An integrated corporate governance framework for enhancing economic growth: Evidence from Sub Saharan African countries

MARTHA MATASHU

21973539

Thesis submitted in fulfillment of the requirements for the degree *Doctor of Philosophy (PhD)* in Business Management presented to the Graduate School of Business and Governance at the North-West University, Mafikeng Campus

Supervisor: Prof Wedzerai S. Musvoto

December 2016

NORTH-WEST UNIVERSITY
YUNIBESITI YA BOKONE-BOPHIRIMA
NOORDWES-UNIVERSITEIT

It all starts here ™

Acknowledgements

This journey would have not have been possible if it was not for the Almighty Jehovah who gave me good health and strength during this study. I would like to acknowledge and thank the contribution of the following persons in the completion of this thesis.

I acknowledge and extend my sincere gratitude to my supervisor, Professor Wedzerai S. Musvoto for the guidance, positive attitude, enthusiasm and wisdom during this study. The completion of this study would not have been possible if it was not for the encouragement, motivation, mentorship, assistance and feedback that he gave on time.

I also would like to thank Dr Energy M. Sonono for assisting with statistical analysis of this work. I am also thankful to Dr Muchativugwa L. Hove for language editing. I am also appreciative of the support that I received and benefited from several colleagues and friends. I benefited from their generous support and encouragement. Last but not least, I am indebted to my family for all their love and care. I am thankful to my brother Antony who took care of all operational issues allowing me time to concentrate on this thesis.

Declaration

I, the undersigned Martha Matashu solemnly declare that this thesis is my own original work and that it has not been submitted, and will not be presented, at any other University for a similar or any other degree award.

………………………………………………………………………………

Signature

Abstract

This study sought to develop an integrated corporate governance framework for enhancing economic growth in Sub Saharan African countries. The implementation of improved corporate governance seems to have yielded insignificant or little contribution to economic growth in the region. The study through a positivist research paradigm examined corporate governance and economic growth data sets from 29 Sub Saharan African countries over seven years from 2008-2014 using hierarchical panel data modeling techniques. Four main themes emerged from the findings: corporate governance has an insignificant effect on economic growth; corporate governance will contribute about 0.01% annually to economic growth for the next 10 years;a short run relationship exist between aggregated variables of corporate governance, legal system, good governance, financial development, macroeconomic fundamentals. Fourthly, aggregated variables of corporate governance, the legal system, good governance, financial development and macroeconomic fundamentals jointly have a strong significant contribution to economic growth. Based on the findings from the panel vector autoregression models an integrated corporate governance framework for enhancing economic growth in Sub Saharan African countries was developed. This framework underscores that in order to facilitate the development of corporate governance that can cause economic growth there is a need to consider corporate governance, the legal system, good governance, financial development and macroeconomic fundamentals not in isolation but as integral parts of the country's practices and policies.

Key terms

Corporate governance, legal systems, good governance, financial development, macroeconomic fundamentals, economic growth, Sub Saharan Africa

Table of Contents

Acronyms

AfDB	African Development Bank
AMA	Arab Maghreb Union
AIC	Akaike Information criteria
AU	African Union
BIC	Bayesian Information criteria
CACG	Commonwealth Association for Corporate Governance,
CACG	Commonwealth Association for Corporate Governance,
CEO	Chief Executive Officer
CISA	Chartered Institute of Secretaries and Administrators
COMESA	Common Market for Eastern and Southern Africa (COMESA)
CR	Corporate Reporting
EAC	East African Community
EMH	Efficiency Market Hypothesis
EPS	Earnings Per Share
EU	European Union
FE	Fixed Effects
FEM	Fixed Effects Model
FEVD	Forecast Error Variance Decompositions
GCGF	Global Corporate Governance Forum
GDP	Gross Domestic Product
GIRF	Generalised Impulse Response Function
GMM	General Methods of Moments
GNI	Gross National Income per capita
ICGN	International Corporate Governance Network
IMF	International Monetary Fund
IODISA.	Institute of Directors Southern Africa
IRF	Impulse Response Function
LDC	Least Development Countries
LDSV	Least Squares Dummy Variable
LM	Lagrange Multiplier
MAIC,	Modified Akaike Information criteria
MBIC,	Modified Bayesian Information criteria
MMSC	Model Selection Criteria
NEDs	Non-Executive Directors
NEPAD	New Partnership for African Development
OECD	Economic Corporation and Development
OLS	Ordinary Least Squares
PACFCG	Pan-African Consultative Forum and Corporate Governance
PEM	Pooled Effects Model
PGCM	Panel Granger causality model

PVAR	Panel Vector Autoregressions
RE	Random Effects
ROA	Return on Asset
SAPs	Structural Adjustment Programmes
SOX	Sarbanes Oxley Act
UN	United Nations
UNDP	United Nations Development Program,
UNEP	United Nations Environment Programme
USA	United States of America
VAR	Vector Autoregression
WFE	World Economic Forum

List of Tables

List of Figures

List of Appendices

CHAPTER 1

Background and the research problem

1.1 Introduction to background of the study

The purpose of this study is to develop an integrated framework of corporate for enhancing economic growth in Sub-Saharan African countries. This has been prompted by the fact that apparently corporate governance does not lead to economic growth in Sub Saharan Africa as has been the general expectation from recent economic development policies. For example, according to several pronouncements by the Organisation for Economic Corporation and Development (OECD), (1999, 2004, 2015), corporate governance is a driver of economic growth. For this reason, there is emphasis on the promotion of corporate governance primed to achieve significant economic growth. However, in spite of this emphasis on the promotion of corporate governance by several developing countries, there has been insignificant economic growth thereby failing to meet the targeted economic growth rates.

Corporate governance is not a new concept it has been in existence since the history of the formation of the corporation. Corporate governance refers to the mechanism through which investors safeguard themselves against expropriation by insiders (La Porta *et al,* 1997). This suggests that corporate governance is an important mechanism that seeks to ensure that the corporation is run in manner that enables it to maximize wealth creation. According to the Cadbury Report (1992) the successful maximization of shareholders' wealth eventually leads to enhanced economic growth. It follows therefore from this that improved corporate governance mechanisms are expected to promote economic growth.

Considering that there has been great emphasis on the promotion of corporate governance in developing economies in particular in Sub Saharan Africa, it would have been expected that such emphasis would lead to significant improvement in both corporate governance and economic growth. However, observations from developing economies suggest that emphasis on corporate governance does not necessarily lead to economic growth and improved corporate governance. For instance, surveys for nearly 10 years by the World Economic Forum (WEF) from 2006 to 2015 indicate that emphasis on corporate governance has not necessarily led to economic growth or improved corporate governance in Sub Saharan Africa. These yearly surveys by the WEF from 2006 to 2015 analysed factors in each year that are necessary for enhancing country productivity and economic growth. In these surveys, corporate governance is identified as one of the key institutional pillars for promoting economic growth. But the salient features of the reports reveal that the current emphasis on improving corporate governance in developing countries neither leads to the enhancement of corporate governance itself nor improvement in economic growth. This suggests that either the development of corporate governance is context-dependent or corporate governance on its own does not lead to economic growth. If this is the case, it follows therefore that contextualization of corporate governance in Sub Saharan Africa is needed, including the clarification of its role in promoting economic growth.

In light of the above discussion, this study develops a corporate governance framework that could be used to enhance economic growth in Sub Saharan Africa. This study commences with defining corporate governance in section 1.2. This is followed by a global overview of corporate governance in 1.3. Section 1.4 explains corporate governance in Sub Saharan Africa while in section 1.5 submits the problem statement upon which the research is based. This is followed by research questions in section 1. 6. Research objectives are outlined in section1.7, and then followed by justification for the study in section 1.8. The structure and scope of the study is provided in section 1.8.

1. 2 Defining corporate governance

Several authors have noted that the concept of corporate governance has in recent history gained increased attention. According to studies by Claessens and Yurtoglu (2013) and Solomon (2011) the increasing attention on corporate governance has been as a result of increased corporate failures and financial crises in recent years. Corporate governance prevents corporate failure and financial crises. This is because if its principles are adopted and implemented correctly by an organization they are expected to enhance the integrity of the operational systems in an organization in safeguarding the interests of all stakeholders. For example, according to La Porta *et al* (1997), corporate governance is a mechanism through which investors safeguard their interests in an organization against expropriation by insiders. It can therefore be inferred from this definition that corporate failure and financial crises result from the failure of this mechanism to safeguard the interests of investors against insiders. It thus follows that if the corporate governance systems have integrity, then the organization has a higher chance of survival thereby sustaining economic growth. Furthermore, David and

Guler (2010) also argue that corporate governance is a mechanism used to coordinate the relationships among shareholders. This definition suggests that corporate governance is a mechanism for unifying the interests of the majority of stakeholders in an entity. If this is the case, it also follows that corporate governance ensures its survival by aligning the different interests in an organization.

Corporate governance is expected to enhance the economic efficiency of companies and economic growth through responsible administration and management of resources. According to Keasey *et al* (1997), corporate governance leads to improved effectiveness and efficient company operations by providing clear structures, processes, cultures and systems that must be followed in order to align the interests of stakeholders in pursuit of the corporate objective. This means that the resources injected by investors into the company must be used efficiently to pursue the objective of the corporation without any form of mismanagement or maladministration that undermines the use of the company's resources. Jensen and Meckling (1976) and Fama and Jensen (1980) highlight the need for internal governance mechanisms that ensure the survival of the corporation by safeguarding investors' resources from expropriation by management or those controlling the company. Fama and Jensen (1980) points out that, mechanism that control and monitor the action of management are required to ensure that decisions that are taken by management lead to the survival of the company. This suggests that, corporate governance is necessary for enabling the company to create wealth and survive into the future. For the most part, it can be reiterated that, the survival of the corporation is balanced on the edge of a knife with which corporate governance minimizes the internal and external expropriation of investors' resources. In other words, the extent to which there is corporate governance determines the overall performance of the company.

Tricker (1984) describe corporate governance as a mechanism that provides overall direction to the organization in terms of controlling and regulating managerial behaviour in order to ensure accountability and attainment of legitimate interests and rights of the shareholders. This definition indicates that corporate governance through strategic decision making allows the company to generate wealth and maximize overall company performance. In other words, maximization of shareholders wealth is dependent on the ability of corporate governance to formulate, implement and evaluate strategic decisions. It also highlights that the nature of strategic decisions that corporate governance makes should be centered on the need to align the legal rights of the shareholders and the moral obligations of the company to satisfy the legitimate needs of the stakeholders. In support of this view, Keasey (1997), La Porta *et al* (1997) and Shleifer and Vishny (1997) explain that corporate governance by promoting increased accountability and transparency to shareholders and stakeholders it ensures that decisions that are taken and implemented in the company are in the best interests of the shareholders. This entails that in the absence of corporate governance it might be impossible for companies to generate value both in the short or long run and ultimately to survive. It can therefore be inferred that the overall performance of the company, its survival and contribution to economic growth is dependent on the level of adherence to corporate governance principles.

Pursing this further, the OECD (1999, 2004, 2015) gives emphasis to the idea that corporate governance is a key element for ensuring economic efficiency and economic growth in any economy. This emphasis implicitly suggests to countries that economic growth is attainable in any economy if there is full implementation of corporate governance principles and practices in all individual companies within a country. It can be assumed that, economic growth is dependent on corporate governance. Akinboade (2003) as well as the Standard and Poor (2008) explain that, the quality of corporate governance at firm level reflects the level of investor protection provided by the firm. This means that corporate governance system within an individual company is a major determinant of not only the performance of the company but also influence the attitude and confidence of the investors about the company. It can be argued that the way a company is perceived to be governed determines its reputation and this has influence on its abilities to create wealth and survive Inferences can be drawn that the reputation that a company creates through its corporate governance has influence on its different stakeholders such as investors, customers and suppliers.

The OECD (1999, 2004, 2015) further describes corporate governance as a set of relationships between a company's management, its board, its shareholders and other stakeholders. This definition is related to the stakeholder's approach in that it underlines the need for corporate governance to ensure accountability and responsibility towards multiple stakeholder interests. This description also highlights that, the essence of an effective corporate governance system that leads to economic growth is one that upholds the legitimate and legal rights of the shareholders and the interest of the stakeholders. In support of this view, Okeahalam and Akinboade (2003**)** define corporate governance as a mechanism concerned with creating a balance between economic, social and individual goals of the firm whilst ensuring efficient use of resources, accountability in the use of power and stewardship and aligning the interests of individuals, corporations and society. This definition views corporate governance as means to an end and not an end in its self. This implies that, corporate governance is a useful commodity that enable the generation of shareholders wealth in the company to lead to the maximisation of the social wellbeing of the society as whole. To sum up, this suggests that the existence of corporate governance in companies has important implications at micro and macro level. In this regard, corporate governance can be seen as inevitable for ensuring company performance and overall economic growth in any economy.

Corporate governance has influence on the way a company is financed hence it has implications on corporate finance. Pandya (2011) holds the view that corporate governance is responsible for laying down the framework for creating long-term trust between companies and the external providers of capital. This description portrays corporate governance as a risk management tool. That is, corporate governance mechanisms provide risk assurance to shareholder equity and debt capital providers. This means that external providers of capital are assured of repayment of their debt if the company balances the legitimate rights of debt providers with those of the stakeholders. It can therefore be assumed that, the provision of debt or any other sources of capital hinges not on hope or faith but rather on evidence of the investor protection that is provided by corporate governance at an individual company level. Okeahalam and Akinboade (2003**)** underscores that the quality of governance is of absolute importance to shareholders as it reflects to them the level of assurance that the individual company is being conducted in a manner that adds shareholder value and safeguards its assets. If corporate governance is viewed as a means to promote investor protection, it means that it is a necessity.

The King Report (2016, 2009), states that "good corporate governance is essentially about effective, responsible leadership. Responsible leadership is characterised by the ethical values of responsibility, accountability, fairness and transparency." It can be deduced from this view that, corporate governance mechanisms should be grounded in ethical behaviour. It means that corporate governance must balance the pursuit of economic objective and ethical obligation of the company. According to the OECD (2015) a corporate governance framework that enhances the integrity of the operations of the company is characterised by compliance to ethical and good practices. The OECD (1999, 2004, 2015) also elaborates that, ethical corporate governance has several benefits to the company and economy at large such as improving the confidence of domestic and international investors, reducing the cost of capital and ultimately inducing more stable sources of financing. This suggests that, corporate governance systems should balance its economic aspirations and ethical aspects in order to enable a company to create corporate sustainability. By the same token, Okeahalam and Akinboade (2003) summarises the key benefits of corporate governance as: (1) Attracting investors both local and foreign and assuring them that their investments will be secure and efficiently managed, and in a transparent and accountable process. (2) Creating competitive and efficient companies and business enterprises. (3) Enhancing the accountability and performance of those entrusted to manage corporations. (4) Promoting efficient and effective use of limited resources. It can be inferred from this summary that corporate governance has important implications at both micro and macro level in any economy. Judging by the nature of the advantages of corporate governance, one can see why the belief that corporate governance is a driver for economic growth is widespread across the world.

Moreover, several authors such as Keasey *et al* (2005), Crittenden and Crittenden (2013, Solomon (2011) as well as Pandya (2011) have also emphasized the importance of implementing corporate governance mechanisms in an organization as a way of increasing its chances of long term survival. However, although good corporate governance is seen as a solution to corporate failure and thereby enhancing economic growth, there are several problems associated with adopting the principles of this concept. Initially, there are many perspectives from which the principles of corporate governance may be adopted, making it difficult to understand which one of those perspectives is suitable in a given situation. For instance corporate governance is popularly viewed from the agency theory. According to Jensen and Meckling (1976) the agency theory of analysing corporate governance focuses on the contractual relationships between the principal and the agent. The agency theory associates corporate governance matters with the problems that arise from separation of control and ownership. In this regard the agency theory sees the role of corporate governance as to focuses on resolving problems caused by diverging interests of the principal and the agent, and the fact that the principal and the agent may have different attitudes to risk. This perspective is supported by Rediker and Seth (1995) who argue that corporate governance mechanisms are instituted to limit managerial discretion and channel their effort towards the goal of profit maximization. This view, however, is narrow in the sense that by focusing only on managing the principal- agent relationship, it ignores other environmental and organizational factors that may have an influence on the profit maximization goal of the principal.

The organizational theory hold is another perspective from which corporate governance is viewed. The organisational theory that hold the assumption that corporate governance practices should be adapted and implemented as a contingency strategy when the need arises in the company. Demsetz and Lehn (1985) explains that the implementation and adaption of corporate governance mechanisms arises only when there are unforeseen factors in the firm or the external environment whose interests have an effect on the operation of the firm. Cyert and March (1963) clarify that, the organizational theory see the organization as a coalition of various parties who have different interests in the environment. This clarification indicates that corporate governance mechanisms are used only when there are needed to balance the unforeseeable multiple stakeholders conflicting interests. Demsetz and Lehn (1985) further expound that, the implementation of a corporate governance mechanism is dependent on the cost and benefits that arise from the specific mechanism. It implies that in the organizational theory assumes corporate governance mechanisms should be implemented partially and sparingly that is only as to when the need arises. It can be argued that the organizational theory perspective is likely to lead to weak corporate governance systems because it promotes its limited implementation.

Corporate governance is also viewed from the shareholder perspective. The shareholder theory believes that the corporation exists for the sole objective of maximizing profit for the shareholders (Friedman, 1954). The shareholder theory believes that the corporation generates wealth by taking into consideration only the needs of the shareholders and immediate stakeholders. Corporate governance, from this perspective, emphasizes management's accountability to the company and its shareholders. Under this framework corporate governance disregards the effects that may arise from other dimensions that affect activities and operations of creating value for the shareholder which should also be governed.

The stakeholder theory, advocates the view that there is need for management of the interests of multiple stakeholders (Freeman, 1984). Even though the stakeholder theory seems to provide a broader understanding of corporate governance on economic growth, it has faced several criticisms. Benn *et al* (2009) criticized the stakeholder theory for failure to provide a framework upon which to operationalize the multiple relationships that affect the company. The absence of a framework upon which to explain how different interests should be satisfied by the company presents a challenge in terms of identifying the needs that the organization must take into account and the priorities that must be followed. For instance Watson (2013), Waweru (2014) and the United Nations Development Program, UNEP (2014) observe that companies lack a general understanding and are confused about the applicability of the stakeholder theory in corporate practices and operations. The UNEP, (2014) further expounds that the stakeholder theory is regarded as being in conflict with the objective of maximisation of profit. It is evident that the stakeholder approach to corporate governance creates some misunderstanding, ambiguity and lack of certainty in terms of how accountability to multiple needs leads to the maximisation of wealth for shareholders.

The concept of corporate governance is also conceptualized from the stewardship's theory. Dulwick and Herbert (2004) points out that, the stewardship theory is based on the assumption that in the corporation conflicts of interest do not exist between the owners and management if there is an appropriate organizational structure that enables activities and interests to be coordinated effectively and efficiently. The stewardship theory, unlike the agency theory, holds the perception that managers are honest, trustworthy stewards and they are not opportunistic thinkers and they have the desire to pursue the interests of shareholders and add value to the company (Anderson and Baker, 2010, Donaldson and Davis 1991, Clark, 2004, Ramos and Olla, 2014). Corporate governance under the stewardship theory focuses on the positive view of the human attitude. It also highlights that corporate governance arrangements of the firm should focus on ensuring that an effective corporate governance structure that enhances effective decision making and organization of activities is in place.

Unlike the agency theory both the resource dependence and social capital theory focuses on the way the firm uses its resources to influence its own performance. The resource dependence theory believes that the organization should use its resources to create networks through which it can influence its external environment (Tricker, 2009). There are ways through which an organization can create strategic links with its external environment, for instance by selecting outside board members as well bringing in links to other important resources in the environment (Daily and Dalton, 1993). If corporate governance is a social science as outlined in Ryan *et al* (2002) then it implies that the adaption and implementation of its principles are dependent on the social dynamics in which it is it applied. Furthermore, it is apparent from the analysis of the definitions of corporate governance as well as the theories that underpin corporate governance that they differ depending on the context from which they were conceived. This means that in order to understand the effects of corporate governance on economic growth it is necessary to understand the context in which the principles of corporate governance are applied. In light of the discussion above, it may be argued that either corporate governance has not been properly conceptualized or the adoption of particular corporate governance theory as well as the effectiveness of its principle is dependent on particular places and factual occurrences. Corporate governance principles are rooted in the finance discipline. According to Ryan *et al* (2002) the accounting and finance discipline is generally accepted as social scientific. This means that scientific standard principles are applied to social phenomenon. Consequently, it follows that the adoption and effectiveness of the principles of a corporate governance theory is dependent on the context in which they are applied.

1.3 A global overview of corporate governance

Corporate governance gained prominence internationally after a series of corporate failures and financial crises that were witnessed in countries across the world during the recent years. This importance is demonstrated by the establishment and publication of several codes of corporate governance principles such as Cadbury Report, King Report, OECD, International Corporate Governance Network (ICGN) and the European wide code of practice. The various codes highlight that internal corporate governance practices are important for strengthening management accountability and transparency to shareholders and stakeholders. Key corporate governance practices include: responsibilities of the board, disclosure and transparency, shareholders' rights and equal treatment of shareholders (see Cadbury Report, 1992, King Report, 2016, 2009, 2004, 1992, OECD, 2015, 2004, 1999). The various codes are based on the assumption that the implementation of corporate governance practices allows the corporation to generate wealth for stakeholders through increased accountability and transparency. Building on the belief that corporate governance can lead to economic growth, codes are ubiquitous hence at no fee companies and countries can adapt corporate governance principles and practices to meet their unique circumstances. According to Solomon (2011), there is a notable improvement in the implementation of corporate governance in countries in Europe, America, Asia and North America partly due to adherence to codes of good corporate governance practices and principles available in individual countries or regional blocks.

As a practical matter, various codes in developed economies were crafted on the basis of country specific needs. For instance the Cadbury Report, Sarbanes Oxley Act (SOX) and European Commission of the European Union (EU) were based on the assumption that increased accountability and transparency to the providers of capital are required to strengthen investor's protection at firm level and ultimately enhance economic welfare in any economy. This indicates that developed economies only emphasised the need to strengthen internal corporate governance systems in individual firms in order to promote economic growth through investment. It follows that perhaps, the corporate governance framework that were established in developed countries did not need to incorporate other factors that influence the development of corporate governance because enabling environment that promote corporate g. If that is the case, it can be argued that codes were able to promote corporate governance in developed countries because an environment that allows corporate governance to thrive was already in existence.

It is important that codes of corporate governance should be aligned to the model of corporate governance that is in existence in a specific country. For instance, Paredes (2004) and Gustavson et al, (2011 argue that the Anglo American model might be effective in generating wealth and economic growth in developed economies, but it might have harmful effects on the economy if it is imported to the developing world such as Africa without taking into consideration the differences in the contexts. This context dependence of the adaption of corporate governance is apparent in Sub Saharan Africa where, in spite of years of emphasis on the importance of adopting good corporate governance principles as a way of enhancing economic growth, there has been very little or insignificant change in the corporate governance indicators as well economic growth indicators for decades. It can be deduced from these global trends that Sub Saharan Africa needs to develop its own codes of corporate governance like other regional blocks such as the European Union. Such a code would need to identify not only good practices and principles of corporate governance but also the factors that influence the development of corporate government to the end that it can contribute to economic growth in the region.

Compliance to corporate governance in most countries is on a voluntary comply or explain basis with the exception of the United States of America where it is a legal requirement. Paredes (2004) argue that the voluntary approach is applicable to countries that use the Anglo American model and not in developed countries. Paredes (2004) suggest that, voluntary corporate governance approaches were only appropriate in environments where institutional variables that make the market based corporate governance systems to function well such as enabling legal laws, corporate law and developed capital markets are already in existence. In this regard, he argues further that enabling factors such as legal laws, corporate law, and developed capital markets that are already in abundance in developed economies are almost nonexistent in developing countries. It can be established from this argument that the availability of codes and expectations that companies would voluntary comply with principles of corporate governance is not adequate to support the development of corporate governance in developing countries. Okeahalam and Akinboade (2003) and Paredes (2004), explain that developing countries lack institutional systems that support the development of corporate governance. These views suggest that contextual factors need to be considered first if the implementation of corporate governance is to lead to economic growth. Okeahalam and Akinboade (2003) suggest that legal systems are likely to be weak unless countries undertook legal reforms to align legal systems to meets their economic needs. Similarly, Paredes (2004) recommends that a mandatory rather than voluntary approach is required in developing countries because they do not have strong legal regulation and legalisation as well as financial markets that support compliance to corporate governance principles. These arguments and recommendations all suggest that, certain conditions that facilitate effective corporate governance systems might not be workable in developing countries where such conditions do not exist. It can be argued that the contextual environment is an antecedent for developing corporate governance that could lead to economic growth in any economy.

Today in the world corporate governance systems are categorized into either the Anglo – American or European continental approach. The models are classified based on the dominant pattern of corporate ownership. The Anglo American model is associated with a system where the finance and corporate governance of the company is controlled by managers on behalf of many shareholders who are spread across who own the company (Solomon, 2011). This means that a large percentage of long term finance is shareholder’s equity and not debt like in Germany and Japan (Rwegasira, 2000). The Anglo American is also called the market based system and it is commonly used in UK and USA. According to Dallas (2004) the major corporate governance problem in these systems is characterised by challenges of dispersed ownership and control, lack of board effectiveness and independence, weak internal control and risk management, excessive compensation and short termism arising from the capital market scrutiny. Corporate governance under Anglo American models such as the Cadbury Report and the Sarbanes Oxley Act (SOX) view the primary objective of corporate governance as promoting accountability and transparency so as to achieve enabling maximisation of wealth creation. Despite sharing similar corporate governance models, compliance under SOX is compulsory whilst it is voluntary in many other jurisdictions. This further demonstrates that, even though there can be similarities in corporate governance patterns of countries, a country specific context approach is required in order to facilitate the development of good corporate governance systems.

The insider system is the other category through which corporate governance characteristics can be understood. According to Solomon (2011), the insider corporate governance system is one where the company's finance is funded by insiders and it is characterized by concentrated ownership unlike if it is financed by the outsider then it will have dispersed ownership. The insider corporate governance systems are also known as continental European corporate governance systems. This model of corporate governance is commonly used in European countries that have civil law origin like Sweden, Netherlands and Switzerland. The European continental model is characterized by concentrated ownership, pyramidal ownership, industrial group and bank holding and this plays an active role in controlling and monitoring management. Rwegasira (2000) explains that, the concentrated systems are also characterized by bank based corporate governance systems. He explicates that, banks are the main sources that provides long term finances and as a result, banks take the responsibility of representing the interest of the other entire stakeholders on the supervisory board. Keasey *et al* (1997) highlights that, for example in Japan the wealth creation is dominated by large groups of companies that are interrelated (*keiretsu*). Under this corporate governance model, there is an interdependent supplier and subcontracting relationship that exists hence monitoring and controlling of management take place within each group. This demonstrates that corporate governance systems, procedures, structures and practices are different because of country specific differences. This suggests that the effectiveness of corporate governance is dependent on the extent to which it has been tailor-made to address the needs of each specific context.

There is also another corporate governance system that is popular in emerging countries. Dallas (2004) observed that most countries in the East Asian block fall under the category of insiders dominated model. According to Solomon (2011) the shareholder members under the insiders' model might be family members, blocks shareholder ownership and banks. It means that under this model the agency problem is not prominent because management and the owners are the same people. Solomon (2011) further points out corporate governance challenges in this model are likely to arise from the lack of separation of ownership from control. Dallas (2004) and Solomon (2011) notes that corporate governance problems such as; excessive power, abuse of power, lack of transparency, misuse of funds, unequal ownership and unequal treatment of minority shareholder are likely to be common under this system. Solomon (2011) highlights that, the East Asian region is an example of a region that is dominated by the insider model and it is characterized by a weak corporate governance systems and weak legal systems that overlook protection of minority shareholder. This view is supported by, Claessens *et al* (2000) who confirm that the East Asian region is prone to excessive abuse of company funds because of weak corporate governance and the absence of protection of minority shareholders. Claessens *et al* (2002) further points out that excessive abuse of power and disregard for minority shareholders largely contributed to the Asian crisis in 1997. It is evident that corporate governance is required not only in the corporate form of ownership but also in family or block of shareholder owned companies in order to prevent abuse of resources and mismanagement of finances and resources. It can be argued that corporate governance is inevitably required in any company regardless of its ownership. This is because mismanagement of resources exists in both concentrated and dispersed ownership companies.

It is important that the implementation of corporate governance should take into account country specific differences even though countries have similar corporate governance patterns. For instance, Dallas (2005) notes that whilst countries such as German, Italy and Netherlands use a broader stakeholder approach. They all use different corporate governance structures in terms of the board structure and composition of the board. In agreement, Rwegasira (2000) points out those countries such as Australia and Denmark use single board structures whilst German and Japan use a two tier board systems. It can be inferred that the context in which corporate governance is implemented plays a significant role in determining its effectiveness. According to Dallas (2004) country specific differences in corporate governance includes differences in disclosures practices and information. As an example, Rwegasira (2000) explains that the bank systems monitor the shareholders, through legalized proxy systems under which shareholders hold regularly shares on deposit at a bank and allow that bank to vote with the share held in fiduciary custody. This means that shareholders' rights in terms of voting rights are different from the American model where individual shareholders have the rights to vote or use a proxy. Dallas (2004) highlights that corporate governance problems differ with the pattern of ownership structure. Dallas (2004) explains that as an example, corporate governance under the East Asian block is characterized by inequitable minority shareholders, excessive influence of block shareholders, influence of external shareholders, lack of board effectiveness and independence, in turn all creates a high potential for expropriation. This observation demonstrates that the implementation of corporate governance in Sub Saharan Africa need to take into account country specific differences just like in emerging and developed economies. That is corporate governance in the region might be ineffective if it fails to take into account country specific differences.

Emerging markets are different from developed economies as such in terms of corporate governance they are also characterized by a different pattern of ownership and control Emerging markets are made up of countries from Asia, Latin America, Middle East and Africa in particular South Africa. According to Dallas (2004) corporate governance in emerging markets is characterized by limited separation of owners from control because it is dominated by family ownership, state ownership and financial groups. Dallas (2004) further explicates that the major corporate governance mechanism problems in this approach is dominated by influence of family blockholders, entrenchment of family in management and the board structures, lack of independent directors and weak board effectiveness. This insight further leads one to believe that, corporate governance principles are required in any economy regardless of whether it is a developed or developing economy. It can be concluded that corporate governance principles are applicable and relevant to all economies be it developed, developing, emerging or transition economies.

1.4 Economic growth in Sub Saharan Africa

Sub Saharan Africa consists of 49 of Africa's 54 countries. According to the United Nations (UN) Least Development Countries (LDC), reports for the past 45 years since 1971 indicate that 31 out of 48 of the least developed countries are from Sub Saharan Africa. This indicates that 63 % of countries in Sub Saharan Africa fall under the category of least developed economies and those outside this group fall under the upper bracket of the lower income level still. This finding corresponds with the observation of the WFE survey reports over the past 10 years since 2006 to 2015. The surveys observed that, most countries in Sub Saharan Africa continues to fall under the group of lower income countries group with the exception of Botswana, Cameroon, Côte d'Ivoire, Namibia and South Africa that are falling in the upper middle level of the lower income group. Countries are divided according to their Gross National Income per capita (GNI). The World Bank (2016) defines GNI per capita (formerly GNP per capita) as “the gross national income, converted to U.S. dollars using the World Bank Atlas method, divided by the midyear population”. GNI for example, in 2016 low-income economies is defined as those with a GNI per capita, of $1,045, middle-income economies are those with a GNI per capita of more than $1,045 but less than $12,736; high-income economies are those with a GNI per capita of $12,736 or more. Lower-middle-income and upper-middle-income economies are separated at a GNI per capita of $4,125 (World Bank, 2016). This evidence was supported by the UN World Economic Situation and Prospect Outlook (2014) report that observed that, Sub Saharan Africa continues to be the region with the largest number of least developed countries, throughout the world. All evidence considered suggest that generally most of Sub Saharan African countries fall under the lower income group level.

The issue of the low rate of economic growth in Sub Saharan Africa is a major issue of concern. This is because according to the WFE (2015) economic growth has got several effects on a country’s macroeconomic and microeconomic performance. For instance economic growth has some effect on: the current deficit, the standards of living, employment creation and alleviation of poverty. This indicates that economic growth is a subject of critical importance in any economy because it has implications at individual and macro level. In addition, the UN World Economic Situation and Prospect Outlook (2014) points out that poor economic growth is associated with several social economic ills such as high rates of poverty, inequality and unemployment. As a result, NEPAD (2016) and WFE (2014, 2015) has recommended that countries in Africa must adopt corporate governance in order to promote economic growth. This suggests that, unless countries in Sub Saharan Africa strengthen their corporate governance it might be impossible for them to improve economic development and overall social welfare.

1.5 Corporate governance in Sub Saharan African

A historical review suggests that corporate governance in most countries in Africa developed from the privatisation of stated owned companies and through dispersed ownership mechanism. According to Okeahalam and Akinboade (2003) companies in African economies were mainly owned and controlled by the state for many years until the 1980s. This suggests that the subject of corporate governance is still in its infancy stage in Africa. Adegbite and Amaeshi (2010) as well as Okeahalam and Akinboade (2003) points out that corporate governance emerged around the 1980s and early 1990s through Structural Adjustment Programmes (SAPs) that were initiated by donor and funding agencies such as International Monetary Fund (IMF) and World Bank. Okeahalam and Akinboade (2003) elaborates that, the primary aim of SAPs was to enhance economic growth through economic liberalization policies such as the privatisation of state owned companies. Presumably, SAPs as debt providers must have introduced corporate governance with the intention of enhancing the performance of companies of in developing. It follows that as a debt provider SAPs must have believed that corporate governance like in developed countries would enable companies in developing to maximise wealth creation and thereby be in a position to repay the principal debts and interest on capital or loan. This demonstrates that corporate governance in Africa might have failed to work because corporate governance principles were implemented in contextual environment that was different from that of developed economies. If this assumption holds, then it entails that corporate governance is necessary in every country but its implementation and outcomes are dependent on the context under which it is applied.

Pursuing this further, Adegbite and Amaeshi (2010) argues that the path to good corporate governance differs with country because countries are faced with different issues. In support of this view Paredes (2004) and Gutsavson *et al* (2011) caution that, the implementation of corporate governance approaches from developed economies might not work well in developing countries because of the differences in contextual factors. It can be argued that, attempts by SAPs to promote corporate governance in Sub Saharan Africa might have failed because they did not take into account different contextual environments between developed and developing economies. It can be deduced from this historical review that since corporate governance in Africa developed from privatisation the approaches required to address corporate governance might be different from those in developed economies that resonates from the agency problem that arose from dispersed ownership. For instance, Okeahalam and Akinboade (2003) mention that, one major challenge associated with the governance of the privatised companies in Africa is the interference of government in the appointment of directors. It can be inferred that government interferences in corporate governance issues in companies in Africa encroaches and undermines the implementation of the standard codes of corporate governance principles that requires that independent directors must be selected and appointed in order to promote objective decision making.

At the present moment, several international institutions such as World Bank, Global Corporate Governance Forum (GCGF), IMF United Nations Development Program, (UNDP), (OECD), and Commonwealth Association for Corporate Governance, (CACG) and many others have all attempted to promote corporate governance in Africa with the goal of promoting economic growth in the region. At regional level bodies such as NEPAD, The Pan-African Consultative Forum and Corporate Governance (PACFCG) as well as the International Fund Corporation in partnership with the Africa Corporate Governance Program (AfCGP), have all made attempts to support the development of corporate governance with the view of promoting economic growth in the region. It is important to mention that it is difficult to assess the contribution made by each individual supporting agency because some of them are no longer in existence while other are still on going and other efforts other than these mentioned here also exist.

Despite all the attempts to promote corporate governance, recent trends reveal, that corporate governance in Africa unlike in developed economies is growing at slow pace. For instance, findings from WFE survey for 10 years since 2006 to 2015 indicates that in the majority of countries across Sub Saharan Africa, corporate governance mechanism continue to be low. The survey shows that, corporate governance indicators such as disclosure and transparency, protection of minority shareholders, efficacy of the board and ethical behaviour of the firm were high in developed countries and low in Sub Saharan Africa. Furthermore, similar observations were made by Ayogu (2001), Okeahalam and Akinboade (2003) Okeahalam (2001) who found minimal existence if not nonexistence of corporate governance practices such role of directors, independence of directors, transparency and disclosure on related to financial performance, ownership, directors, remunerations and internal control systems in most companies in Africa. Moreover, these observations corresponds with the findings of the, KPMG (2008, 2011, 213) which found limited evidence of corporate reporting (CR) in the majority of companies in countries in Africa. The King Report (1999, 2004, 2009, 2016) maintains that CR is an important element of corporate governance that enhances disclosure and transparency. This suggests that there is little evidence of the presence of corporate governance that promote accountability and transparency in most Sub Saharan Africa countries. It is evident that, despite the availability of several attempts to promote the development of corporate governance in the continent, the region continues to rank low in the world. All matters discussed above, lead this study to believe that conducive conditions like those in developed countries are required in Sub Saharan Africa in order to make corporate governance work in the region. In light of this challenge facing Sub Saharan Africa, Gutsavson *et al*, (2011), Paredes (2004) as well as Steger and Hartz (2005) have all argued against the prescription of corporate governance models on countries with different social economic contexts.

1.6 Problem statement

As noted in the previous sections various codes of corporate governance such as the Cadbury (1992), OCED (1994, 2004, 2015), King Report (1992, 2002, 2009, 2016) NEPAD (2016), IMF (2016) and World Bank (2016) currently regard corporate governance as the driver of economic growth. This has led to both developed and developing countries placing great emphasis on the promotion of corporate governance. However, this emphasis yielded unexpected results with the developed countries yielding significant targeted economic growth rates while the developing countries yielded insignificant to no economic growth at all. For instance, the WFE yearly surveys for the 10 years since 2006 to 2015 observed that emphasis on corporate governance among countries in the European Union and the United States of America has led to improved productivity and competiveness in companies and this ultimately led to enhanced economic growth (see WFE, 2006, 2007, 2008, 2009, 2010, 2011, 2013, 2014) while in Sub Saharan Africa promotion of corporate governance did not result in enhanced economic growth. It appears that emphasis on corporate governance led to economic growth in the European Union and the USA and not in Sub Saharan Africa and consequently it can be inferred that the relationship between corporate governance and economic growth depends on the context in which it is applied. Therefore, it may be concluded that the variables that promote corporate governance and the relationship between corporate governance and economic growth only works under certain conducive conditions. It thus follows from this that conducive conditions for the promotion of corporate governance exist in the European Union and the USA and not in Sub Saharan Africa.

It is generally expected that corporate governance practices contribute to economic growth by enhancing overall company performance through increased transparency and accountability to stakeholders. According to the codes, corporate governance at firm level minimizes the agency problem by promoting accountability and transparency through practices such as board effectiveness, director liability, shareholder's rights, and protection of minority shareholders as well as disclosure and transparency (King Report, 2016, OECD, 2015). The OCED (1999, 2004, 2015) maintains that corporate governance enhances economic growth by attracting investment and efficient utilisation of resources through firm protection of investors that boost investors' confidence and consequently attracts domestic and local investors. According to NEPAD (2016) Sub Saharan African countries are need to attract investment so as to stimulate and sustain economic growth. This means that, the implementation of corporate governance can lead to economic growth by enabling companies to attract investment in their countries. According to Paredes (2004) the traditional corporate governance assumption was based on the context of developed economies which presupposed enabling environments in terms of institutional environment, legal systems and financial development were already in existence and yet these might exist in minimal doses in developing economics. If factors that determine corporate governance are context specific dependent as suggested by the preceding views above, it means that an understanding of the context specific factors that influence corporate governance is necessary so as to establish its effects on economic growth.

According to Afolabi, (2015) the development of corporate governance is influenced by external factors such as legal systems, good governance, financial development and macroeconomic fundamentals. This means that for corporate governance to cause economic growth in Sub Saharan Africa there should be a way that corporate governance interacts with the institutional and macroeconomic fundamentals. If there are certain conditions through which the developing economies can realise economic growth then this way is not yet known in the Sub Saharan African region. For example the OECD (2015) explains the importance of an institutional environment in terms of laws, legislation and regulation in ensuring effectiveness of corporate governance. The OECD (2015) articulates that the legal systems promote enforcement of laws and regulations that protect the rights of shareholders and stakeholders in the company thereby promoting the development of corporate governance. Furthermore, there is consensus amongst various scholars that the legal systems strengthen the protection of investor's rights and in so doing create an enabling environment that facilitates the development of corporate governance (Isukul and Chizea 2015, Shleifer and Vishiny, 1997**,** Asongu, 2015, Djankov et al., 2006, Doidge et al., 2007, Klapper and Love, 2004, Levine, 1997, Levine, 1999). It can be inferred that ensuring sound legal systems is an imperative for promoting effective corporate governance practices. However, that is not enough. This is because legal systems have to be relevant to address the needs of its society and have to be aligned to corporate governance and other internal systems in the country to ensure its functionality. For example, the legal environment which is responsible for the protection of the rights of investors, property rights, efficient operations of the legal framework and the enforcement of laws and regulations varies with country. It follows that there is need to investigate corporate governance in terms of its linkages to legal systems and economic growth in Sub Saharan Africa. This is because it is highlighted by Shleifer and Vishiny (1997) that in less developing economies and some of those in the transition phase, corporate governance appears to be non-existent. It follows that, if there is a dearth of corporate governance, it is of paramount importance to understand factors that determine and promote development the corporate governance in order to enhance economic growth.

Good governance is yet another factor that influences the development of corporate governance and its effectiveness. Isukul and Chizea (2015) found that good governance influences corporate governance by formulating rules, polices, implementation and enforcing the rules that affect corporate governance practices. This suggests that corporate governance is influenced by the certainties and uncertainties created by factors such as political stability, the absence of violence and the presence of a democratically elected government. Isukul and Chizea (2015) further points out that good governance influences corporate governance through enforcement of regulations that are related to corporate governance. Under this condition, corporate governance can be considered as context dependent since if it is influenced by the good governance in a specific country. It also indicates that although good governance can lead to economic growth, its contribution to economic growth varies with conditions of good governance.

