economic performance. The country's expenditure mainly oriented on: education, social protection and healthcare (Abdieva, Baigonushova and Ganiev 2017). However, according to the World Bank report (2005), the country suffered from high level of corruption and non-transparent practices from state administration. Lower levels of state administration were particularly in the health, education and agricultural sectors. Tajikistan also had problems of poor electricity supply, insufficient poor infrastructure and inadequate operational effectiveness (World Bank 2005). Such findings indicate that government spending had no significant effect on contributing economic growth in Tajikistan.

This was similar in the case of Liberia where government spending was not a contributing factor on the country's economic growth. Corruption was viewed as one of the major obstacles to rebuilding the country's educational, health and infrastructure sectors. The widespread corruption in the civil sector negatively impacted the quality of public infrastructure, decreased tax revenues, diverted public talent into rent-seeking and distorted the allocation of public expenditure (Polity 2013). Wekker and Beganovic (2011) pointed out that poor government legitimacy was a result of non-payment of civil servants during the civil war which created an environment wherein government jobs became an avenue for extraction of private gain. As a result corruption became insitutionalised and accepted to such extent that government officials often did not view it as a criminal act. For example, resource project deals were subject to fraud and do not provide the state with adequate revenue (Polity 2013). Oveall, the poor functioning of the government through corruption negatively affected

[13] Contractionary Fiscal Policy refers to reductions in government spending or transfer payments, or increase in taxes to a lower level of economic activity (Goodwin, et al. 2006, 9).

the country's revenues from its vast resources to such extent it may be considered a hinderance increasing Liberia's economic growth.

In the case of Cambodia, government spending was considered as one of the components that would stimulate economic growth (Jenkins 2006). Government spending on education, health, agriculture and rural developments were chosen as priority sectors aimed at promoting economic activity and growth (Jenkins 2006). For example, in 2004 government spending was allocated in such a way that the priority sectors received 31.3 percent of the budget while defence and security had only 20.2 percent; compared to 1998 where the defence budget was 43.2 percent and priority sectors only accounted for 15.9 percent (Jenkins 2006, v). Looking at these estimations the priority sectors seem to be less funded despite the increase in 2004 compared to defence and security. As much as Cambodia's government stressed the importance on increasing of spending in generating economic growth on their agenda, there were key challenges that hindered the process. According to Hill and Menon (2013) the key challenges that affected governtment spending efficiency were weak institutions, uneven allocation of funds in sectors and high levels of corruption. High levels of corruption were as a result of very low civil salaries, misallocation of large inflows capital and weak civil society. Jenkins (2006) found that capital expenditure on government projects were not equally distributed, reflecting the impact of few construction projects on the cuntry's project portfolio. As a result, Cambodia challenges remained somewhat poor particularly on the education sector and rural infrastructure (Hill and Menon 2013).

Afghanistan was also one of the countries that managed to increase it government spending over the study period. For instance, the Afghanistan Economic Performance Assessment Report (2007, 19) showed that government expenditure has risen from 8.5 percent of GDP in 2002 and 2003 to 15.5 percent in 2005 and 2006. However most of the government spending in all productive sectors was financed by foreign aid (Guimbert 2004). Although government spending has increased, it still did not cover all expenditures. Instead the country was faced with major obstacles such as: weak institutions, insurgencies by Taliban members, continued precence of former warlords in government positions, as well as high corruption which negatively affected the allocation of government expenditure in Afghanistan. The civil serivice was reported to be prone to bribery, corruption and ethic discrimination for approving government projects. The U.S Departemnet of State Report (2015) found that Afghan officials collected bribes through smuggling of illegal goods and illcit trade of regulartory institutions, which was reported to have a negative impact of the country's

revenue. The report findings also revealed that the government does not execute criminal penalties for corruption effectively. Furthermore, the data available suggest that the country's infrastructure remained weak despite the increase in government spending (Afghanistan Economic Performance Assessment 2007).