In a similar way, financial development is believed to affect the implementation of corporate governance and in turn influences the overall economic efficiency of a country. According to the World Bank (2015) financial development shapes corporate governance by either enabling or constraining the company's access to capital from domestic and international investors. This means that financial development can either provide an opportunity or obstacles for the development of corporate governance. For instance Paredes (2004) explained that capital market promotes the implementation of corporate governance practices by making compliance to corporate governance practices a listing requirement for a company to be listed and to remain as such. There is evidence that financial development has significant influence on corporate governance (Asongu, 2015, Djankov *et al*, 2006, Doidge *et al*, 2007, Klapper and Love, 2004, Levine, 1997). This confirms the view that financial development conditions determine the development and effectiveness of corporate governance. Furthermore, La Porta (1997, 1999, 2000) observes that financial development varies with the origin of the legal laws that is either common or civil law. This implies that an understanding of the influence of the legal system on the development of corporate governance is necessary in order be able to create corporate governance systems that can promote economic growth.

Moreover, there is an association between macroeconomic fundamentals and corporate governance. According to Visconti (2011), macroeconomic fundamentals have a significant effect on profitability and cash flows of the company and in turn all these influence corporate governance. Corporate governance is expected to flourish and produce expected outcomes if there are supportive macroeconomic fundamentals. Nhuta (2014) found that corporate governance practices differ with macroeconomic stability. Since macroeconomic fundamentals vary with country, it can be expected that the effect of corporate governance on economic growth differs with the stability of the macroeconomic fundamentals.

In light of the fact that the variables that affect the implementation of corporate governance were applied in different contexts and yielded different results, it may be deduced that the way the variables influence corporate governance is context dependent. It means therefore that the environmental conditions in Sub Saharan Africa are different from those in Europe and affect the implementation of corporate governance differently. Furthermore, in view of the fact that corporate governance is a social science (Ryan *et al*, 2002), it follows that the implementation of corporate governance is dependent on the social relationships that exist in that particular society. Hence, the implementation of corporate governance is dependent on particular places and factual occurrences. It may therefore be concluded that the application of corporate governance principles in different social settings cannot be expected to yield identical results. If the implementation of corporate governance in different settings cannot be expected to yield identical results, then it is important to understand how the relationships between corporate governance and the variables that affect its implementation are influenced by the nature of that particular social setting.

All matters discussed above point out that corporate governance is only just but part of the system hence the way it works and the results that it produces are context dependent. According to Weber (2011) a phenomenon is context-dependent where the functionality and effectiveness of its properties are determined by the context in which it is applied. This implies that the functionality of elements and outcomes of the phenomenon are determined by the factors in the surrounding systems. Viewing corporate governance as a context dependent social phenomenon means that the functionality and outcomes of corporate governance are dependent on the dynamics of the systems in which it exists. That is to say, the existence of corporate governance and its outcomes is determined by the interaction of its internal components with subsystems in the system and the broader external environment. It can thus be argued that corporate governance could lead to economic growth but the ability to create economic growth is dependent on the context in which it is implemented.

If, according to the WFE yearly surveys for the 10 years since 2006 to 2015, the implementation of corporate governance in Europe and the United States of America yielded different results from Sub Saharan Africa, then it means that the relationship between corporate governance and the variables that affect the implementation is different in these different regions. In light of the aforementioned the problem being investigated in this study is to determine the nature of the relationships between corporate governance and the variables that affect its implementation in Sub Saharan African countries and to develop a framework for corporate governance that could be used to enhance economic growth in this region.

1.7 Research questions

The following are the research questions that underpin the research problem under investigation in this study:

i. What is the nature of the relationship between corporate governance and economic growth in Sub Saharan African countries?

ii. Can the inclusion of legal system which consists of legal rights, property rights, efficiency in legal systems and investor protection have an influence on the effect of corporate governance on economic growth in Sub Saharan African countries?.

iii. Does the incorporation of good governance represented by indicators such as voice and accountability, political stability, government effectiveness, regulatory quality and control of corruption influence the effects of corporate governance in economic growth in Sub Saharan African countries?

iv. Does the inclusion of financial development influence the effect of corporate governance in economic growth Sub Saharan African countries?

v. Do macroeconomic fundamentals have influence on the effect of corporate governance on economic growth in region?

vi. Can there be short run as well as causal relationships, between corporate governance and economic growth?

vii. What corporate governance framework could enhance economic growth in Sub Saharan African countries?

1.8 Research objectives

The research objectives flowing from the research questions above seek to:

i. Establish the nature of the relationship between corporate governance and economic growth in countries across Sub Saharan Africa.

ii. Investigate whether the inclusion of a legal system which consists of legal rights, property rights, efficient legal system and investor protection have influence on the effect of corporate governance on economic growth in Sub Saharan African countries.

iii. Establish whether good governance incorporation of elements represented by indicators such as voice and accountability, political stability, government effectiveness, regulatory quality, control of corruption have influence on the effect of corporate governance on economic growth in Sub Saharan African countries.

iv. Investigate if the inclusion of financial development has influence on the effect of corporate governance on economic growth in countries in the region.

v. Examine if macroeconomic fundamentals have influence on the effect of corporate governance on economic growth in region.

vi. Examine whether there is a short run as well as a causal relationship between corporate governance and economic growth.

vii. To develop a corporate governance framework that can enhance economic growth in Sub Saharan African countries.

1.9 Justification for the study

The current research fills the gap in literature by examining the nature of the relationship between corporate governance and economic growth in countries across Sub Saharan Africa. At the present moment, comparative research on the relationship between corporate governance and economic growth remains scarce in Sub Saharan African countries. Studies that focus on comparative corporate governance in Sub Saharan Africa are far apart. Of the few comparative corporate governance studies that exist such as those by scholars like Shleifer and Vishiny (1997), La Porta, 1997, Doidge *et al* (2006) and Djnakov (2008) all focused on developed countries. These studies, by overlooking countries in Sub Saharan Africa, cannot be generalised to the region. This is because the context of Sub Saharan Africa is different from that of developed economies. According to Negash (2008), empirical and theoretical evidence that explain the relationship between corporate governance and economic growth remains absent in Africa. CIPE (2002) point out that the limited evidence on the continent has led practitioners, policy makers, and policy recommendations to be drawn on evidence drawn from developed economies. Policies derived from studies based on developed economies might be of limited relevance, use and applicability to countries in Sub Saharan Africa. This shortcoming in literature further justifies the need to conduct this study because it focuses on corporate governance and economic growth in Sub Saharan Africa as a developing economies context. This study is important because it has the potential to influence policy makers, practitioners and future studies interested in the corporate governance and economic growth in Sub Saharan Africa.

Sub Saharan Africa needs a framework for corporate governance in order to enhance corporate governance and economic growth in countries in the region. Munisi *et al* (2014), Adegbite and Amaeshi (2010) and Gutsavson *et al* (2011) observed that the legal, regulatory and institutional environment in Sub Saharan Africa is weak to support the development of corporate governance. In order for countries in Sub Saharan Africa to promote corporate governance with the view of enhancing economic growth, it is of critical importance that the countries create an enabling environment first. In addition, the region is plagued by weak governance as reflected by high levels of corruption, ineffective policy formulation and implementation (Okeahalam, Akinboade 2003). Moreover, Ayogu, 2001, Okeahalam, Akinboade 2003, Okeahalam, 2001 and WFE (2011, 2012, 2013, 2014, 2015) found that individual corporate governance mechanisms such as disclosure and transparency, effectiveness of the boards continues to be low in the region. Whilst there has been emphasis on the challenges facing the region, efforts to develop a conceptual framework that explains the nature of the relationship between corporate governance and economic growth for enhancing economic growth for Sub Saharan Africa has been limited. It is therefore important to conduct this study because it aims to develop a framework of corporate governance for enhancing economic growth in Sub Saharan Africa. The framework identifies factors that must be in place first in order to create appropriate conditions that can enable the development of corporate governance such that it can contribute to economic growth.

This study has potential implications for policy makers involved in corporate governance and economic growth. This is because at the present moment, in Sub Saharan Africa the implementation of corporate governance is hindered by the absence of a supporting institutional and macroeconomic environment. Ayogu (2001) found that weak institutional environment and corruption undermined the implementation of corporate governance in Africa. Okeahalam, Akinboade (2003) confirms that in Africa institutions lack the capacity to develop an enabling institutional environment that promotes economic growth. Furthermore, practitioners globally are faced with the challenge of making strategic decisions and policies about corporate governance issues (see Boer, 2013, OCED, 2012, Shrives and Brennan, 2014). Judging by these findings, beneficiaries of this study incudes; economic development insititutions, legal, regulatory, legislation and corporate governance bodies such as AU, Southern African Development Committee (SADC), IFC and NEPAD King Committee and

Institute of Diretors Southern Africa (IODISA). This is because this study identifies factors that must be controlled and monitored in order for corporate governance to thrive and nurture economic growth. Such an understanding may influence policy, practitioners and other decision makers' understanding of the environment that allows corporate governance to drive economic growth. Moreover, this study helps in identifying weaknesses in current practices and draws recommendations for improving the implementation of corporate governance.

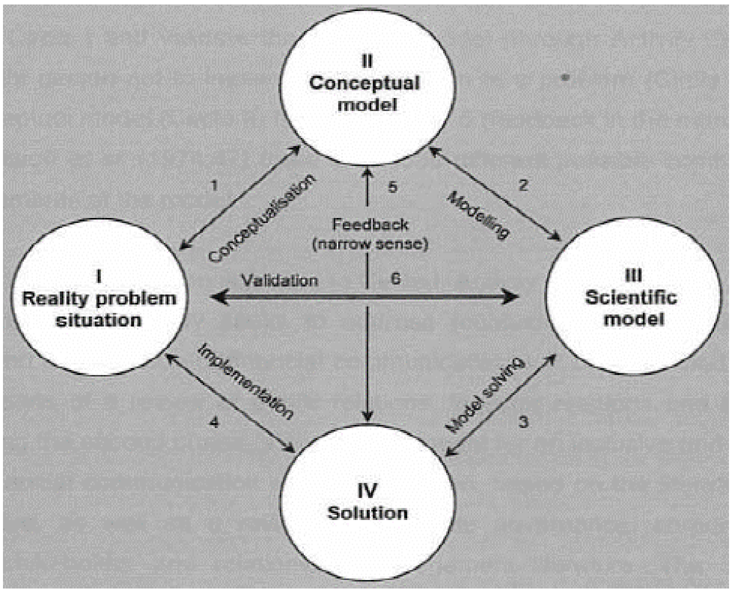
The lack of economic growth in the region prevails in a background where there is high rate of unemployment and poverty. In addition, empirical evidence shows that efforts to promote corporate governance in countries across Sub Saharan since the 1980s and 1990s to date have not yet yielded desired outcomes. For instance, WFE (2011, 2012, 2013, 2014, 2015) observed that in Africa, corporate governance has not yet made any major contribution to economic growth for many years. Whilst there is little evidence that corporate governance could lead to economic growth in Africa there are continued calls to implement corporate governance in the continent. At the present moment, the NEPAD (2016, UN World Economic Situation and Prospect Outlook (2014) and WFE (2013, 2014) have recommended that countries in the region should implement corporate governance in order to promote economic growth. Similarly, Okeahalam, Akinboade (2003) points out the adaption of corporate governance has the potential to improve economic growth in the continent. Although there is increased demand for the adaption and implementation of corporate governance, there is no discussion about the model of corporate governance for Africa. Gustavson *et al* (2010) argues that Anglo-American model might not be appropriate for Sub Saharan Africa. This study is aware that a conducive environment like those in developed countries cannot be developed in sub Saharan African countries overnight. In this regard, findings from this study could outline the dimensions that create conditions for corporate governance that would bolster significant positive contributions to economic growth in the region.

1.10 Scope and structure of the study

The scope and structure that this study follows is explained by the systems view of problems solving model proposed by Mitroff in 1974. Musvoto (2008) and Koornhof (1998) used the Mitroff model in exploratory studies in finance and accounting as social science phenomenon. Following such studies this study explores corporate governance as a social science. The

Mitroff systems view of problem-solving model in this study is used to demarcate the scope, structure and research methodology that will be followed in this study. The scope of this study is limited to investigating the nature of relationship between corporate governance and economic growth in Sub Saharan Africa and to further develop a framework of corporate governance for enhancing economic growth. A panel data analysis of corporate governance, legal systems, good governance, financial development, macroeconomic fundamentals and economic growth from 49 Sub-Sahara Africa countries for a seven year period from 2008-2014 was conducted to achieve the objectives of this study.

Figure: 1 On managing science in the systems age: Two schemes for the study of science as a whole systems phenomenon



Source: Mitroff, I. I., Betz, F., Pondy, L. R. & Sagasti, F (1974)

1.10.1 Reality of the problem

The Mitroff model identifies four key sub systems of scientific activity which could be followed to systematically study and solve a problem. The Mitroff model means that research could start at either circle 1, 11, 111, 1V; it actually does not have a start or end point. This study has already commenced with circle 1 that involves description of the research problem under investigation.

1.10. 2 Conceptual model

Conceptualisation is process 1 that lies between circle I and II. According to Mitroff *et al* (1974) the conceptual model identifies the set of variables that define that nature of the problem and the extent to which could be solved. In this study, the natures of problems are solved at macro level. It implies that the conceptual framework developed in this study identifies and explains variables at micro and macro level that determine corporate governance and its effects on economic growth.

1.10.3 Modelling and scientific model

Developing a scientific model is activity III and it follows after the conceptual model has been established. Musvoto (2008) describes a scientific model as a set of either qualitative or quantitative relationships which represent relevant features of the reality under observation. In this study, econometric models that explain the relationship associated with determinants of corporate governance and its role in economic growth are specified.

1.10.4 Validation of scientific model

The reality of the problem is used to test the validity of existing scientific explanations of the modern world. This aspect is depicted in the Mitroff model by the movement of the arrow 6 between circle I and circle III. This process is comparable to the conventional research paradigm that mostly focuses on empirical validation or hypothesis testing of existing models or theories. Feedback arrow 6 between circle III and I and the movement of arrow I between circle I and II shows that the validation of scientific model can lead to a conceptualisation of the conceptual model that explains the reality of the problem situation. Feedback arrow 6 between I and III and movement between arrow 3 between circle III and circle IV indicates that validation of scientific model can also lead to modelling of solution that can be implemented to solve the observed problem situation. The Mitroff model reinforces rigour of research and enables the solving of complex real problems.

1.10.5 Stage IV Solution

Circle IV consists of solutions where two key activities can be performed namely modelling the solution of the conceptual model or implementing the solution to solve the identified problem. Activity 5 represents feedback to the problem solving that is circle I, III and IV. This is demonstrated when the goal is to arrive at better scientific solutions. This study ends with activity in circle III because the implementation of the model developed in this research is beyond the scope of this study. The proposed study structure following the Mitroff model is as follows:

1.11 Chapter outline

Chapter 1: Introduction to the study

In this chapter the introduction was provided, definition and conceptual analysis of corporate governance and global overview of corporate governance were discussed. Thereafter, the economic growth and corporate governance of Sub Saharan Africa was given as a background to the research problem and subsequently a statement of problem, research questions and objectives were presented. A justification for the study, scope and structure were given and in conclusion the study chapter outline was provided.

Chapter 2-3, in line with scientific research related to activity II, focus on conceptualisation and the conceptual framework.

Chapter 2:

Theoretical framework for determinants of corporate governance and economic growth

This chapter focuses on literature review to identify antecedent research into corporate governance and economic growth. It further analyses corporate governance and economic growth theories in order to understand the principles underpinning antecedent researches into corporate governance and economic growth. This chapter lays the foundation for developing a conceptual framework for determinants of corporate governance and economic growth in Chapter 3.

Chapter 3 A conceptual framework for determinants of corporate governance and its effects on economic growth

This chapter presents the proposed conceptual framework for determinants of corporate governance and its effects on economic growth after a literature review and theoretical analysis of the theories of corporate governance and economic growth in Chapter 2. The chapter explains the conceptual relationship between variables that determine corporate governance and their role in economic growth. The conceptual relationship explained in the integrated framework provides conceptual answers to the research questions raised in section 1.7. The conceptual relationship explained in this chapter forms the basis for the specifications of the econometric model in Chapter 5.

In accordance to the Mittrof model process 2 and activity III, it focuses on modelling and scientific models. In this regard chapters 4 focuses on outlining research methodology and specification of panel data models.

Chapter 4: Research philosophies and methodology

This chapter explains, the research paradigm particularly the philosophy, ontology and epistemology upon which the interpretation of the research problem under investigation is based. Research methodology and research methods followed to find answers to the research questions are provided in this chapter. This chapter also specifies the model tested to provide empirical evidence that explains the research problem identified in Chapter 1. The specified model examines the significance of the relationship between the variables identified in the six dimensions in the conceptual model highlighted in the previous chapter. The population, sample population, data and model are fully explained in this section.

Chapter 5-6 focuses on activity IV; it involves the identification of empirical solutions and interrogating the feedback suggested to the resolution of the research problem. These three chapters present findings from the estimated models and they also discuss, interpret and draw conclusions and recommendations regarding the problem under study.

Chapter 5: Determinants of corporate governance and economic growth

This chapter presents empirical findings on corporate governance, institutional and macroeconomic environment in Sub Saharan Africa. Basically, descriptive data on corporate governance, institutional, macroeconomic and microeconomic growth in Sub Saharan Africa is presented in this chapter. This chapter presents empirical findings from the estimation of models that sought to answer research question i-*v* stated in section 1.8**.** The findings in this chapter establish the nature of the empirical relationship between corporate governance and economic growth.

Chapter 6 Short run and causality relationship between corporate governance and economic growth

This chapter builds on the results in the previous chapter by presenting the findings on the short run, long run and causality relationship between corporate governance and economic growth. Empirical findings in this chapter provide answers to research question *vi-vii* specified in section 1.8.

Chapter 7: Discussion and interpretation of results

This chapter presents a detailed discussion and interpretation of the findings presented in the chapters 5-6. The discussion and interpretation of empirical findings on the research questions raised in this study allows the drawing of findings from the hierarchical panel data analysis, vector autogression (VAR) model and panel vector Granger causality test. This chapter also has as part of this study's contribution to addressing the gap in literature it develops integrated framework of corporate governance for enhancing economic growth drawing on empirical findings from this study. The framework identifies the antecedents of corporate governance and explains the relationship between these variables. The chapter answered research question *vii* in section 1.7.

Chapter 8: Conclusions and recommendations

This chapter draws conclusions and submits recommendations from the discussion of the findings in relation to the research problem under investigation. In particular the conclusions and recommendations on the nature of relationship between corporate governance and economic growth in Sub Saharan Africa will also be presented.The recommendations are based on the discussion and conclusion reached in this study. It is envisaged that recommendations from this study have both practical and theoretical implications for corporate governance.

CHAPTER 2

Theoretical framework for determinants of corporate governance and economic growth

2.1 Introduction

The purpose of this chapter is to review literature on corporate governance and economic growth. The aim of this review is to identify factors that determine corporate governance and establish its effect on economic growth. In order to assess whether corporate governance is a determinant of economic growth, it is important to first understand the factors that determine the development of corporate governance and its contribution to economic growth. To understand the principle underlying corporate governance and its role in economic growth, different theories of corporate governance and economic growth are discussed. It is envisaged that this chapter identifies and explains the theoretical relationship between corporate governance and its effect on economic growth.

The view that corporate governance is a determinant of economic growth is a new perspective in both corporate governance and economic growth literature. In traditional finance theories, the role of corporate governance is regarded as limited to ensuring the maximisation of shareholders' wealth (Fama and Jensen, 1983). The agency perspective does not encompass the economic growth dimension whilst on the other hand the economic growth theories do not incorporate the corporate governance dimension. As a matter of fact, the idea that corporate governance is a driver for economic growth in any country was initiated by economic development policy makers, namely the OECD. Since then, this view has been widespread and is accepted by many institutions like NEPAD, IMF, IFC and World Bank. In contrast to the view that corporate governance could lead to economic growth in any economy, evidence from recent trends suggest that corporate governance could result in decline in economic growth in a economies. For example, the trend in the WFE surveys suggests that there is a non-linear relationship between corporate governance and economic growth WFE (2011, 2012, 2013, 2014, 2015). The findings show that there is no sign of significant increase in either corporate governance or economic growth. This evidence suggests that the effect of corporate governance on economic growth differs with the conditions under which it is applied. If the effect of corporate governance on economic growth varies with the circumstances of individual country it follows that there is need to investigate common factors that determine the development of corporate governance and influence its contribution to economic growth. It can be assumed that as long as conditions that support corporate governance are not established in a country then corporate governance risks failing to make any contribution to economic growth. It can be concluded that before corporate governance is implemented there is a need to first understand the factors that determine corporate governance and its effects on economic growth.

The rest of this chapter is organised as follows: section 2.2 outlines the role of corporate governance. Section 2.3 highlights firm level determinants of corporate governance. Section 2.4 sets out the legal system as a determinant of corporate governance, 2.5 identifies good governance as a determinant of corporate governance, and section 2.6 discusses whether financial developments is a determinant of corporate governance. In section 2.7 macroeconomic fundamentals are discussed as a determinant of corporate governance. Section 2.8 highlights corporate governance theories and in section 2.9 economic growth theories are in discussed.

2.2 The role of corporate governance in economic growth

The different ways through which corporate governance is expected to affect economic growth are summarised below: firstly, corporate governance boosts investors' confidence and this affects the company's access to financing capital formation and allocation, eventually leading to higher economic growth and greater employment creation (Claessens and Yortoglou, 2013, IFC, 2016, OECD, 2015). Secondly, the quality of corporate governance affects the cost at which the corporations access finance and the confidence with which the providers of capital participate in the value creation process (Claessens and Yortoglou, 2013, Akinboade, 2003, OECD, 2015). Thirdly, it provides a framework through which household savings could be allocated and managed efficiently to enhance company performance, generate more wealth and ultimately engender economic growth (Claessens and Yortoglou, 2013, OECD, 2015). Fourthly, it provides reassurance to shareholders and other stakeholders that their rights are protected and makes it possible for corporations to decrease the cost of capital and facilitate their access to the capital market (Claessens and Yortoglou, 2013, La Porta, 1997, OECD, 2015). It can be concluded from these views that corporate governance is necessary for economic growth. It can be argued that, if at all corporate governance is to lead to economic growth then a change in corporate governance must precede the change in economic growth. It can be concluded that a conducive environment that promotes corporate governance must be created first before corporate governance can be expected to make any significant contribution to economic growth.

2.3 Firm level determinants of corporate governance mechanisms

According to Gutsavson *et al* (2009) corporate governance principles promote economic growth through increased accountability and transparency. Standard and Poor (2008) explain that the level of corporate governance mechanism at individual company level reflects the level of investor protection that is available at firm level. Sound corporate governance at firm level is determined by legal systems. According to Dallas (2004) corporate governance mechanisms have their foundations in corporate laws (company laws) governing how companies are formed and managed. Dallas (2004) further explains that company laws govern the formation and operational matters such as the rights and duties of the shareholders, directors, managers, issuance and exchange of securities and many other aspects. In accordance with the Cadbury Report (1992), King Report (1994, 2004, 2009, 2016) and OECD (1999, 2004, 2015) basic corporate governance practices include the rights of the shareholder, responsibilities and role of directors, disclosure and transparency. This suggests that the extent to which corporate governance practices are adhered to in an individual company reflects the level of investor protection. This also suggests that corporate governance implementation at firm level is determined country specific differences.

Shareholders' rights are an internal governance tenet through which corporate governance seeks to protect the rights of the shareholders. Shareholders, as owners of equity, have certain property rights in a company (OECD, 2015). According to Dallas (2008) shareholders have control rights and cash flow rights in the company. The need to protect shareholders arises from the fact that shareholders are entitled to control rights and cash flow in the corporation in exchange for the private property rights invested in the company. Examples include; the right to vote, access to share profits of the company, right to elect and remove directors from office and many others (Dallas, 2004). The extent to which internal governance has mechanisms that safeguard the interest of the shareholder reflects the extent to which the firm provides protection for investors.

The role of shareholders in corporate governance is to appoint a board of directors (Cadbury, 1992). The board of directors is responsible for the governance of the company on behalf of the shareholders. The board of directors has the responsibility of strategic decision making, providing leadership, monitoring and management of the business and accounting to the shareholders (Cadbury Report, 1992). The board of directors monitors and controls the action of management on half of the shareholder (Tricker, 2009). The effectiveness of the board determines the efficiency of the operations of the overall company. Akpan and Amran (2015) showed that board composition, qualification and education level had an insignificant relationship to corporate performance. Their findings established that there is negative relationship between women directors and corporate performance as measured by ROE. They argue that women directors are used to window-dress appointments yet women do not make any meaningful independent contribution. Ilaboya and Obaretin (2015) concluded that amongst policy makers in developing economies, there is a significant relationship between board of directors and corporate performance.

Director liability is an internal governance mechanism that seeks to hold directors accountable for breach of statutory and fiduciary duties. Djankov *et al*, (2008) found that directors' liability depends on the availability of legal and public laws that regulate director dealings and the extent to which there is enforcement of these laws at firm and court systems. They further observed that regulation of anti-director self-dealing was strong in common law countries than civil law and this provided an explanation for the differences in investor protection observed in different countries. Since legal origins determine the level of director liability at firm level in a country, it follows that variations in corporate governance across countries is partly explained by the differences in the origins of the legal systems.

Protection of minority shareholders is regarded as important for ensuring equal treatment of shareholders. Solomon (2011) explains that equal treatment of shareholders is important because majority shareholders can use their excess power to abuse company resources. It means that on a regular basis corporate governance must take measures to ensure that the rights of this group of shareholders are protected.

2.4 The legal systems as a determinant of corporate governance

The legal environment is one of the major determinants of corporate governance systems in individual companies. Friedman (1975) describes the legal system as the law which set rules and norms, written or unwritten, about right or wrong behaviour, duties and rights. The legal system affects the individual company governance through the written laws and the effectiveness with which such laws are enforced (Dallas, 2004). The OECD (2015) explains that a conducive legal, legislation and regulatory framework are required to support corporate governance. La Porta *et al* (1998) found that legal rules related to the rights of the investors, quality of enforcement such as voting rights provides protection against expropriation by management and also affects the development of corporate governance.

Basically the availability of laws reflects the extent to which investors' rights are protected. For instance, Djnakov *et al* (2008) and Doidge *et al* (2008) found that a strong legal system that provide protection for property rights, enforcement of public and private laws has a positive effect on the implementation of corporate governance in companies. Aggarwal and Williamson (2007) observed that the quality of country regulations in terms of compliance to standard mechanisms such as board structure, financial accounting and recording had significant influence on corporate governance and company performance. Doidge *et al* (2007) reached the conclusion that, country legal system matter most for the development of corporate governance than internal systems at firm level. The cost of implementing good corporate governance practices is high in countries with weak legal and country governance systems than in countries with strong legal and country governance (Aggarwal and Williamson, 2007, Standard and Poor, 2008). This suggests that, the legal system is a determinant of corporate governance.

The investor protection provided that corporate governance provides varies with the origin of the legal system. Mahoney (2001) explains that common law was founded on principles that focus on strengthening the protection of property rights, individual rights and enforcement of contract than enhancing state power; on contrast civil law emphasises state power over property rights. La Porta (1997, 1999, 2000) found that civil law provides less investor protection than common law. Beck *et al* (2003) affirms that common law provides stronger protection than civil law because it is built on individual rights and property rights. La Porta *et al* (1997) asserts that, the origin of law influences corporate governance by the level of investor protection that it provides. Dankjov *et al*, (2008) observed that countries w***ith common law origins experienced economic growth faster than civil law because common law provides and ensures protection to investors and minority shareholders than their counterparts. They explain that legal systems also differ in the effectiveness with which the judicial systems enforce the laws. This indicates that legal origin shapes corporate governance at firm level through investor protection that the legal systems provide.

2.5 Good governance as a determinant of corporate governance

The state of country governance determines certainty or uncertainty in conducting business in a given country. Good governance consists of the traditions and institutions by which authority in a country is exercised. This includes the process by which governments are selected, monitored and replaced; the capacity of the good to effectively formulate and implement sound policies; and the respect of citizens and the state for institutions that govern economic and social interactions (World Bank, 2015). The WFE (2014) suggests that good governance can impose cost to the businesses and ultimately slow the processes of economic growth. Claessens and Yurtoglu (2013) found that corruption, quality of regulation and government effectiveness have influence on the development of corporate governance and company performance in developed, emerging and transition economies. Afolabi (2015) explains that weak corporate governance such as lack of political stability, failure to formulate and implement macroeconomic policies as well as corruption all increase the cost of business and affect the way a company should be governed. Since good governance affects the promotion of corporate governance, it can be assumed that good governance is a determinant of corporate governance. Djankov *et al* (2006) and Doidge *et al* (2006) found that factors such as rule of law, democratic accountability, business regulations and corruption have an influence on the way a company is governed and its contribution to economic growth. Their findings suggest that good governance is now seen as a measure of the extent to which a country's environment provides adequate protection to investors. According to Doidge *et al* (2006) country characteristics influence the cost and benefits of implementing corporate governance in a country. Doidge *et al* (2006) found that poor governance is associated with poor investor protection. Doidge *et al* (2006) concluded that poor investor protection due to poor country governance makes it expensive for firms to implement corporate governance. This evidence suggests that poor country governance is a cost to the company, investors and the nation at large.

2.6 Financial development as a determinant of corporate governance

Financial development plays a key role in enabling companies to have access to financing and attracting investment from both domestic and foreign markets. The World Bank (2013) defines financial development as improvements in the quality of five key financial functions:

(a) Producing and processing information about possible investments and allocating capital based on these assessments;
(b) Monitoring individuals and firms and exerting corporate governance after allocating capital;
(c) Facilitating the trading, diversification, and management of risk;
(d) Mobilizing and pooling savings and
(e) Easing the exchange of goods, services, and financial instruments.

This means that all these functions have influence on economic growth. Paredes (2004) explains that financial development influences corporate governance through capital markets that regulate the implementation of corporate governance for listing purposes. Financial development promotes the implementation of corporate governance because companies are interested in having access to finance in the capital market (Dallas, 2004). This suggests that, financial development is a determinant of corporate governance.

2.7 The macroeconomic fundamentals as a determinant of corporate governance

Macroeconomic fundamentals are external factors beyond the control of the company but have an influence on corporate governance. Visconti (2011) elaborates that macroeconomic fundamentals such as inflation and interest rates represent macroeconomic risks that hinder investment. The level of gross national savings determines the level of resources available for productive use in the economy (WFE, 2014). This suggests that there is need for policy makers to control the macroeconomic environment in a way that supports the development of corporate governance in order to enhance economic growth.

2.8 Corporate governance theories

Corporate governance is viewed from different theories. The section that follows focuses on explaining the theories that underpin corporate governance and connections to economic growth. The following corporate governance theories are examined: neoclassical theory, property rights, agency, shareholder, stewardship, resource dependence, organisational theory and institutional theory. Lastly economic growth models and theories are also examined, namely, the Harrod –Domar model, Solow-Swan model and the endogenous growth theory.

2.8.1 Neoclassical theory

According to Ryan *et al* (2002) the neoclassical theory is based on the assumption that a rational individual seeks to maximise utility or self-interest. Shareholders inject their money into a company to provide goods and services that satisfy needs in the society with the hope of maximising their self-economic interests (Cronje *et al* 1987, 2000, 2004). The neoclassical theory helps us to understand that corporate governance is required to safeguard the interests of individual property owners. The company is responsible for creating wealth for shareholders so that they can maximise return on capital (Marx *et al*, 1987). It can be deduced from this theory that corporate governance is required to ensure if that the company is run in an efficient manner it enables shareholders to get a return on their investments. This suggests that corporate governance plays multiple roles such as safeguarding the property rights of the investors, ensuring the efficient allocation and utilisation of scarce resources in the economy.

Corporate governance, by providing assurance to investors at firm level, boosts investor confidence, retains investors and attracts new investment (Okeahalam and Akinboade, 2003). La Porta *et al* (1997, 1999) elucidate that corporate governance provides assurance to investors that their investment is protected and that their investments are efficient for the purpose of creating wealth that ultimately enables shareholders to get a return on their investments. The neoclassical theory suggests that there are linkages between corporate governance and economic growth. This is because the accumulation of capital is determined by the extent to which there is protection of investor interests at firm level (OECD, 2015, Standard and Poor, 2008). It can be deduced that the individual seeks utility or self-interest to invest their money in expectation of a return. Corporate governance ensures that the interests of the investors are realised. It implies that corporate governance in addition to affecting the allocation of resources it also affects the efficiency with which the company uses the resources.

Corporate governance determines the efficient utilisation of resources through its principles, policies and practices that promote accountability and transparency to stakeholders (OECD, 2015, 2004, 1999, Okeahalam and Akinboade, 2003). Corporate governance mechanisms such as board of directors influence the utilisation of resources by making strategic decisions regarding the vision and direction which the company must follow in formulating, implementing, monitoring and evaluating strategies to meet the objectives of the company (Cadbury Report, 1992). It can be argued that the neoclassical theory supports the shareholder perspective proposition that maximisation of the shareholders interest leads to the satisfaction of the interest of the stakeholders are satisfied. This theory does not consider other external factors that have influence the maximisation of profits.

2.8.2 Property rights theory

Furubotn and Pejovich (1972) define property rights as the sanctioned behavioural relations among men that arise from the existence of things and pertain to their use. The OECD (2015) points out that corporate governance framework should protect shareholders' rights and ensure equitable treatment of shareholders, including minority and foreign shareholders because they have property rights. This entails that the aim of corporate governance should be to ensure that the rights of shareholders as equity owners are protected because these individuals have taken the risk of satisfying a set of identified needs in the society with the hope of making a profit. It follows that corporate governance facilitates procedures, processes, policies and practices that manage the set of relationships involved in generating wealth so as to enable the company to maximise profits for the shareholder. Corporate governance is necessary because the corporation is an entity of aggregated private property rights of different individuals who injected their property in a limited company with the view of getting a return on their equity. Shareholders or investors as individuals finance firm to earn a legal entitlement to rights in the company (La Porta *et al*, 2000). As a practical matter, corporate governance must ensure that in the corporation all shareholders are treated equally and there are platforms through which the shareholders can exercise their rights. Basically property rights provide the basis upon which shareholders' rights should be incorporated into corporate governance hence its effect on economic growth. Furubotn and Pejovich (1972) suggest that property rights specify the norms of behaviour with respect to things that each person must observe in interactions with other persons, or bear the cost for non-observance. This view is supported by Prasad (2003) who explains that property rights grant the individual the legitimate right to pursue the rent or profit generating opportunities. Property rights provide the private property owners to write contracts and incorporate (Letza, 2002). It means that property ownership rights allow owners to engage in lawful relationships and transactions that enable them to maximise their welfare. It is clear that without strong property rights there is likely to be no formation of companies, efficient financial markets and economic growth is likely to slow. It entails that property rights must first be in place in order to enable the implementation of effective corporate governance mechanisms that ensure the maximisation of wealth creation.

Furubotn and Pejovich (1972) postulate that the differences observed in economic growth and development amongst countries and in particular Third World countries were linked to property rights. La Porta *et al*, (2000) agrees and posits that well developed property lights and legal systems influence economic growth. La Porta *et al*, (2000) identified factors some listed below through which investor protection has micro and macro impact on economic growth.

i. It can enhance savings.
ii. It can channel these savings into real investment and thereby foster capital accumulation.
iii. The extent that the financiers exercise some control over the investment decisions of the entrepreneurs, financial development improves the efficiency of resource allocation as capital flows toward the more productive uses.

These advantages demonstrate that property rights have effect on major factors that determine investment which is an important driver for economic growth. According to Johnson (2002) property right determine not only investment decisions but also the companies' decision to reinvest their profits. Similar observations were made by the WFE (2014) who noted that if investors feel that their rights are not protected they are unwilling to invest, or upgrade their property or even reinvest their funds. This demonstrates that the quality of property rights affects investment decisions and all this in turn has effects on efficient allocation and utilisation of resources and ultimately economic growth. The OCED (2015) identifies property rights as fundamental reason why corporate governance practices should ensure shareholder rights such as control and cash flow rights. The rights that shareholders are entitled to are reward for the risk taken by investing private property into the business with a view of getting a profit (Berle and Means, 1932, Letza, 2002). It can be assumed that property rights are a predeterminant of corporate governance and economic growth.

2.8.4 Agency theory

The ownership of a company or the way a company is financed determines the structure of corporate governance, processes and procedures required in a company. According to Berle and Means (1932) there are diverging conflicts of interest that arise from separation of ownership and control and these have detrimental effects on the creation of wealth and maximisation of profits in a corporation. Separation of ownership from control occurs because individual shareholders have to appoint management to run their company on their behalf (Berle and Means, 1932). The corporation is characterised by managerial opportunistic behaviour whereby management is not likely to pursue the interests of their owners without seeking to benefit themselves first (Smith, 1776). Managerial opportunism arises from the fact that the individual manager is a rational individual who is bound to seek to maximise their own welfare and not those of the shareholders (Jensen and Meckling, 1976). This means that although the agent has control over the company and authority over the running of the company it does not mean that their interests and decisions are aligned with the interest of the shareholder.

Jensen and Meckling (1976) as well as Fama and Jensen (1980) point out that the diverging interests between a principal and agency if not controlled were likely to lead to expropriation of shareholder’s wealth. This suggests that the opportunistic managerial misbehaviour related to the agency theory that is associated with the misuse; underutilisation, mismanagement and expropriation of investor resources are inherent in the corporation form of ownership. The fact that the agency problem exists within the foundation in any corporation form of entity suggests that corporate governance is inevitably required in every company. Corporate governance installs mechanisms through board of directors to monitor and control the behaviour of management so as to maximise wealth creation (Fama, 1980). Under the agency theory, corporate governance is of critical importance for monitoring the behaviour of management.

Jensen and Meckling (1976) points out that, managerial opportunistic behaviours were likely to lead to expropriation through residual loss. Shareholders lose their profit if the costs incurred in implementing corporate governance are higher than the benefit. Jensen and Meckling (1976) refer to agency cost as any cost incurred by management in their attempt to monitor and control managerial functions such that the action of management does not harm the interest of the shareholders. Examples of agency cost include bonding costs such as contractual guarantees to have the financial accounts audited by a public account, explicit bonding against malfeasance on the part of the manager, and contractual limitations on the manager's decision-making power. Agency costs are comparable to all the costs incurred in implementing corporate governance: remuneration of directors, auditor's fees, holding annual general meeting and others. Residual loss occurs when the cost of implementing corporate governance is higher than the benefit of implementing it.

2.8.5 Shareholder theory

The shareholder (stockholding) theory has its roots in the agency theory. The shareholder theory holds the assumption that profit maximisation is the only objective of a firm (Freeman, 1984, Hasnas, 1998). It means that shareholder theory ignores the interest of other stakeholders by concentrating on satisfaction of the interests of the shareholder. Corporate governance under the shareholder approach is limited to the relationship between the company and its management (Keasey *et al*, 1997). It entails that even though the shareholder theory provides the foundation model for creating wealth and its maximisation, there is evidence that due concentration on the maximization of wealth creation for the shareholder alone is no longer adequate to enable the corporation to create wealth for the stakeholders.

In recent times corporate governance mechanisms that take into consideration the interests of multiple stakeholders and promotes accountability to multiple stakeholders is required to allow the corporation to create wealth for the shareholder (Benn *at al*, 2014, Bansal and Desjardine, 2014, Hutchison, 2011). This means that the shareholder belief that profit can be maximise only when the corporation take into account the interests of a limited group of shareholders who have immediate effect on the operation might not hold. It entails that corporate governance principles and practices under the shareholder theory only focus on promoting management accountability to limited stakeholders of the company such as shareholder, supplier and customer among other immediate groups. Muswaka (2014) argues that although the shareholder theory recognises the legal and legitimate rights of shareholders who injected their capital into the corporation, assumptions did not explicitly extend the same moral legitimacy to the social, human and social capital invested. This suggests that corporate governance, regardless of the differences in the context from which it is looked at, has moral obligations to take into account the interests of the society in which it is embedded. Up to date, the inclusion of effects from the external environment has been ignored in corporate governance models that use a shareholder approach. It means that the shareholder approach might not reflect reality in open systems environment where there is interaction of multiple interests.

Lorenzo (2006) criticises the shareholder approach as insular and that it focuses on separating the entity from the environment in which it exists. Other shortcomings of the shareholder approach that have been identified in literature include promoting greediness, emphasising shortermism and narrow focus (Hahn and Figge, 2011, Galbreath, 2011, William and Zumbasen, 2011, Karns, 2011, Hutchison, 2011, Wolf, 2011). It is evident that the application of the shareholder approach in an environment where there are multiple stakeholders might not work. Lorenzo (2006) further argues that the shareholder approach in the absence of moral and legal limits the stockholder theory can lead to large wealth gaps and disparities, where the rich get richer and the poor get poorer. This view suggests that corporate governance disregards the interests of the other stakeholders. Shareholder theory is critiqued in business literature as the reason behind the recent corporate failure because it promotes greediness (Hahn and Figge, 2011, Galbreath, 2011, William and Zumbasen, 2011, Karns, 2011, Hutchison, 2011,Wolf, 2011). It has been criticised for focusing only on the maximisation of wealth for shareholders and protection of interests, neglecting its obligation towards stakeholders.

2.8.6 Resources dependency and social capital theory

According to Hung (1998) dependence theory is based on the assumption that corporations depend upon one another for access to valuable resources. The resource dependency theory assumes that the effectiveness and survival of the organisation depends upon establishing links and regulating interdependences in order to survive in the systems**.** Hung (1998) establishes that the organisation should focus on establishing links and connections so as to regulate interdependence of the resources in the broader society. Corporate governance structures should therefore emphasise strategic linkages with other organisations in the systems in order to influence the systems in which they exist. For instance Tricker (2009) as well as Daily and Dalton (1993) suggest that interlocking directorship is one form of links in that complex chain of connections among organizations. This means that corporate governance is seen as resources that enable organisations to make linkages with its external environment. Tricker (2009) suggests that the corporate governance aspect such as the independent director should be viewed as resources used by the organisation to create linkages with other organisations. The resources dependency theory recognises that the survival of the corporation is dependent on the connections between the internal and external environment at large.

2.8.7 Institutional theory

According Isukul and Chizea (2015) institutional theory emphasizes that sound and stable institutions are required to support the development of effective corporate governance. The institutional theory brings into context the need to recognise the role of the state plays in shaping not only the structures of the business environment but also the individual organisations and the relationships between their stakeholders (de Beer and Rensburg, 2011). De Beer and Rensburg (2011) further mention that institutional theory may also be interpreted as part of the legitimacy creation process. This theory suggests that sound institutions such as legal systems, government and financial markets are required to promote corporate governance.

2.8.8 Stewardship theory

According to Trickers (2009) stewardship theory is based on the assumption that directors can be trusted to act on behalf of the company. Tricker (2009) further mentions that stewardship theory has its roots in property rights theory that believe that directors have a legal and statutory duty to act in the best interests of the corporation and its shareholder. Corporate governance believes that the interests of shareholders and stakeholders are protected by regulations placed on the power and rights of the directors in the company. Ramosa and Olla (2014) note that the stewardship theory is based on the assumption that there is no conflict of interest between the agent and the principal. It follows from this that the agent is seen as a trustworthy person who will honour their statutory and legal obligation to the shareholders and the company because there is a legally and legitimate moral relationship between the principal and agent.

Dulwick and Herbert (2004) suggest that if an appropriate structure that allows effective communication between the agent and the principal exists then there is no conflict of interest between these two. These aspects suggest that corporate governance is concerned about the structures that are used to control human behaviour to achieve the desired outcome. Anderson and Barker (2010), note that corporate governance under the stewardship theory believes in a unit of command organisation approach. The unit of command combines the role of the CEO and chairperson to create unity and help the company to make informed decisions. Although this might be true, the agency theory argues that combining roles of the CEO and Chairperson might result in power being concentrated in one individual leading to biased decision making and possible abuses of power. In other words, these tenets of stewardship theory expose the company to risk of misuse of power and authority to benefit one highlighted in Berle and Means (1932). It entails that corporate governance should balance the positive human attitude and negative inclination inherent in managerial opportunistic behaviour.

In comparison between the stewardship theory and agency theory, Huillier (2014) identified two differences. Firstly, the stewardship theory sees stewardship as resident in an individual who is honest and is determined to act in the best interests of the company in contrast to the agency theory which views managers' behaviour as opportunistic. Secondly, stewardship takes into consideration several non-financial motives for managerial activity, including achievement and recognition, the intrinsic satisfaction achieved from a successful performance and a strong work ethic of governance unlike the agency view which is based on economic interpretations of relationships within organisations. In this study it is proposed that differences in corporate governance should ensure internal alignment of the interest of management with those of the organisation and focus on motivation of the agent rather than control and monitoring.

2.8.9 Stakeholder theory

Freeman (1984) defines a stakeholder as an individual who can affect or be affected by the operations of the organisation in the pursuit of its corporate objectives. Corporate governance under this framework involves corporate and management accountability to a broad range of stakeholders. It implies that corporate governance should allocate the resources of the organisation in a way that benefits all the shareholders and stakeholders. Keasey *et al* (1997) points that corporate governance systems under this perspective is based on the view that ethical behaviour enables the corporation to maximise long term profit therefore shareholder-principals should encourage their managers to have in place structures that safeguard the interests of the stakeholders.

The stakeholder view is different from the agency theory which believes in economic contract. The stakeholder approach is seen as a contradiction to the traditional agency theory. Proponents of the agency theory like Friedman (1954) and Jensen (2000) assume that the corporation and management have the moral obligation to ensure the shareholder’s returns hence decisions and resources must be for the purpose of enabling the organisation to maximise shareholder profits. Shankman (1999) explicates that the agency theory focuses on the economic obligation of the firm and is silent on the moral and ethical implications of the corporation. This suggests that the agency theory regarded ethical and extended responsibility as a cost to the firm that must be minimised. The stakeholder approach believes that if ignored the uncontrolled interest on the stakeholder leads to failure to create wealth for the shareholders. This debate and conflict must be confusing and difficult for the company to understand what approach to adopt for its corporate governance systems.

Jensen (2000) posits that maximisation of shareholders’ wealth results in enhanced social welfare. Solomon (2011) argues that there is no inconsistency between the shareholder and stakeholder theory pointing out that the organisation can achieve long term profit maximisation and ultimately maximisation of shareholder profit by taking into account the interests of the shareholders and the stakeholder. Corporate governance endeavours to achieve the interests of the shareholder by incorporating broader accountability and transparency in the interests of shareholders and stakeholders. As a practical matter corporate governance under this approach should embrace the social and economic issues that have potential influence on the ability of the organisation to maximise value creation. The stakeholder and agency theory should not be viewed as competing theories but rather as complementary theories. Solomon (2011) further mentions that the stakeholder approach is becoming popular owing to the fact that shareholders are increasingly becoming aware that ignoring the needs of stakeholders will not lead to long term creation of value. This means that if the agency theory can be extended, it provides the model for creating value and enhancing economic growth.

2.9 Economic growth

The World Bank (2016) defines Gross Domestic Product (GDP) per capita reflect an increase in economic productivity and average material wellbeing of a country's population. Economic growth is measured as percentage change in GDP which is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products (World Bank, 2015). Economic growth is basically the rate of change in wealth over a given time. It means that economic growth is synonymous with positive increase in the gross domestic product produced in the economy. This is because a percentage change results in positive increase only when the change in new quantity is greater than the older quantity. It follows that in any economy over a given period of time the prospects of economic growth exist when there are factors and conditions which increase the goods and services produced in a country. This suggests that that economic growth is determined by rate of increase in the performance of companies within a country.

There is an emerging perspective from literature that corporate governance is a driver of economic growth, an assumption that has not been tested in its entirety in literature. According to Osman (2011) for many years strategies for obtaining economic growth were based on models that ignored corporate governance and instead emphasised changes in macroeconomic fundamentals, namely monetary and fiscal policies such as inflation, savings, interest rates, subsidies, current devaluation, money supply, exchange rate, trade and many others. This indicates that the role of corporate governance has not been included in the analysis of factors that contribute to economic growth for many years. At the present moment, some of the existing models and theories that have been used to explain economic growth in economics include neoclassical theory of economic growth, the Harrod –Domar model, Solow-Swan model, endogenous growth theory. In the section that follows a discussion of the aforementioned economic growth theories and models is presented.

2.9.1 Neoclassical theory of economic growth

Neoclassical economic theories hold that every individual seeks to maximise their self-economic benefits in any transaction. The traditional neoclassical theory of economic growth assumes that economic growth is determined by exogenous factors namely production, labour, capital and technological. Whilst this model does not include the effect of corporate governance on economic growth it has been suggested that, this has a significant effect on economic growth through investment. For instance the OECD (2015) propounds that corporate governance is a key element for enhancing economic efficiency and growth. Under these circumstances the neoclassical theory, by overlooking corporate governance, it is discarding the role that corporate governance plays in determining economic growth. The neoclassical approach neglects the effects the principal agency relationship, processes and procedures involved in the processes of creation of wealth and overall company performance. The main limitations of the neoclassical theory are that it disregards the of influence corporate governance as an on capital accumulation and efficient utilisation of the capital injected into the corporation.

2.9.2 The Harrod –Domar model

Harrod –Domar model shows that economic growth is determined by the balance between accumulation of capital, savings, household consumption, production and wages. According to Solow (1956), Harrod-Domar assumes that in the long run, the economic system is at best balanced on a knife-edge of equilibrium for growth. Solow (1956) explains that this assumption is based on the belief that if a proportion of key factors such as savings ratio, the capital-output ratio and the rate of increase of labour force have a slight disequilibrium, then the consequences would be either growing unemployment or prolonged inflation. Hageman (2009) asserts that economic growth is based on the injection of balanced savings and employment so as to maintain productivity. Satao (1964) explains the Harrod –Domar model was based on the assumption of long term economic growth that would arise by making fixed contributions of capital and labour. This model explains economic growth due to changes in investment, savings and use of technology. It incorporates factors related to human skills, capital accumulation, and interest rates. This model is not adequate because productivity of the company is influenced not only by the availability of technology or labour but also by corporate governance. Claessens (2006) Claessens and Yurtoglu (2013) as well as La Porta *et al* (1997) provide evidence that corporate governance is a determinant of economic growth. This suggests that an alternative model that takes into consideration the effects of corporate governance on economic growth needs to be developed.

2.9.3 Solow-Swan model

According to Guerrini (2006) the Solow–Swan model is designed to show how growth in the capital stock, growth in the labour force and advances in technology interact and affect a nation’s total output. Solow-Swan model is an exogenous model that explains economic growth in terms of changes in investment, technological progress and savings. The main shortcoming of the Solow-Swan model like all the other exogenous models is that its assumptions are based on the neoclassical economics theory of growth which sees economic growth as determined by exogenous factors and it neglects economic growth. By neglecting corporate governance the Solow–Swan model disregards endogenous factors that have influence on economic growth. A point overlooked in this model is that, the accumulation of capital does not translate into economic growth instead it is the efficient with which the resources are utilised that enhances overall company performance and ultimately lead to economic growth. The OECD, (2015, 2004) and S& P (2008) point out that investment is determined by corporate governance and not only the traditional fiscal and monetary policies. This indicates that corporate governance is expected to enhance economic performance of the company and ultimately economic growth by providing investors protection which attracts investment. This also suggests that, inasmuch as technological changes, savings and investment are necessary these might be insufficient to explain economic growth unless the influence of corporate governance systems at firm level is taken into consideration.

2.9.4 Endogenous growth theory

Endogenous growth theories hold the belief that economic growth is determined by the internal institutional factors such as government policies, education and others (Barro, 1996). The endogenous theory considers economic growth to be an outcome of internal and not external factors. It associates economic growth with a country’s government policy actions such as the provision of human capital, learning, innovation, infrastructure and property rights amongst other endogenous forces (Howitt, 2000). Although the endogenous growth theory views microeconomic fundamentals as the determinants of the macroeconomic behaviour and economic growth outcomes it disregards the principal-agent behaviour that affects corporate behaviour and overall company performance at microeconomic level. The central argument of this study is that, the principal-agency relationship should form the foundation for explaining economic growth. Dallas (2004) argues that traditional economic theories are built on the basis of shareholder dominated theories. This means that economic growth theories see the protection of pursuit of the interest of the shareholder as the only means to attract investment and capital for economic growth.

2.10 Conclusion

The literature review discussed here investigated the factors that determine corporate governance and its effect on economic growth. Literature suggests that, the nature of the relationship between corporate governance and economic growth is influenced by firm level, institutional and macroeconomic fundamentals. In addition, twelve theories were examined in order to draw an insight into the principles underlying corporate governance and its role in economic growth. Although the different theories give different perspectives into corporate governance, these must not be considered as giving diverging views into corporate governance but rather as complementary. Arguably, despite having different perspectives, all the theories embody the common idea that corporate governance enhances the performance of the overall company and this contributes to economic growth. The theories implicitly suggest that protection of property rights lays the foundation for creation of wealth and ultimately the maximisation of social welfare. The next chapter focuses on constructing an integrated conceptual framework for the determinants of corporate governance and its effect economic growth.

CHAPTER 3

A conceptual framework for determinants of corporate governance and its effects on economic growth

3.1 Introduction

This chapter provides a conceptual framework that explains the institutional and macroeconomic determinants of corporate governance and economic growth. The conceptual framework identifies a set of variables that explain the interrelationship between corporate governance and economic growth. The conceptual framework presented here builds on the relationship identified during literature review and analysis of theories of corporate governance and economic growth theories that was conducted in the previous chapter. The relationship explained in this chapter seeks to answers the research questions and to achieve the research objectives outlined in chapter 1. In addition the conceptual framework developed here provides a basis for the formulation and specifications of models that will be estimated in order to empirically validate the relationship between corporate governance and economic growth.

To help to understand linkages between determinants of corporate governance and economic growth the rest of the chapter is organised as follows. Section commences with firm level brief description of the variables of the conceptual framework, in section 3.2. In section 3.3 firm level determinants of corporate governance, section 3.4 legal determinants of corporate governance and section 3.5 good governance determinants of corporate governance. In section 3.6 financial determinants of corporate governance, section 3.7 determinants of corporate governance and a conclusion in section 3.8

3.2 The conceptual framework for corporate governance and economic growth

The previous chapter has shown that internal corporate governance, institutional and macroeconomic environment are factors that determine corporate governance and its effects on economic growth. In Figure 3.1 a framework that shows the variables that determine corporate governance and its effect on economic growth was designed. The framework show corporate governance, legal system, good governance, financial development and macroeconomic fundamentals are the key factors that determine corporate governance and its effect on economic growth.

Corporate governance refers to the processes, procedures, structure through which the company is directed and controlled. The internal corporate governance mechanism at firm level includes: efficacy of the board, protection of minority shareholders, director liability, shareholder's rights as well as disclosure and transparency. The institutional environment is the second dimension that determines corporate governance and its effect on economic growth. According to WFE (2014) the institutional environment is made up of the legal and administrative framework within which individuals, firms, and governments interact to generate wealth. In the framework shown in Figure 3.1 the institutional environment is made up of the legal systems, good governance and financial development. The legal systems it is considered to be made up of different aspects such as: property rights, investor protection rights, efficiency of the legal systems and judicial prudence (*Doidge et al*, 2006, La Porta, 1997, WFE, 2008, Aggarwal and Williamson, 2007).

Turning to the administrative this aspect is synonymous with good governance. The World Bank (2016) defines good governance as the traditions and institutions by which authority in a country is exercised. This includes the process by which governments are selected, monitored and replaced; the capacity of the good to effectively formulate and implement sound policies; and the respect of citizens and the state for institutions that govern economic and social interactions Good governance consists of voice and accountability, political stability, government effectiveness, regulatory quality, control of corruption, rule of law. Financial development refers amongst other things to financing through local equity market and regulation of securities of exchange. The macroeconomic fundamentals include inflation, gross national savings and FDI.

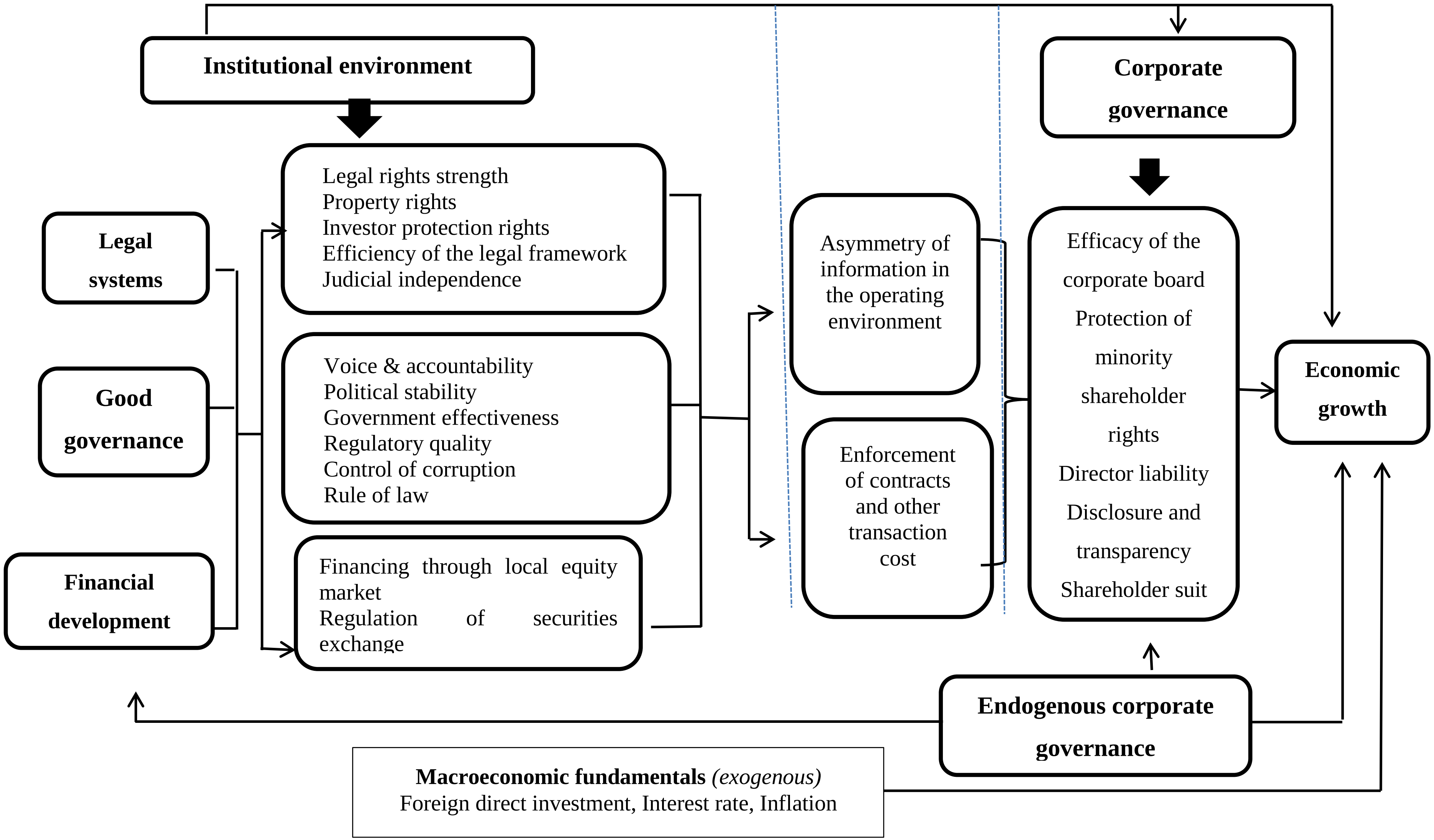


Figure: 3. 1: A conceptual framework for corporate governance and its effect on economic growth
Source: Own (2016)

The conceptual framework for corporate governance and its effects in economic development presented in Figure 3.1 above is based on the assumption that the institutional environment and macroeconomic fundamentals are determinants of corporate governance that leads to economic growth. That is the, legal systems, good government, financial development and macroeconomic fundamentals are determines economic growth through corporate governance. The framework holds the view that economic growth is a function of corporate governance at firm level that is determined by the institutional environment and macroeconomic fundamentals in a country.

These components are interlinked in the sense that the legal systems, good governance, financial development and macroeconomic fundamentals are all necessary for creating an environment that enable corporate governance to make a significant positive contribution to economic growth. The OECD (2015) points out that, a legal, regulatory and institutional environment are required to ensure the development effective corporate governance system that stimulate economic growth. An effective corporate governance system is expected to enhance the economic efficiency performance of the corporation and ultimately lead to economic growth through increased corporate and management accountability to stakeholders. The efficiency with which corporate governance enhances overall company performance and economic development is primarily determined by legal systems, good governance, financial development and macroeconomic fundamentals conditions. Aggarwal and Williamson, (2007) articulates that, the development of corporate governance is dependent on both country and firm level environment. It can be inferred that, an understanding of the different factors that facilitate the development of corporate governance and economic growth that is required in order to promote the development of corporate governance.

Determinants of corporate governance and economic growth are examined through the lenses of the 12 theories that were discussed in chapter two. These theories provide explanation of the connection between the institutional environments, macroeconomic fundamentals corporate governance and economic growth. It can be postulated that the principles and rationale underlying antecedents of corporate governance and the resulting effect on economic growth can be drawn from the group of theories discussed in the previous chapter. According to the OECD (2015), Dodge *et al* (2008) and Djankov *et al* (2006) explain that the quality of corporate governance reflects the level investor protection that is provided to investors and this has effect on investment and capital accumulation and this ultimately affects economic growth. Dallas (2004) explains that the quality of investor protection provided by an individual company is affected by the nature of legal law and enforcement of the legal laws, regulation and legislation available in the legal systems. It can deduce role of corporate governance is to provide protection to investors in accordance to the principles of the neoclassical theories, property rights, agency theory and institutional theory. Tenets of these theories highlight that corporate governance is necessary tool for safeguarding the legal and legitimate rights of the shareholders or investors. Basically these theories help us to understand that corporate governance by providing protection of property rights provides it provides the basis for creation of value and economic growth.

According to La Porta *et al*, (1997) investors see corporate governance as a mechanism to safeguard them against expropriation from insiders. The expropriation arises from the separation of ownership and control in accordance with the agency theory. Individual corporate governance that safeguard the interest of the investors includes the shareholder rights, board of directors, disclosure and transparency and director liability. Principles underpinning the need for internal corporate governance mechanism can be found in the stewardship theory, shareholder theory, organizational theory, agency, neoclassical , property rights and institutional theory.

The agency theory see corporate governance as explained by the agency problem, however besides the separation of ownership and control, there are other external factors that have influence on corporate governance in accordance with the property rights theory and institutional theory. Dallas (2004) explains that corporate governance is informed by company laws that govern the formation, management and conduct of the corporation and company law in turn is derived from the legal laws of the country. Legal laws specify the rights of the shareholders, board of directors, management and other operational matters of the company in light of various theoretical frameworks such as; the property rights neoclassical, stewardship, and agency theory. According to Claessen and Yortglou (2013), Shleifer and Vishiny, (1997) and La Porta *et al*, (1997, 1999, 2000) a legal system provides the foundation for corporate governance. Presumably, the legal system is influences economic growth through its effect on economic growth.

According to Isukul and Chizea (2015) the institutional theory highlight that good institutions are important role in ensuring the development of good corporate governance mechanism. Isukul and Chizea (2015) points out that the development of corporate governance at firm good governance is affected by the way government formulates, implements and ensures regulation of policies at country level. Hence good governance influences corporate governance through the certainties and uncertainties it creates about investing in a country. Financial development influences the implementation of corporate governance in individual companies (Classens and Yortglou, 2013). According to Doidge (2008) countries that have a huge need to gain access finance in the capital market are likely to improve their corporate governance mechanisms. Macroeconomic fundamentals constitute the uncontrolled effect on corporate governance practices. Economic growth is associated with accumulation of capital, investment, saving as well the influence of institutions in the country in accordance with the neoclassical theory of economic growth, The Harrod –Domar model, Solow-Swan model, endogenous growth theory. The section that follows discusses determinants of corporate governance and its effects on economic growth.

3.3 Firm level determinants of corporate governance and economic growth

Corporate governance at firm level is necessary because there is an agency problem that is inherent in the every corporation form of ownership. According to Berle and Means (1932) the agency problem arises because there is a separation of ownership from control leads to conflict of interest between the principal and the agency. Jensen and Meckling (1976) assert that the agency problem is inevitable because all individuals have tendencies to seek to maximise their own self economic interest. The agency problem has detrimental effects on the ability of the company to generate and maximise wealth. This is because the agency often neglects their legal and fiduciary obligations of acting as stewards of the company instead there is a tendency to expropriate the resources of the company for the own benefit. In this regard Fama and Jensen (1980) proposed companies should have in place corporate governance mechanism that controls and monitors the action of management in order to ensure the survival of the firm. The need for corporate governance arises from the fact that companies are run on a day to day basis by management who have inborn tendencies to use the resources of the company to their advantage in accordance with the neoclassical theory.

The role of corporate governance is to minimise managerial opportunistic behaviour so as to allow the company to maximise value creation. The agency problem brings into account the need for corporate governance mechanism to increase accountability and transparency.

In this regard various codes have recommended corporate governance mechanism process, procedures and practices at firm level that can increase accountability to the shareholder and stakeholder. Corporate governance principles, policies and practices are designed in such a way that enable the stakeholders to build trust in the company that management used the authority and power delegated to them to make decisions that allow the company to maximise wealth creation for the stakeholders (see Cadbury Report, 1992, OCED, 1999, 2004, 2015, King Report, 1994, 2002, 2009, 2016). These corporate governance mechanisms that promote accountability include board responsibilities, shareholder rights, disclosure and transparency, protection of minority shareholder and liability of directors. The section that follows focuses on explaining the relationship between corporate governance practices and economic growth.

3. 3.1 Board responsibilities and effectiveness of the board

Directors are expected to use the power trusted to them by the company and the shareholders in run and control the company in a manner that maximises value creation for the shareholder in accordance with the stewardship and agency theory. The fiduciary and statutory duties of the directors to the company are enacted and enforced by company law, legal law and regulation frameworks in a specific country (Dallas, 2004). Since the legal jurisdiction of countries differ owing to several factors such as history, culture, politics and many other factors, it follows that the effectiveness with which directors performance their duties is likely to be different. The roles and responsibilities of the board are affected by legal systems through laws, legislation, regulation and enforcement of fiduciary and statutory duties of the directors (CISA, 2010). The legal systems take into account the agency and stewardship theory concurrently. For instance, the agency theory views directors as stewards who are appointed to manage the company on behalf of the owners of the company. Djankov *et al,* (2008, 2006) observed that the extent to which there is private and public enforcement of laws that prevent the directors from mismanaging the assets of shapes the development of corporate governance and has significant influence on economic growth. This implies that the legal systems influence the effectiveness of the board through formulation and enforcement of laws related to board directors' fiduciary and statutory duties. It can be deduced that a legal systems that has laws and systems that enforce the fiduciary and statutory obligation of the directors is required to ensure the effectiveness of the board. Effectiveness of the board is achieved when the board performs it duties with due diligence, act in faith, trust and best interest of the company and shareholders. The Cadbury Report (1992) explains that the effectiveness the board determines economic efficiency in the company and the overall economy. The role of the directors' includes strategic planning, monitoring, evaluation and controlling performance of the company, ensuring compliance with statutes. According to Cadbury Report (1992), King Report (2016) and OECD (2015) effectiveness of the board responsibilities is influenced by many factors such as; board structure, composition, board size and board diversity, separation of chairman from CEO, NEDs. CISA (2010) explicates that, it is recommended that majority of board members must be independent non-executive directors who can enhance objective and independence decision making. Separation of chairman from CEO is also expected to minimise the giving of excessive control and power to the hand of one person. Alofoabi, (2015) observed that the board size enhance effectiveness of the board by ensuring effective monitoring of management. Ilaboya and Obaretin (2015) found that there is a positive and statistically significant relationship between board size and performance in terms of ROA and Tobin Q. This suggests that an effective board by promoting accountability and transparency it enhances the overall performance of the company.

Board composition is another element that is expected to have influence on the effectiveness of the board. There is no prescribed size, compositions and structure of the board structure in corporate governance. The board size should be composed in such a way that individual board members must exercise their duties with independence, objectivity, skills and competence (García-Meca *et al*, 2014, Akpan and Amran, 2014, Liu *et al*, 2015, Oba *et al*, 2014, Ramezani *et al*, 2013) for instance diversity of the board implies that the board is made up of people with different characteristics, perspectives, skills, value and abilities that and this may enhance problem solving and strategic decision making (Delis et al., 2016). Delis et al., (2016) and Garcia-Meca *et al* (2014) found a statistically significant relationship between board diversity, company performance and evaluation, while there is a negative relationship between the percentage of foreign board, ROA and EPS. This empirical evidence demonstrates the importance of board diversity in corporate governance and the resulting effects of corporate performance. Dallas (2004) agrees that an appropriate board structure improves the effectiveness with which the boards carry out their overall accountability, for strategic decision making performance, internal control of the company as well must align with the interests of the stakeholders. For instance by giving guidance and clarity regarding specific interests, resources such as managerial authority for financial budgets that should be allocated in the process of managing those aspects. It can be deduced that without a relevant corporate governance structure an organisation might find it difficult to align conflicting interests. Miletkov *et al* (2014) concluded that an ineffective and incompetent board performance causes investors to lose confidence in the company thereby disinvest or culminates in poor performance of the company.

Board composition refers to a combination of attributes that should make a board of directors to be effective such as the size of board, board size, structure, NED, independent directors. Akpan and Amran (2015) observed that board characteristics such as size has influence on the financial performance of the company aspects such as ROA but has significant negative effect on TobinQ. These findings were similar to Waweru (2014). This indicates that board composition has influence on the market value of the firm as well as the return that investors can expect to get on their assets employed in the business. Akpan and Amran (2015) found that there is a negative relationship between their presence of women directors and corporate performance measured by ROE. They argue that these findings may suggest that women directors are used as a window dressing process yet they not make a meaningful independent contribution. These results are inconsistent with Garcia-Meca *et al* (2014) findings in different developed countries. This demonstrates that effect of composition of the board of directors on economic growth differs with context. Whilst board composition differs with country investors see board composition as important for enhancing the protection of their interest.

Waweru (2014) found a significant relationship between board structure and firm performance. Wintoki *et al* (2012) on the other found evidence that board structure has insignificant relationship with company performance. Based on their findings they argue that the board structure is determined by several factors and furthermore it has no influence on firm’s performance. Delis *et al* (2016) concurs that board structure is determined by several external factors other than internal firm characteristics. They are two types of board structures namely unitary and two tier board structures. Unitary structure is a board structure that is composed of both executive and NED which is commonly used in Anglo American corporate governance models (Solomon, 2011). In the interest of promoting independent decisions this model separates the role of the CEO from the chairperson. According to Keasey *et al* (1997) two tier boards consist of management and supervisory board are commonly used where the company seeks to address the interest of the providers of capital and stakeholder who have immediate effect on the operations of the firm. The management board is made up executive who are responsible for the operational issues and these headed by the CEO. Supervisory board consists of NEDs who focus on overseeing the management board. Supervisory board consists of NEDs, worker representatives, CEO and chairman. The OECD (1999, 2004, 2015) does not advocate a specific board structure its advice that varies with the context. Turning to Africa, Waweru (2014) recommended that countries need to strengthen corporate governance mechanism such as board of directors in order to promote investors protection. Waweru (2015) posits that in the context of Africa, strengthening of corporate governance practices may improve the market value of African firms, which would, in turn, attract more foreign investors, thus impinge on economic growth.

3.3 .2 Director liability

Board of directors have fiduciary and statutory duty to act in the best of interest of the shareholder and the company. Directors can be personally liable to pay a fine, imprisonment for breach of breach of duties or jointly liable for company debts for non-observation of statutes of compliance. Djankov *et al*, (2008) developed an anti-director self-dealing which seeks to measure the extent to which there is internal mechanism, legal and public laws that regulate director self-dealing and the extent to which there is enforcement of these laws at firm and courts systems. They found that there is a significant relationship between director self-dealing and economic growth. This evidence suggests that director liability influence economic growth through the protection of minority shareholder interest from expropriation by controlling insider be it managers or controlling shareholders. This evidence shows that a sound legal system is required to promote effective corporate governance systems.

Djankov *et al*, (2008) further found empirical evidence that the structure of regulation of self-dealing is determined by the source of origin of law namely common or civil law origins. Djankov *et al*, (2008) particularly observed that regulation of anti-director self-dealing to be strong in common law countries than civil law and these findings provided explanations of the differences in investor protection observed in different countries. This is because these differences may provide some insight regarding the influence of the legal origins and subsequently the legal system of the development of corporate governance and further on the resulting outcome on economic development.

3.3.3 Shareholder rights

La Porta *et al,* (1998) points out that when investors buy shares they become entitled not only to dividend payments, but also to exercise control over management through the voting process. According to Dallas (2006) control rights are procedural rights that shareholders are entitled to. La Porta *et al* (1998) constructed a protection of anti-director rights index which provides a quantitative measure of the legal laws that represent investor's protection. La Porta *et al* (1998)'s antidirector index is an aggregation of shareholder and minority shareholders rights such as the ease of voting for directors, the freedom of trading shares during a shareholders meeting, the possibility of electing directors through a cumulative voting mechanism or proportional representation of minorities on the board, the existence of a grievance mechanism for oppressed minority shareholders, such as a class-action lawsuit or appraisal rights for major corporate decisions, the existence of a pre-emptive right to new security issues by the firm, and the percentage of votes needed to call an extraordinary shareholder meeting. La Porta *et al* (1998) found that company treatment of shareholders meeting and voting procedures, ownership rights and other aspects related to body of directors reflects the level of protection for shareholder rights. The Standard and Poor (2008) highlight that shareholder rights are likely to be low in countries with weak legal systems and regulations laws. Both the agency theory and property rights provide the shareholder with rights for their private property invested in the company. Dallas (2005) describes cash flow rights as entitlement to a dividend and rights to receive a payment in exchange of sale of shares and control rights as mostly procedural rights such as the right to participate in voting or attending meetings.

3.3.4 Disclosure and transparency

According to the Standard and Poor (2008) disclosure and transparency involves the timely disclosure of adequate information concerning a company's operating and financial performance and its corporate governance practices. Disclosure and transparency means that the company publishes information related to the performance and position of the company, examples are annual financial statement, director's reports, profit and loss, balance sheet, cash flow statement and many others (Dallas, 2004). Owners and stakeholders of the company require information on the company and because they are not involved in the day to day running of the business. Solomon (2011) describes disclosure and transparency as a key element of corporate governance that enables stakeholders to monitor the actions and performance of the company. Dallas (2004) and the Standard and Poor (2008) articulate that different stakeholders such as investors , creditors , employees and many others require quality and reliable information in order to make decisions and opinions about the company. It means that the quantity and quality of information that stakeholders have about a company influence their strategic decision that they have to make and which are related to economic growth.

For example Waweru (2014) observed that firm disclosure and transparency measures such as auditing and firm performance affected the quality of corporate governance in Kenya and South Africa. This proves that corporate governance needs to take into account the impact and implications of different aspects of disclosure and transparency these have effect on the performance of the corporation. Ayogu (2001), Okeahalam and Akinboade (2003) , Okeahalam (2001) and Waweru, (2014) argue that strengthening of corporate governance practices may improve the market value of African firms, which would, in turn, attract more foreign investors, thus impinge on economic growth. There is evidence that there is a significant relationship between disclosure and transparency and value of the company as proxied by Tobin Q, ROA as well as overall company performance (Dalwa *et al,* 2015, Luo *et al,* 2015). It is evident that disclosure and transparency have an influence on the return that shareholders receive when assets of the company are utilised to generate wealth. It may be inferred from this, that the efficiency with which the assets are used to maximise wealth creation is influenced by disclosure and transparency.

There is further evidence that transparency combined with inadequate disclosure make investors to be discouraged to make investment in certain markets (Standard and Poor, 2008). The Standard and Poor (2008) further observed that the absence of disclosure and transparency caused undervaluation of shares and high cost. This demonstrates that the lack of disclosure and transparency has several negative effects on important matters that determine the funding and survival of the company. The belief that transparency and disclose lowers the cost of capital is also documented by the asset pricing models such as the efficiency market hypothesis (EMH) by Fama (1980). The EMH assumes the price of the shares in an efficiency market reflects the information available on the share on the market. It entails that economic growth is likely to be affected by the availability of information about the company. This is because investors are likely to lose confidence in the market, making the share of the company to be undervalued and as a result lowers any domestic and international investment into the company. It can be postulated that countries where there is lack of disclosure and transparency in companies are likely to experience low economic growth because it is considered a risk to make an investment in such a country.

3.3.5 Protection of minority shareholders

Minority shareholders need to be protected because this group of shareholders by virtue of their size might have limited power to influence decision making in the organisation. Dallas (2004) points that minority shareholders have high risk of having their investment expropriated by controlling shareholders unless their rights are protected by law. The need to protect minority shareholders arises from the fact that there are different types of ownership in a company. Firms can be owned by families, shareholders or institutions (Dallas, 2004). Solomon (2011) points out that in ownership where there major shareholders, minority shareholder are likely to be dominated by large controlling shareholders. The majority shareholder who presumably owns the largest number of shares and this could be because there are institutional or shareblock owners. Therefore to ensure equitable treatment of all shareholders there is needed to protect minority shareholders. CISA (2010) explain that measures such as ensuring the share of the same class have the same rights such as voting, attending meeting is an example of protecting minority shareholders. Djankov *et al* (2006, 2008) constructed an anti self dealing index to investigate the protection of minority shareholders. Djankov *et al* (2006, 2008) finding showed that the availability of public and private laws as public enforcement and private enforcement of laws that protect self-dealing had influence on the protection of minority shareholders. In particular Djankov *et al* (2006, 2008) found that protection of minority shareholders is determined by the availability of laws that can hold the directors or controlling shareholder accountable. They found that there is weak protection of minority rights and weak legal systems in developing countries. It can be concluded that corporate governance practices in developing economies are hindered by the absence of protection of minority shareholders as well the prevalence of weak legal systems.

3.4 Legal determinant of corporate governance

The framework in Figure 3.1 shows that a legal system that encompasses judicial independence, legal rights, investor protection and efficiency of the legal framework is a determinant of corporate governance. According to Paredes (2004) and La Porta *et al,* (1997) the legal systems is instil confidence needed to encourage shareholders to invest and protecting the shareholders from insider abuse. Corporate governance mechanism across countries differs with ideological and structural differences in the legal traditions origin of law. Mahoney (2001) explain that common law origin were founded on principles that intended to strengthen protection of property, individual rights and enforcement of contract than enhancing state power, in contrast civil law emphasises state power over property. Beck *et al* (2003) assert that, common law is built on individual rights and property rights. This means that corporate governance in common law countries exist in any legal environment that has well written laws and ensures enforcement of the laws that protect the interest of investors compared to that of civil countries. There is evidence that common law countries are associated with higher protection of investor and enforcement of laws that protect property rights than civil law (Beck et al, 2001, Levine, 2003, La Porta *et al,*, 1997, 1999, Mahoney, 2003). It can be established that corporate governance in common law prevails in an environment where there is country investor protection. It follows that in a country where there is wide investor protection from the legal systems the benefits implementing corporate governance are likely to be greater than in those without.

Doidge *et al* (2006) found that the cost of implementing corporate governance in a country is higher than in countries in with strong environment. This is an indication to legal and regulatory practitioners that a sound legal system is necessary to ensure effective corporate governance systems that can enhance the efficiency of the companies in the industry and promote economic growth. For instance La Porta et al, (2002) found that countries with common origin strong investor protection to shareholders and creditors compared to civil law origin countries. This proves that protection of investor resources is complemented with investor protection available at country level. It follows from the fact that investor protection boosts investors’ confidence and attracts investment that common law countries are likely to experience a high flow of foreign direct investment and local investment than civil law countries. Legal origins has influence such as efficient courts (Djankov *et al,* 2006), capital markets, financial development, corruption of control and growth amongst others (see Asongu, 2015, La Porta *et al*, 2002, Doidge *et al*, 2006). This evidence suggest that corporate governance is likely to be effective in an environment that has a sound and effective legal framework is required to support the development of corporate governance. It also further emphasizes that despite the ideological and structural differences in the traditional origin of legal systems countries must ensure that their legal systems provide protection to investor and ensure effective corporate governance in order to promote investment and economic growth in their economies. This also suggests that it might be impossible for corporate governance to stimulate economic growth in the absence of a sound legal system that provides countrywide investor protection.

However, at the same time adoption of strong corporate governance in countries with weak legal system comes at higher cost. Garcia-Meca *et al*, (2015) reached the conclusion that a strong legal system promotes the development of effective good corporate governance that can enhance firm performance. Claessens and Yurtoglu (2013) clarify that adopting corporate governance at firm level and in a country that has a weak legal systems is a cost to the firm they refer to this cost as state expropriation. State expropriation can be described as agency cost incurred when corporate governance is adopted so as to compensate for poor country governance and this result in loss of residual value to the shareholders. Djankov et al., (2008) emphasises that the cost of implementing corporate governance in countries with weak legal environments is higher than the benefit of doing so. It is evident that a weak legal environment inhibits the implementation of corporate governance and has negative effect on economic growth.

Djanko et al., (2006) found that strong shareholder protection provided by both private control of self-dealing and public control resulted in low control premium, high initial public offering equity that contributed to effective corporate governance. Similarly, Doidge *et al* (2006) observed that countries that had strong legal systems lead to increased number of listed firms per millions of population, the value of initial public offerings per country to GDP, equity market access, and ownership concentration. This evidence suggests that legal laws that protect investors are associated with higher financial development.

3.4.1 Judicial Independence

Judicial independence gives assurance that laws will be enforced fairly and justly to all members of the society without the influence of the state of powerful groups of individual on the judiciary systems. The WFE (2015) describes the judicial independence as the extent to which the judiciary is independent from the political influences of members of government and citizens. Mahoney (2001) explains that judicial independence as the extent to which the judge is independent. It measures the extent to which there is interference of the state or government in decision made by courts and judges. Judicial independence influences corporate governance by ensuring that there is no uncontrolled state interference in the enforcement of laws that protect the rights of individuals and private property rights (Fernandez and Tamayo, 2015). It follows that judicial independence differs with country. It is pointed out in Beck *et al* (2003) that judicial independence varies with the ideological differences in the origin of law. Beck *et al* (2003) and Mahoney (2001) established that judicial independence is high in common law origins because there is emphasises on protection of individual rights and property rights unlike in civil law where judicial independence is viewed as less important instead emphasise strong legislation. It implies that in order for countries to promote the development of corporate there must ensure that there is judicial independence in the legal system that protects the rights of individual property owners. It also suggests that state interferences undermine property rights of the individual property owners. In other words judicial independence is likely to be low in conditions where there is emphasis on state legislation or excessive state interference.

3.4.2 Efficiency of the legal framework

According to the WFE (2015) efficiency of legal framework measures the extent to which a legal framework of a country provides the ability for private businesses to settle disputes and challenge the legality of government actions. An efficient legal system is expected to lead to improved corporate governance because the legal system has rules and regulations in place that protect individual and property rights from the state. It is pointed in Fernandez and Tamayo (2015) that role legal framework is to make sure that they are written laws, rules and regulation and ensure the enforcement of such laws , rule and regulation that ensure protection of individual and private property rights. It means that corporate governance at firm level is effective when there is efficient legal framework that is an efficient in settling disputes. Several finance scholars observed that a legal system affects economic growth through its influence on corporate governance (Asongu, 2015, Beck *et al,* 2003, Djankov *et al,* 2006, Doidge *et al* 2007). This evidence suggests that efficient legal systems are required to promote the development of effective corporate governance that can enhance economic growth. It can be presumed that differences in the efficiency of the legal systems have influence on the development of corporate governance and its effectiveness. This leads one to believe that the efficiency of the legal framework in having laws and ensuring enforcement of property rights is a prerequisite for effective corporate governance that can support economic growth. It can be concluded that from this that, improved corporate governance at firm level alone is necessary but not sufficient to make a significant contribution to economic growth in the absence of an efficient legal framework.

3.4.3 Property Rights

Beck et al., (2003) define property rights as measures of the extent to which legal systems protects private property and enforce laws that protect private property. This indicates that the extent to which legal systems have laws that define and protect law determine the level of protection available to private property owners. Fernandez (2015) suggests that a strong legal and independent judiciary system is required to support the protection of property rights. This entails that effectiveness of property rights in promoting free enterprise in an economy is influenced by the extent to which courts and judges or the country enforce and create laws has influence in the extent to which property rights are protected in a country. Empirical studies shows that countries and companies were there is protection of shareholders rights, rights to property, protection of investors had higher higher Tobin Q ratios for the firms translating to higher corporate performance (Miletkov *et al*,2015, Miletkov *et al,* 2015).