4. Other Contributing Growth Factors: FDI

FDI has also come to be viewed as a major contributing factor to economic growth according to most previous research (Dritsaki, Dritsaki and Adamopoulos 2004; Zuzana 2014; Pacheco-López 2005). On the other hand, FDI may negatively affect economic growth because of misallocation of investment capital and corruption (Boyd and Smith 1992; Mauro 1995; World Bank 2002; Wei 2000; Vuksic 2005). Corruption is viewed as a major obstacle that discourages FDI, and to a larger extent trade, because paying a bribe before starting a business as inefficient tax will increase the transaction cost and production cost of foreign investors, and that in turm hinder economic growth (Wei 2000). Whilst other literature argued that corruption encourges FDI because it removes government-imposed regulations that hinder investment, reduces the cost and shorten waiting time in ques (Leff 1964; Huntingon 1968; Lui 1985; Beck and Marker 1986; Lein 1986). Bribing by foreign investors is viewed beneficial for investment because it speeds up procedure in obtaining government goods (Romer 1994).

When investigating the outlier countries in Figure 4, FDI has contributed to growth in some of these economies despite high levels of corruption. In the case of Cambodia, FDI was treated as a major source of capital accumaltion that will generate economic growth (Sathan 2017). In order to attract FDI, the Cambodian government not only had to do major economic reforms such as liberalising trade, the country also established the Investment Law in 1994 that aimed to remove restrictions on private investment and improve the investment and business environment for foreign investors (Hing 2013; Sathan 2017). As a result Cambodian economy achieved rapid growth and FDI became the major engine of growth (Council for the Development of Cambodia 2017). Hing (2013, 20) reported that FDI increased from US$203 million during 1994 to 1999 and US$604 in the second half of the 2000s. Most of the FDI was in light industry, services and infrastructure construction (Hing 2013). Sathan's (2017) study found that political stability since 1999, global and regional economic integration and open trade policy played a major role in attracting FDI in the country.

FDI also has been considered a contributing source of Afghanistan's economy, as it was estimated an average growth of 17 percent since 2002 by the Afghanistan Economic Performance Assessment (2007). The Assessment also reported this level of FDI flows were driven by foreign aid in rebuiding and reconstruction which brought significant improvements in the country's industrial sector (Afghanistan Economic Performance Assessment 2007). As a result, FDI increased gradually since 2001 from US$68 million to US$271 million in 2005 and most of the investment was in the telecommunication sector (Tahiri 2017, 12). However, Afghanistan was considered as one of the world's most difficult places to do business. The major problems included: difficulty enforcing contracts, delays in registering property, high transactional costs and corruption (Afghanistan Economic Performance Assessment 2007). For instance, the U.S Development State Report (2015, 3) findings showed that foreign investors rank corruption high on the list of impediments in Afghanistan. The World Bank's composite index of Doing Business indicators ranked Afghanistan 162 out of 175 countries evaluated in 2006; in comparison to Cambodia ranked 143. Enforcement of contracts took 1642 days, time to register property in Afghanistan took 252 days compared to 56 days in Cambodia. Surprisingly, the number of required procedures and the time to start-up took 8 days in Afghanistan, among the lowest in the world (The World Bank 2005; Afghanistan Economic Performance Assessment 2007, 22). In this case corruption played a role in speeding the process of commerce in Afghanistan's heavy regulation systems that would otherwise impede business.