3.4.4 Investor protection

García-Meca, *et al* (2014) describes investor protection as encompassing all the commercial law and legal systems that protect investors and mitigate agency problems that may occur with the transactions. Similarly, Fernandez and Tamayo (2015) describe investor protection as all institutional mechanisms taken by the legal systems and the government to reduce asymmetric of information in the markets, enforcement of contracting, reducing transaction costs and providing an environment in which transactions can take place in confidence. It is well known that investors are risk averse that is there is no investor who is willing to invest in a company or country where there is high risk of losing their investment. La Porta *et al*, (2002) observed that investors 'protection can be provided by legal system aspects such as; cash flow rights, anti-directors rights and control rights and corporate valuation. The evidence presented in their study further supported their assumptions that firm in countries with protective legal systems were likely to have higher financial performance as represented by high Tobin Q. It follows that investor protection from the legal systems in addition to that from corporate governance may restore investors 'confidence retains and attract new investors. It can be assumed from the fact that investor protection safeguards property rights, ensure enforcement of the contract, reduce asymmetric information that, investors protection is likely to lower the cost of implementation of corporate governance, increase its benefits to the company and in terms of firm performance and ultimately contribute to economic growth.

Klapper and Love (2004) found that there is an interrelationship between investor's protection and corporate governance. Investor protection from the institutional environment can compensate for weak corporate governance at firm level but at the same time investors might be less dependent on the country environment if the firm having in strong corporate governance. Doidge *et al* (2006) argues that country level investor protection is necessary for reducing the cost of implementation of corporate governance. Doidge *et al* (2006) further argue that cost of implementing corporate governance in countries where there is weak investor protection and might be of little benefit because investors might be concerned about the weak legal systems. Doidge *et al* (2006) who reached a conclusion that corporate governance at firm level must take place before the legal systems cannot start to implement changes in investor protection. They explain that adoption of strong corporate governance mechanism by companies in countries with weak legal country would be an attempt to compensate for the weak institutional environment. Claessens (2006) asserts that voluntary corporate governance adopted by firm in weak legal systems compensate for the weak investor protection provided by the legal systems. Klapper and Love (2004) provide evidence that the implementation of corporate governance can attract high costs for example to attract and retain qualified and competent independent directors, regular publication of audited financial statements and directors remuneration that to lower the cost of implementation of corporate governance the legal systems should first provide investor protection. Klapper and

Love (2004) reached the conclusion that countries must first provide investor protection in order to support the development of corporate governance.

It is therefore assumed in the integrated framework that the legal system is a determinant for corporate governance and economic growth. It can be postulated that: corporate governance has a positive and significant effect on economic growth when it is supported by legal systems factors such as legal rights strength, property rights, investor protection rights, efficiency of the legal framework and judicial independence cause.

3.5. Good governance as a determinant of corporate governance

According to WFE (2014) a country's good governance can impose a cost to the business that can slow the processes of economic growth. This implies that good governance in addition to the legal systems it is also a determinant of corporate governance. The section that follows using the variables of good governance depicted in Figure 3.1 examines whether good governance is a determinant of corporate governance and economic growth.

3.5.1 Voice and accountability

Kaufmann *et al* (2010) define voice and accountability as the extent to which a country's citizens are able to participate in selecting their government, as well as freedom of expression, freedom of association and a free media. Voice and accountability is expected to influence corporate governance since it demonstrates the functioning of the regulatory institutions such as parliament and legislative bodies to hold politicians accountable to the public. This is because in a country the principles of voice and accountability aim to promote the participation of citizens in decision making meaning that this is likely to promote investor confidence. Doidge *et al* (2006) reached the conclusion that voice and accountability influence firm level corporate governance by the level of country level protection it offers to the investors. Klapper and Love (2004) suggest that democratic accountability can promote economic growth by providing an investor friendly environment that boosts investor confidence and attracts investment into companies in the country. Zagorchev and Gao (2015) found that good governance supplemented effective supervision and regulation of financial institutions. Claessens and Yurtoglu (2013) examined the effect of a country's good governance on the development of corporate governance and corporate performance in developed, emerging and transition economies. They found a significant association between corruption, financial market development, corporate governance and economic growth.

Despite the critical importance of voice and responsibility there are few studies that have examined its influence on the effect of corporate governance on economic growth. In the integrated framework in Figure 3.1, this study proposes that there is need to understand voice and accountability not only as a formal mechanism for promoting the participation of citizens in economic decision making but also as a relationship between the society and the state whose patterns, attitude and behaviour can have effect on corporate governance and economic growth. It can be concluded that while evidence on voice and accountability is underdeveloped it does not mean that this aspect is less significant in promoting corporate governance and economic growth in developing countries' economies.

3.5.2 Anti-corruption

According to Kaufman *et al* (2010) the ant corruption indicator captures the perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as "state capture" by elites and private interests. Claessens and Yurtoglu (2013) provide evidence that firm level corporate governance systems are ineffective if there is corruption in a country. The scholars found countries with high anticorruption where characterised by low economic development. This evidence further leads one to conclude that corruption has impact on economic growth in any economy. Whilst control of corruption is considered as important for ensuring effective corporate governance findings from several surveys by WFE show that most least developed countries in Sub Saharan Africa economies are facing the challenge of high corruption (WFE, 2011, 2012, 2013, 2014). The most popular form of corruption includes a high degree of public diversion of public funds, public trust in politicians and irregular payment and bribes (WFE, 2014). This evidence suggests that unless transition economies improve their country governance practices such as control of corruption they are likely to continue to experience poor economic growth. It also indicates that, the level of anti corruption control is likely to affect the corporate governance at firm level and on economic growth

Garcia-Meca *et al* (2014) found that corruption increased the cost of implementing corporate governance in companies. They measure corruption as the extent to which government officials engaged in corrupt tendencies such as demanding bribes. If corruption has influence on corporate governance it can be argued that those countries seeking to promote corporate governance with the intention of promoting economic development should consider first improving good governance practices such rule of law, accountability and corruption before expecting to achieve economic development at firm level. This is because there is a possibility that corporate governance at firm level is undermined by the absence of good governance in a country.

3.5.3 Political stability

Doidge *et al* (2006) found that country governance factors such as political stability had significant impact on the development of corporate governance in different countries. Inasmuch as this study broadens our understanding of the significant importance of corporate governance, the study did not incorporate the economic dimension. In consequence, it does not provide a comprehensive understanding of the relationship between corporate governance and economic growth as a whole. Klapper and Love (2004) observed that weak country governance, political will and poor governance increases the cost for improving corporate governance at firm level. In particular they point out that the cost of implementing corporate governance is higher than the benefit because such countries have poor financial development and are less likely to attract investors. These findings support their hypothesis that country characteristics are important determinants of corporate governance. It can be concluded from this evidence there is need to incorporate the effect of political stability on the development of corporate governance and economic growth. This is because political stability shapes the environment in which the company operates and affects the corporate governance systems, corporate performance and has broader consequences on economic growth as a whole.

The cost of implementing corporate governance is low in a country where there is political stability and this reduces the cost of expropriation from country governance risk (Standard and Poor, 2008).This means that political stability provides some assurance of low expropriation from risk in the country governance environment. Generally, political stability provides investor protection and confidence of getting a return on their investment. On the contrary political instability represents a risk and is likely to result in poor economic growth. In sum political stability is required to enable companies to raise external finance on attractive terms in the financial markets especially in countries with poor economic growth. It can be argued that it is impossible to expect to attract investor if a country has political instability. It follows that before a country can design their economic growth strategies they must prioritise political stability.

3.5.4 Government Effectiveness

According to Kaufman *et al* (2010) government effectiveness aspect captures the perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies. Government effectiveness can contribute to increased efficient utilisation of resources thereby enabling the government to deliver basic important services to their citizens, especially in developing countries. Despite the availability of studies on good governance, evidence on government effectiveness and corporate governance is still under developed.

3.5.5 Regulatory Quality

This captures the perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development (Kaufman et al, 2010). Djankov *et al* (2006) found that regulatory quality has effect on economic growth through the type of regulations they prioritise. This evidence suggests that government regulation quality can influence corporate governance and its role in the policies it formulates, implements and supports. The argument is that although empirical evidence on regulatory quality and corporate governance is still underdeveloped it can be expected that effective regulatory qualities policies are likely to support corporate governance. It can be presumed that the regulatory quality might influence the development of corporate governance through the effectiveness of the regulation of the legal system, legislative reforms as well as the monitoring of the institutional environment.

3.5.6 Rule of Law

Kaufman *et al* (2010) defines rule of law as capturing perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence. La Porta *et al*, (1997) referred to rule of law as the level of law and order in the country. According to this view the level of rule of law indicates the extent of investor protection as well as the presence and the enforcement of various laws that protect investor property rights and interests. Rule of law is likely to promote enterprising and better economic performance at firm and national economic level. La Porta *et al*, (1997) showed that rule of law influence corporate governance through the level of protection it provides to investors at country level. This suggests that, rule of law is necessary for providing investor protection which promotes financial and economic development.

WFE (2014) uses indicators such as public trust in politicians, irregular payments, bribes judicial independence, favouritism in decisions of government officials and many aspects that have influence on the investment decision. With regard to good governance WFE surveys reveal that developed economies are leading on institutional performance such as rule of law whilst most countries in Sub Saharan Africa are trailing behind (WFE, 2012, 2013, 2014, 2014). The survey has identified poor governance at country and firm level as factors that have contributed to low economic development in economies in Sub Saharan Africa. It can be inferred that, the quality of country governance has impact on investment decisions which is the driver for economic growth. Klapper and Love (2004) found that, the presence of strong rule of law to promote investment in companies with weak corporate governance systems. This indicates that the extent to which a country observes law can be a substitute for weak corporate governance. This indicates that investors see investor protection by rule of law as adequate to compensate for poor corporate governance at firm level. Klapper and Love (2004) argue that companies that have good corporate governance are less dependent on country on legal systems and the efficiency of the judiciary. These results are consistent with those found in several countries by various scholars. La Porta *et al*, (1998) developed an index for rule of law and expropriation that measures enforcement and property rights in developed countries. The found a positive correlation between rule of law and development of finance and corporate governance across different countries.

Doidge *et al* (2007) observed that there is a significant relation between rule of law and country governance environment. These findings are consistent with La Porta *et al* (2002) found that those countries with firms that provide investor of minority shareholders had had higher market valuation. This evidence suggests that country level governance places constraints on the development of corporate governance and the resulting performance of the firm. Although this study provides useful evidence about the impact of country governance and legal systems on firm performance it does not incorporate the effect on economic growth. Moreover, these empirical findings are based on companies from developed economies whose context is different from Sub Saharan African countries. Against this background it is important studies to be carried using developing economies context in specific those in Sub Saharan Africa.

La Porta *et al* (1997) found a significant relationship between rule of law and the number of listed companies per million in a domestic economy. This proves that rule of law plays a significant role in promoting financial development. Similar evidence was observed by Doidge *et al* (2006) who used democratic accountability, corruption and rule of law to construct a rule of law index. They observed that there is a significant correlation between rule of law, business regulation and economic growth. In particular rule of law was significantly correlated to business regulations. This evidence demonstrates the extent to which rule of law has impact on promoting economic growth.

In their study, Osman *et al* (2011) found that countries that had rule of law grow faster than those that do not have. It means that rule of law provides investor protection that stimulate and sustain sustained investment and ultimately economic growth. Osman *et al* (2011) asserts that the quality of institutions has an influence on economic performance. Whilst this evidence suggests the content of laws or policies play an important role in promoting corporate governance and economic growth, it does not provide a framework that explains how the rule of law in connection with other institutional factors have determine corporate governance and economic growth. It follows therefore that, such empirical findings have limited use to practitioners because it does not provide a complete basis for understanding the role of legal systems on economic growth and still remain unclear how this is relates to growth.

3.6 Financial development determinant of corporate governance

The World Bank (2013) in its global financial development report states that it is difficult to achieve financial development because financial markets are characterised by imperfection in information which subsequently culminates in incurring transaction costs such as writing contracts, interpreting and enforcing contracts. The concept of the imperfect market and its resultant consequences in terms of transaction and contract costs is buttressed in the agency cost concept explained in Jensen and Meckling (1976). Jensen and Meckling (1976) provided empirical evidence that at the basic unit level the imperfections in the financial markets inhibit investment and savings from the society. Their study provides both theoretical explanations and empirical evidence of how measures such as contracts and property rights provide assurance to investors. Presumably it is against this understanding that there are imperfections in the financial markets that any intervention to promote economic growth is based. The World Bank (2013) considers reducing the imperfection in the financial markets as a very important measure for economic growth through financial development. In well-developed financial institutions and financial markets there is likely to be efficient resource allocation and potential because of effective measures of minimising and controlling market imperfections. Minimising imperfect market information and transactions costs bring into context the concept of how financial development influences economic growth through corporate governance

3.6.1 Regulation of securities of exchange

According to Dallas (2004) corporate governance principles and practices can improve through the laws that govern the issuing and exchange of corporate securities. CISA (2010) points out that stock exchanges have several rules and relations that require companies to comply with good corporate governance practices such as disclosure and transparency, composition of board of directors particular emphasis having majority independence NEDs , disclosure on auditing, compensation of directors, financial statement amongst many others (CISA, 2010). This indicates that the availability of regulations of securities exchanges help to improve the implementation and adaption of corporate governance practices in a company in exchange of being listed in the stock exchange. Solomon (2011) explains that the availability of securities of exchange plays an important role in promoting the development of corporate governance in any economy because it also helps to address the problem of conflicts of interest between management and stakeholders for example it prevents insider trading by requiring directors to disclose any trading that they make on the stock exchange. It is evident that the stock exchange’s listing requirements promote the development of corporate governance in companies that are listed on the stock exchange. Although regulations of securities play an important role in promoting the development of corporate governance it is observed to be underdeveloped in the developing countries because of the limited availability of developed financial markets. Securities laws also have the responsibility of giving laws that regulate the listing and exchange of securities on the stock exchange. According to Dallas (2004) regulations mostly focus on promoting disclosure and transparency principles of the corporation in addition to providing legal regulation over corporate governance practices in companies. Security laws also address conflicts of interest between company management regarding issues such as third party transactions, inside dealings and many others.

3.6.2 Financing through the market

Financial development in the context of the corporate governance and its role in economic growth are expected to promote efficient financial markets that can help strengthen the regulation of corporate governance at firm level. The availability of financial markets in any economy determine corporate governance by affecting the access and cost at which companies access financial markets (Beck *et al.,* 2003, Claessens, 2006, Doidge *et al.,* 2007, Levine, 1997, Levine, 1999, Levine and Zervos, 1998). Companies that rise funding through domestic or international markets are expected to improve their corporate governance so as to attract investment. In so doing the need for external funding leads companies to improve their corporate governance. King and Ross (1993) provided evidence of countries with more developed financial market having greater rate of average rate of economic growth. The WFE (2014) clarifies that sophisticated financial markets play an important role in enabling companies to have access to domestic and international finance which it requires for its entrepreneurial activities.

There is further evidence from Doidge *et al* (2006) that financing through the market is a determinant of corporate governance. They observed that the cost of improving corporate governance is high in low income developing countries because the cost of raising funds is high to recover the cost of improving corporate governance. This means that the level of economic growth determines the costs and benefits that a company accrues from improving its corporate governance. Doidge *et al* (2006) explain that implementation of corporate governance at firm level alone is not only a cost to the business but it is not enough to provide the investor with protection needed to attract investors. This information is an indication to policy makers that improved corporate governance at firm level in a developing can simply become a cost to the company in the absence of supporting institutional environment. Against this background the integrated framework makes the assumption that financial development is antecedent of corporate governance. It is therefore postulated that financial development causes corporate governance to have positive and significant effect on economic growth.

3.7 Macroeconomic fundamentals

Macroeconomic fundamentals are part of the macro environment that is uncontrollable by the corporation but has influence on the operations of the company hence must take into account the governance of the firm.

3.7.1 Inflation rate

Inflation, GDP deflator (annual %) is measured by the annual growth rate of the GDP implicit deflator showing the rate of price change in the economy as a whole. The GDP implicit deflator is the ratio of GDP in current local currency to GDP in constant local currency World Development Indicators (WDI). Macroeconomic variables follow the endogenous theory of growth explanation that investment and saving have an influence on economic growth. Inflation has an impact on the cost of production and profit margin hence the overall performance of the company. According to Nhuta (2014) inflation erodes shareholders wealth and may result in good corporate governance principles and practices being abandoned.

3.7.3 Foreign direct investment

Foreign direct investments refer to direct investment equity flows in the reporting economy. It is the sum of equity capital, reinvestment of earnings, and other capital (World Bank, 2016). Mukherjee (2015) provides evidence that countries with weaker domestic institution have concentrated ownership and low capital flows. He also found that corporate governance has influence on investment and capital flows.

3.7.3 Gross national saving

Aggregate national savings is defined as public- and private-sector savings as a percentage of nominal GDP. National savings equals gross domestic investment plus the current-account balance (WFE, 2010). The fact that these macroeconomic fundamentals have an effect on the efficiency of the processes through which the company creates wealth demonstrates that, macroeconomic fundamentals are antecedents of corporate governance. The integrated framework thus postulates that macroeconomic fundamentals cause corporate governance to have a positive and significant effect on economic growth.

3.8 Conclusion

This chapter presented the conceptual framework that explains the nature of the relationship between corporate governance and economic growth. The developed conceptual framework for corporate governance and its effects on economic growth was developed from a review of literature as the analysis of various corporate governance, economic growth models and theories that were examined in this study. The factors that determine the development of corporate governance with the view of enhancing economic growth were identified and discussed. The relationship formulated in this chapter provides a basis for model specification in Chapter 5. The next chapter explores the research philosophies, methodology and methods that are followed in this study.

CHAPTER 4

Research philosophies, methodology and methods

4.1 Introduction

This chapter explains the research methodology and methods that were followed in this study. It outlines the ideological and philosophical viewpoint of this study. Research design and research strategy that were used to collect and analyses data to get answers to the research questions are outlined. The purpose of this chapter is also to explain the research methods followed in this study in order to achieve the research objectives of this study. This study proposes to use econometric panel data analysis principles and procedures. This chapter also focuses on specifying the models that must be estimated in order to establish the empirical relationship between corporate governance and economic growth. It also identifies and the population of the study and outlines sources from which secondary data were collected.

4.2 Research paradigm

According to Rayman and Holloway (2011) a research paradigm is an ideological or philosophical perspective about the world. This means that, the way we understand the world is shaped by one one's world view or philosophy which in turn is shaped by our knowledge and experiences. Rayman and Holloway (2011) further describe a research paradigm as associated with three core philosophical aspects namely ontology, epistemology and methodology. Saunders *et al* (2009) defines philosophy as the nature of knowledge developed. This suggests that, the understanding that one has shapes their viewpoint and interpretation of the world. It follows therefore that, the concept of corporate governance is interpreted differently because it is perceived from different paradigms. This explains why different paradigms reflect different understandings and beliefs about corporate governance. It can be argued that a context based approach is required to understand corporate governance.

4.2.1 Corporate governance as social science: A positivist viewpoint

If corporate governance is a social science as pointed out by Ryan *et al* (2002), it follows that scientific techniques can be applied to examine corporate governance as a science.

Mitroff (1974) suggest that paradigms affect not only how we view, study, interpret and know an object but also what use we make of it. It can be established from this that the way we study corporate governance is important not only for shaping our understanding and knowledge but also in shaping what we believe it should be used for. In other words, what is conceived as the use of corporate governance also determines what we believe is required to enable corporate governance to function efficiently so that it can achieve the expected outcomes. The outcomes which corporate governance is expected to achieve are also context dependent on the needs and interests of a given society. This means that one's world view influences how one interprets the world and also determines what plan of action one thinks should be taken to solve the problem identified. In this regard, the main assumption underpinning this study is that corporate governance is a social science whose principles are universal but the applications of these principles are context dependent. That is although the principles of corporate governance do not change with context, the implementation of corporate governance principles and its effectiveness depend on the social systems in which the corporation is based.

Based on this philosophical assumption, this study adapts a positivist approach to examine corporate governance and its role in economic growth in Sub Saharan Africa. Rayman and Holloway (2011) define positivism as a paradigm that holds the ontological assumptions that there is an objective reality that exists out there. It implies that there is a social reality that exists externally, independent of the perceptions of individuals who see it. Reality exists regardless of our perceptions and knowledge about its existence. According to Ryan et al, (2002) positivist research aims to uncover universal laws and give an objective picture of the world. Basically, positivism interprets reality by examining the relationship between the systems so as to establish patterns and regularities. This is unlike the constructivism or interpretivism that creates meaning about social reality from the perspectives of those who are involved in the creation of that reality.

It entails that there are commonalities that must exist to explain factors that determine corporate governance and its role in any economic growth in the different contexts. It can be deduced that the effectiveness to which corporate governance can be put to enhance economic growth depends on the understanding of basic rules and laws that govern its existence. It might be impossible to understand how corporate governance can be used to promote economic growth if there is no understanding of the natural laws that govern its existence and functionality.

According to Jackson (2010) objective reality seeks to establish the existence of regularities and causal relationships in the social world using a positivist epistemology. By adopting positivism this study contends that there must be natural laws that explain corporate governance and its role in economic growth. Even though corporate governance varies with context and countries there must be common similarities that explain corporate governance and its role in economic growth. This study further asserts that factors that determine corporate governance and its effects on economic growth can be explained through an empirical study. This view is supported by Jackson (2010) who states that, objective reality can be established through positivism by examining the casual relationship between the systems rather than by examining the view of individuals who constructed the system as the interpretivism does.

4.2.3 Systems view of corporate governance and its effects on economic growth

To explain corporate governance as a social science from positivism epistemology and objective ontology this study follows the systems view approach. Jackson (2010) advises that some aspects of social science cannot be understood unless the sub systems are studied as a systems. It means that a holistic rather than reductionist approach is required to study corporate governance because it is made up of interconnected parts of the broader systems in the environment in which the corporation exists. Burrel and Morgan (1979) proposed that the nature of social science can be understood from four dimensions namely, functionalist, subjective, radical humanist and radical structuralism. This study chooses to use the functionalist approach to systems. According to Burrel and Morgan (1979) if a system is seen from a functionalist approach (objective, sociology of regulation) social reality then has a hard objective that has an external existence independent of observers. Ryan *et al* (2002) clarify that the functionalist paradigm assumes that the society is a single system of interrelated elements, with each element of social life serving a specific function. It can be deduced from these explanations that if corporate governance is a social science, it follows that there must be corporate governance to serve a particular function in the society and its ability to do so is dependent on the social systems in which it is embedded. Burrel and

Morgan (1979) further elucidate that the functionalist paradigm holds that an understanding of the function of the working can be gained by finding regularities or commonalities in the relationship between sub-systems and the whole.

Burrel and Morgan (1979), state that an interpretive paradigm holds the belief that reality is socially constructed through human experiences and interactions. This paradigm assumes we can understand a system by understanding the views of the human beings who constructed the views. Interpretivism uses qualitative research methodologies that seek to build knowledge by interacting with the participants who created the meanings. Radical humanist paradigm assumes knowledge about systems can be gained by understanding the intentions of the human beings who created the systems (Burrel and Morgan, 1979). This entails that reality is created from the perspective of the individual who participated in creating the observed phenomenon. Radical structuralism assumes that objective reality engenders a casual regulation governing the behaviour of systems (Burrel and Morgan (1979. The preliminary goal of this paradigm is to understand radical change.

Whilst this study choose functionalism to a systems view it is aware that a systems view can be understood from other approaches such as interpretivism, radical humanism and radical structuralism. This is because although the other approaches are important for understating social science they are not relevant to this study. That is, the study seeks to understand the underlying laws governing corporate governance and its role in economic growth.

4.2.4 Epistemology

Epistemology is the second element of any research paradigm. According to Rayman and Holloway (2011) epistemology "is a philosophical study of the theory of knowledge and determines what accounts for valid knowledge." Ryan *et al*, (2002) suggest that, the key questions in the field of epistemology are "what is known and how is it acquired?" Lancaster (2005) explicates that, epistemological approaches organise and explain knowledge in the form of theories that are empirical whilst ontological approaches focus on conceptual orientations. Ryan *et al* (2002) identify rationalism and empiricism as the main source of epistemology. They further state that epistemology is often explained from either empiricism or rationalism. Empiricism assumes reality exists in space and time and can be understood by repeated observation and empirical validations of what is observed (Smith, 2011, Ryan *et al*, 2008). Rationalism, on the other hand, assumes that ideal reality does not exist in space or time but can be understood by exercise of reason or logic alone. This study examines the nature of the relationship between corporate governance and economic growth through a positivism approach .The study will to this will follow an empiricist approach. This implies seek to create meaning by interpreting and analysing empirical evidence about same phenomenon observed overtime instead creating meaning from the views of those who are involved in the construction of the social reality.

This study holds similar epistemological Platonic ideas that there is an existence of ideas that explain the essence of things (their form). However, unlike the Platonic approach that uses constructivism to explain a social phenomenon this study uses an empiricist approach. Ryan *et al*, (2002) explain that the empiricist approach opines that there is an existence of external realities but empirical observations and validations of the perceived reality are required to test the validity of assumed truth. The implications of empiricism in this study are that the nature of the relationship between corporate governance and economic growth can be analysed through an empirical study. This empirical study therefore uses conventional scientific research methods to validate theories. It engages a Mitroff model systems view to problem solving and to study corporate governance as social science. The Mitroff model systems view was previously explained in Chapter 1.

4.2.4 Ontology

Ryan *et al* (2002, p. 13) define ontology as the study of existence; it addresses the question of what we discern to be real. Rayman and Holloway (2011) points out that ontology is concerned with the state of being in terms of human existence and social reality. The challenge associated with ontology is to establish how to know what is reality and how to know when statements about the world are true or false. This suggests that ontology is concerned with establishing what is conceived to be reality versus what is in existence.

Ryan *et al* (2002) clarify that realism and idealism are the main ontological assumptions. Idealism believes in objective reality which is constructed by the individual through logical reasoning as such reality is subjective and socially constructed. Realism on the contrary assumes that there is an external form of reality that is observed as such there should be external justification for what is observed. According to Ryan et al, (2002), realism interprets the relationship between events on the assumptions of critical realism. This study holds that there is a causality relationship; that for example the effects of B causes A or inversely A causes effects on B and the universal laws that explain this behaviour can be tested through repeated observation of the events between A and B. This study interprets corporate governance from a realist approach whereby there is cause and effect relationship between corporate governance and economic growth.

4.2.5 Research methodology

Research methodology is the third element of this research paradigm that is determined by ontological and epistemological perspectives. Essentially assumptions about the nature of reality can be explained either subjectively or objectively. Research methodology, according to Jackson, (2010) is the way knowledge is acquired, including the ideas that govern the principles, rules and procedures of a particular field of study. Essentially, research methodology provides insights into the nature of processes, procedures and principles to be followed in order to address the research problem identified. Welman *et al* (2005, p.2) point out that research methodology considers and explains the logic behind the research methods and techniques. Jackson (2010) adds that the purpose of research methodology is to establish the principles underlying the use of models or techniques, implying that research should follow established stages and rigorous steps. As discussed in the previous paragraphs this study uses Mitroff models.

4.3. Research design and methods

Research design according to Welman (2005:52) is a plan according through which we obtain research participants and collect data from them. Mouton (2001) describes a research design as a blue print of how one intends to conduct research. Research design may either be empirical whereby it focuses on hypothesis / theory testing or validation or non-empirical which focuses on developing meaning of the phenomenon through conceptual analysis or theory building (Mouton 2001). To develop an integrated framework for corporate governance and its role in economic growth this study follows principles of empirical research. According to Ryan *et al* (2002) empirical research establishes explanation through continued observation of a phenomenon under the assumption that there is cause and effect relationship. Some empirical observation is required in order to draw holistic meaning and understanding of the existence of any phenomenon. This study focuses on constructing a conceptual framework. Hence the study follows a quantitative and not qualitative approach. According to Smith (2011) quantitative research strategies use data which can express quantitatively or classified by some numerical value whilst qualitative data is descriptive. To develop quantitative evidence the nature of relationship between corporate governance and economic growth was empirically observed. Quantitative aggregated data based from various institutions such as World Bank Economy and Growth, WFE as well as World Bank‘s Doing Business and Governance Indicators are used. Similar comparative studies have used data from these sources (Djankov et al, 2006, Doidge et al., 2006) but not with a specific focus on Sub Saharan Africa which is the focus of this study

4.4 Econometric panel data analysis

Panel data analysis is a research technique that enables the study of cross sectional units over time. Verbeek (2004) defines a panel data set contains repeated observations of the same individual units across section over a number of periods. Maddala (2005) agrees that panel data because of repeated observations over time on the same units enable one to specify and estimate realistic models than a single cross section or single time series. Hsiao (2007) in agreement points out that panel data, by integrating inter-individual differences and intra-individual dynamics, have several advantages over cross-sectional or time-series data. Verbeek (2004) further explains that panel data is suitable not only to model or explain why individual units behave differently but also to model why a given unit behaves differently in different time periods. The observation is that differences could be attributed to a different past. This means that if one is interested in understanding changes in cross section over different time periods then panel data provides better estimators that a series of cross section.

Hsiao (2007) identifies three factors contributing to the geometric growth of panel data studies: (i) data availability,

(ii) greater capacity for modelling the complexity of human behaviour than a single cross-section or time series data, and

(iii) challenging methodology.

Combined all the three factors suggest that panel data sets enable data to be used to explain complex relationships over a period of time. Verbeek (2004) notes that panel data have an advantage in that it allows the observation of certain parameters without making restrictive assumptions compared to time series or cross sectional data sets.

4.4.1. Advantages of panel data analysis

i. Availability of data

Hsiao (2007) argues that the collection of large volumes that are supposedly used in cross-sectional or time series data is more costly than panel data because panel data has become widely available in both developed and developing countries. The section that follows discusses the advantages that this study is likely to benefit from the use panel data as well the associated disadvantages and the measures taken to mitigate the shortcomings that may arise in the modelling method.

ii. **Greater capacity for capturing the complexity of human behaviour than a single cross-section or time series data**

Hsiao (2007) explains that panel data captures the complexity of individual behaviour over a period than cross section or time series data. Panel data, because of sequential observation of behaviour over time, is able to distinguish and explain behaviour over time. He further adds that panel data allows constructing and testing of complicated behaviour hypothesis.

iii. Efficiency of parameter estimators

Verbeek (2004) identifies efficiency of parameters of estimators as another advantage of panel data analysis. He explains that efficiency and accuracy of estimation of observed outcomes is likely to be high because panel data sets are larger than cross sectional or time series as such it enables explanation over two dimensions. Is simple words the more the observations the more accurate the results are likely to become. As such, Verbeek (2004) emphasises that panel data sets yield more information and better explanations.

iv. **Controlling the impact of omitted variables**.

Hsiao (2007) highlights that "it is frequently argued that the real reason one finds (or does not find) certain effects is due to ignoring the effects of certain variables in one's model specification which are correlated with the included explanatory variables." Omitted variables arise if a variable that is correlated with the included variable is excluded from the model. It is important to control for omitted variables because the true effect and outcome between variables cannot be controlled, understood, estimated or even predicted if additional variables that have influence are omitted. Hsiao (2007) emphasises that panel data is able to control for effects of omitted or unobserved variables because panel data contain information on both the intertemporal dynamics and the individuality of the entities being observed.

v. Identification of parameters

According to Verbeek (2004, p.344) panel data reduces identification problems such as omitted variables, endogeneity, measurement error and enhances robustness and identification of individual dynamics. This strengthens this study given that it has argued that existing studies have not captured all the variables that have an influence on corporate governance suggesting that it is impossible to understand corporate governance and its role in economic development. Verbeek (2004, p.344 further explains that unobserved effects might be due to some omitted variables, errors or the past may influence the current and even future of an observed individual. Various panel data techniques such as dummy variables, fixed effects models, random effects model are used address this identification problem.

vi. Simplifying computation and statistical inference

Hsiao (2007) highlights that panel data simplifies data through analysis of nonstationarity time series. This problem arises when time series is not stationary and the large sample approximation about the distributions of the least-squares or maximum likelihood estimators is no longer normally distributed. Panel data encompasses techniques from time series such as unit root and cointegration into panel data modelling because there is growing recognition that cross sectional information is a useful source of information (Verbeek, 2004, p.368). For instance, to analyse the effect of corporate governance on economic development, a comparative analysis with other countries might be useful than analysis at individual country level as this may help to establish the country specific different effects and even predict the expected long run relationship. Moreover, techniques can be used to address problem of heterogeneity, unit roots and nonstationarity emanating from the use panel data sets (Koop, 2004, Madhalla, 2001, Verbeek, 2004).

Regarding statistical inferences where there is an omitted variable bias which may lead to the possibility of unmeasured and observed factors that affect both the predictor and outcome Treiman (2009, p.364) explains that panel data uses fixed effect and random effects models to test for unobserved heterogeneity. Panel data has the capacity to explain this past and predict the behaviour of variables over time.

vii. Measurement errors

Hsiao (2007.p.5) points out measurement errors can lead to under identification in an econometric model. He refers to Biørn (1992); Griliches and Hausman (1986) as well as Wansbeek and Koning (1989) who all suggested that various techniques can be used to control for the errors and hence reduce the effect of measurement errors on explaining the observed results. This implies that panel data addresses the econometric problem of the effects of the presence of omitted variables be it due to unmeasured or unobserved effects that correlate with the explanatory variable. Hsiao (2003, p.5) further explains that panel data can use regression model that allows one to use both intertemporal dynamics and the individuality of the entities being investigated to control the effects of the missing variable or unobserved variable. It means that panel data analysis has the capability of explaining the relationship between past, present and future conditions.

4.4.2 Conceptual model

The Mitroff model classifies the process of developing a conceptual model through conceptualisation as the first step of problem solving. They further explain the role of a conceptual model in a problem solving approach to identify and delineate variables that define the problem. This step of developing a conceptual model was done in Chapter three. Murkherjee (1998) describes a conceptual model as a means for finding answers to research questions. A conceptual model is a tool that helps to achieve research objectives by organising and distinguishing concepts related to the research questions under investigation (Musvoto, 2008). This implies that a conceptual model provides theoretical groundwork for examining and understanding relationships between components of a research problem. In this study the conceptual framework developed and presented in figure 3.1 provides a basis for specification and estimation of panel models that provide answers to the research questions raised in this study.

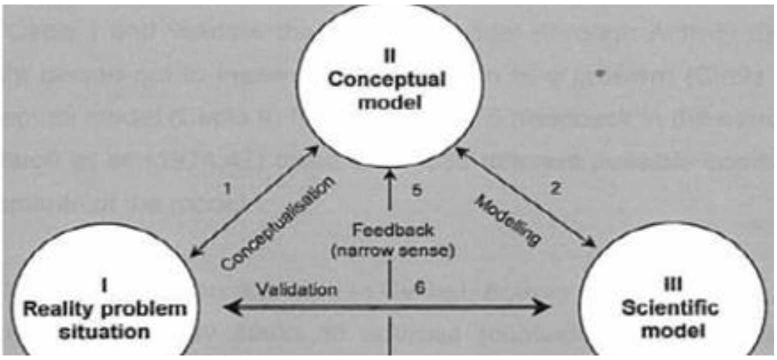


Figure 4.1: On managing science in the systems age: Two schemes for the study of science as a whole systems phenomenon. *Source*: Mitroff, I. I., Betz, F., Pondy, L. R. & Sagasti, F. (1974).

As shown in Fig 4.1 the activity of developing a scientific model requires modelling. Mitroff *et al* (1974) describe modelling as a process formulating and abstracting of significant relationships that provide theoretical explanation of the observed phenomenon. Despite identifying the process the Mitroff systems view of problem solving does not provide detailed steps involved in the modelling process. One possible reason could be explained by a survey literature which revealed that that there are different ways of engaging in the activity of modelling (Maddala, 2005, Mitroff et al, 1974, Murkehjee, 1998). To address this challenge this study followed steps of econometric analysis proposed by Maddala (2005, p. 8).

4.4.3 Schematic description of steps involved in an econometric analysis model

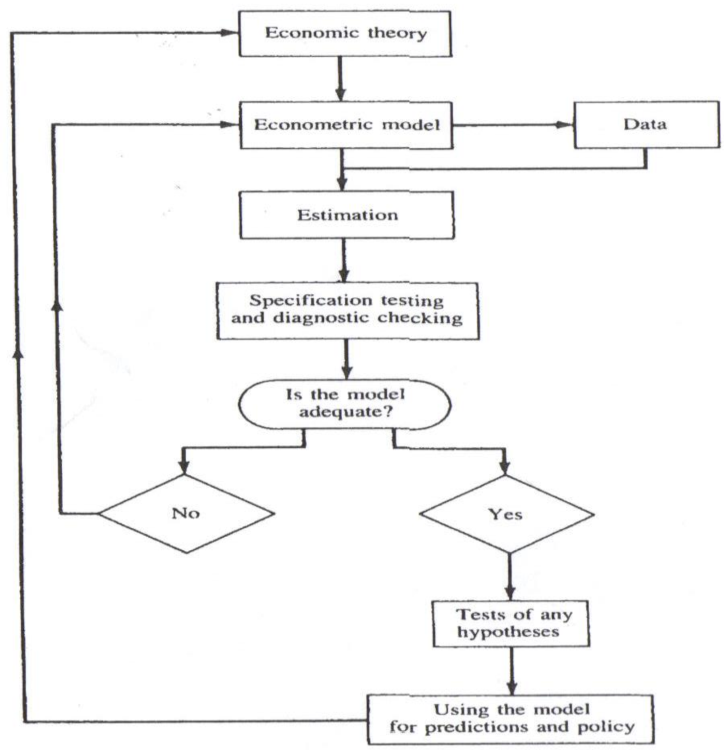


Figure 4.2: Schematic description of steps involved in an econometric analysis model. Adopted from Maddala (2005, p.7*)*

Figure 4.2 represents a schematic overview of steps involved in econometric analysis based on Maddala (2005). Maddala (2005) shows the connection between theory, econometric model, data, estimation, model specification and testing that should be followed in order to arrive at a model that provides an adequate explanation of the research questions.

4.5 Specifying tests and diagnostic testing in general to specific modelling approach

A model can be biased and thus misleading owing to various reasons such as model specification, endogeneity, heterogeneity, omitted variables and thus give misleading and biased results. There are many approaches of analysing panel data such as general linear models proposed by Molenberghs and Verbeke (2006); log-linear models for categorical outcomes (Gilula and Haberman, 1994) as well as generalized estimating model method

(Liang and Zeger, 1986). The model specified in this study is estimated using pooled effect model, fixed, random effect model and General Moments Methods (GMM). The section that follows explains these diagnostic tests.

4.5. 1 Pooled effects model

It is a model that pools all cross section and time series data and estimates an OLS and does not take into account cross section specific differences. This pooled model assumes that an outcome is explained by the observed effect and there are no cross sectional individual unobserved effects that have effect on the observed outcome. The pooled effects model assumes homogeneity and disregards individual specific differences that may have effect on the outcome (Verbeek, 2004). It should be remembered that under OLS estimates were calculated which estimate the coefficient but because this is a mere estimate there is no certainty on the measures of the coefficients. Once there is no certainty about the accuracy of the coefficients then there is the risk that the specified model and its observed results might be misleading. Providing accurate estimates is important because it increases the consistency, reliability, validity and confidence in the model and estimated results. As such there is need to test the accuracy of the estimates.

4.5.2 Challenges of pool effects model

The pooled effect model eliminates heterogeneity: it does not take into account the individual specific country differences that may have an influence on the observed relationships. This means that the pooled model assumes that there are no cross section specific differences. The assumption underpinning the pooled effect assumption may not hold because companies exist in different countries with differences in history, political, legal and financial systems and these factors may contribute to cross section specific differences across countries. If it is possible that there is variance in the effect of unobserved variables and the errors are not homogenous there is need to test for heterogeneity and autocorrelation. There might be unobserved heterogeneity and thus there is need to test for this possibility. If this assumption does not hold then it follows that OLS estimator becomes inconsistent and biased hence the interpretation of the effect of explanatory variable on the dependent becomes wrong.

Muhammad *et al* (2015) states that pooled OLS does not take into account heterogeneity and if variables under a study are likely to be endogenous the OLS will mostly likely be inconsistent. The presence of heterogeneity indicates that the pool effect model is not appropriate thus either the fixed or random effect model should be considered. Muhammad *et al* (2015) suggest that systems GMM indicator can be used to check robustness of the results because this technique takes into account the omitted variables. In addition, the GMM addresses endogeneity and reverse causality using a lagged variable of the independent variables as instruments.

4.5.3 Panel data test for diagnosing unobserved heterogeneity

To start with, because the model specification began with simple pooled effect model which only assumed homogeneity and disregarded heterogeneity, the fixed and random model has to be used to test for heterogeneity.

4.5.4 Fixed effect model

The fixed effects (FE) model eliminates the effects of time invariant variables by making the assumption that effect across individual units over time are fixed. The fixed effect model is estimated by least squares dummy variable (LDSV) regression and within estimation. It is tested using F-test.

4.5.5 Challenges of fixed effects model

If unmeasured effects do change over time the fixed assumptions do not hold and as a result the fixed effects model is not appropriate. It implies that if there are unmeasured effects that change over time, then the OLS estimator is biased hence OLS regression does not solve the bias problem. Secondly, the FE model assumes that explanatory variables must be strictly exogenous and restricted by the unobserved variables. It is generally assumed that because we control for unobserved variables, there is no remaining correlation between predictor variables and idiosyncratic error. There are possible ways in which this assumption of strict exogeneity no longer holds in the approximated model for example if one or more of the predicator variables is dependent on the outcome of the variable measures in the previous period.

4.5.6 Random effects

Random effects (RE) model is a regression analysis estimation that assumes that all factors that affect the dependent variables but have not been included as regressors can be represented by the random error term (Madhala *et al*, 2005). There is a possibility that corporate governance at firm level differs across countries because firms exist in countries that differ in political, legal systems and financial markets due to differences such as history, culture, and traditions constant across countries. Therefore to test the validity of the fixed effect model, a random effect model which assumes that unobserved effects are uncorrelated with the regressors is tested. Random effects assume that random factors are independently and identically distributed over individuals. Random effect model can be considered as a regression model with a random constant term.

4.6 Model selection

The previous tests examined the presence of the fixed or random effects; however they do not explain fixed effects or random effects substantively. In order to determine the appropriate model, data should be described by producing a summary of statistics then follow the panel modelling process that follows where one can test the hypothesis.

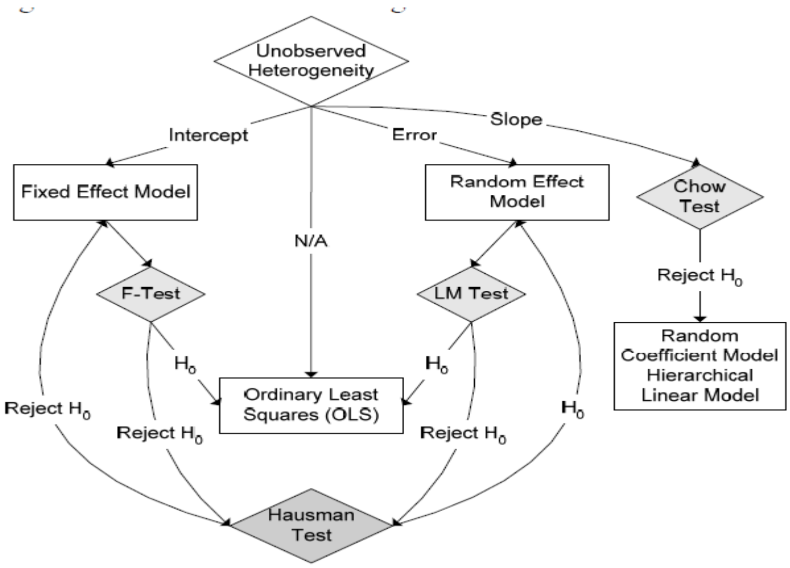


Figure 4.3 Model selection

Source Park, 2011

If one expects that the individual heterogeneity captured in the disturbance term and the individual group or time is uncorrelated with any of the regressors, then one should test the random effect model. If the heterogeneity captured by specific individual intercepts and the individual effects are correlated with any of the regressors, then a fixed effects model becomes plausible. If each group shares the same disturbances, a fixed effect is appropriate. However, if each individual has its own disturbance then the random effect is favourable for addressing heteroskedastic disturbances fixed effect model where the adequacy of the fixed effect is tested by F-test, whilst random effect is examined by Breusch -Pagan (1980) Lagrange multiplier (LM) test. The former compares a fixed effect model and OLS to see how much the fixed effect model improves the goodness of fit, whereas the latter compares a random effect model with OLS.

4.6.1 Robust Inference

Both the random effects and fixed models hold the assumptions that α_i captures all the correlation between the unobservable in different periods. It also assumed that ε_{it} is uncorrelated over individual and time on conditions that x_{it} variables are strictly exogenous, the presence of autocorrelation in ε_{it} does not result in inconsistency of the standard estimators. It does invalidate the errors and implies that estimators are no longer adequate. For instance the presence of heteroskedasticity in ϵ_{it} or the random effect models in α_i may lead the effects estimator to no longer be a feasible GLS estimator in β. OLS random effects or fixed estimators adjust its standard errors for general forms of heteroskedasticity and correlation. This helps to avoid making misleading inferences without imposing alternative assumptions on the structure of covariance matrix.

4.6.2 Test for heteroskedasticity and autocorrelation

Generalised Methods Moments (GMM) test can be used to test for heteroskedasticity and autocorrelation. Autocorrelation is a problem that occurs when there is violation of the assumption that OLS is the best least estimator. This implies that the OLS loses efficiency; the residual variance no longer provides unbiased estimates of the error variance. It implies that testing the hypothesis is invalid since the standard error is the H_0 under test that there is no significant correlation. Under H_a , there is a positive significant correlation. Autocorrelation is caused by model misspecification which mostly occurs when a variable that has influence of the variables in the model is omitted. The consequences are that the omitted variable may cause the model to underestimate or overstate the expected outcomes (Mukherjee et al, 1998). The challenge that arises through mis-specification is that the coefficient estimators are biased unless the variables are orthogonal to those that are included in the model. However, if the omitted variables are not correlated or do not have effect on the models that are included in the model then the omitted variables have no influence on the relationship.

4.7 Panel vector autoregressions (pvar) model specification

Panel vector auto regression model is specified and estimated because this study takes into account that multiple regression only provides an understanding of the effect of an explanatory variable on dependent variable at a given point, overlooking the fact that the effect of explanatory variable on dependent variable may take time to manifest. According to Koop (2004) the problem with using time series data in panel data multiple regressions is that one time series variable can influence the outcome in the other time lag. That is because panel data involves time series data and it is important to take into account the time lags because one times series variable can influence another with a time lag. Panel vector autoregressions are necessary because multiple regression model neglects the fact that effect of the explanatory variable on the dependent variable may take some time to manifest itself and also it might be dependent on the outcome of the dependent variable itself. Koop (2004) explains value of the dependent variable at a given point in time should depend not only on the value of the explanatory variable at the time period but also on the values of the explanatory variables in the past. Abrigo and Love (2015) thus describe panel vector autoregression as estimates of multivariate panel regression of each dependent variable on the lag of itself, including the lags of other dependent variables that are exogenous. The study estimates the efficacy of the model using generalised methods moments (GMM).

The long run relationship between corporate governance and economic growth in general and specifically in Sub Saharan Africa context remains an unsettled issue in literature. This section seeks to establish connectivity between corporate governance, good governance, financial development and macroeconomic environment and track the link to long run economic development. Kadenge and Tafirei (2015) argue that the OLS has been observed to have some shortcomings when studying long run relationships between the variable. This means previous studies only identify the relationship but not to detect the long run relationship.

4.7.1 Panel VAR Granger causality test

Although corporate governance is seen as a predictor of economic growth, there have been limited efforts towards addressing the issue of causality. Levine (1999) argues that an explanatory variable can be a leading indicator rather than an underlying cause. In this instance not only does there exist limited evidence in literature to establish if corporate governance causes economic development, but even if corporate governance has causal impact on economic development, little empirical evidence in cross country studies on the determinant of corporate governance exists. In the previous section the study sought to determine how good governance, legal, financial and macroeconomic environment affect corporate governance and its role in economic development. In this section the study seeks to establish if there is a causal link between corporate governance and economic growth. Given the insufficient empirical evidence on whether corporate governance causes economic development and the inadequate understanding of determinants of corporate governance this study addresses this challenge. It is important to understand causality because this helps policy makers to identify those determinants of corporate governance in order to promote the development of corporate governance and cause economic development.

4.7.2 Generalised impulse response function (GIRF)

The study ran a generalised response function to check the impact of variables over time and if there is any indication of correlation.

4.7.3 Panel data model specifications and diagnostic test

For the purpose of analysis the data was structured hierarchically to enable a two level-hierarchical measurement analysis at disaggregated and aggregated levels across countries. The study uses a nested sequential approach to introduce additional variables one at a time.

Nested sequential approach was motivated by the assumption that the effect of the additional explanatory variables would spill over into each other, thus creating correlation across space rather than across time. To enhance the efficiency and consistency of the estimation this study used the mixed model approach. The rationale for using the mixed models that the pooled effect only groups all cross section and time series data it gives a common regression overlooking cross section specific differences as well as the time effect. To enhance the efficiency and minimise bias from that may arise from the use of only pooled effect model this study specified and estimated both a pooled and fixed effect model. This was adopted because pooled effect only uses OLS which literature has identified as fraught with inefficiencies such that it does not take advantage of the panel structure that is cross sectional differences and unobserved differences.

Pooled and fixed effects models were firstly specified and estimated for Sub Saharan African in order to understand the relationship from the regional level in its entirety. The study further estimate pooled effects model and fixed effects model estimated at legal origin, income level and regional level to establish whether the effect of corporate governance on economic growth varies with region. To avoid duplication, pooled and fixed effects models were specified only at Sub Saharan Africa level and the model specification for legal origin, income level and regionals are not indicated in this document. To capture and identify the variations that occur at different levels, this study used a hierarchical modelling in order to test the interaction of the variables at different levels.

4.8 Specification of pooled effect models

To establish whether corporate governance is a determinant of economic development in countries in Sub Saharan Africa hierarchical panel data models can be specified and estimated. Economic growth estimated as corporate governance and to examine this relationship estimates from a pooled effects model and random effect model are specified as follows.

This section specifies Pooled effects model (PEM) using aggregated data. PEM1- PEM5 specifies models that examine relationships raised in research questions i-*v* using disaggregated data

4.8.1 Determine the nature of the relationship between corporate governance and economic growth in countries across Sub Saharan Africa

The pooled effects model assumes homogeneity and disregards individual specific differences that may have effect on the outcome (Verbeek, 2004). The assumption behind the pooled effect model is that if a cross sectional outcome over time is explained by the observed effect there are no crosses sectional individual effects that have effect on observed outcome. In this study the pooled effects model for corporate governance and economic growth follows the assumption that there are no unobserved individual country specific differences in corporate governance that have an influence on observed economic growth.

The relationship between corporate governance and economic growth based on the pooled effect modelled is given in model1 below. In the model, economic growth is the dependent variable and it is represented by GDP values. Corporate governance is the main independent variable and it is represented by protection of minority shareholders, director liability, shareholder suit, disclosure and transparency and efficacy of the board.

$$EcoGr_{it} = \beta_0 + \beta_{Cg} X_{it}^{Cg} + u_{it} \qquad \text{(PEM1)}$$

where $EcoGr_{it}$ that is economic growth in country i at time t where i = country 1, 2…29, and time is year 1, 2... 7. X_{it}^{Cg} is = F (protection of minority shareholder, director liability, ease of shareholder suit, disclosure and transparency, efficacy of the board for country i at time t in country i at time t where i is 1, 2,3…N, t is 1, 2, 3 …T). β_{Cg}, is a column vector containing the corresponding coefficient. As such X_{it}^{Cg} represents a measure of all observed country specific corporate governance effects and u_{it} captures the unobserved country heterogeneity. X_{it}^{Cg} , represents corporate governance variables in country i at time t , that affect economic growth in country i at time t. u_{it} accounts for unobserved country heterogeneity that are time invariant. Hence the fixed model specified in this study specifies corporate governance observed in specific individual countries at a given time period that is X_{it}^{Cg} and the unobserved heterogeneityu_{it} in individual specific country at a given time has effect on $EcoGr_{it}$ that is economic growth in country i at time t. The model is estimated using OLS to estimate coefficient of β which represents the slope or the marginal effect of X_{it}^{Cg} on $EcoGr_{it}$.

To broaden our understanding whether the effect of corporate governance on economic growth varies with the region, income level and legal origin of law the same pooled effect model was estimated per region, income level and legal origin of law.

4.9 Specification of models to test for endogeneity

The effect of corporate governance on economic growth in the previous pooled effects model explained a number of variables of corporate governance hence it disregards endogeneity. Endogeneity is a condition where one or more explanatory variables have influence on the observed outcome of the dependent variable (Wintonki e*t al*, 2016). Endogeneity needs to be understood by corporate governance and economic growth researcher, policy makers and practitioners because it has implications on the predication of the causal relationships. Koop (2004) points that the OLS estimator becomes biased, inconsistent and thus yields misleading results where there is a presence of endogeneity. To account for endogeneity, this study used hierarchical regression model with nested data. The study uses a nested sequential approach to introduce additional variables one at a time. Nested sequential approach was motivated by the assumption that the effect of the additional explanatory variables would spill over into each other, creating correlations across space rather than across time. Legal systems, good governance, financial development and macroeconomic fundamentals are the additional explanatory variables that added sequentially into the first regression model. Although other methods such as stepwise regression exist to account for the effect of additional variables this study choose to use the nested sequential approach. Koop (2004) cautions that stepwise regression method can be misleading because of the order in which the variables are selected since only significant variables are retained in the model leaving out any that appears to be insignificant. The nested approach has advantages over the stepwise regression because it allows the nested block to be added and then give a comparison reports for the nested models.

4.9.1 Investigate whether legal systems have influence on the effect of corporate governance on economic growth in Sub Saharan Africa countries

This model sought to estimate a pooled OLS that can be used to investigate whether legal system which consists of legal rights, property rights, efficiency legal system and investor protection determine the effect of corporate governance on economic growth in Sub Saharan Africa countries. Corporate governance can be influence by legal systems observed at country level and unobserved country specific heterogeneity. The influence of legal systems on the effect of corporate governance on economic growth is captured by adding legal systems variables into model1. The model that seeks to nest the influence of the legal systems on the effect of corporate governance on economic growth can be specified as follows:

$$EcoGr_{it} = \beta_0 + \beta_{Cg}X_{it}^{Cg} + \beta_{lg}X_{it}^{lg} + u_{it} \qquad \text{(PEM2)}$$

where, X_{it}^{lg} =F (Legal rights, property rights, investor protection and efficiency of the legal framework in country i at time t where i is 1, 2.3…N, t is 1, 2, 3 …T). β_{lg} is a column vector containing the corresponding coefficient $EcoGr_{it}$ is economic growth. The model includes X_{it}^{Cg}, that is corporate governance variables in modelPM1, that have effect on economic growth and they are also influenced by the legal systems. u_{it}, represents the unobserved country heterogeneity.

4.9.2 Establish the influence of good governance on the effect of corporate governance on economic growth in countries Sub Saharan Africa

To establish whether good governance elements represented by indicators such as voice & accountability, political stability, government effectiveness, regulatory quality, control of corruption have influence on the effect of corporate governance on economic growth in countries Sub Saharan Africa, the following pooled effects model was specified:

$$EcoGr_{it} = \beta_0 + \beta_{Cg}X_{it}^{Cg} + \beta_{lg}X_{it}^{lg} + \beta_{gdg}X_{it}^{gdg} + u_{it} \qquad \text{(PEM3)}$$

where X_{it}^{gdg} = F (voice and accountability, political stability, government effectiveness, regulatory quality, control of corruption in country i at time t where i is 1, 2.3…N, t is 1, 2, 3 …T). β_{gdg}, column vector containing the corresponding coefficient, where $EcoGr_{it}$ is economic growth in that is affected by X_{it}^{Cg}, corporate governance variables in model (PEM1), but its on affect economic growth is influence by X_{it}^{lg} that is legal systems variables that are in model(PEM2), in addition to X_{it}^{gdg} that is good governance variables. u_{it}, represents corporate governance variable, legal systems variables from model (PM1) and PM2 respectively and the unobserved heterogeneity term u_{it} that affect $EcoGr_{it}$.

4.9.3 Investigate if financial development has influence on the effect of corporate governance on economic growth in countries in the region

To investigate if financial development is a determinant of the effect of corporate governance on economic growth in countries in the region the following model was specified:

$$EcoGr_{it} = \beta_0 + \beta_{Cg}X_{it}^{Cg} + \beta_{cg}X_{it}^{lg} + \beta_{gdg}X_{it}^{gdg} + \beta_{fd}X_{it}^{fd} + u_{it} \quad \text{(PEM4)}$$

where X_{it}^{fd}= F (financing through the market, regulation of securities of exchange in country i at time t where i is 1, 2.3…N, t is 1, 2, 3 …T), β_{fd}, is a column vector containing the corresponding coefficient where $EcoGr_{it}$ is economic growth that is affected byX_{it}^{Cg}, corporate governance variables in model(PEM1), but its effect on economic growth is influenced by X_{it}^{lg} that is legal systems variables that are in model(PEM2), X_{it}^{gdg} that is good governance in (PM3) in addition to X_{it}^{fd} that are financial development variables and the unobserved heterogeneity term u_{it}.

4.9.4. Examine if macroeconomic fundamentals have effect on corporate governance and economic growth

The influence of good governance on corporate governance can be determined by sequentially nesting the effects of good governance in the previously nested model. Below is an model that specifies nested pooled effect model for estimating the effect of corporate governance on economic growth after the inclusion of good governance to nested effects from a block of corporate governance, legal systems, good governance and financial development variables. The model is specified as follows.

$$EcoGr_{it} = \beta_0 + \beta_{Cg}X_{it}^{Cg} + \beta_{lg}X_{it}^{lg} + \beta_{gdg}X_{it}^{gdg} + \beta_{fd}X_{it}^{fd} + \beta_{mf}X_{it}^{mf} + u_{it} \qquad \text{(PEM5)}$$

where X_{it}^{fm} = F (gross national savings, inflation deflator and foreign direct investment for country i at time t where i is 1, 2.3…N, t is 1, 2, 3 …T), β_{fm}, is a column vector containing the corresponding coefficient where $EcoGr_{it}$ is economic growth in that is affected byX_{it}^{Cg}, corporate governance variables in model(PM1), but its effect on economic growth is influenced by X_{it}^{lg} that is legal systems variables that are in model(PM2), X_{it}^{gdg} that is good governance in (PM3) in addition to X_{it}^{fd} that make up financial development variables in model(PM4) in addition to X_{it}^{fm} that is financial development variables and the unobserved heterogeneity term u_{it}.

4.10 Specification testing and diagnostic checking for unobserved heterogeneity

The pooled model assumes that there are no cross section specific differences. The assumption underpinning the pooled effect may not hold because companies exist in different countries with differences in history, political, legal and financial systems and these factors may contribute to cross section specific differences across countries. There might be unobserved heterogeneity and thus the need to test for this possibility. If this assumption does not hold then it follows that OLS estimator becomes inconsistent and biased hence the interpretation of the effect of $\beta_{Cg}X_{it}^{Cg}$ on $EcoGr_{it}$ becomes wrong. Heterogeneous factors are unobserved individual specific differences that vary over all units but does not vary overtime. If the unobserved individual specifics are correlated to the corporate governance then they cause the OLS estimator to be biased.

4.10.1 Specification of fixed effects model to account for heterogeneity

The fixed effects model eliminates the effects of time invariant variables by making the assumption that effects across individual units overtime are fixed (Verbeek, 2004). The fixed effect model assumes that unobserved individual country specific differences that do not vary overtime are correlated to the explanatory regressors. Fixed effect models focus on differences within individual states that are related to the observed explanatory factors. As indicated above, account for heterogeneity fixed model was estimated to determine the effect of corporate governance on economic growth influenced by individual cross country differences that are invariant overtime. This section specifies fixed effects model (FEM) using aggregated data. FEM1- FEM6 specifies models that examine relationships raised in research questions i-*v* using disaggregated data

4.10.2 Determine the nature of the relationship between corporate governance and economic growth in countries across Sub Saharan Africa

A fixed effect model that seeks to examine whether corporate governance is a determinant for economic growth is given as follows:

$$Econgro_{it} = \alpha_i + \beta_{Cg} X_{it}^{Cg} + u_{it} + \epsilon_{it}, \qquad \text{(FEM1)}$$

X_{it}^{Cg}= F (protection of minority shareholder, director liability, shareholder suit, disclosure and transparency, efficacy of the board in for country i at time t where i is 1, 2.3…N, t is 1, 2, 3 …T). β_{Cg} , is the corresponding coefficient, α_i, stands for all the effects of the individual country specific differences that are assumed to be constant over time and these are assumed to be correlated to the explanatory regressors, u_{it} stands for unobserved error that is independent and identically distributed, ϵ_{it}, is assumed to be independent and identically distributed over individuals and time.

4.10.3 Specification of models to test endogeneity

Further to test for endogeneity that is these additional explanatory variables have an influence on the effect of corporate governance on economic growth a sequential approach was used to introduce a block of additional variables into the regression equation. To examine whether the effect of corporate governance on economic growth is influenced by the addition of legal systems the following fixed effects model was specified:

4.10.4 Investigate the influence of the legal system on the effect of corporate governance on economic growth in Sub Saharan Africa countries

The models to investigate the influence of the legal system on the effect of corporate governance on economic growth is estimated as follows

$$EcoGr_{it} = \alpha_i + \beta_{Cg}X_{it}^{Cg} + \beta_{lg}X_{it}^{lg} + u_{it} + \epsilon_{it} \qquad \text{(FEM2)}$$

X_{it}^{lg} =F (Legal rights, property rights, investor protection and efficiency of the legal framework in country i at time t where i is 1, 2.3…N, t is 1, 2, 3 …T). β_{lg} is a column vector containing the corresponding coefficient $EcoGr_{it}$ is economic growth,

4.10.5 Examine the influence of good governance on the effect of corporate governance on economic growth in Sub Saharan Africa countries

To examine whether the effect of corporate governance on economic growth is influenced by the introduction of good governance in addition to legal systems the following fixed effects model was specified:

$$EcoGr_{it} = \alpha_i + \beta_{Cg}X_{it}^{Cg} + \beta_{lg}X_{it}^{lg} + \beta_{gdg}X_{it}^{gdg} + u_{it} + \epsilon_{it} \qquad \text{(FEM3)}$$

ModelFM4 examines the effect of corporate governance on economic growth after adding good governance. The model makes a comparison of its nested effects of corporate on economic growth with those observed in model2 where a block of legal systems and corporate governance where previously where added.

4.10.6 Investigate the influence of financial development on the effect of corporate governance on economic growth in Sub Saharan Africa countries

To examine whether the effect of corporate governance on economic growth is influence by the introduction of financial development in addition good governance and legal systems the following fixed effects model was specified

$$EcoGr_{it} = \alpha_i + \beta_{Cg}X_{it}^{Cg} + \beta_{lg}X_{it}^{lg} + \beta_{gdg}X_{it}^{gdg} + \beta_{fd}X_{it}^{fd} + u_{it} + \epsilon_{it} \qquad \text{(FEM4)}$$

FEM 4 examines the effect of corporate governance on economic growth after adding financial development. The model makes a comparison of its nested effects of corporate on economic growth with those observed in model3 where good, governance, block of legal systems and corporate governance were previously added

4.10.7 Examine the influence of macroeconomic fundamentals on the effect of corporate governance on economic growth in Sub Saharan Africa countries

To establish whether the effect of corporate governance on economic growth is influence by the introduction of macroeconomic economic fundamentals in addition to good governance legal systems and financial development the following fixed effects model was specified.

$$EcoGr_{it} = \alpha_i + \beta_{Cg}X_{it}^{Cg} + \beta_{lg}X_{it}^{lg} + \beta_{gdg}X_{it}^{gdg} + \beta_{fd}X_{it}^{fd} + \beta_{mf}X_{it}^{mf} + u_{it}+\epsilon_{it}$$

(FEM5)

4.10.8 The influence of country differences on the effect of corporate governance on economic growth in Sub Saharan Africa countries

$$EcoGr_{it} = \alpha_i + \beta_{Cg}X_{it}^{Cg} + \beta_{lg}X_{it}^{lg} + \beta_{gdg}X_{it}^{gdg} + \beta_{fd}X_{it}^{fd} + \beta_{mf}X_{it}^{mf} + \sum_c \beta_s D_i^c + u_{it}+\epsilon_{it} \qquad \text{(FEM6)}$$

where, $D_i^c$the country is dummy and β_s is the corresponding coefficient

To establish whether the effect of corporate governance on economic growth is influence by the introduction of financial development in addition good governance and legal systems the following fixed effects model was specified accounting for country as dummy variable

4.11 Disaggregated and aggregated data

Aggregated indicators have an advantage of providing aggregated statistical measure. Kaufmann *et al*, (2011) highlights the main advantage of aggregated indicators as being their ability to summarise and combine very large set of individual perceptions-based into an index. There are many advantages of suing aggregated data indicators may be deduced, firstly that it enables higher order statistical power in contrast to that obtained from a single source or multi fragmented sources. Secondly, aggregated analyses of evidence from multiple sources can be examined and combined thus improving and enhancing statistical power and ability to detect relationship or solve a problem. Basically aggregated data provide a higher statistical power to explain an observed phenomenon. Aggregated variables of the various dimensions were used as provided from the different websites.

This study started by using disaggregated data components of corporate governance, legal systems, good governance, financial development and macroeconomic fundamentals as collected from the various websites. Thereafter aggregated indices for corporate governance, legal systems, good governance, financial development and macroeconomic fundamentals were calculated using equal weighted average method where each of the data points contributed equally to the final average. A weighted average was considered because it avoided the problem of allocating specific weights to individual variables.

4.11.1 Specification of pooled effects models using aggregated data

This section specifies Pooled effects model (PEM) using aggregated data. PEM1- PEM5 specifies pooled models that examine relationships raised in research questions i-*v* using aggregated data

i. **Determine the nature of the relationship between corporate governance and economic growth**

$$EcoGr_{it} = \beta_0 + \beta_{Agg\_cg} X_{it}^{Agg\_cg} + u_{it} \qquad \text{(PEM1)}$$

$X_{it}^{Agg\_cg}$ is the aggregated corporate governance index

ii. **Investigate whether legal systems have influence on the effect of corporate governance on economic growth in Sub Saharan Africa countries**

$$EcoGr_{it} = \beta_0 + \beta_{Agg\_cg} X_{it}^{Agg\_cg} + \beta_{Agg\_lg} X_{it}^{Agg\_lg} + u_{it} \qquad \text{(PEM2)}$$

$X_{it}^{Agg\_lg}$ is aggregated legal systems index

iii. **Establish whether good governance have influence on the effect of corporate governance on economic growth in countries Sub Saharan Africa.**

$$EcoGr_{it} = \beta_0 + \beta_{Agg\_cg} X_{it}^{Agg\_cg} + \beta_{Agg\_lg} X_{it}^{Agg\_lg} + \beta_{Agg\_gdg} X_{it}^{Agg\_gdg} + u_{it} \qquad \text{(PEM3)}$$

$X_{it}^{Agg\_gdg}$ is aggregated good governance

iv. **Investigate if financial development has influence on the effect of corporate governance on economic growth in countries in the region**

$$EcoGr_{it} = \beta_0 + \beta_{Agg\_cg}X_{it}^{Agg\_cg} + \beta_{Agg\_lg}X_{it}^{Agg\_lg} + \beta_{Agg\_gdg}X_{it}^{Agg\_gdg} + \beta_{Agg\_fm}X_{it}^{Agg\_fd} + u_{it} \quad \text{(PEM,4)}$$

$X_{it}^{Agg\_fd}$ is the aggregated financial development index

v. **Examine if macroeconomic fundamentals have influence on the effect of corporate governance on economic growth in region.**

$$EcoGr_{it} = \beta_0 + \beta_{Agg\_cg}X_{it}^{Agg\_cg} + \beta_{Agg\_lg}X_{it}^{Agg\_lg} + \beta_{Agg\_gdg}X_{it}^{Agg\_gdg} + \beta_{Agg-mf}X_{it}^{Agg\_mf} + \beta_{Agg\_fm}X_{it}^{Agg\_fm} + u_{it} \quad \text{(PEM5)}$$

$X_{it}^{Agg\_fm}$ is the aggregated macroeconomic fundamental index

4.11.2 Specification of fixed effects models using aggregated data

This section specifies fixed effects model (FEM) using aggregated data. FEM1- FEM6 specifies fixed models that examine relationships raised in research questions i-*v* using aggregated data

i. **Determine the nature of the relationship between corporate governance and economic growth in countries across Sub Saharan Africa**

$$Econgro_{it} = \alpha_i + \beta_{Agg\_Cg}X^{Agg\_Cg}{}_{it} + u_i + \epsilon_{it}, \quad \text{(FEM1)}$$

$X_{it}^{Agg\_cg}$ is the aggregated corporate governance index

ii. **Investigate the influence of the legal system on the effect of corporate governance on economic growth in Sub Saharan Africa countries**

$$EcoGr_{it} = \alpha_i + \beta_{Cg}X_{it}^{Agg\_Cg} + \beta_{lg}X_{it}^{Agg\_lg} + u_{it} + \epsilon_{it} \quad \text{(FEM2)}$$

$X_{it}^{Agg\_lg}$ is aggregated legal systems index

iii. **Establish the influence of good governance s on the effect of corporate governance on economic growth in Sub Saharan Africa countries**

$$EcoGr_{it} = \alpha_i + \beta_{Cg}X_{it}^{Agg\_Cg} + \beta_{lg}X_{it}^{Agg\_lg} + \beta_{gdg}X_{it}^{Agg\_gdg} + u_{it} + \epsilon_{it} \quad \text{(FEM3)}$$

$X_{it}^{Agg\_gdg}$ is aggregated good governance

iv. **Investigate the influence of financial development on the effect of corporate governance on economic growth in Sub Saharan Africa countries**

$$EcoGr_{it} = \alpha_i + \beta_{Cg}X_{it}^{Agg\_Cg} + \beta_{lg}X_{it}^{Agg\_lg} + \beta_{gdg}X_{it}^{Agg\_gdg} + \beta_{fd}X_{it}^{Agg\_fd} + u_{it}+\epsilon_{it} \quad \text{(FEM4)}$$

$X_{it}^{Agg\_fd}$ is the aggregated financial development index

v. **Examine the influence of the macroeconomic fundamentals on the effect of corporate governance on economic growth in Sub Saharan Africa countries**

$$EcoGr_{it} = \alpha_i + \beta_{Cg}X_{it}^{Cg} + \beta_{lg}X_{it}^{lg} + \beta_{gdg}X_{it}^{gdg} + \beta_{fd}X_{it}^{fd} + \beta_{mf}X_{it}^{mf} + u_{it}+\epsilon_{it} \quad \text{(FEM5)}$$

$\beta_{mf}X_{it}^{mf}$ is the aggregated macroeconomic fundamental index

vi. **The country differences influences on the effect of corporate governance on economic growth in Sub Saharan Africa countries**

$$EcoGr_{it} = \alpha_i + \beta_{Cg}X_{it}^{Agg\_Cg} + \beta_{lg}X_{it}^{Agg\_lg} + \beta_{gdg}X_{it}^{Agg\_gdg} + \beta_{fd}X_{it}^{Agg\_fd} + \beta_{mf}X_{it}^{Agg\_mf} + \sum_c \beta_s D_i^c + u_{it}+\epsilon_{it} \quad \text{(FEM6)}$$

Where $D_i^c$the country is dummy and β_s is the corresponding coefficient

4.11.3 Specification of panel vector autoregressions panel (VAR) for short run relationship between corporate governance and economic growth

This section specifies panel VAR model (pvar) using disaggregated data. The pvar specifies models that examine relationships raised in research questions *vi* using disaggregated data. Panel vector autoregressions (PVAR) all variables are assumed to be endogenous and interdependent across the section. A panel my help to understand the evolution of the variable. The panel var model is estimated as

$$Y_{it} = Y_{it-1}A_1 + Y_{it-2}A_2 + \cdots + Y_{it-p+1}A_{p-1+}Y_{it-p}A_p + X_{it}B + u_{it} + e_{it}$$

$A = 1,..N, t = 1 \ldots, T$ where , Y_{it} stands for the vector of dependent variables in this case GDP, X_{it}, vector of exogenous covariates; u_{it} ande_{it} vectors of dependent variable-specific fixed-effects and idiosyncratic errors, respectively. $A_1, A_{2,\ldots,}A_{P-1,}A_P,$ and B are parameters to be estimated endogenous variables and these are represented by the following variables

Where, Y_{it} represent lags of the dependent variable on lags of itself that is current values of GDP or economic growth standards GDP or economic growth. X_{it} Represent lagged variables of economic growth, corporate governance, legal systems, good governance, financial development and macroeconomic fundamentals respectively that are can be summarised as follows.

where,

$Corporate\ governance$ = F (GDP$_{-t-1}$,Prmsr$_{-t-1}$, Shrst$_{-t-1}$, Dirlia$_{-t-1}$, Disctran$_{-\ t-1}$, Effbr$_{-\ t-1}$)

$Legal\ systems$ = F (GDP$_{t-1}$,Agg_Cg $_{t-1}$,leg$_{-\ t-1}$,pro$_{-\ t-1}$, judic$_{-t-1}$, inve$_{-\ t-1}$, eff$_{-\ t-1}$)

$Good\ governance$ =F (GDP$_{t-1}$,Agg_Cg$_{t-1}$, pol$_{-t-1}$, gvtef$_{-t-1}$, voiacc$_{-t-1}$, ctnrcrrpt$_{t-1}$,rul$_{-t-1}$, regq$_{-t-1}$)

$Financial\ development$ = F(GDP $_{t-1}$, Agg_cg$_{t-1}$, fin$_{-\ t-1}$,regsec$_{-\ t-1}$)

$Macroeconomuc\ fundamentals$ = F(GDP$_{t-1}$, Agg_Cg$_{t-1}$,gross$_{-\ t-1}$, fdi$_{-\ t-1}$,infl$_{-\ t-1}$,)

4.11.4 Specification of panel VAR model short run models using aggregated indices

This section specifies panel VAR model (pvar) using aggregated data. The pvar specifies models that examine relationships raised in research questions *vi* using aggregated data

$$Y_{it} = Y_{it-1}A_1 + Y_{it-2}A_2 + \cdots + Y_{it-p+1}A_{p-1+}Y_{it-p}A_p \ + X_{it}B + u_{it} + e_{it}$$

Where Y_{it} stands for the vector of dependent variables in this case GDP, X_{it},

$Y_{it} =\ F(GDP_{t-1,}Acg\ _{t-1}$, Agg_leg$_{t-1}$, Agg_gg $_{t-1}$, Agg_fd$_{t-1}$, Agg_mf$_{t-1}$)

$$GDP_{it} = GDP_{it-1}A_1 + GDP_{it-2}A_2 + \cdots + GDP_{it-p+1}A_{p-1+}GDP_{it-p}A_p \ + Agg_{-cg_{it}}B + u_{it} + e_{it} = 1,..N, t = 1,2 \ldots T_i \qquad \text{(PVAR1)}$$

$$Agg\_cg_{it} = Agg\_cg_{it-1}A_1 + Agg\_cg_{it-2}A_2 + \cdots + Agg\_cg_{it-p+1}A_{p-1+}Agg\_cg_{it-p}A_p \ + GDP_{it}B + u_{it} + e_{it} = 1,..N, t = 1,2 \ldots T_i \qquad \text{(PVAR)}$$

Similar model were estimated for values of aggregated indices for legal systems, good governance, financial development and macroeconomic fundamental and their lagged values.

4.11.5 Specification of panel Granger causality test for the relationship between corporate governance and economic growth

This section specifies panel VAR Granger causality model using disaggregated data. The Panel Var Granger Causality Models (PGCM) that examines the relationships that were raised in research questions *vi* using disaggregated data are specified below. PGCM1-PGCM8 examines the Granger causality relationship and direction of the relationship between aggregated corporate governance and economic growth using corporate governance, legal system, good governance, financial development and macroeconomic fundamental.

Effect of economic growth, aggregated corporate governance and legal system on economic growth

$\Delta EcoGr_{i,t-p}$=α_i+$\sum_{p=1}^{p}\gamma_i^{(p)}\Delta\, EcoGr_{i,t-p}+\sum_{p=1}^{p}\beta_i^{(p)}\,\Delta\mathrm{Agg\_Cg}_{i,t-1}+\ \sum_{p=1}^{p}\beta_i^{(p)}\,\Delta\mathrm{leg}_{-i,t-1}$+ $\sum_{p=1}^{p}\beta_i^{(p)}\,\Delta pro_{i,t-p}$+$\sum_{p=1}^{p}\beta_i^{(p)}\Delta\, inve_{i,t-p}$+$\sum_{p=1}^{p}\beta_i^{(p)}\,\Delta judic_{i,t-p}+\sum_{p=1}^{p}\beta_i^{(p)}\,\Delta eff_{i,t-p}$+ ε_{it} (PGCM1)

$\Delta Agg\_Cg_{i,t-p}$=α_i+$\sum_{p=1}^{p}\gamma_i^{(p)}\Delta\, EcoGr_{i,t-p}+\sum_{p=1}^{p}\beta_i^{(p)}\,\Delta\mathrm{Agg\_Cg}_{i,t-1}+$ $\sum_{p=1}^{p}\beta_i^{(p)}\,\Delta\mathrm{leg}_{-i,t-1}$+ $\sum_{p=1}^{p}\beta_i^{(p)}\,\Delta pro_{i,t-p}$+$\sum_{p=1}^{p}\beta_i^{(p)}\Delta\, inve_{i,t-p}$+$\sum_{p=1}^{p}\beta_i^{(p)}\,\Delta judic_{i,t-p}+$ $\sum_{p=1}^{p}\beta_i^{(p)}\,\Delta eff_{i,t-p}$+ ε_{it} (PGCM2)

Effect of disaggregated corporate governance and good governance on economic growth

$\Delta EcoGr_{i,t-p}$=α_i+$\sum_{p=1}^{p}\gamma_i^{(p)}\Delta\, EcoGr_{i,t-p}+\sum_{p=1}^{p}\beta_i^{(p)}\,\Delta\mathrm{Agg\_Cg}_{i,t-1}+\ \sum_{p=1}^{p}\beta_i^{(p)}\,\Delta\mathrm{pol}_{-i,t-1}$+ $\sum_{p=1}^{p}\beta_i^{(p)}\,\Delta getf_{i,t-p}$+$\sum_{p=1}^{p}\beta_i^{(p)}\Delta\, voiacc_{i,t-p}$ + $\sum_{p=1}^{p}\beta_i^{(p)}\,\Delta\mathrm{ctnrcrrpt}_{i,t-p}+\sum_{p=1}^{p}\beta_i^{(p)}\,\Delta rul_{i,t-p}$+$\sum_{p=1}^{p}\beta_i^{(p)}\,\Delta regq_{i,t-p}+\ \varepsilon_{it}$ (PGCM3)

$\Delta Agg\_cg_{i,t-p}$=α_i+$\sum_{p=1}^{p}\gamma_i^{(p)}\Delta\, EcoGr_{i,t-p}+\sum_{p=1}^{p}\beta_i^{(p)}\,\Delta\mathrm{Agg\_Cg}_{i,t-1}+$ $\sum_{p=1}^{p}\beta_i^{(p)}\,\Delta\mathrm{pol}_{-i,t-1}$+ $\sum_{p=1}^{p}\beta_i^{(p)}\,\Delta getf_{i,t-p}$+$\sum_{p=1}^{p}\beta_i^{(p)}\Delta\, voiacc_{i,t-p}$ + $\sum_{p=1}^{p}\beta_i^{(p)}\,\Delta\mathrm{ctnrcrrpt}_{i,t-p}+\sum_{p=1}^{p}\beta_i^{(p)}\,\Delta rul_{i,t-p}$+$\sum_{p=1}^{p}\beta_i^{(p)}\,\Delta regq_{i,t-p}+\ \varepsilon_{it}$ (PGCM4)

Effect of disaggregated corporate governance and financial development on economic growth

$\Delta EcoGr_{i,t-p}$=α_i+$\sum_{p=1}^{p}\gamma_i^{(p)}\Delta\, EcoGr_{i,t-p}+\sum_{p=1}^{p}\beta_i^{(p)}\,\Delta\mathrm{Agg\_Cg}_{i,t-1}+\ \sum_{p=1}^{p}\beta_i^{(p)}\,\Delta\mathrm{fin}_{-i,t-1}$+ $\sum_{p=1}^{p}\beta_i^{(p)}\,\Delta regsec_{i,t-p}\ +\varepsilon_{it}$ (PGCM5)

$$\Delta Agg\_Cg_{i,t-p}=\alpha_i+\sum_{p=1}^{p}\gamma_i^{(p)}\Delta\, EcoGr_{i,t-p}+\sum_{p=1}^{p}\beta_i^{(p)}\,\Delta\text{Agg\_Cg}_{i,t-1}+\ \sum_{p=1}^{p}\beta_i^{(p)}\,\Delta\text{fin}_{-i,t-1}+ \sum_{p=1}^{p}\beta_i^{(p)}\,\Delta regsec_{i,t-p}\ +\varepsilon_{it} \qquad \text{(PGCM6)}$$

Effect of disaggregated corporate governance and macroeconomic fundamentals on economic growth

$$\Delta EcoGr_{i,t-p}=\alpha_i+\sum_{p=1}^{p}\gamma_i^{(p)}\Delta\, EcoGr_{i,t-p}+\sum_{p=1}^{p}\beta_i^{(p)}\,\Delta\text{Agg\_Cg}_{i,t-1}+\ \sum_{p=1}^{p}\beta_i^{(p)}\,\Delta\text{gross}_{i,t-1}+ \sum_{p=1}^{p}\beta_i^{(p)}\,\Delta\text{fdi}_{i,t-p}+\sum_{p=1}^{p}\beta_i^{(p)}\Delta\, infl_{i,t-p}\ +\varepsilon_{it} \qquad \text{(PGCM7)}$$

$$\Delta\, Agg\_Cg_{i,t-p}=\alpha_i+\sum_{p=1}^{p}\gamma_i^{(p)}\Delta\, EcoGr_{i,t-p}+\sum_{p=1}^{p}\beta_i^{(p)}\,\Delta\text{Agg\_Cg}_{i,t-1}+ \sum_{p=1}^{p}\beta_i^{(p)}\,\Delta\text{gross}_{i,t-1}+\sum_{p=1}^{p}\beta_i^{(p)}\,\Delta\text{fdi}_{i,t-p}+\sum_{p=1}^{p}\beta_i^{(p)}\Delta\, infl_{i,t-p}\ +\varepsilon_{it} \qquad \text{(PGCM8)}$$

4.11.6 Panel VAR Granger Causality models using aggregate data

This section specifies panel VAR Granger causality model using aggregated data. Panel VAR Granger Wald test was conducted which tested the null hypothesis that $H_0=0$ that the excluded variables do not Granger cause model variable. $H_a\ \neq 0$ that the excluded variables d Granger cause mode variable. PGCM1-PGCM6 examines the Granger causality relationship and direction of the relationship between aggregated corporate governance and economic growth using aggregated corporate governance, economic growth, legal system, good governance, financial development and macroeconomic fundamentals. Specifications Granger causality test between corporate governance and economic growth is as follows

$$\Delta EcoGr_{i,t-p}=\alpha_i+\sum_{p=1}^{p}\gamma_i^{(p)}\Delta\, EcoGr_{i,t-p}+\sum_{p=1}^{p}\beta_i^{(p)}\,\Delta Agg\_lg_{i,t-p}+ \sum_{p=1}^{p}\beta_i^{(p)}\,\Delta Agg\_Cg_{i,t-p}+\ \sum_{p=1}^{p}\beta_i^{(p)}\,\Delta Agg\_gg_{i,t-p}+\sum_{p=1}^{p}\beta_i^{(p)}\Delta\, Agg\_FD_{i,t-p}\ \varepsilon_{it}\ + \sum_{p=1}^{p}\beta_i^{(p)}\,\Delta Agg\_MF_{i,t-p}+\varepsilon_{it} \qquad \text{(PGCM1)}$$

$$\Delta Agg\_Cg_{i,t-p}=\alpha_i+\sum_{p=1}^{p}\gamma_i^{(p)}\Delta\, EcoGr_{i,t-p}+ \sum_{p=1}^{p}\beta_i^{(p)}\,\Delta Agg\_Cg_{i,t-p}+\sum_{p=1}^{p}\beta_i^{(p)}\,\Delta Agg\_lg_{i,t-p}\ +\sum_{p=1}^{p}\beta_i^{(p)}\,\Delta Agg\_gdg_{i,t-p}+ +\sum_{p=1}^{p}\beta_i^{(p)}\Delta Agg\_\,FD_{i,t-p}\ \varepsilon_{it}\ +\ \ \sum_{p=1}^{p}\beta_i^{(p)}\,\Delta Agg\_MF_{i,t-p}+\varepsilon_{it}$$

(PGCM2)

$\Delta Agg\_lg_{i,t-p}$=$\alpha_i + \sum_{p=1}^{p}\gamma_i^{(p)}\Delta\, EcoGr_{i,t-p}$ +
$\sum_{p=1}^{p}\beta_i^{(p)}\,\Delta Agg\_Cg_{i,t-p}$+$\sum_{p=1}^{p}\beta_i^{(p)}\,\Delta Agg\_lg_{i,t-p}$ +$\sum_{p=1}^{p}\beta_i^{(p)}\,\Delta Agg\_gg_{i,t-p}$+
+$\sum_{p=1}^{p}\beta_i^{(p)}\Delta\, Agg\_FD_{i,t-p}\;\varepsilon_{it}$ + $\sum_{p=1}^{p}\beta_i^{(p)}\,\Delta Agg\_MF_{i,t-p}$+ ε_{it}

(PGCM3)

$\Delta Agg\_gg_{i,t-p}$=α_i+$\sum_{p=1}^{p}\gamma_i^{(p)}\Delta\, EcoGr_{i,t-p}$ +
$\sum_{p=1}^{p}\beta_i^{(p)}\,\Delta Agg\_Cg_{i,t-p}$+$\sum_{p=1}^{p}\beta_i^{(p)}\,\Delta Agg\_lg_{i,t-p}$ +$\sum_{p=1}^{p}\beta_i^{(p)}\,\Delta Agg\_gdg_{i,t-p}$+
+$\sum_{p=1}^{p}\beta_i^{(p)}\Delta\, Agg\_FD_{i,t-p}\;\varepsilon_{it}$ + $\sum_{p=1}^{p}\beta_i^{(p)}\,\Delta Agg\_MF_{i,t-p}$+ ε_{it}

*(P*GCM4)

$\Delta Agg\_FD_{i,t-p}$=α_i+$\sum_{p=1}^{p}\gamma_i^{(p)}\Delta\, EcoGr_{i,t-p}$ +
$\sum_{p=1}^{p}\beta_i^{(p)}\,\Delta Agg\_Cg_{i,t-p}$+$\sum_{p=1}^{p}\beta_i^{(p)}\,\Delta Agg\_lg_{i,t-p}$ +$\sum_{p=1}^{p}\beta_i^{(p)}\,\Delta Agg\_gdg_{i,t-p}$+
+$\sum_{p=1}^{p}\beta_i^{(p)}\Delta Agg\_\,FD_{i,t-p}\;\varepsilon_{it}$ + $\sum_{p=1}^{p}\beta_i^{(p)}\,\Delta Agg\_MF_{i,t-p}$+ ε_{it}

(PGCM5)

$\Delta Agg\_MF_{i,t-p}$=α_i+$\sum_{p=1}^{p}\gamma_i^{(p)}\Delta\, EcoGr_{i,t-p}$ +
$\sum_{p=1}^{p}\beta_i^{(p)}\,\Delta Agg\_Cg_{i,t-p}$+$\sum_{p=1}^{p}\beta_i^{(p)}\,\Delta Agg\_lg_{i,t-p}$ +$\sum_{p=1}^{p}\beta_i^{(p)}\,\Delta Agg\_gg_{i,t-p}$+
+$\sum_{p=1}^{p}\beta_i^{(p)}\Delta Agg\_\,FD_{i,t-p}\;\varepsilon_{it}$ + $\sum_{p=1}^{p}\beta_i^{(p)}\,\Delta Agg\_MF_{i,t-p}$+ ε_{it}

(PGCM6)

where, are$\Delta EcoGr_{i,t-p}$,$\Delta Agg\_Cg_{i,t-P,}$ $\Delta Agg\_Lg_{i,t-P}$,$\Delta Agg\_\,gg_{i,t-P}$, $\Delta Agg\_FD_{i,t-P}$, $\Delta MF_{i,t-P}$ stands for change in economic growth, aggregated variables of corporate governance, legal systems, good governance, financial development and macroeconomic fundamentals over one period respectively.