In the case of Liberia, the ending of the civil war has significantly contributed to the growth of the economy. Attracting FDI has also been a central component of Liberia's post-conflict economic and reconstruction strategy (Adnan 2011). The policy measures that the country used in attracting FDI were based on the Open-Door Policy (established in the 1960s) that encouraged foreign private investments in which freedom of movements of capital, including repatriation of dividends, profits and capital are given. Since 2005 under President Sirleaf, an influx of many foreign companies entered Liberia, licences have been given to several companies for mineral exploration and the economy of the country experienced rapid growth. FDI inflows in the country increased to an average amount of 16 billion dollars channelled primarily from iron ore, rubber and timber industries (Adanan 2011; Paczynska 2016). Such increase of FDI flows in Liberia, shows how political stability was one the determinants that attracted foreign private investors in doing business (Sackor 2017). As much as Liberia experienced economic growth through FDI, the country was perceived as one of the most

corrupt countries in the world being 185th out of 206 countries by the 2005 WGI (Mukendi 2010). However, Seckor (2017) argued that despite the civil war and high levels of corruption, Liberia's abundant resources are favourable to agriculture and mining have made the country more attractive to foreign investors, thereby contributing to economic growth.

Also, in Bangladesh FDI has been considered one of the components that fosters economic growth (Hussain and Haque 2016). Realising the importance of FDI, in 1999 a new industrial policy was adopted by the government of Bangladesh aimed at achieving rapid industrialisation through offering investment friendly incentives to foreign investors (Rahman 2015; United Nations 2000). As a result, the inflow of FDI increased and has been identified by institutional institutions as a highly attractive destination, and managed to improve the country's economic performance. Textiles and garments were the primary sectors that attracted FDI in Bangladesh. Also, manufacturing of electronics, metal and plastic goods were also areas that attracted FDI. The United Kingdom was the largest contributor of FDI inflows in Bangladesh followed by South Korea, Japan and Netherlands (Jamil and Hasan 2015). Despite having made substantial economic progress, Bangladesh has not been able to attract a desirable level of FDI (Rayhan 2014; Tabassum and Ahmed 2014). According to Raham (2008) factors that hindered FDI inflow in the country included inefficeint bureaucracy, widespread corruption, lack of transparency and slow moving privatisation proces. Similarly, Tajkistan was also one of the countries that managed to achieve high growth, however the amount of private investment was found low over the study period. For instance private market investments was approximately 6 percent of the country's GDP between 2003 and 2006 (Bobomurodov 2014, 15). The key challenges that limited FDI in Tajikistan were its unfavourable geographic location, heavy government influence on decision making and widespread corruption. Such hindrances increased uncertainty for foreign investors and damaged the overall business climate of the country (Adami 2012).

Summary of the Chapter

This chapter presented a comprehensive analysis of other factors that may contribute to economic growth despite high levels of corruption. These factors include natural resources, trade openness, government spending and FDI. The first part described the results which showed that natural resources contributed to the economic growth of most of the outlier countries. The second part described results on trade openness being a contributing factor, showing that it had fostered economic growth in non-oil/gas countries. These countries included: Bangladesh, Tajikistan, Afghanistan, Kazakhstan, Cambodia and Liberia. The third

part described results of government spending, showing that it had a significant impact on Bangladesh's economic growth but less impact on other countries' economic growth. The last part of the results presentation discussed the results of FDI on economic growth. The results showed that FDI was contributing factor to economic growth in Cambodia, Liberia and Afghanistan and less significant Bangladesh and Tajikistan. Based on the findings, it was observed that the contributing factors to some extent might played a significant role in achieving economic growth in these outlier countries despite high levels of corruption present.

Chapter 6: Discussion, Conclusion and Recommendations

The main objective of this thesis was to empirically investigate the nature of correlation between the level of corruption and economic growth using previous empirical studies as well as data from the World Bank for the period of 1996-2006. The paper aimed to understand whether corruption is the ultimate inhibitor of economic growth. The results of the study were presented in chapter 4 and 5. The findings suggested that high levels of corruption had resulted to lack of economic growth while other countries exhibited economic growth despite high levels of corruption. This positive relationship happened through various through transmission channels such as trade openness, government expenditure and FDI. Therefore, this chapter discusses the results to address the research questions, limitations of the study, recommendations for future research, followed by the summary of the study and ends with the conclusion.