4.11.7 Forecast of the relationship between corporate governance and economic growth

To forecast the relationship between corporate governance and economic growth the an h-step panel VAR model was estimated using aggregated data. In order to examine the how the relationship between corporate governance and economic growth response to change in time the study defines a VAR forecast**.**

$$\boldsymbol{Y_{it+h} - E[Y_{it+h}] = \sum_{i=0}^{h-1} ei(t + h - i)^{\phi_i}}$$

where Y_{it+h} is the observed vector time at time $t + h$ and $E[Y_{it+h}]$ is the h step head predicator variable made at time t

4.12 Population, sample size and sampling method

This panel data study is based on an investigation of population sample of 29 countries in Sub Saharan Africa for the period 2008-2014. Limitations to the sample size and time span is due to constraints in the availability of data. Doidge *et al* (2007) mentioned the absence of data as a key challenge hindering comparative studies to focus their investigation on corporate governance in Africa. Pursuing this further, Koop (2009) agrees that developing countries are likely to experience challenges in collection of data for various reasons compared to developed countries. Based on these views it is only logical to anticipate that some countries in Sub Saharan Africa are for various reasons bound to have some missing or incomplete data sets. The panel data included six categories: GDP, corporate governance, legal systems, good governance, financial development and macroeconomic fundamental for the year period. Criteria for a country to be included in the sample were that all data should have been observed for the period understudy. This study used this strict selection process to ensure that it keeps a balanced panel.

Verbeek (2004) discusses the problem of incomplete and selection bias, explaining that panel data set can be missing or incomplete for variety of reasons such as lack of co-operation. Verbeek (2004) cautions that use of incomplete data may lead to biased estimators and misleading tests. He also maintains that although the loss of efficiency can be prevented by making use of only balanced panel data sets there are also some challenges in that some information that is useful might be left out in unbalanced panel data set. Verbeek (2004) further points out that selection bias is one of the key challenges associated with using incomplete panel data and further recommend the use of panel data to address this problem. Taking into consideration all things discussed in this section, a decision was reached in this study to make use of a balanced panel data rather than unbalanced panel data. The use of balanced panel entails that model sample to be included in this study is restricted to that country where there is availability of complete observations of panel data set over the given time period. The sampling method used in this study is purposive sampling because the study selected only those countries with complete panel data sets.

4.12.1 Data

This study seeks to establish whether corporate governance is a determinant of economic growth. For that this Gross Domestic Product (GDP) annual % from to measure economic development this study uses annual data on country GDP collected from WDI on financial development sector a database published by the World Bank across 220 countries. The World Bank (2016) defines GDP as the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. Countries economic development are categorised into four homogenous groups according to the World Bank income group namely; low income, lower-middle income, upper middle income and high income group. To enable analysis of the countries will be grouped into the income groups which represents the different levels of economic growth **(**Claessens and Yurtoglu, 2013, Doidge *et al*., 2007, Djankov *et al.*, 2006, García-Meca *et al.*, 2014, La Porta *et al*., 1997)**.**

The WFE identifies the corporate governance aspects of disclosure and transparency, efficacy of the board part of global competitive indicators for the institutional pillars that are necessary for promoting a country global competiveness. Annual data on efficacy of the board directors and extent of disclosure and transparency across is collected from the World Economic Forum Global Competitive Reports. Efficacy of the board, measures the effectiveness of corporate governance by investors and boards of directors in a country (1 = management has little accountability to investors and boards; 7 = investors and boards exert strong supervision of management decisions) WFE, 2015)

Disclosure and transparency is regarded as key element of corporate governance because transparency is core principle of corporate governance. The WFE (2015) describes disclosure and transparency, as the strength of financial auditing and reporting standards regarding company financial performance? (1 = extremely weak; 7 = extremely strong).The quality, scope and combined with the timeliness of company transparency and disclosure is a key issue of concern for investors in terms of their perceived risk and investment decision (Dallas, 2005). According to capital asset model disclosure is associated with high performance. This view is supported by efficiency market hypothesis which postulates that financial markets are imperfect markets hence strong efficiency markets that make information available to investors are likely to attract more investors unlike the weak form markets. Under this assumption it can be presumed that economic growth is high in those countries with companies that have high disclosure and transparency.

Easy of doing business as provide a measure of the extent to which corporate governance provides protection of minority of shareholders from conflicts of interest through a set of shareholder rights indicators. The data is compiled from a question that is administered to corporate lawyers, securities lawyer, securities of exchange, company laws, civil procedures and court rules. The need to protect shareholders from conflicts resonates with the agency theory (Berle and Mean, 1932, Jensen and Meckling, 1976, Fama and Meckling, 1980). Djankov *et al* (2008) provide measures for protection of minority, shareholder rights, director liability and ease of shareholder suits. This index ranges from 0 to 10, with higher values indicating stronger protection (Djankov, *et al* 2006, 2008). Annual data of the protection of minority shareholder indicators is available online of the World Bank website. The use of these indicators as proxies of corporate governance follows studies by other scholars such as Claessens and Yortglou (2013).

To account for macroeconomic fundamentals that may have an influence on economic growth, this study incorporates the following macro stability, foreign direct investment, gross national saving, inflation and as control variables. Inflation deflator and FDI data is accessible to WDI database accessible on line on the World Bank website. Gross national saving is available on WFE reports.

Comparative law scholars have the argued that the legal environment is most important external factor affecting corporate governance at firm level (La Port *et al* , 1997, 1999, 2000, Dallas, 2005). Dallas states that it is critically important to understand both the scope of the relevant law and the effectiveness that is enforced. Under the assumption that the legal environment is a determinant of corporate governance, various scholars have used as proxies of legal environment the following legal origin, property rights, strength of investor protection, legal rights, efficiency of the legal system and judicial independence (La Porta *et al*, 1997, 1999,2000, Djnakov *et al*, 2006, 2008, Doidge *et al* , 2006). Unlike the previous study which not only used or two indicators but were also focused on developed economies this study will use the six indicators across different countries in Sub Saharan Africa in attempt to enhance the confidence of conclusions.

The WFE (2015) describes property rights measures the extent to which property rights, including financial assets are protected using a scale of [1 = not at all; 7 = to a great extent] Property rights are associated with the legal and regulatory development within a country (Levine, 1999). Comparative economics and legal scholars have argued that differences in property rights have an effect on economic development through its influence in shaping financial development, corporate governance and corporate finance (Djnakov *et al,* 2006, 2008, La Porta *et al*, 1997, 2000). The principles underpinning property rights have their its origins in the neoclassical economics and property theory support the idea of having institutions to protect the interest of investor, ensure contact enforcement to ensure that transactions take place in confidence.

Strength of investor protection is a combination of the extent of disclosure index (transparency of transactions), director liability index (liability for self-dealing), and the ease of shareholder suit index (shareholders' ability to sue officers and directors for misconduct). Scale of strength of investor protection index ranges between 0–10 (best) (WFE, 2010). The rationale underlying this indicator is that legal systems that provide strong investor protection is likely to attract more investors and strong legal investor protection is associated with strong corporate governance. Legal rights strength is an indicator of the degree of legal protection of borrowers' and lenders' rights on a 0–12 (best). This index measures the degree to which collateral and bankruptcy laws protect borrowers' and lenders' rights and thus facilitate lending.

Efficiency of the legal system measures the extent to which in legal framework in country enable private businesses to settle disputes and challenge the legality of government actions and/or regulations is (1 = inefficient and subject to manipulation, 7 = efficient and follows a clear, neutral process) [1 = extremely inefficient; 7 = extremely efficient] WFE (2014). Dallas (2005, p.197) points out that the effectiveness, fairness and consistence with which laws and law enforcement are administered has on the effect the rights of minority shareholders, creditors and stakeholders. Judicial independence is the judicial system from influences of the government, individuals, or companies [1 = not independent at all; 7 = entirely independent) (WFE, 2015). Comparative law and finance scholars have argued that legal origins are determinant of corporate governance see (Asongu, 2015, Fernandez and Tamayo, 2015 Beck, 2003, La Porta e*t al,* 19997, 1998, 1999 Djanko *et al*, 2008). This empirical evidence suggests that there is need to consider country specific legal origin namely common and civil law.

The WGI consist of six composite indicators of governance covering over 200 countries since 1996 to date. Kaufmann, *et al* (2011) explains that WGI data is collected from variety of sources such as the World Economic Forum's Global Competitiveness Report, the Institute for Management Development's World Competitiveness Yearbook, the World Bank / EBRD's Business Environment and Enterprise Performance surveys, the Gallup World Poll, Latinobarometro, Afrobarometro, and the Americasbarometer. Essentially WGI consists of indices for each dimension which are calculated by aggregating data from different sources for providing an overall overview of the performance of the dimension. Good governance measurement ranges between-2.5 and 2.5 with the lowest indicating extreme weakness and the high value the strongest. Weak control of corruption at country levels is associated with weak corporate governance thus investors are not assured of return on their investment in country environment that with high level of corruption. Thus high corruption is linked with poor corporate governance and ultimately poor economic development.

In determining if corporate governance is determined by good governance this study incorporates the institutional and property rights theory to the agency theory. The intuitional theory takes accounts for the differences corporate governance and resulting variations in economic development across countries that may be explained by differences in institutional contexts namely good governance and legal environment across countries in the region. This view is backed by La Porta *et al* (1997) who found that differences in countries legal systems influence economic development through financial development and corporate governance. Similarly, Djankov *et al* (2006) provide evidence that differences in country good governance has influence on enforcement of internal corporate governance mechanism and ultimately has impact on economic growth. Based on the institutional theory and empirical studies it can presume that countries in Sub Saharan Africa can promote economic development there if they first strengthen good governance and legal environment that supports corporate governance at firm level.

Due to the limited data financial development of countries in Sub Saharan Africa financial development is represented by the following indicators, financing through local equity market and regulation of securities exchange. Financing through local equity market entails raising money by issuing shares on the stock market in your country is (1 = impossible, 7 = very easy). It is generally held that country specific financial development impact economic development through its influence on corporate governance and corporate finance. Yet again another school of thought argues that corporate governance shape and guide country specific financial development by influencing their practices. Regulation of securities exchange assess the regulation of securities exchanges in a country, it ranges between (1 = ineffective; 7 = effective). Regulation of securities exchange encompasses the availability of measures that seek to ensure enforcement of existing laws. The role on regulation of securities is important to investors in that it seen as measure that support corporate governance. Hence it can be expected that countries that have effective regulation of securities should have sound corporate governance and this in turn leads to higher economic development.

4.12.2 Panel data model estimation and diagnostic test

Model estimation, selection panel data models were implemented using the following techniques

4. 12.2.1 Hausman specification test for the random effects model

The specification test developed by Hausman (1978) is used to test for othorgonality of the random effects of the regressors. Orthogonally that is a condition under which a variable in the explanatory variables is uncorrelated with each of the regressors included in the model.

The Hausman test is based on the idea that under the hypothesis H_0 : α_i are not correlated with x_{it} that is the null hypothesis under test is that there is no correlation, both OLS in the LDVS and GLS estimators are consistent but OLS is inefficient, the assumptions under H_1 : α_i are not correlated with x_{it} whereas under the alternative, OLS is consistent but GLS is not. Hausman compares the fixed and random effects model. If the null hypothesis that individual effect is uncorrelated with the other regressors is not rejected, random effect model is accepted and fixed effects rejected. If it does not support it we use the fixed effects model. Hausman test whether there is a significant difference between the fixed and random effects estimate. The Hausman test for the null hypothesis that x_{it} and α_i are uncorrelated. It is expected that there is one which is constant under both H_0 and H_a, and H_a which is consistent and efficient under the null hypothesis only. If there is significant difference between the estimates the null hypothesis is unlikely to rejected, we accept the H_1 this support the assumption that α_i is independent, this means that the RE gives unbiased coefficients.

4.12.2.2 Breusch – Pagan (1980) Lagrange multiplier (LM) test

LM test examines if individual or time specific variance components are zero $H_0 : \sigma_u^2 = 0$, $H_1 : \sigma_u^2 \neq 0$. If the null hypothesis is rejected, then it can be concluded that there is a significant random effects in the panel data therefore the random effects model is better able to address the problem of heterogeneity than pooled OLS. Under this condition the next step is to conduct an appropriateness formal test to examine individual group and or time effects. If the null hypothesis of LM is rejected, a random effect model is better than pooled OLS. If the hypothesis of F test is rejected then a fixed effects model is preferred over the OLS. If both hypothesis are not rejected then the most appropriate models if the pooled OLS. Wald test can also be used to conduct a test of the fixed effects. The next step is to conduct a Hausman test when both the LM and F-test are all rejected. If the null hypothesis of correlation between an individual effect and regressors is rejected then go for the fixed effects model or else stick to the random effects model.

4.13 Pre estimation

The following pre-test were conducted and results are presented in chapter 5

4.13.1 Linearity

Pane l scatter plots of the dependent variables and regression were estimated to check for linearity of the variables prior to estimation. The scatter plots for disaggregated and aggregated indices and results are reported in chapter 5.

4.14 Post estimation test

The following post -test were conducted and results were attached in the appendix.

4.14.1 Heteroskedasticity

Heteroskedasticity and robust standard errors option was selected for pooled effects model, this package assumes homoscedasticity and this calculates the OLS based on the assumption of heteroskedasticity. OLS estimates are assumed to be constant and unbiased when they are estimated using robust standard errors. Diagnosing for heteroskedacity is necessary because regression model assumes that the errors have the same variance across all observations when it may actually have some variances (Green, 2012). He further explains that using robust standard error option enables the regression to estimate and fit a model that accounts for heteroskedastic residuals.

4.14.2 Diagnostic test for multicollinearity

Multicollinearity is a problem that arises when explanatory variables are highly correlated with each other. This study used a correlation matrix to diagnose for multicollinearity although other techniques such as Variance Inflation (VIF), covariance matrix and Eigen system values were possible. The correlations are presented in Table 7.29, and the findings show that all variables except government effectiveness and voice and accountability are not correlated to economic growth. The observed lack of significant correlation could be partly due to lowly skewed distribution of all the remaining variables observed in Table 5A-5E, that is director liability and protection of minority shareholders. The remaining corporate governance variables are correlated with each other but the correlation coefficient in the correlation matrix of the predictor variables are not so large that is not unity or one, suggesting that multicollinearity might be limited. The presence of multicollinearity does not affect the efficacy of the explanatory variables fitted into the new model provided the predictor variables follow the same pattern of multicollinearity in the data in the original regression model. Multicollinearity inflates the standard errors in the independent variable but does not make the results to be biased.

4.14.3 Panel lag selection

The lag length for this study is 12 months and optimal lag period one period ago. This means that the estimated coefficient measures the effects of the explanatory variable one period ago on the dependent period. The optimal lag order was selected using consistent and model selection criteria (MMSC) for GMM proposed by Andrew and Lu (2001) which is based on Hansen (1982) statistics of identifying restriction. According to Abirgo and Love (2015) MMSC similar to other methods that commonly used such maximum likelihood centred models such as Akaike Information Criteria (AIC), Bayesian Information Criteria (BIC) and Hanna-Quinn. Based on the three models selection criteria proposed by Andrew and Lu (2001) and the overall coefficient determination in the first order panel VAR model is the most appropriate because it has the smallest Modified Bayesian Information criteria (MBIC) and Modified Akaike Information criteria (MAIC). Based on these lag selection the criterion this study fits a first order panel VAR using GMM estimation.

4.14.4 Eigen stability condition

An Eigen value stability conditions post estimation panel VAR stability condition that calculates the modulus of each Eigen value of the estimated value was estimated. The results indicate that the moduli companion matrix of some of the VAR model are less than one hence they are stable. Eigenvalue stability condition was computed before estimating impulse response function (IRF) and forecast error variance decompositions (FEVD)

4.14.5 Panel VAR Impulse response function (pvarif)

The study estimated panel VAR impulse response function were the confidence bands were estimated using Gaussian approximation based on the Monte Carlo drawn from the estimated panel VAR model. The Orthoginalized (IRF) is based on the Cholesky decomposition calculated at 95% confidence internal. The results of Orthoginalized IRF were reported after each panel model estimated in chapter 7. The study reported the Step Orthoginalized IRF for corporate governance, legal systems, good governance, financial development and macroeconomic fundamentals**.**

4.14. 6 Panel vector forecast error variance decomposition (FEVD)

Panel vector forecast error variance decomposition (FEVD) was estimated based on Cholesky decomposition of residual covariance matric of the underlying panel VAR model estimated in the previous section. Standard errors and confidence intervals were based on Monte Carlo simulation was computed (attached in the appendix).

4.15 Conclusion

This chapter discussed the philosophical assumptions underpinning this study: three components of the research paradigm namely philosophy, ontology and epistemology. The basis of assuming objective reality on corporate governance as social science was explained. Realism and empiricism epistemological assumptions underlying the study were outlined. The research design to be followed is comparative and uses panel data analysis. In the next chapter panel data analysis is presented. This chapter also described the panel data analysis techniques that were followed in this study. The chapter largely focused on specification of econometric models that are empirically validated. The specified model seeks to provide empirical answers to questions that were raised in section 1.7. The relationships that were specified in the models were based on the relationships explained in the conceptual framework in Chapter 3. Both Stata and SPSS were used for data analysis. SPSS was used for assessment of descriptive and the latter for estimation of the models. The next chapter presents the findings on corporate governance, institutional and macroeconomic economic environment in Sub Saharan Africa.

CHAPTER 5

Determinants of corporate governance and economic growth

5.1 Introduction

The purpose of this chapter is to present findings from the data that was collected and analysed in order to establish whether corporate governance is a determinant of economic growth with the view of developing an integrated corporate governance framework for enhancing economic growth in Sub Saharan Africa countries. Data analysis and presentation of findings in this study is organised as follows. The current chapter presents findings from a hierarchical panel data analysis that was conducted in order to examine the determinants of corporate governance and economic growth in Sub Saharan Africa. Chapter 6, presents findings from the panel VAR test that were conducted to investigate the short run and causal relationship between corporate governance and economic growth in Sub Saharan African countries building on the results from the chapter 5. In chapter 7 the study provides a discussion and interpretation of the results. Chapter 8 presents recommendations and conclusions of this study. To the body of knowledge of corporate governance and economics this study envisages its findings of this study could contribute towards the understanding of nature of relationship between corporate governance and economic growth in Sub Saharan African countries. Such an understanding could be of strategic importance to corporate governance and economic growth policy makers as well as practitioners in terms of identifying elements that might need to be controlled and monitored in order to promote corporate governance and enhance economic growth.

This study is conducted in a background where Sub Saharan African countries are expected to adapt corporate governance practices in order to address the poor economic growth that has been widespread in these economies for many decades. This is because traditionally corporate governance was not considered as a determinant of economic growth instead countries depended on fiscal and monetary policies such as reduction of interest rates, budget deficit and devaluation of currency to promote economic growth. Presumably, the recent growing recognition of corporate governance as a key element of economic growth might be an indication that there is an increasing awareness amongst policy makers that although conventional macro fundamentals are necessary they alone might not be adequate to promote and sustain economic growth. Under these circumstances, it is important to understand the antecedents of corporate governance and economic growth in Sub Saharan African countries context that is missing in literature. Such an understanding is important because it may provide a basis to identify variables that are required to create a conducive environment that can promote the development of corporate governance and enable it to stimulate economic growth in the region.

5.1.1 Summary of descriptive statistics

In this section, descriptive statistics are presented for the purpose of giving an overview of the institutional environment and macroeconomic fundamental structure underlying corporate governance and economic growth in Sub Saharan African countries. Corporate governance practices namely protection of minority shareholder, disclosure and transparency as well as efficacy of the board are examined with reference to the frameworks proposed by the Cadbury Report 1992, OECD (1999, 2004, 2015) and King Report (1994, 2002, 2009). Director liability and shareholder suit are examined according to the criteria outlined in the dataset on doing business available on the World Bank online website. Proxies of the legal system and financial development are evaluated with reference to the framework set by the WFE annual global competitive survey reports available on the WFE online website. Good governance indicators and macroeconomic fundamentals are analysed with reference to the framework of the WDI and economic growth sector indicators available from the World Bank online database. This study benefited from the use of data collected from the global indicators. This is because data for a specific global indicator is collected and computed using the same techniques and this further enables comparability from a global perspective. An analysis of such data enable a comparative analysis of the microeconomic and macroeconomic structure underlying corporate governance and economic growth in countries across Sub Saharan Africa to be conducted. Such a comparative analysis may assist countries to evaluate the relationship between corporate governance and economic growth in their own countries.

The descriptive statistics emanate from the 203 annual observations of corporate governance and economic growth datasets from 29 Sub Saharan African countries for a period of seven year from 2008 to 2014. Economic growth is the dependent variable and corporate governance is the primary explanatory variable and the legal system, good governance, financial development as well macroeconomic fundamentals are additional explanatory variables. Descriptive statistics of the aforementioned variables are presented in the sections that follow.

Table 5.1 Descriptive statistics for corporate governance indicators

	Mean	Std. Deviation	Minimum	Maximum	Skewness	Kurtosis	N
GDP	5.040	3.543	-17.670	14.050	-1.495	8.565	202
Efficacy of the board	4.506	0.521	2.800	6.000	-0.123	1.172	196
Disclosure and transparency	4.857	2.026	0.000	8.000	-0.392	-0.795	203
Director liability	3.755	2.770	0.000	9.000	0.269	-1.429	203
Shareholder suits	5.335	2.177	1.000	10.000	0.389	-0.765	203
Protection of minority shareholders	4.643	1.478	2.000	8.000	0.335	-0.399	203

5.1.2 Economic growth characteristics

Based on the GDP results shown in Table 5.1 above, this study found that the level of economic growth is on the declining path as indicated by a negatively skewed coefficient of -1.495 implying that economic growth in Sub Saharan Africa countries is on the declining path. This implies that, the mean is less than the median suggesting that economic growth is on the negative direction thus there is a decline in economic growth. Since economic growth is interpreted as a measure of the performance of companies within a country, this suggests that the overall performance of companies in Sub Saharan Africa countries is on the decreasing path. Further analysis show that, the average means score for economic growth is estimated at 5.040, implying that the average the economic growth rate in each country within the sample is 5.040. The results show that the standard deviation is estimated at 3.543 from an average mean score of 5.040. The small range between the standard deviation and mean demonstrates that although there is heterogeneity in economic growth across countries in Sub Saharan Africa the differences in the rate of economic growth across countries in the region are only minor. The study found a minimum of -17.670 and maximum of 14.050 of economic growth. This wide range between highest score and lowest score observed in the distribution of economic growth suggests that there could be some outliers in the region.

This indicates that, there is one country that experienced extremely low negative and high economic growth during the period under consideration. Overall, the results from all the measures of variability provide evidence that there are variations in economic growth across Sub Saharan African countries and the trend is on the declining path. The low economic growth found in this study during this period is consistent with the finding of WFE (2008, 2009, 2010, 2011, 2012, 2013, 2014). It can be concluded from this evidence that economic growth in Sub Saharan African countries has been on the declining stage. The decline in economic growth observed in Sub Saharan African countries is thus concerning and disturbing because poor economic growth is associated with several detrimental social – economic implications in any economy.

5.2 Corporate governance indicators

Various bodies such as the Cadbury Report (1992), OECD (1999, 2004, 2015) and King Report identifies corporate governance as made up of practices such as efficacy of the board, protection of minority shareholders, shareholder suits, director liability as well as disclosure and transparency constitute some the best practices of any good corporate governance system. There is evidence that corporate governance has a significant relationship with the overall performance of the company in any economy (Adegbite *et a.,* 2013, Arora *et al.,* 2016, Biswas, 2013). This indicates that effective implementation of corporate governance is necessary to enable efficient economic performance of the company. Since company performance is dependent on corporate governance it can be assumed that corporate governance determines economic growth through its influence on company performance. The section that follows provides descriptive statistics of corporate governance and it is proxied by the efficacy of board, disclosure and transparency, director liability and shareholder suit.

5.2.1 Efficacy of the board

Findings on the efficacy of the board are presented in table 5.1. The results above indicate that efficacy of the board is negatively skewed as shown by a coefficient of -0.123 and this indicates that the mean is less than the median. The result further found that the efficacy of the board has a standard deviation of 0.521 from an average mean of 4.506, signifying that there are minor variations the efficiency with which the board discharge their duties in companies across countries in the region. The observed decline in the board efficacy could be an indication that, the board of directors in most companies in Sub Saharan African countries are making inefficiency and ineffective decisions. Given that the efficacy of the board determines the performance of the company it can be inferred that, the low economic growth observed in Sub Saharan African countries is contributed by the poor company performance that arises from the observed absence of the efficacy of the board.

5.2.2 Disclosure and transparency

Disclosure and transparency is necessary because by providing material information timeously to the stakeholders it strengthens management and the company's accountability to stakeholders. This study observed that disclosure and transparency is on the declining path as indicated by the negatively skewed coefficient of -0.389. The observed results are not surprising because other empirical findings have observed a similar trend. For instance the KPMG international surveys as well as the WFE global survey reports (see KPMG, 2008, 2011, 2013, WFE, 2015, 2014, 2013, 2012) found little or no evidence of disclosure in some countries in Africa. This suggests that in most companies across countries in the region there is extremely weak disclosure and transparency. The weak disclosure and transparency found in companies in the region is concerning given that disclosure and transparency is regarded as a core fundamental element of corporate governance that have direct influence on investment. Since disclosure and transparency has influence on the perception of investors there is a possibility that the low economic growth in the region is contributed by poor investment that arises from the absence of strong disclosure and transparency. Further analysis show that disclosure and transparency has got an estimated standard deviation of 2.03 and an average mean score of 4.86. The low differences between the standard deviation and mean indicate that, they are low variations in disclosure and transparency patterns amongst countries in the region. Low disclosure and transparency can be an indication of the absence or maybe a decline in activities such as publication of integrated reports that encompass the sustainability aspects, of quarterly and annual reports, non-disclosure of aspects such executive compensation, internal control and risk management process, audit processes and independence amongst other issues. A decline in disclosure and transparency could be an indication of the absence or existence of weak corporate governance in a company this is because disclosure and transparency is viewed as a reflection and a standard measure of the governance of the corporation.

5.2.3 Director liability

In accordance with corporate or company law directors as agency of the company have fiduciary, legal and statutory duties towards the company and its shareholder hence they can be held legally held liable for any contravention of their duties. This study found that director liability is positively skewed with coefficient estimated at 0.27 and this indicates that, director liability is on an increasing trend. The results further reveal that director liability has standard deviation of 2.77 from a mean average of 3.75. The low variation between the standard deviation and mean suggest that there is low variability in the extent of director liability across countries within the sample. In other words directors can be held personally liable to fine, debts of the company if they are found in breach of their fiduciary, statutory and legal duties. Given the fact that director liability measure ranges from 0 to 10 with higher values indicating greater director liability the mean score of 4.75 is notably low and concerning because it suggests that there is generally a low director liability in the region. The findings further reveal director liability has an estimated minimum of 0 and maximum of 9, this suggests that are large differences in the level of director liability in some countries. This indicates that, whilst directors liability is very high in some countries there no evidence of its existence in other countries. It therefore entails that the extent to which shareholder can be able to use internal companies procedures or public law enforcement to hold directors accountable and liable for fraud, gross negligence and even acting in bad faith varies across countries is very low in countries across the region.

5.2.4 Shareholder suit

Shareholder rights should be protected because they invested their property rights in the company and the extent of protection has influence on the performance of the company. The results in table 5.1 indicate that shareholder suit in the region is on the positive growth direction as shown by a positively skewed coefficient of 0.389, suggesting that mean is greater than the mode. This means that across all countries observed in the study there is a general increase in shareholder suits suggesting activities that primary seek to strengthen shareholder rights such as having the rights to trade and transfer their shares freely, they have the right to vote, remove directors, right to call for extra ordinary meeting as well the rights to approve the issue of new shares are on the increase. Shareholder suit measure is also another leading activity that provides protection to the rights of the shareholders. Its measurements range from 0 to 10 with the higher values representing greater shareholder suit. The results indicate that there is a high variation in shareholder suits as shown by a standard deviation of 2.18 from mean average score of 5.33. The study found further evidence shareholder suits has got a minimum of 1and maximum 10. The high range indicates that they were high disparities in the extent of shareholder suits in countries within the sample. It is important to note that shareholder rights is observed to be low in Sub Saharan Africa yet its regarded as an necessary for providing investors' protection as well as boosting investors' confidence and all this plays a vital role in attracting investment which matters for investment. The need for protection of private property is underscored in the property rights theory, property rights as well in the various codes of corporate governance. For instance the OED (2015) emphasises that "the corporate governance framework should protect and facilitate the exercise of shareholders' rights and ensure the equitable treatment of all shareholders, including minority and foreign shareholders. Against this backdrop it can be argued that inasmuch as shareholder suits is expected to differ with countries there must an minimal level of shareholder suit that is required to provide protection to shareholders that can attract investors and global capital finance.

5.2.5 Protection of the minority shareholders

The findings of this study show that, protection of the minority shareholders is on the growing path, as indicated by the positively skewed coefficient of 0.34. Notably, protection of minority shareholder is 4.64 and the variability form this average mean score is estimated by standard deviation of 1.48. This indicates that, there is a moderately high variation in protection of the minority shareholder in Sub Saharan Africa countries. Measurement of the protection of the minority shareholder ranges between 0 and 10 with higher values indicating greater availability of protection for minority shareholders. Under these conditions the observed mean average score of 4.64 suggest that there is generally a low protection of the minority shareholder compared to the world standard. Protection for minority shareholder is an important principle of corporate governance this is because this category of shareholders may have insufficient power to affect the resolution of company goals and safeguard themselves against expropriation by management or those controlling the company.

In sum, the preceding section presented descriptive statistics of corporate governance. The findings show that some corporate governance in Sub Saharan African countries is characterised by an increase and decline of practices of corporate governance practices. It can also be established from these findings that, corporate governance practices are still low Sub Saharan Africa generally as indicated by a ranking that fall below the average of the world standard for most if not all practices. At this juncture, it is questionable as whether the low corporate governance observed across countries in the region has the ability to make any significant contribution to economic growth. The next section presents descriptive statistics for the legal system which is in this study considered as a possible additional explanatory variable of economic growth in addition to corporate governance.

5.3. The legal system

Literature suggests that the legal system forms the foundation for the development of a corporate governance system that can contribute to economic growth (Claessens, 2006, Porta et al, 2000). It can be assumed that economic growth is depended of the impact of the legal systems on corporate governance. The section that follows focuses on presenting descriptive statistics of the observed legal system.

Table 5. 2 Descriptive statistics for legal system indicators

	Mean	Std. Deviation	Minimum	Maximum	Skewness	Kurtosis	N
GDP	5.040	3.543	-17.670	14.050	-1.495	8.565	202
Efficiency of the legal framework	3.643	0.720	2.000	5.200	0.291	-0.450	196
Investor protection	4.762	1.330	2.700	8.000	0.627	-0.094	195
Judicial independence	3.451	1.049	1.600	5.700	0.384	-0.820	196
Legal rights index	5.631	2.339	1.000	10.000	-0.050	-1.088	195
Property rights	4.072	1.796	2.000	4.068	0.364	-0.092	196

5.3.1 Efficiency of the legal framework

Efficiency of the legal framework that is the extent of the competence in the enforcement of laws by both private and public institutions plays a vital role in ensuring a sound legal system that promotes good corporate governance and ultimately enhances economic growth. The measurement for the efficiency of the legal framework ranges between 0 and 7 with the higher value indicating efficiency. This study found that, the efficiency of the legal framework is on the increasing path as indicated by a positively skewed coefficient estimated at 0.291. The results show that means average of the efficiency of the legal framework is 3.643 and the standard deviation is 0.720. The average of efficiency of the legal systems in Sub Saharan Africa countries is general low compared to the world standard although it varies moderately across countries in the region. This means that the competence with which social institutions enforce rules that govern behaviour in the society in specific the ability for private businesses to settle disputes and challenge the legality of government actions and/or regulations is very low in most countries across Sub Saharan Africa. It can be inferred that countries interested in promoting effective corporate governance that can enhance economic growth in their economies might need to first to improve the efficiency of the legal framework in their countries. According to Dallas (2004) the efficiency of the legal systems is dependent on the content and enforcement of their laws. This entails that to improve the legal systems it is necessary for countries to review the content of their laws and the effectiveness with which laws are enforced in their country.

5.3.2 Investor protection

Investor protection is necessary for providing assurance to investors and consequently, it strengthens the development of good corporate governance within companies. The measure for investor protection ranges from 0 to 10 with the higher values signalling the greater availability of investor protection. This study found that investor protection is on the positive growing path as shown a positive skew of 0.627. The findings indicate a mean average score of 4.762 and standard deviation of 1.330 suggesting that there are marginal differences on investor protection across countries. The mean average score of investor protection observed in this study is fall below the average of the world maximum standard of 10. The study found a range of 5.3 suggesting that are high disparities in extent of the presence of investor protection within countries. Dallas (2004) cautions that the legal and corporate governance regimes that provide less investor protection may find it difficult and very expensive to attract capital. It follows that countries that are intend to stimulate investment should may need to first improve investor protection that is provided by their legal system and corporate laws. For instance countries may enhance investor protection by having legal laws that specify and protects the rights shareholders as owners of the company as well as those of other stakeholders like the creditors. Moreover, company laws may specify processes and structural procedures that corporate governance systems should implement in order to promote investor protection for example the structure of the board, disclosure and transparency procedures, director liability and many others.

5.3.3 Judicial independence

Legal laws may guarantee the rights to private property owners, business entities and individual but this amount to nothing without the existence of an independent judiciary system that protect these rights. Judicial independence that is the extent to which the judiciary is separate from undue influence from the government and private interest plays a very important role in ensuring the enforcement of laws in particular contracts and other related business transactions. The measurement ranges from 0 to 10 with the highest value indicating greater judicial independence. The study found that judicial prudence is on the positive growing path as signified by a positively skewed coefficient estimated at 0.384. The study also found that judicial independence across country has a mean average score of 3.451 and standard deviation of 1.049 suggesting that there minor variations in judicial independence across countries. The average mean of judicial independence found in Sub Saharan Africa countries within the sample falls below the maximum standard of 10. It can be deduced from this evidence that the extent to which judges have the ability to exercise impartial decision making impartially in accordance to their own interpretation of law and facts is low in countries across Sub Saharan Africa. It follows from the fact that, judicial independence is observed to be low it can be concluded that the judicial systems of most countries in the region does not provide strong protection for property rights, shareholders' right and other stakeholder's rights.

5.3.4 The legal rights

The results in Table 5.2 found that legal rights is on the negative path as indicated by a negatively skewed coefficient of -0.050 suggesting that there is decline in legal rights. Legal rights involve the extent at which borrowers, lenders and shareholder are protected and this aspect has influence on the availability of capital and finance which in turn affects economic growth. The measurement of legal rights ranges between 0 and 12 with the higher value showing the presence of legal rights. The study found a mean average score of 5.631 and standard deviation of 2.339 signifying that there are high variations in legal rights across countries. At the same time further analysis found that legal rights have minimum of 0 and maximum of 10. This indicates that there are instances of high disparities in legal rights between countries. It can be concluded from these findings that the rankings of the legal rights in Sub Saharan African countries is generally low compared to the maximum standard score of 12. Considering that, protection of investors' rights is a risk assurance measure questions can be raised concerning the extent to which the observed low legal rights has the ability to enable countries to develop corporate governance and attract investment.

5.4.5 Property rights

The availability of property rights demonstrates the extent to which individual private property owners have the rights to use their private property to provide good and services and legitimately expect a return on their investment. The measurement of property rights ranges between 0 and 7 with high values suggesting greater property protection. The study found that property rights are on the positive growth path as shown by a positively skewed coefficient of 0.364. The study found a mean average score of 4.068 and standard deviation of 1.796, indicating that there are variations in property rights across countries within the sample.

Evidence from the findings presented here suggests that corporate governance in Sub Saharan Africa exist in county with weak legal systems. These findings are similar to the view of Paredes (2004) who suggest that in developing countries the infrastructures that protect shareholder rights are still in their early development stage or are nonexistence. The next section presents descriptive statistics for good governance which is assumed to be an additional explanatory variable that have influence on the development of corporate governance system and its effect on economic growth.

5.4 Good governance

Good governance is associated with the creation of an enabling environment that support the development of strong corporate governance practices that promotes company performance and this in turn has effect on economic growth. We note that all the WGI are measured using the standard unit of world governance indicator that ranges between -2.5 to 2.5 with the highest value indicating stronger good governance. The concept of good governance that is the authority and institutions by which authority is exercised in country is recognised as an imperative for shaping the environment within which individuals, governance and institution interact to create wealth. Good governance practices that are proxied by government effectiveness, political stability, control for corruption, voice and accountability, rule of law and regulation quality. The section that follows presents the descriptive statistics of individual specific good governance indicators observed in this study

Table 5.3 Descriptive statistics for good governance indicators

	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis	N
GDP	-17.670	14.050	5.040	3.543	-1.495	8.565	202
Government Effectiveness	-1.540	1.190	-0.383	0.669	0.458	-0.665	203
Political Stability	-2.190	1.620	-0.218	0.881	-0.312	-0.665	203
Control of Corruption	-1.450	1.270	-0.364	0.665	0.477	-0.728	203
Voice and Accountability	-1.540	0.980	-0.378	0.698	0.141	-1.097	203
Rule of Law	-1.840	1.000	-0.330	0.963	0.057	0.14.146	203
Regulatory Quality	-2.110	1.100	-0.308	0.611	-0.253	0.629	203

5.4.1 Government effectiveness

Looking at the Table 5.3 we can see that government effectiveness is on the positive direction as shown by a positively skewed coefficient of 0.458. This means that, government effectiveness is on the growing path. Government effectiveness involves the competence with which the government operates in terms of providing appropriate quality services for the public service, business sector and political independence of the judicial systems. Further analysis indicate that , the mean average of government effectives across countries is -0.383 and the standard deviation from this mean score is 0.669 suggesting that there are similarities in the level of government effectiveness across countries in the region. The study also found minimum and maximum effectiveness is estimated at -1.540 and 1.190. These findings suggest that government effectiveness in areas such as policy formulation, implementation and commitment the implementation of policies as well its ability to ensure quality service delivery is poor in Sub Saharan African countries. Additionally the low standard deviation signifies a statistically low variation in economic growth across countries in the region suggest that there are similarity in weak government effectiveness in countries within the sample. The results indicate that government effectiveness across all countries falls in the negative range indicating that government effectiveness is weak in most if not all countries within the region.