Summary Results of the Study

The overall aim of this study is achieved through answering research questions pertaining to the outcomes analysed in chapter 4 and chapter 5:

i. Is there a correlation between the level of corruption and the lack of economic growth?
ii. Are there countries which exhibit good economic growth despite the presence of high levels of corruption?
iii. Are there other factors which may explain the presence of economic growth in these outlier countries?

The results from chapter 4 lead to the fact that high levels of corruption had a negative impact on economic growth on some countries. This conclusion corroborated with the empirical findings of Mauro (1995, 1997), Knack and Keefer (1996), Gyimah-Brempon (2002) and World Bank (2000). However, the findings also showed evidence which suggested that there are countries that experience economic growth despite high levels of corruption. These countries included: Bangladesh, Turkmenistan, Tajikistan, Afghanistan, Sudan, Kazakhstan, Nigeria, Angola, Cambodia, Chad, Iraq, Azerbaijan, Liberia, Myanmar and Equatorial Guinea. Chapter 5 explored other factors that contributed on these countries' economic growth despite high levels of corruption. The positive effect of corruption on economic growth that was found as a contributor common in most of the outlier countries was natural resources especially oil and gas products. However, in non-oil rich countries such as

Bangladesh, Afghanistan, Tajikistan, Cambodia and Liberia the positive effect of corruption on economic growth happened through transmission channels such as trade openness, government expenditure and FDI. Based on secondary research conducted, the findings revealed that corruption was positively significant to influence economic growth through transmission channel of trade openness in these countries. This result is consistent with Krueger (1974) and Hodge et al. (2011) argument of how trade creates opportunity for government official to get involved in rent-seeking activities. Rent-seeking theory applied in the case of approval application of certain procurement, such as import licence. Queue model was applied where bureaucrats distributed licence to traders who bribe to speed up procedure. High trade barriers are associated with corrupted economies may allow more sharing of technology knowledge among trading partners. Transaction cost theory was also applied when international traders are more willing to pay more bribes as part of business cost when involved in foreign trade.

This study concluded that the impact of corruption on economic growth through transmission channel of government spending was positively significant in Bangladesh and was not a contributing factor on other countries. In the case of Bangladesh, the findings supported by Delavallade (2006) and Beck and Maher (1986) explanations of corruption affects the structure and allocation of government spending through supply and demand government project. Rent-seeking theory was applied when government officials sought extra income by tendering public projects to private contractors. Contractors are willing to offer high bribes in bidding process of large development project. Such large development project can contribute to economic growth by increasing spending on productive sectors (society welfare), reduce unemployment problem and generating higher returns in the labour market. However, in other countries, government spending had no significant impact on economic growth. This was because the composition of government revenue was allocated away from education, health care, and the maintenance of infrastructure towards less productive projects that had more scope for manipulation and bribe-taking opportunities, hence not contributing to economic growth.

This study found that there was a positive impact of corruption on economic growth through transmission channel of FDI. This result supported Romer (1994) and Lui's (1985) queue model that shows how corruption can have a positive impact in a condition where entrepreneurs pay bribes to government officials to reduce the time spent in queues to obtain business licences or contract approvals. This system in turn increased FDI, as a result,

economic growth in countries such as Afghanistan, Liberia and Cambodia. However, in countries such as Bangladesh and Tajikistan had not been able to attract desirable level of FDI. This was due to inefficient bureaucracy, widespread corruption and misallocation of investment capital. Such setbacks increased uncertainty for foreign investors which negatively affect the overall business climate of these countries. Overall these findings showed that the role of corruption does not necessarily foster growth, it instead greases the wheels of commerce in regulation-heavy systems that would otherwise impede business (Leff 1964; Huntingon 1968; Lui 1985; Beck and Marker 1986; Lein 1986). In sum, corruption does not necessarily prevent economic growth when other factors are conductive.