5.4.2 Political stability

Political stability reflects the level of risk associated with investing in given country. Political stability is thus an indispensable element of good governance that is necessary for attracting investment, growth and survival of any company. For instance it is well known that investor and property owner are not willing to undertake the risk of making any investment in country where there is political instability because there are not assured of getting a return on their investment. The results in Table 5.3 illustrates that political stability is on the negative path as shown by a negatively skewed coefficient of -0.312, this implies that there is a decline in political stability. The weak political stability suggests that, tendencies that undermine good governance such as constitutional violations as well as politically driven violence are on the increase in countries within the sample. This decline in political stability across country is further illustrated by the average mean score estimated at -0.218. Since the average mean score of political stability falls below the world score standard of 2.5 it can be concluded that there is weak governance in countries in the region. The study also found that, the standard deviation for political standard is estimated at 0.881. It can be inferred from this low standard that, although there are differences in the level of political stability in countries in the region the variations across the countries are very small. These findings lead to the conclusion that countries in Sub Saharan Africa are characterised by high level of political instability.

5.4.3 Control of corruption

Control for corruption aims to reduce corruption, generating significant benefits and minimising the negative effect to economic growth. Weak control for corruption is expected to have economic cost on corporate governance because companies may try to improve their corporate governance beyond the local standard with the aim of attracting investor yet the cost of doing this may actually outweigh the benefits. This study found that control for corruption is on the positive growth path this is indicated by a positively skewed coefficient estimated at 0.477. This suggests that, attempts to control corruption are on the increase. The findings indicate that mean average score for control of corruption is estimated at -0.364. This is mean average score is low compared to the world standard score of 2.5, indicating that countries might need to strengthens and increase measures that control corruption The standard deviation corruption is estimated at 0.665 suggesting that minor variations in the level of control for corruption. It may be deduced from the both low standard and mean average score that control of corruption in Sub Saharan Africa countries is generally weak across all countries. Presumably, there are high prevalence of unethical and dishonesty in the dealing with public contracts, obsession with demanding bribes by government officials in most if not all countries in the region. Claessens and Yortoglou (2013) provide evidence that corruption has negative influence on corporate governance and economic growth. This is because corruption is associated with diversion of public funds to companies, individual or group of individuals due to corruption. Corruption has become a global issue of concern because it is understood to have undue negative influence on service delivery and overall the creation of wealth in countries.

5.4.4 Voice and accountability

The results show that voice and accountability is on the increasing path as reflected by a positively skewed coefficient of 0.141. The study further found a mean average score of -0.378 and standard deviation of 0.698, suggesting that there are marginal variations in voice and accountability across countries. The generally low voice and accountability is supported by the observed minimum of -1.540 and maximum of 0.980. These ranges show that there is generally a low voice and accountability this is because the highest and lowest observed voice and accountability falls below the word standard score which is estimated at 2.5.Voice and accountability is viewed as one of the core fundamental principles of democracy that seek to ensure that all citizens have the right to participate in selecting their government, and as a result it is important for ensuring equity in wealth creation and distribution. Voice and accountability is expected to promote the development of corporate governance practices as well as enabling it to contribute to economic growth. Weak voice and accountability reflects that there is a high country governance risk. Doidge *et al* (2006) found that weak voice and accountability and consequently deters investment and it also increases the cost of implementing corporate governance. It follows that the cost of implementing corporate governance in Sub Saharan African countries might be higher than the benefits given the high provenance of low voice and accountability observed in most countries.

5.4.5 Rule of law

The extent to which the various agency believe that there is respect and adherence to laws that govern the various sectors of the society for instance the business sector, government, public and private sector it has influence on economic growth. Findings of this study indicates that rule of law in countries within the sample is on the positive growth path this is indicated by positively skewed coefficient of 0.057. This study found that rule of law has a mean score estimated at -0.330 and standard deviation of 0.963. The average mean is below the world standard score of 2.5, showing us that, rule of law in low in countries in the region. The low standard deviation indicate that although the extent that government and its official, various agents as well as private and individual entities subject themselves and are accountable under the law it varies with country, it is generally low across countries within the sample. It implies that, nearly in all countries rule of law is low and this further lead us to believe that to promote economic growth countries might need to reform their legal system in order to strengthen the rule of law in their countries.

5.4.6 Regulation quality

The study found that regulation quality is on the declining path as estimated by the negatively skewed coefficient of -0.253. Regulation quality refers to the capacity for government to develop and implement sound policies that ensure private sector development. The results also indicate a mean average score of -0.308, this below the standard average score of 2.5 suggesting there is poor regulation quality. The standard deviation is estimated at 0.611. The low standard deviation suggests there are no major differences in the regulation quality in the different countries. Considered together all the findings reveal that the regulation quality in

Sub Saharan Africa countries is generally weak. In summary the all the descriptive statistics for good governance presented in this study reveal that corporate governance in Sub Saharan Africa countries exist in macroeconomic environment that is characterised by weak governance practices. The next section presents descriptive statistics for financial development which is considered as an explanatory variable for economic growth in addition to corporate governance, legal systems and good governance.

Table 5. 4 Descriptive statistics for financial development indicators

	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis	N
Regulation of securities exchange	0.000	6.600	3.767	0.972	-0.032	1.174	196
Financing through market	1.500	6.600	3.374	0.869	0.499	0.586	196

5.5 Financial development

Financial development is expected to influence economic growth through its influence on investment and corporate governance. Sub Saharan Africa is known to have a low financial development due to the absence of financial markets and consequently there is scarcity of data on various financial market related indicators. To address the challenge of the absence of financial market related data the study used regulation of securities exchange and financing through the market as proxies for financial development.

5.5.1 Regulation of securities exchange

Publically listed companies in Sub Saharan African countries like elsewhere are subject to regulation by respective regulation of securities authorities. Rule and regulations of security exchange primary seek to ensure compliance towards corporate governance practices such as disclosure, calling of shareholders meeting and many others. This study found that regulation of securities of exchange has negatively skewed coefficient estimated at -0.032, suggesting that it is on the decline. Regulation of securities exchange measure ranges between 1 and 7 with the higher value showing greater availability. The findings show that the mean average score is estimated at 3.767, this measure is below the world standard pegged at 7. The results indicate a standard deviation of 0.972 suggesting that they are minor differences in regulation of securities of exchanges across Sub Saharan African countries. Regulation of securities exchange is envisaged to play an important role by monitoring and ensuring the compliance to various governance laws that has influence on the operations of the corporation. The findings suggest that corporate governance in the region prevails in background where there is low financial development. It may be inferred the fact that there is low absence of regulation of securities of exchange that countries in the region are most likely to face a challenge ensuring the implementation and regulation of corporate governance.

5.5.2 Financing through the market

It is generally expected that companies that have sound corporate governance are likely to attract finance through the market at lower cost. This measure ranges between 0 and 7 with the higher value indicating availability. The study found that financing through the market is on the positive growing path as shown by a positively skewed coefficient estimated at 0.499. The results further indicates that the financing through market mean score average of 3.374 The low means score results suggest that financing through the market is low in Sub Saharan African countries. The standard deviation is estimated at 0.972. This indicates that there are marginal variations in financing through market in countries in the region, that is financing through the market is generally low in most countries although it is on the increase. Financing through market is associated with dispersed ownership and ultimately demand for strong corporate governance practices to control problems that arise from separation of control. Corporate governance exists in background where financing through the market it is generally low although it is on the increase.

The results descriptive statistics for financial development presented here suggest that corporate governance and economic growth exists in countries that are characterised by low financial development. The next section presents macroeconomic fundamental descriptive statistics.

Table 5.5 Descriptive statistics macroeconomic indicators

	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis	N
Inflation deflator % GDP	-9.560	17.450	7.731	10.684	5.166	39.238	202
Foreign direct investment	-558 328 982	9 885 001 293	1 162 837 339	1 945 372 680	2.533	6.027	202
Gross national saving %	-10.000	49.200	17.090	10.166	0.413	0.915	193

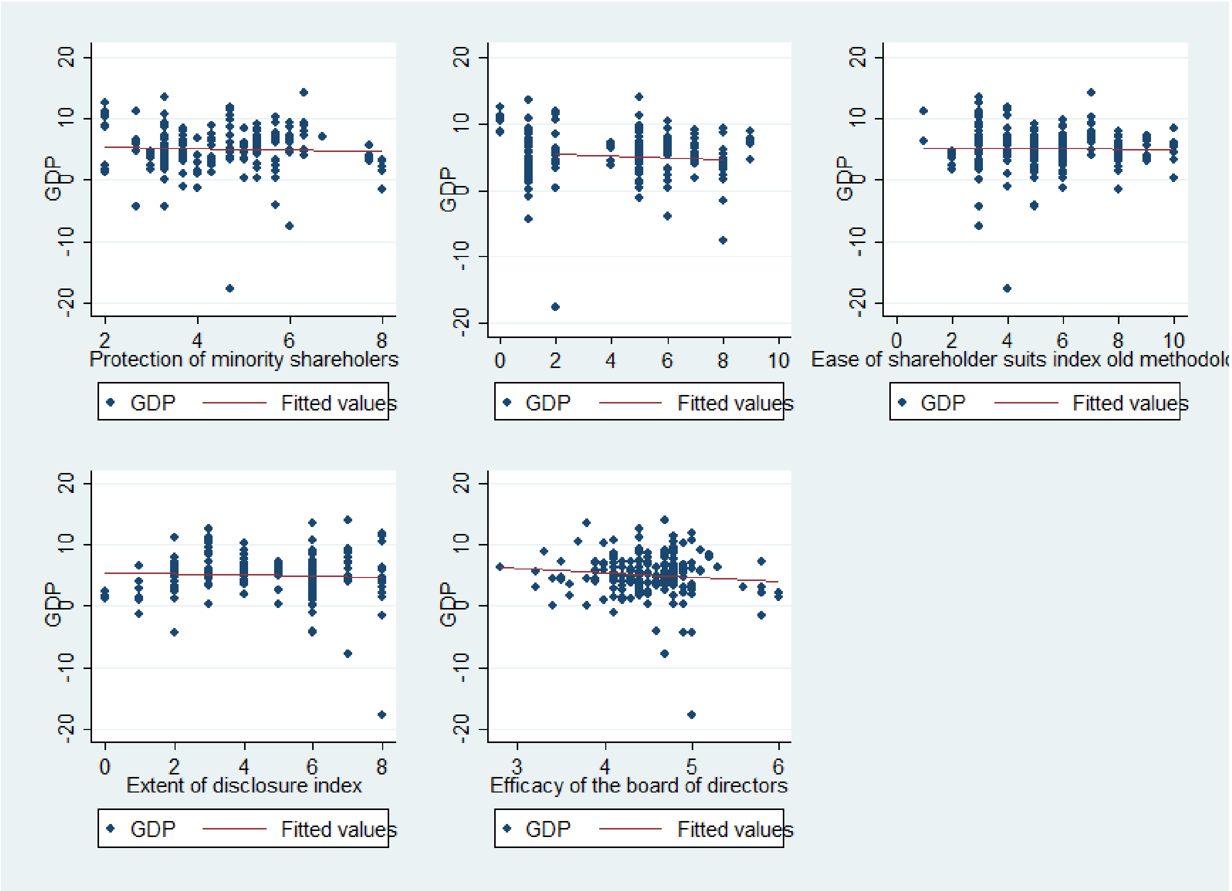
GDP

5.6 Macroeconomic fundamentals

The study found that inflation is on the positive path as shown by positively skewed coefficient estimated at 5.166. This indicates that the inflation rate is on the increase in countries in Sub Saharan Africa. The study found the standard deviation for inflation is estimated at 10.684 compared to a mean of 7.731 suggesting that are high variations in inflation across the countries. The minimum inflation rate is estimated at -9.560 and maximum is 17.450. The huge differences between minimum and maximum score indicate that that has been high variations on inflation rate in some countries or one country. This could also be an indication that there is outlier amongst the countries in the sample.

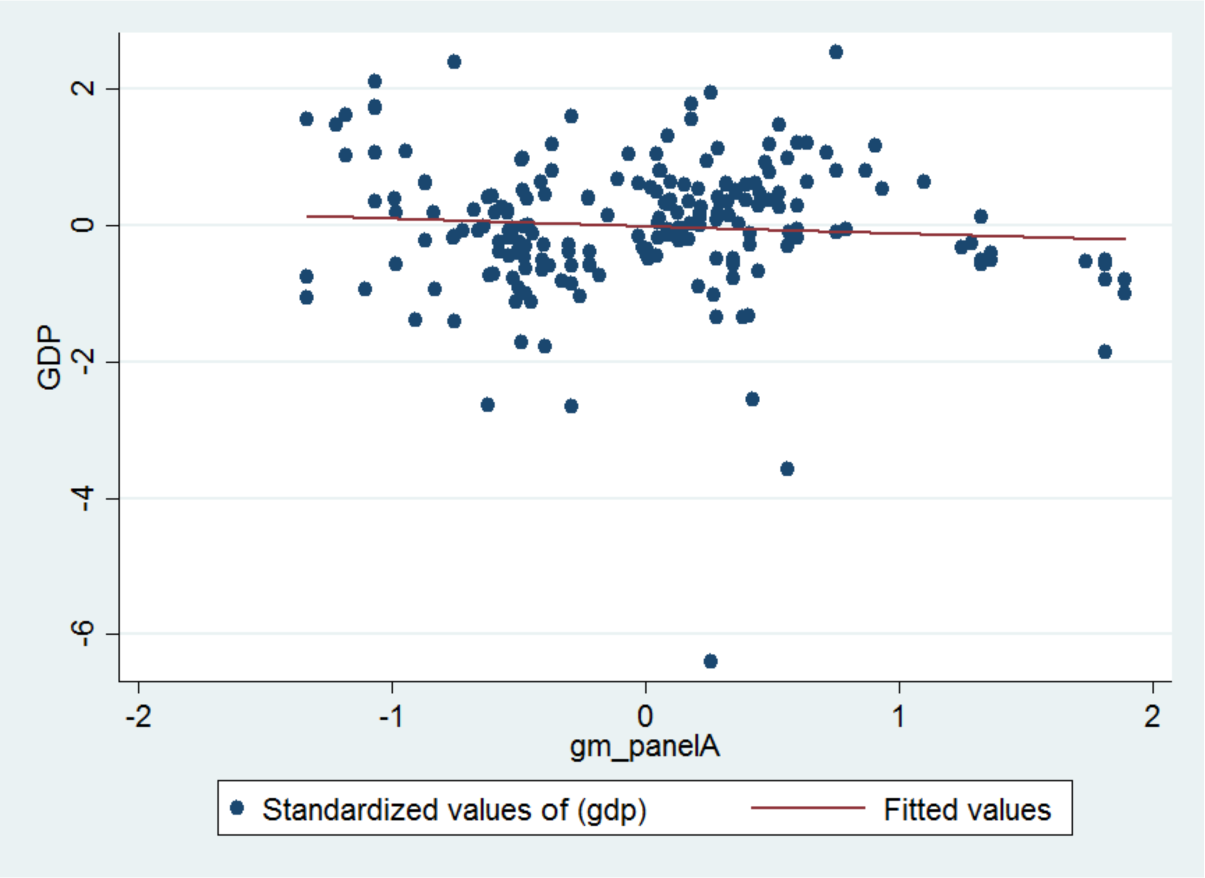
Foreign direct investment is considered as macroeconomic fundamental that determines economic growth in any economy. The standard deviation for foreign direct investment is high suggesting that are high variation across countries. Foreign direct investment is on the growing path as shown by a positively skewed coefficient. Gross national saving is on the growing path as shown by a positively skewed coefficient of 0.413. Gross national savings have a high standard deviation which indicates that there are high variations in gross saving across countries. Findings on the macroeconomic fundamentals suggest that corporate governance exist in macroeconomic environments that are characterised by high macroeconomic fundamentals instabilities.

Figure 5. 1 Scatter plot for corporate governance and GDP



In Figure 5.1 the scatter plot for protection for minority shareholders, director liabilities as well as the extent of disclosure and transparency show that there is a nonlinear negative slope trend. The negative slope entails that an increase in protection for minority shareholders, director liabilities as well as the extent of disclosure and transparency is not directly proportional to the economic growth. The scatter plot for efficacy of the board is tightly clustered around the line showing that the relationship amongst the efficacy of the board and economic growth is stronger. The pattern shows a linear negative slope, a strong relationship with an outlier. This means that GDP that is economic growth decreases as efficacy of the board increases. The negative correlation relationship between efficacy of the board and economic growth usually occurs if the efficacy of the board was used to substitute for weak investor protection from the weak legal and country governance environment. In such cases an increase in board efficacy can be associated with low level of economic growth since companies would possibly incur high cost that reduce company performance and in turn lead to negative economic growth.

Figure 5.2 Scatter plot for aggregated corporate governance and GDP



The scatter chart for aggregated variables of corporate governance is closely fitted to the line suggesting the existence of a strong relationship between aggregated variables of corporate governance and economic growth. The fitted line is slightly sloping downwards indicating that there is a weak negative correlation between aggregated corporate governance and GDP. This implies that an increase in aggregated corporate governance leads to a decrease in GDP. This means that economic growth decreases when aggregated corporate governance increases. This means that an increase in corporate governance does not lead to an increase in economic growth expected by various codes of corporate governance such as the OECD.

Figure 5.3 Scatter plot for the legal system and GDP

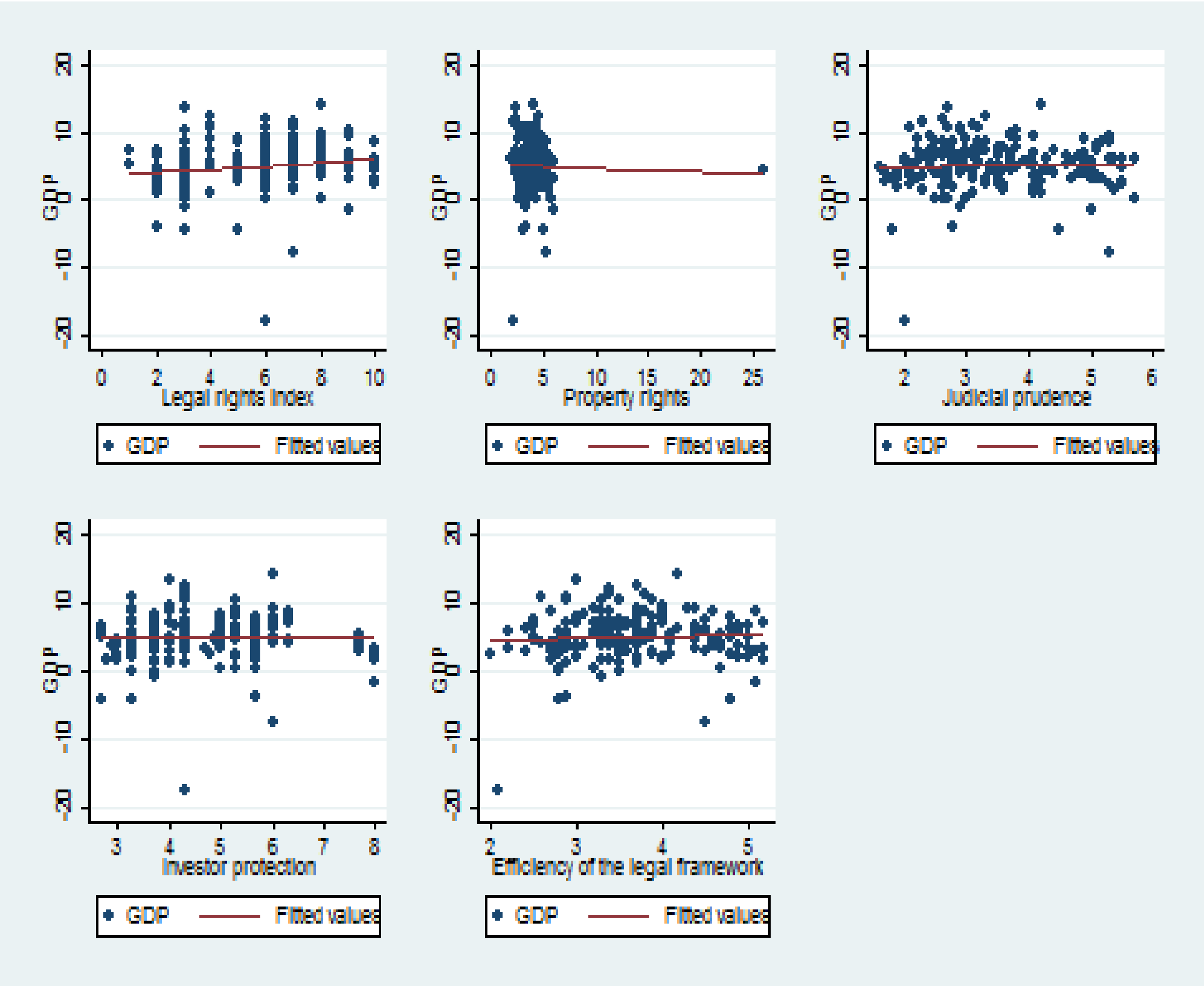


Figure 5.3 shows the scatter plots for disaggregated legal system explanatory variables. As can be seen the graphs for legal rights and investor protection have nonlinear relationship with GDP. The line of best fit for legal rights, property rights, judicial independence, investor protection and efficiency of the legal framework are all sloping upwards suggest that there is positive relationship between these legal systems variables and economic growth. The study figure show that slope for property rights, judicial independence and efficiency of the legal framework is sloping slightly suggesting that is a weak linear relationship between these variables and GDP. This indicates that an increase in legal rights, property rights, judicial independence, investor protection and efficiency of the legal framework leads to an increase in GDP although not at a proportional rate. These findings are consistent to Djankov *et al* (2006) who found a positive relationship between the legal system and economic growth. It may be inferred that the legal systems in Sub Saharan African countries has similar effect on economic growth like elsewhere in developed countries. It can therefore be assumed that, if

countries in Sub Saharan Africa can create conducive legal systems like those in developed countries, they can have the potential to improve economic growth in their economies.

Figure 5.4 Scatter plot for aggregated legal system and GDP

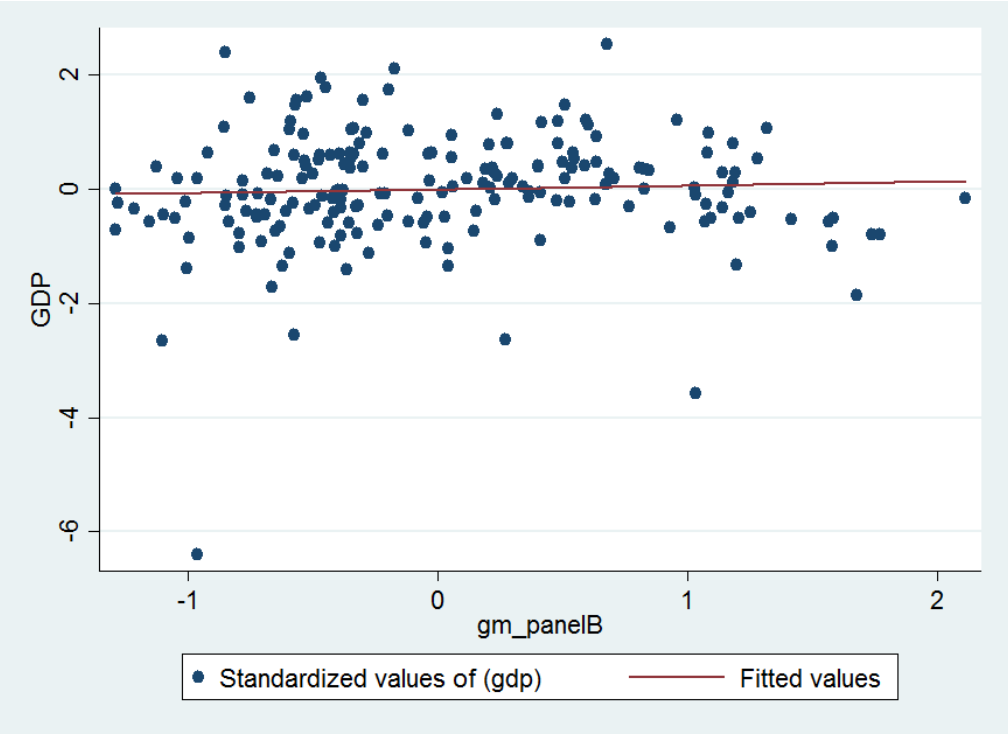


Figure 5.4 shows that there is weak positive relationship between aggregated variables of the legal systems and GDP. This means that an increase in aggregated variable of the legal systems leads to an increase in GDP. These findings are consistent with those of studies such as Doidge *et al* (2007) who found that countries with strong legal systems grower faster than those with weak legal systems.

Figure 5.5 Scatter plot variables of good governance and GDP

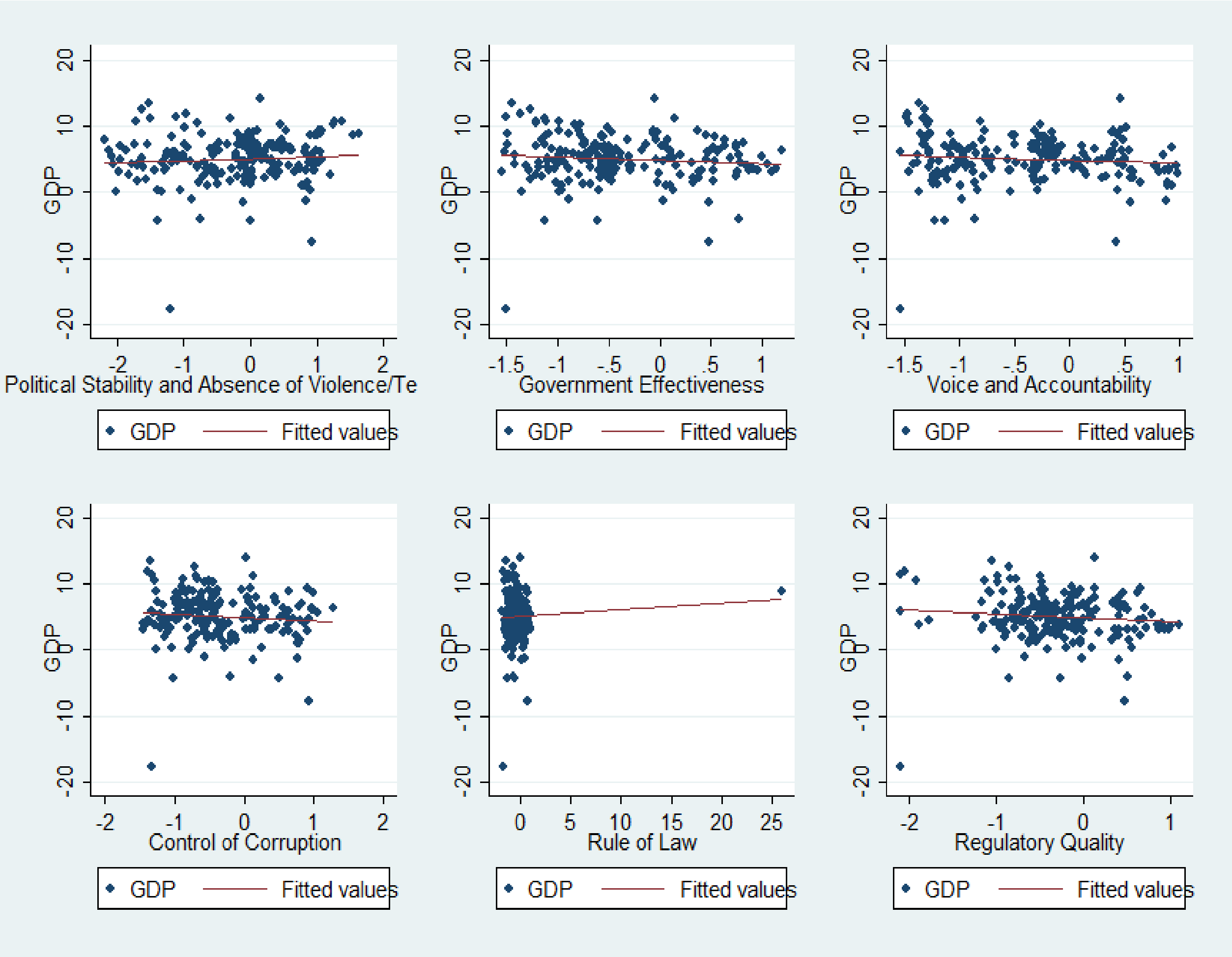
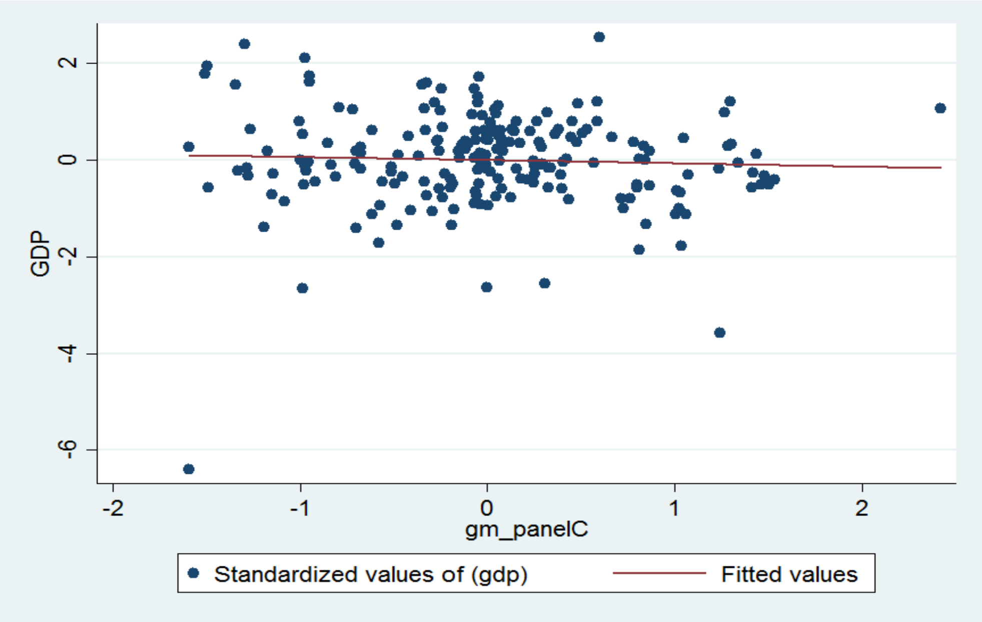


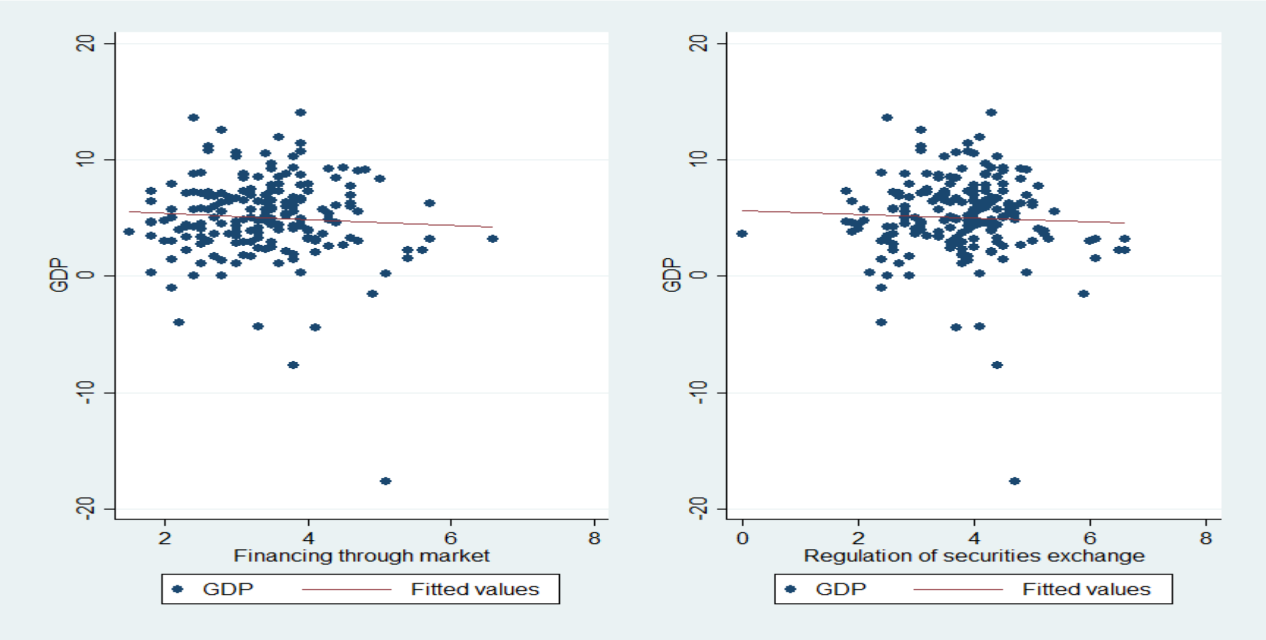
Figure 5.5 shows that scatter plot for aggregated good governance variables. Looking at the shapes we can see that the scatter plot for political stability and absence of terrorism indicates a positive linear relationship between aggregated good governance and economic growth. This suggests there is positive correlation between political stability and economic growth. The dots on the scatter plots clustered closely around the fitting line suggesting that the relationship is strong. The scatter plot for government effectiveness and GDP are clustered around the fitted line and showing a slowly sloping negative slope. This suggests that GDP decreases as government effectiveness increases. The scatter graph for voice and accountability show that is a strong inverse relationship between voice and accountability and GDP. It also shows that there are some few outliers. The figure for control of corruption shows that there is a negative linear relationship between control for corruption and economic growth. The scatter plot for regulation quality shows that there is a negative correlation between regulation quality and GDP.

Figure 5.6 Scatter plot for aggregated good governance and GDP



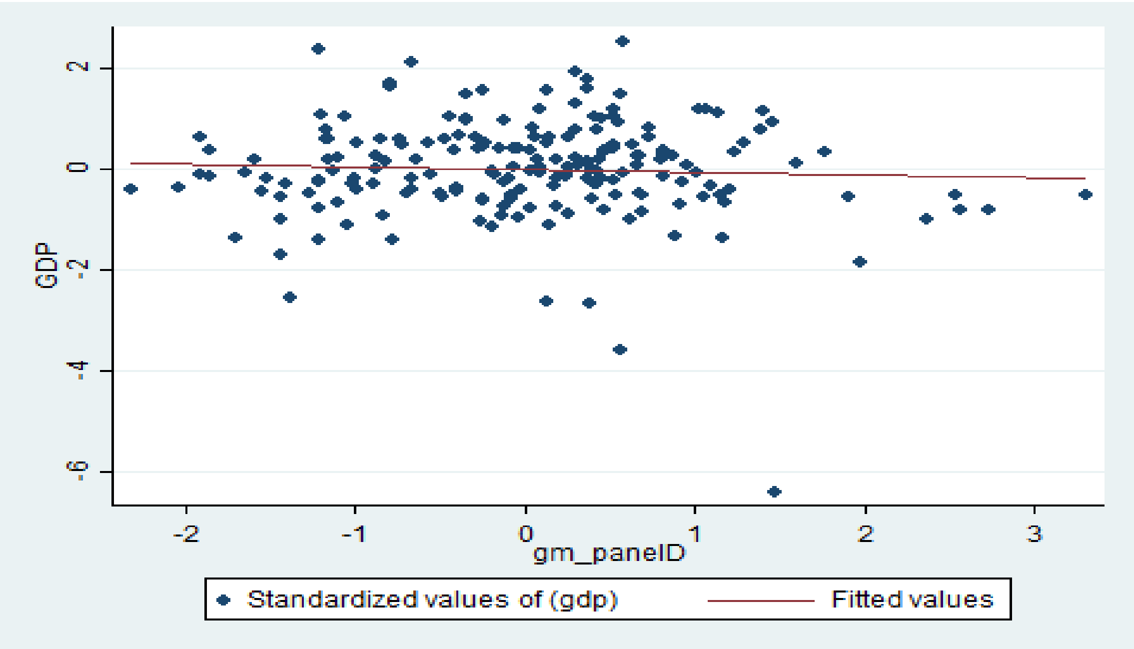
The scatter plot shows that there is a negative relationship between aggregated good governance and GDP. This indicates that GDP decreases as aggregated good governance increases. This finding contradicts the WFE (2015) view that good governance plays a significant role in promoting economic growth.

Figure 5.7 Scatter plot for variables for financial development and GDP



The figure 5.7 shows that there is an inverse relationship between financing through the market and GDP. This implies that GDP decreases as financing through the market increases. The scatter plot for regulation of securities exchange and GDP show that there is inverse relationship between these two variables. That is GDP decreases as regulation of securities increase.

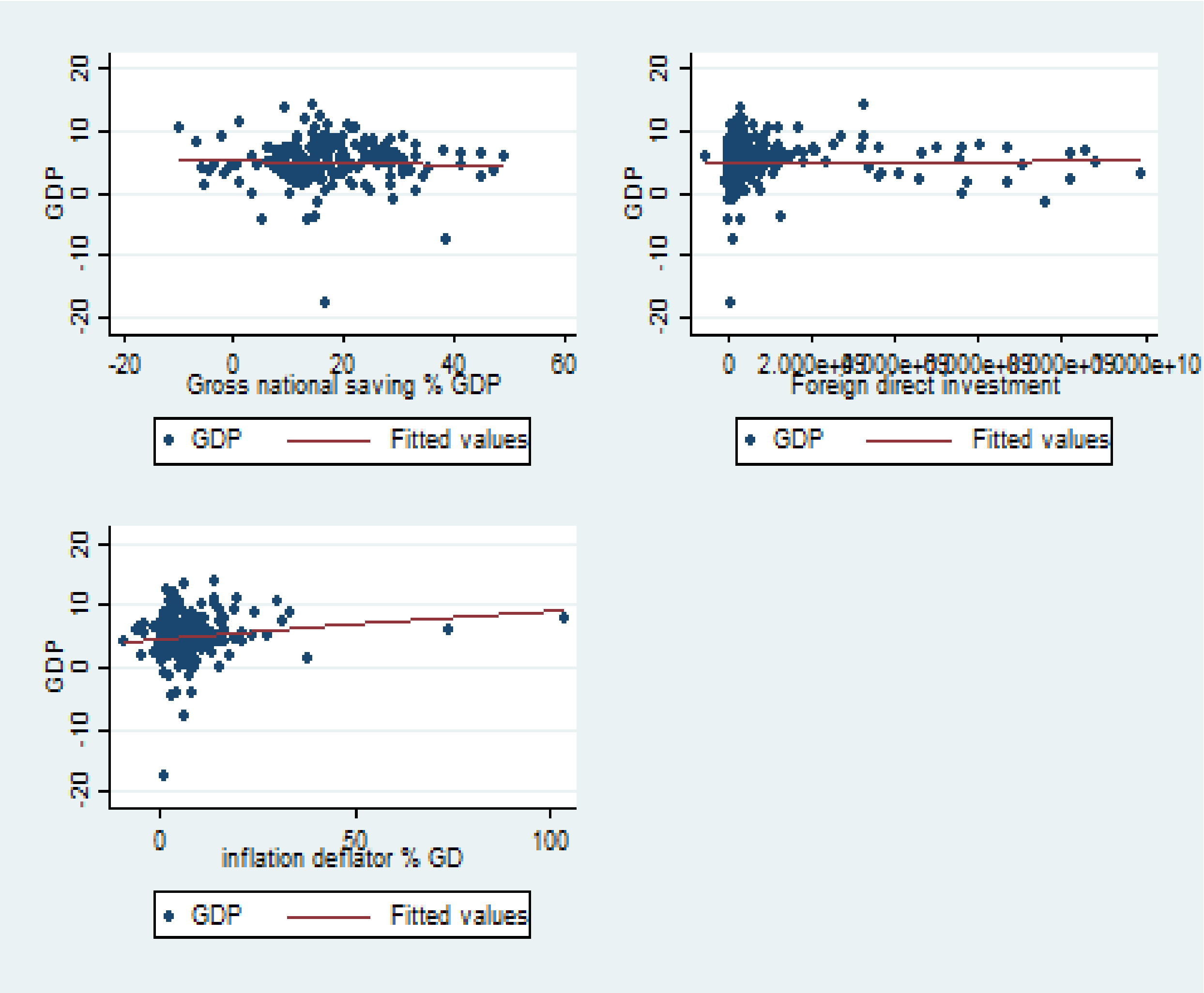
Figure 5.8 Aggregated financial development and GDP



The scatter plot for aggregated variable of corporate governance show that all countries are tightly clustered and there is weak nonlinear relationship between aggregated corporate governance and economic growth. This indicates that an economic growth decreases as n aggregated financial development increases.

Figure 5.9 Scatter plot for acroeconomic fundamentals and GDP

3



Scatter plot for aggregated gross national saving, foreign direct investment and inflation deflator show a closely clustered around the line trend suggesting that there is a strong relationship between economic growth and these variables.