Study limitations and recommondations

Limitations

This study is based on the instruments used to measure the relationship between variables. This research investigated the impact of the level of corruption on economic growth as measured in GDP. Using GDP as a measurement instrument can be found problematic because it cannot trace the impact of corruption on various sectors of the economy (Drudy 2009). This study also does not clearly examine the level of corruption in each sector as well as the impact of corruption level on the economic growth rate in each sector.

Another limitation is that this study does not estimate the best level at which corruption is beneficial to economic growth. This is according to Mendez and Sepulveda's (2006) assumption that the positive relationship between corruption and economic growth is sustained until corruption reaches the optimal level. When corruption has surpasses the optimal level, the impact on the growth rate turns it to negative.

Moreover, this study focuses on how the level of corruption could contribute to economic growth through tramission channels while ignoring that the impact may have a reverse causality. An analysis on examining two-way causal relationship between corruption and economic growth might be significant in such a way that the reverse inluence from GDP to corruption level may contribute to different outcomes (Hodge, et al. 2011; Dzhumashev 2014).

Other limitations of this research is that it cannot include all factors that may explain the presence of economic growth despite high levels of corruption. Another limitation is that this research only did an analyisis of other factors on selected countries as there is not enough space to do a more comprehensive study of multiple countries.

Recommendations

To generate more detailed results, future research could make more specific analysis on the economic performance of each industry including the agricultural, manufacturing and tertiary and how corruption influence each sector at different levels. Future research could estimate the value of optimal corruption level which is the turning point of economic growth from positive to negative. Also, future research could consider examining how much growth can these outlier countries achieve with a minimum level of corruption.

In addition, future research could make analysis based bidirectional relationship between corruption and economic growth as the endogeneity effect between both variables. Such research will play an important role in explaining the nature of relation between corruption and economic growth. However, in conducting this study, researchers should be cautious when dealing with the duplication effect of the variables since the effect passes through various transmission factors.

Very importantly, since the findings show that corruption had different effects from country to country through various channels, further research could conduct a more country specific analysis to provide in-depth analysis.

General Conclusion

Summary of the thesis

This quantitative and qualitative research study investigated the impact of the level of corruption on economic growth across 211 countries over the period from 1996 to 2006 using World Bank data. Chapter 1 introduced the study, provided the background to the research problem and the rationale for conducting the research. Chapter 2 reviewed existing related literature which implied that corruption and its impact to economic growth. Chapter 3 reviewed and analysed the findings from previous empirical studies as well as identified existing gaps from past research. Chapter 4 discussed results of how high levels of corruption resulted to lack of economic growth in some countries while chapter 5 discussed the results of countries that exhibited economic growth despite high-level of corruption through transmission channels. This chapter has discussed the main findings of the study, addressing the research questions and identified potential limitations of the study. It also provided recommendations for the study. A conclusion to the study will be provided below.

Conclusion

This research established that there are countries that exhibit good economic growth despite the presence of high-level corruption. It confirmed that the positive effect of corruption and economic growth happens through transmission channels such as; trade openness, government spending and FDI depending on the country context. Trade openness was found to be a contributing factor in the economic growth in these countries based on the process in which international traders were willing to pay bribes as part of business costs to secure approval, procurement and to speed up procedures. Government spending was also found as a contributing factor of growth despite high-level corruption present. However, it had a positive impact in Bangladesh, because the country's government expenditure was invested in productive sectors which stimulated economic growth, whilst in other countries spending was allocated towards less productive activities. Lastly, this study found that FDI was another contributing factor to GDP in a condition where entrepreneurs paid bribes to government officials to reduce the time spent in que to obtain business licences or contract approvals. In contrast, FDI was less significant in Bangladesh and Tajikistan due to their ranking of high-level corruption increased uncertainty for foreign investors and that in turn negatively affected the business climate of these countries. Overall based on the provided evidence, it appears that corruption is not always necessarily a factor that inhibits economic growth in all country contexts.

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