Figure 5.10 Scatter plot for aggregated macroeconomic fundamentals and GDP

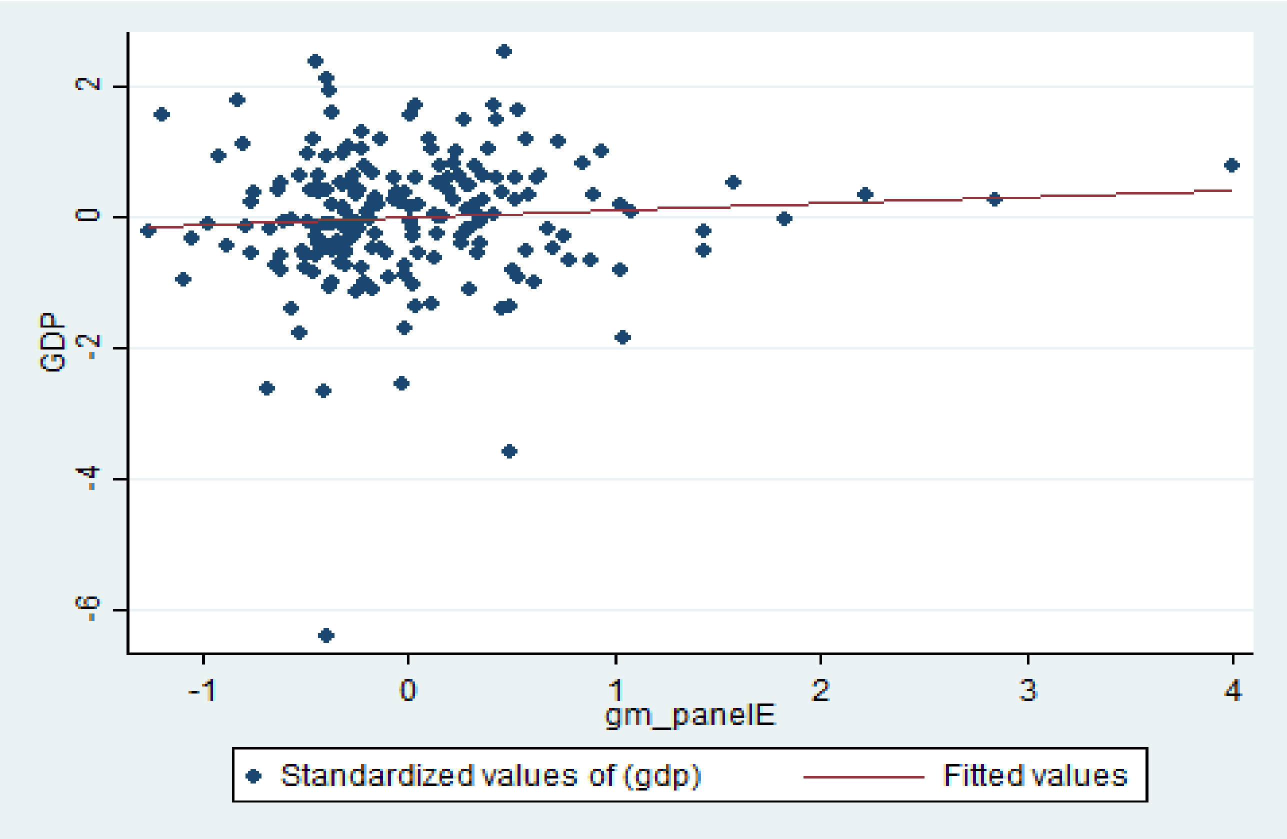
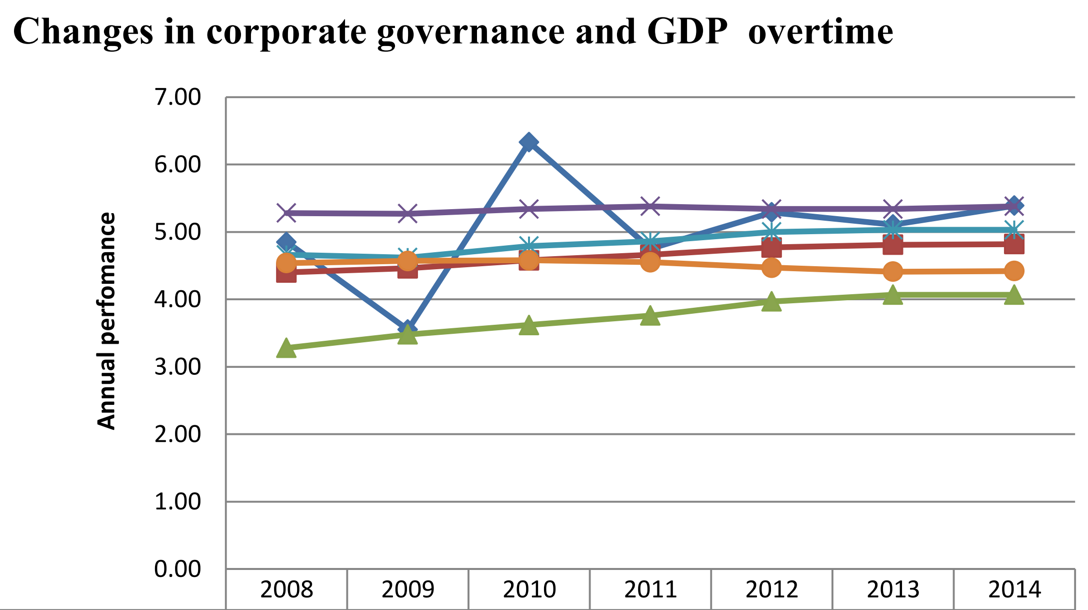


Figure 5.10 shows that there is weak positive correlation between aggregated macroeconomic fundamentals and GDP. This means that GDP increases as macroeconomic fundamentals increase.

5.7 Development of corporate governance and economic growth overtime

Changes in corporate governance within the given period might have been prompted by factors such corporate governance reforms, policy demands or voluntary compliance with the code of good practice. Good corporate governance is strengthened by the introduction and maintenance of mechanism that promote alignment of the behaviour and performance of the manager with the interest of the stakeholders, shareholders included (Keasey *et al*, 1997). This means that improved corporate governance is expected to contribute to economic growth through increased performance of the company. The section that follows presents descriptive statistics that demonstrates the changes in corporate governance practices over the seven year period under investigation.

Figure 5.11 Changes in corporate governance and economic growth overtime



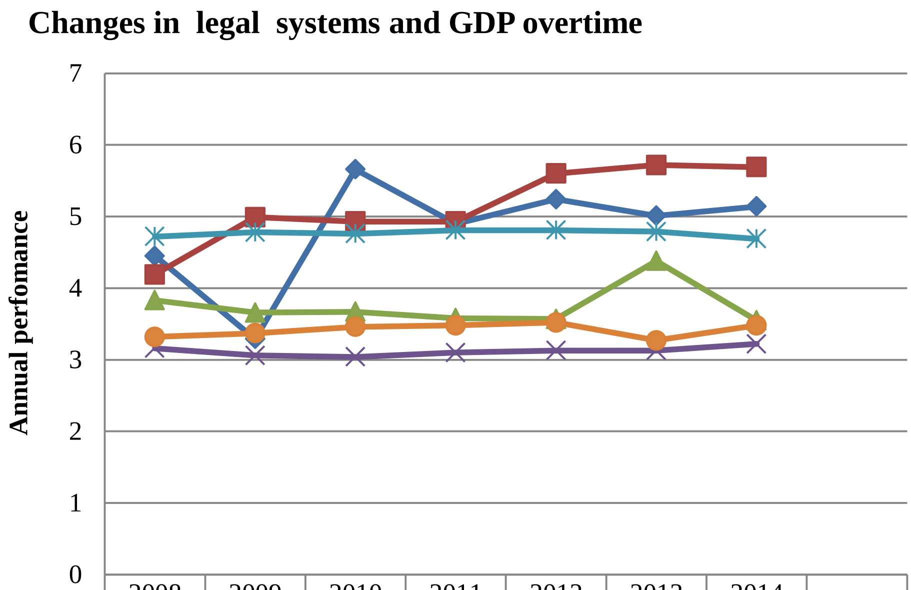
	2008	2009	2010	2011	2012	2013	2014
Gross domestic product	4.85	3.55	6.33	4.75	5.29	5.11	5.39
Protection of minority shareholder	4.40	4.46	4.58	4.66	4.77	4.81	4.82
Director liability	3.28	3.48	3.62	3.76	3.97	4.07	4.07
Shareholder suit	5.28	5.27	5.34	5.38	5.34	5.34	5.38
Disclosure and transparency	4.66	4.62	4.79	4.86	5.00	5.03	5.03
Efficacy of the board	4.54	4.57	4.58	4.55	4.47	4.41	4.42

Figure 5.10 presents the development of corporate governance and economic growth patterns in Sub Saharan African countries overtime. The results in the figure show that economic growth increased at slow rate over the years. For instance economic growth increased from 4.85 in 2008 to 5.39 in 2014 this constitutes an overall low increase of 0.75 over the period. We note that there was a decline in economic growth from 4.85 in 2008 to 3.55 in 2009. We also observed that there was an increase in economic growth rate to 6.33 in 2010. The decrease in economic growth in 2008 could be associated with the decline in economic activities that occurred due the 2008-2009 global financial crises. This trend demonstrates there have been fluctuations in economic growth over the given period of time.

Turning to corporate governance the results in figure 5.11 show that corporate governance variables are growing at slow rate. For instance in 2008 protection for the minority shareholders was estimated at 3.28 and it increased to 4.07 in 2014, this is an increase by 0.79

units. Extent of disclosure and transparency increased from 4.66 in 2008 to 5.03 in 2014 thus an increase of 0.37 percentages over the years. Overall both corporate governance and economic growth are observed to be growing at a slow rate during the period. This suggests that the various components of corporate governance underwent changes overtime although the changes are only minor.

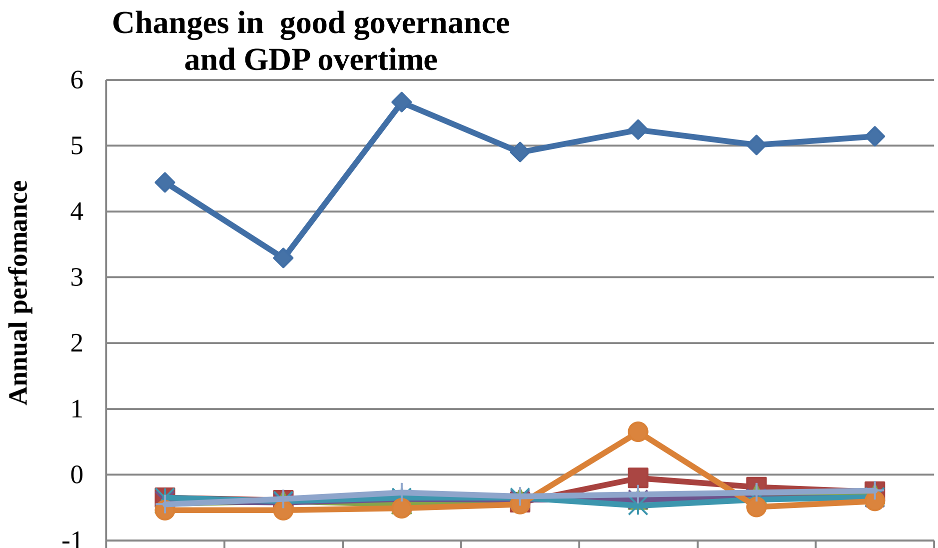
Figure 5.12 Changes in legal system and GDP overtime



	2008	2009	2010	2011	2012	2013	2014
Gross domestic product	4.45	3.29	5.66	4.9	5.24	5.01	5.14
Legal rights	4.19	4.99	4.93	4.93	5.6	5.72	5.69
Property rights	3.83	3.66	3.67	3.58	3.57	4.38	3.55
Judicial independence	3.16	3.06	3.04	3.1	3.13	3.13	3.22
Investor protection	4.72	4.78	4.76	4.81	4.81	4.79	4.69
Efficiency of the legal framework	3.32	3.37	3.46	3.48	3.52	3.27	3.48

The theory of property rights provides a basis for explaining and justifying the need for legal laws and enforcement of the laws in countries. Figure 5.12 show that they are some fluctuation in the evolution of variables of legal systems during the period. The legal systems during the period has been characterised by low judicial independence and efficiency of the legal framework. This suggests that the legal systems might have suffered from undue and improper influence from the government and other partisan interest instead of pursuing impartial justice and fairness. Based on these results it can be argued that whilst improvement in legal rights and investor protection are necessary these may not be adequate to compensate for the weaknesses in the legal systems that might have arisen from the poor property rights, weak judicial independence and inefficiency legal framework that were observed during the given years in the given period. It can be concluded from this evident that, Sub Saharan Africa countries were characterised by weak legal system during the period.

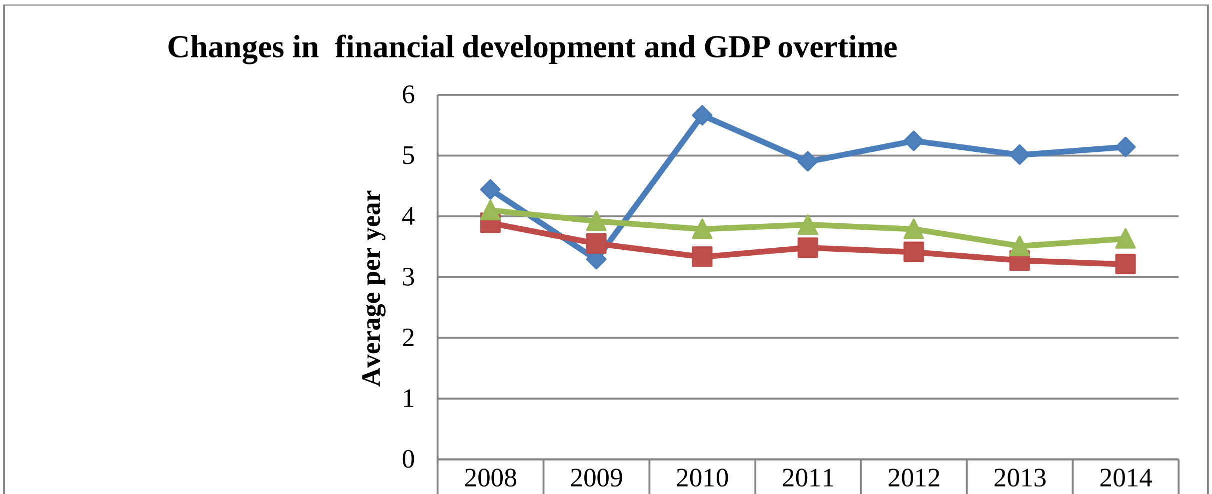
Figure 5.13 Changes in good governance and economic growth overtime



	2008	2009	2010	2011	2012	2013	2014
Gross domestic product	4.44	3.29	5.66	4.9	5.24	5.01	5.14
Political stability	-0.35	-0.39	-0.41	-0.42	-0.05	-0.19	-0.26
Government effectiveness	-0.44	-0.4	-0.45	-0.36	-0.38	-0.3	-0.3
Voice and accountability	-0.4	-0.42	-0.37	-0.38	-0.38	-0.36	-0.35
Control of corruption	-0.35	-0.4	-0.35	-0.35	-0.47	-0.38	-0.34
Rule of law	-0.54	-0.54	-0.51	-0.45	0.65	-0.49	-0.4
Regulation quality	-0.45	-0.37	-0.27	-0.33	-0.3	-0.27	-0.24

Good governance environment is expected to have influence on the effect of corporate governance on economic growth because it is an indicator of investor protection provided by country governance. Figure 5.13 above show the development of good governance and economic growth during the period. One key observation is that there is weak governance across countries in Sub Saharan Africa. As we see can all the good governance indicators fall clustered within the negative range during all the years, suggesting that there is generally weak performance in almost all good governance indicators. Furthermore, the study observed that although there was positive increase in rule of law in 2013, this increase was negligible because it still fell below world unit standard score of 2.5. Moreover this increase was followed by a sharp decline in rule in 2014. Observations of weak governance in Sub Saharan Africa are similar to those observed y several surveys such as; Standard and Poor (2008), WFE (2009, 2013, 2015) and the World Bank (2014, 2013, 2012). Weak country governance has negative effect on overall performance and that in turn has effect on economic growth.

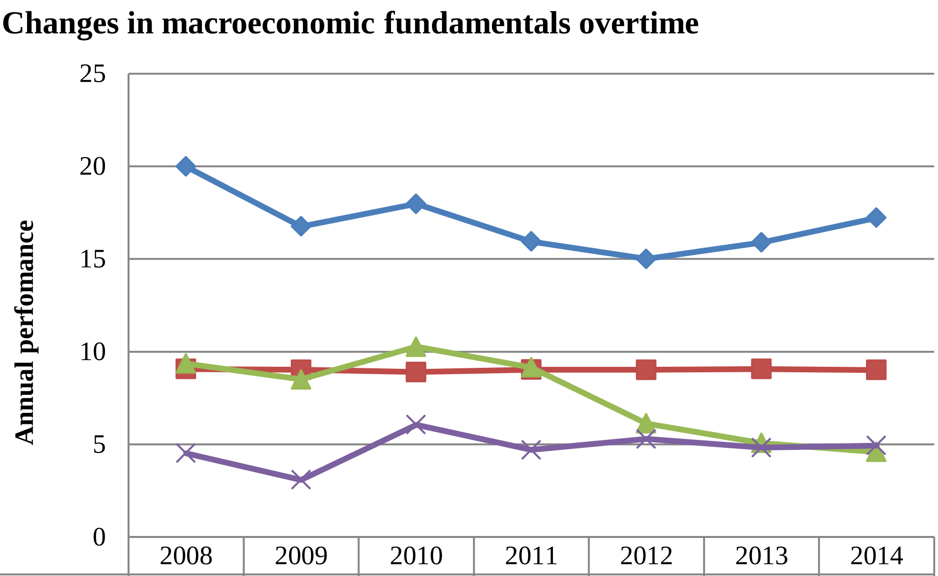
Figure 5.14 Changes in financial development and GDP overtime



	2008	2009	2010	2011	2012	2013	2014
Gross domestic product	4.44	3.29	5.66	4.9	5.24	5.01	5.14
Financing through the market	3.89	3.55	3.33	3.48	3.41	3.27	3.21
Regulation of securities exchange	4.1	3.92	3.79	3.86	3.79	3.51	3.63

The concept of financial development is related to potential efficiency in access and allocation of global finance to companies within country. Financial development is linked to development of corporate governance and economic growth. Figure 5.14 indicates that during the years both financing through the market and regulation of securities have been on the decline over the years. The decline in the regulation of securities observed might be as a result of authorities not adequately performing their duties such as monitoring and ensuring compliance with corporate governance over the years. The challenge that arises with the absence of regulation of securities is that it might be impossible to create a community of companies that has good governance practices that enhance company performance and ultimately contribute towards economic growth. The decline in financing through the market could be an indication of the absence of well-developed financial market in most countries across Sub Saharan Africa.

Figure 5.15 Changes in macroeconomic fundamentals and GDP overtime



	2008	2009	2010	2011	2012	2013	2014
Gross national saving	19.99	16.76	17.97	15.94	15	15.89	17.22
Foreign direct investment	9.07	9.024	8.9	9.03	9.02	9.07	9.01
Inflation deflator	9.36	8.5	10.27	9.15	6.13	5.07	4.59
Gross domestic product	4.52	3.09	6.06	4.7	5.29	4.82	4.94

Foreign direct investment is an important source of finance for companies within a country.. Figure 5.15 show that there has has been a constant flow of foreign direct investement across all the years. In the modern global economy an increase in foreign direct investement is associated with an increase corporate governance because investors are demanding of high standards of corporate governance in order for them to invest their finances. Further analysis reveal that there has been a decrease in gross national saving.This may explain why there has been a decline in financing through market because there was general decline in national saving. The WFE (2014) points out that gross natonal saving are has influence on the avaibility of finance in the local market.

5.7.1 Comparison of corporate governance practices and economic growth across countries

The role of corporate governance is concerned with controlling, monitoring the agency problem with the aim of enhancing value creation through increased accountability of management and the board to stakeholders. Corporate governance primary seeks to ensure that companies are governed in a manner that enhances the overall performance of companies and this is necessary for promoting economic growth in any country. Corporate governance practices are expected to differ across countries because of different contextual circumstances consequently its effect on in economic growth is likely to vary. The section that follows presents findings on the state of corporate governance practices across countries in Sub Saharan Africa.

Figure 5.16 Comparison of corporate governance practices and GDP across countries

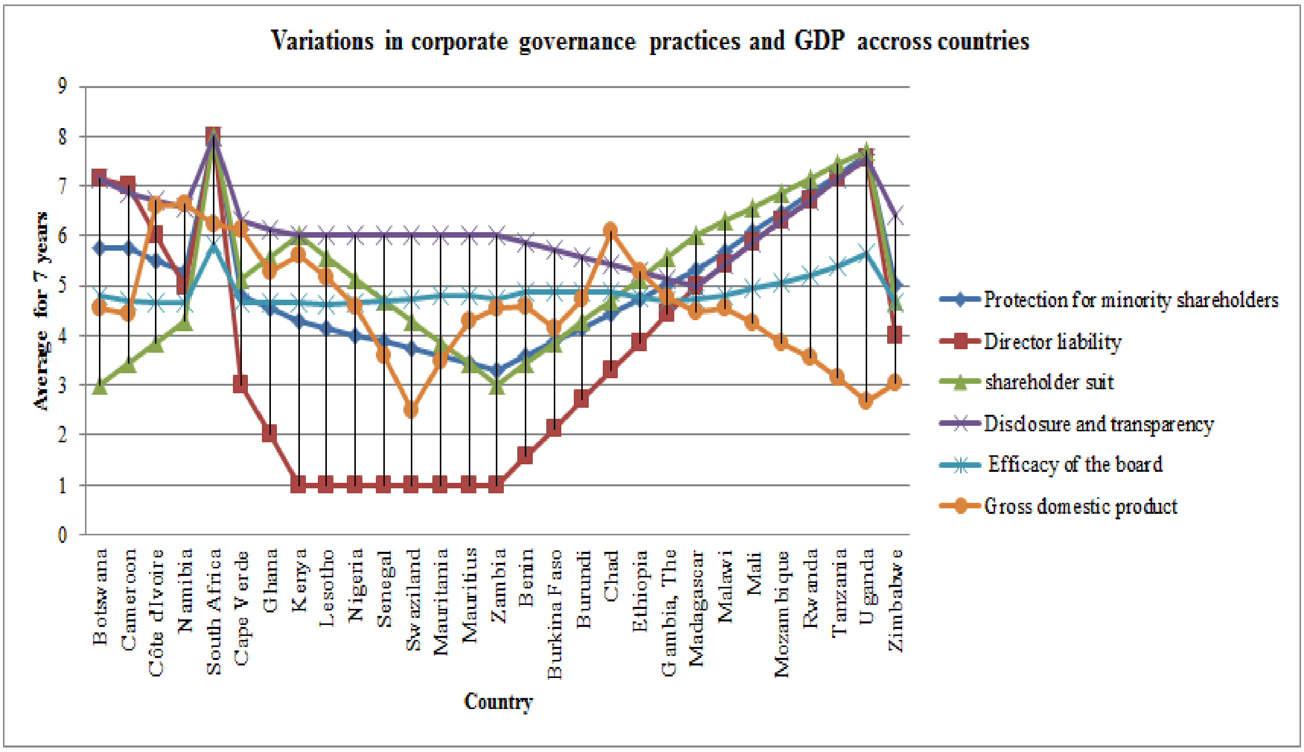
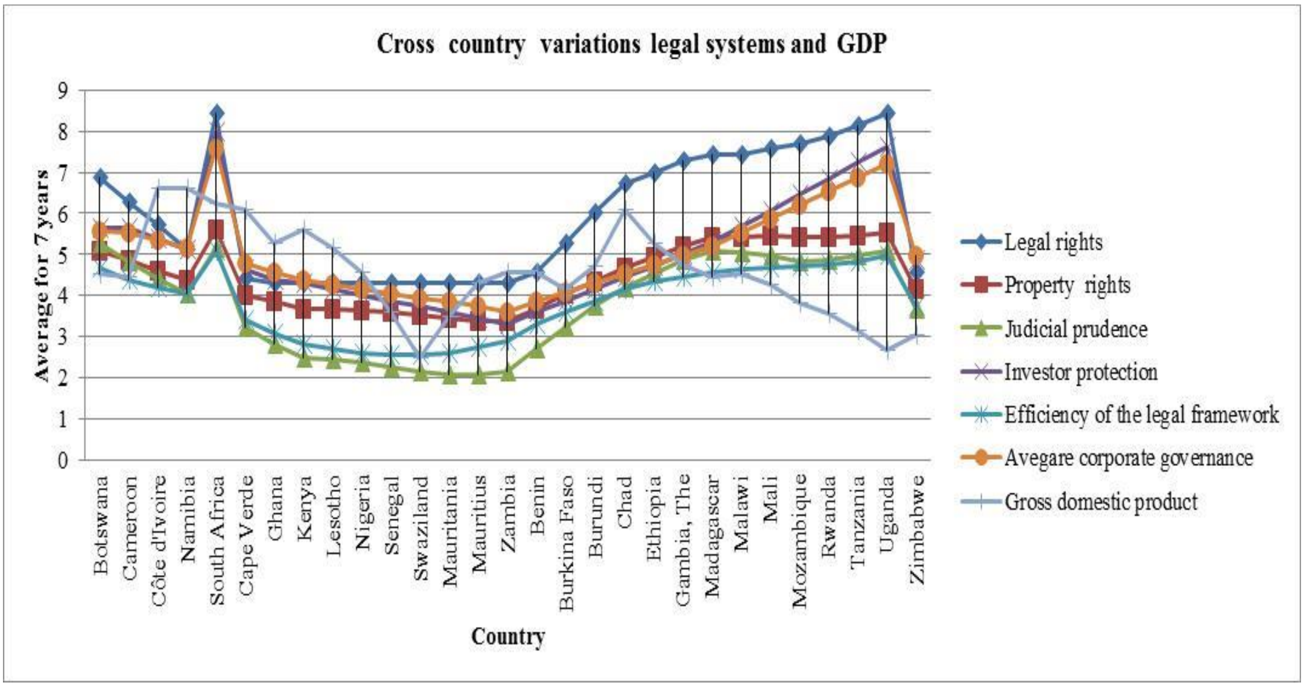


Figure 5.16 show that there are variations in the performances of the different corporate governance practices and GDP across countries. For instance the findings show that corporate governance practices and economic growth is high countries such as South Africa, Madagascar, Malawi and Uganda and comparatively low in Zimbabwe and Benin. The chart shows that different corporate governance practices have been exercised at various levels in Sub Saharan African countries. The findings show that only South Africa has an overall high performance in all corporate governance practices whilst in most of the countries in the region there are huge discrepancies. For example, the results reveal that disclosure and transparency is high in countries such as Kenya, Lesotho, Swaziland, Zambia and Senegal whilst it is low in countries such as Gambia and Madagascar. At the same time, the study found that in the same countries there is high director liability, protection of the minority shareholders as well as efficacy of the board whilst it is comparatively lower in other

countries. The figure, show that countries such as Madagascar, Malawi, Tanzania and Uganda have high performance in corporate governance practices such as shareholder suit, protection of the minority shareholders as well as director liability whilst the efficacy of the board is lower in the same country. This indicates that there are variations in the extent to which the different corporate governance practices are performed in companies within countries in Sub Saharan Africa. It is evident from these findings that, various corporate governance practices are performed at different levels in countries across Sub Saharan Africa. It suggests that, the level of emphasis given to the implementation of the various corporate governance practices differs with country. Pursing this further, it is postulated that, the impact of corporate governance on economic growth influenced by the country's legal system. The next section presents findings on the performance of the legal system and GDP across countries in Sub Saharan Africa.

Figure 5.17 Comparison of legal system and GDP across countries



The results in Figure 5.17 show that the extent to which the various elements of the legal system are performed in Sub Saharan African countries. As can be seen, inasmuch components of the legal system might be similar across all countries; there are variations in the level at which the different elements of the legal system are performed in countries. For example the figure shows that, the legal rights are high in countries such as South Africa, Uganda, Tanzania, and Rwanda compared to Senegal, Swaziland and Zambia. The findings also reveal that judicial independence and the efficiency of the legal framework is generally low in all countries across Sub Saharan Africa. The results indicate that amongst all the other countries in the region it is only South Africa and Botswana that have strong performances in all the aspects of the legal system. Therefore it can be assumed that the high performance in corporate governance practices and economic growth observed in these countries might have been contributed by their strong legal system. This also suggests that, there should be minimum performance in the elements of the legal system that is required in order to enable a country to strengthen performance in corporate governance and subsequently enhance its economic growth. If ever there is a minimum reservation of aspects in the legal system that are required to enables corporate governance to lead to economic growth it seems it is evident that most countries across Sub Saharan Africa are not meeting that standard.

Figure 5.18 Comparison of good governance and GDP across countries

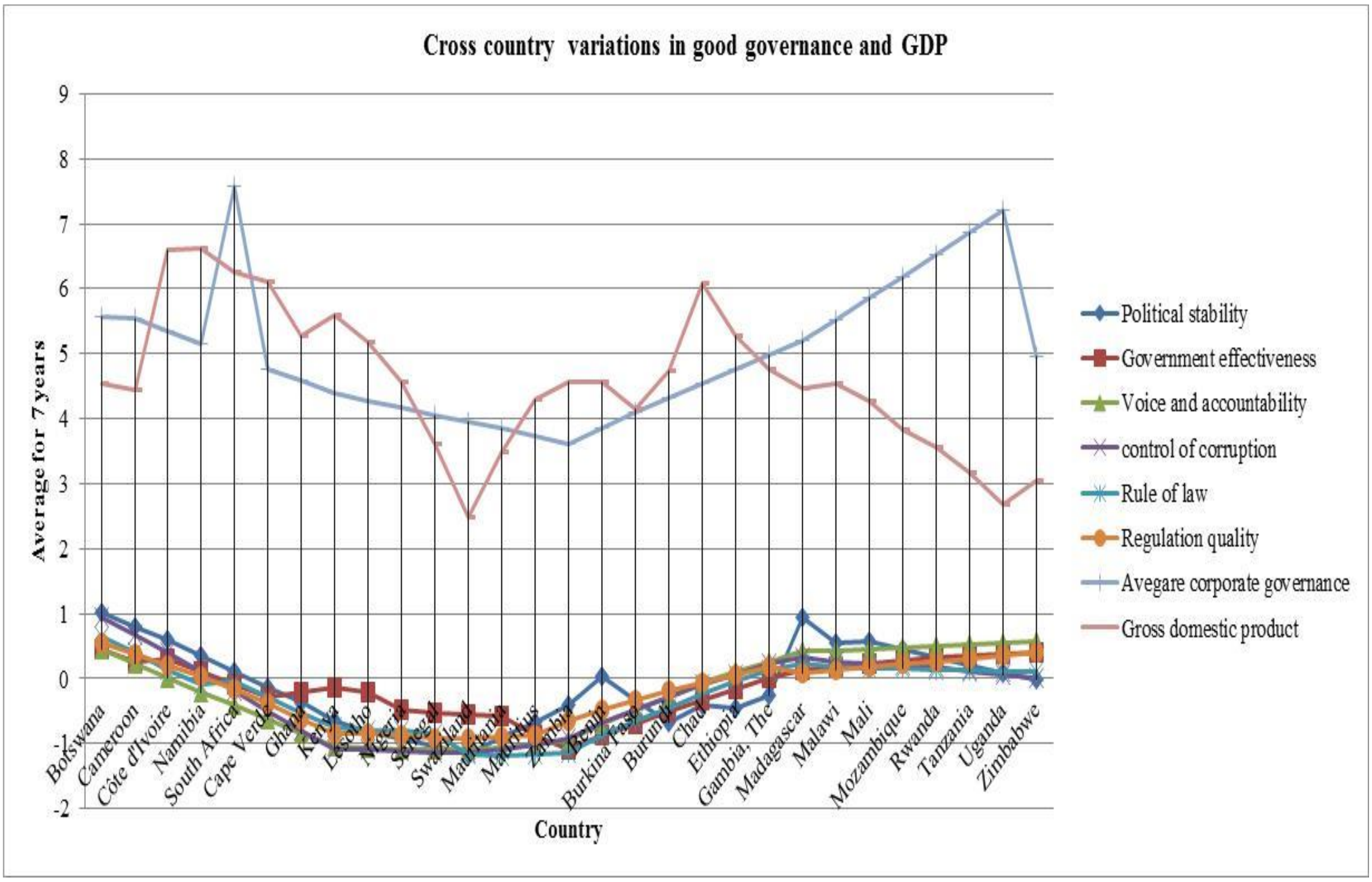


Figure 5.18 show that strength of good governance differs across countries in Sub Saharan Africa. The findings show that, all good governance indicators falls below the world standard of score of 2.5 in all countries across the region. The results that indicate government effectiveness is very low in a few countries such as Ghana, Kenya, Lesotho, Senegal, Swaziland and Mauritania whilst it is very weak in most the countries. Further analysis reveal that, political stability as well as voice and accountability is generally weak in all countries and this could be an indication that the processes by which governments are selected, monitored and replaced has not been based on free and fair participation of the citizens of the countries. The results also show that there is government effectiveness and regulation quality falls within the negative ranges in most countries and this could be an indication of the incapacity of the government to effectively formulate and implement sound policies. We further note that rule of law and control of corruption falls within the negative ranges and this signifies good governance might be present due to the absence of respect for citizens and the state institutions that govern economic and social interaction among them. In addition it implies there might be challenges in terms of abiding to rules, enforcement of contracts and, property rights due to the presence of high violence and crime in some countries. Moreover this suggests that the government might have focused on using power to pursue individual benefits instead of the society as whole or the prevalence of state capture.

5.19 Comparison of financial development and GDP across countries

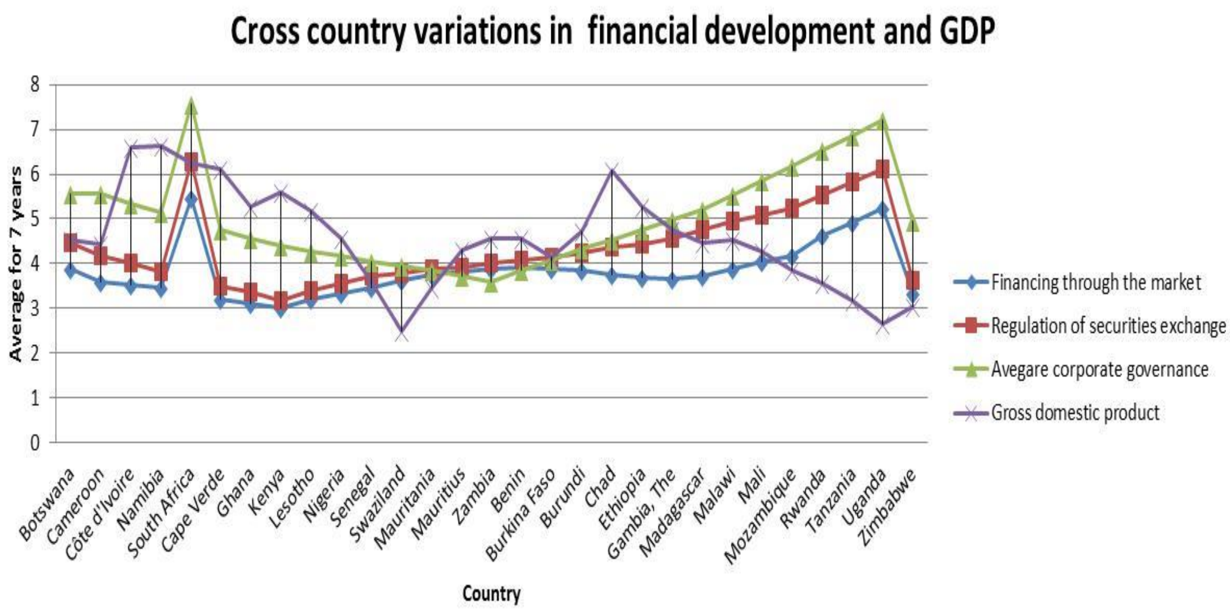
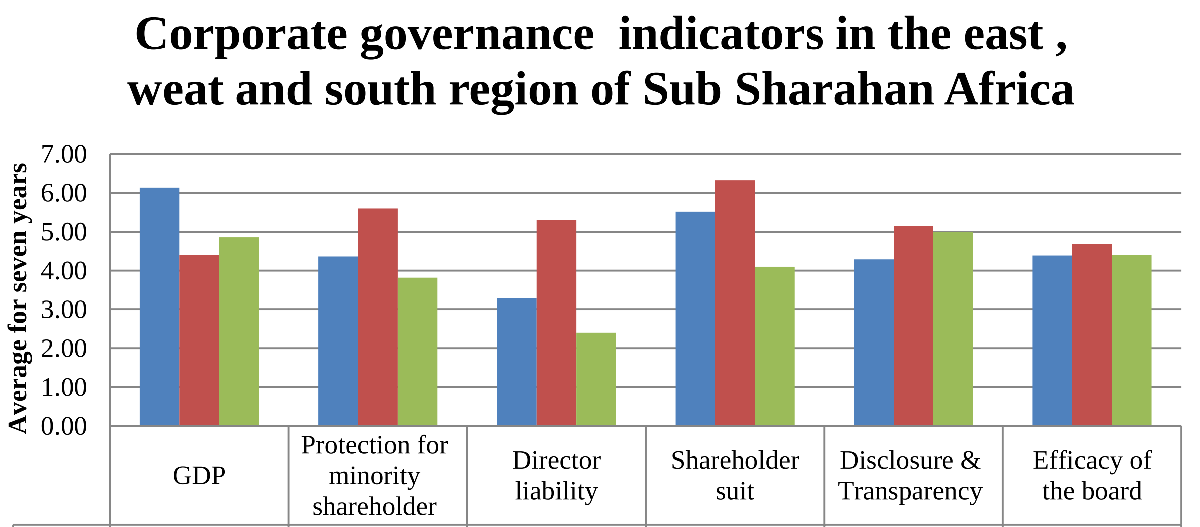


Figure 5.19 show that financial development varies across countries. Financing through the market is highest in South Africa, Zambia and Tanzania as well as in Uganda whilst it is low in Zimbabwe, Cape Verde and Ghana. The figure also shows that, financing through the market is high in countries with high regulation of securities of exchange and aggregated corporate governance. Countries with underdeveloped financial market may experience low financing through the market and as a result this lead to concentrated ownership and inconsequence limited demand for strong corporate governance practices. Since the financing through the market is influenced by the level of financial development it can be assumed that variations in corporate governance performance across countries are influenced by financial development.

5.7.2 Comparison of corporate governance and economic growth by regional block

Countries often fall within certain regional blocks. The development of corporate governance, the legal system, good governance, financial development and macroeconomic fundamentals across countries might differ with region.

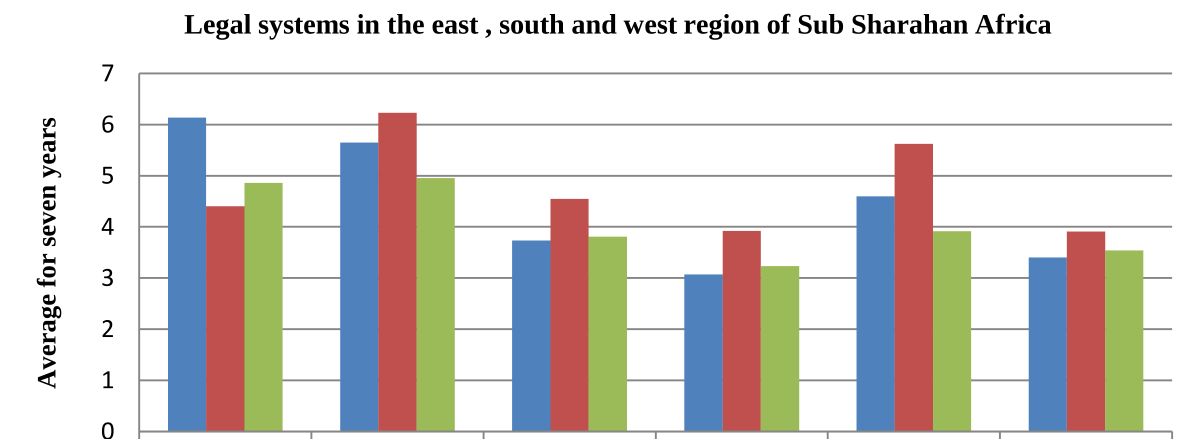
Figure 5.20 Corporate governance in countries in6520 the east, south and west region in the Sub Saharan Africa



	GDP	Protection for minority shareholder	Director liability	Shareholder suit	Disclosure & Transparency	Efficacy of the board
East	6.14	4.36	3.30	5.52	4.29	4.39
South	4.41	5.59	5.30	6.32	5.14	4.68
West	4.86	3.82	2.40	4.10	5.00	4.40

Figure 5.20 show that that economic growth is higher in countries in the east region and lowest in the south region. The finding shows that corporate governance practices are higher in countries in the south region and this is followed by east and west region. The results indicate that whilst countries in the south region have the highest performance of shareholder suit, disclosure and transparency, director liability as well as the protection of the minority shareholders countries in the west have the lowest performance of these corporate governance practices. Overall the results show that, there are minor differences in the level of corporate governance practices in countries in the east, south and the west region.

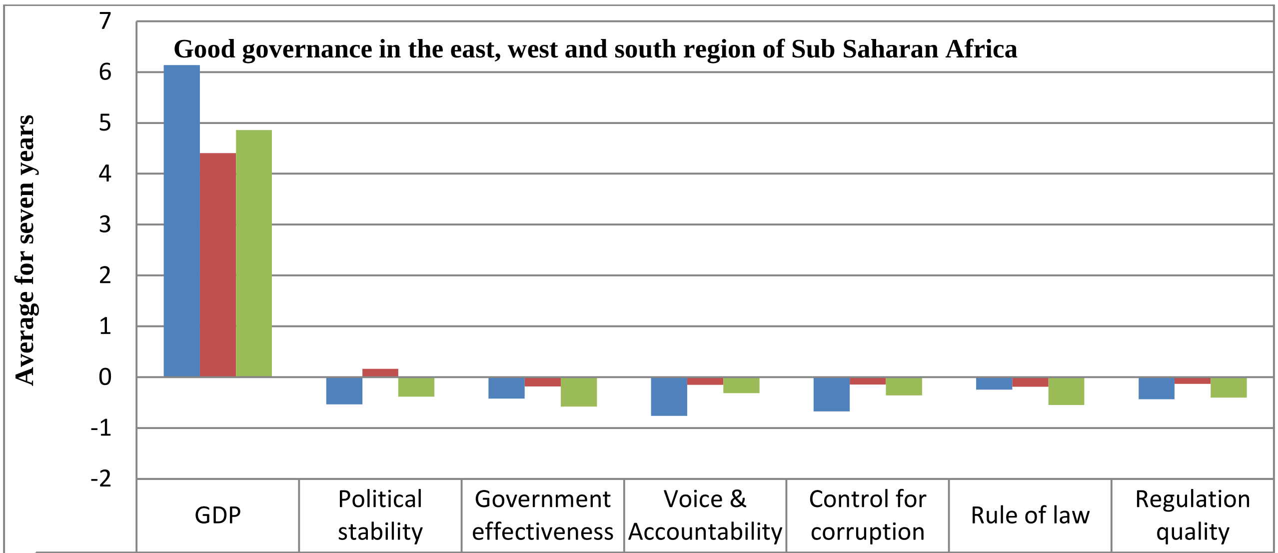
Figure 5.21 Legal systems in regions in Sub Saharan Africa



	GDP	Legal rights	Property rights	Judicial prudence	Investor protection	Efficient of the legal framework
East	6.14	5.65	3.74	3.07	4.60	3.40
South	4.41	6.23	4.55	3.92	5.62	3.91
West	4.86	4.96	3.81	3.23	3.92	3.54

Figure 5.21 show that countries in the South region have stronger legal systems than those in the west and east. The findings reveal that GDP is higher in countries in the east than those in the south that are observed to have strong legal systems.

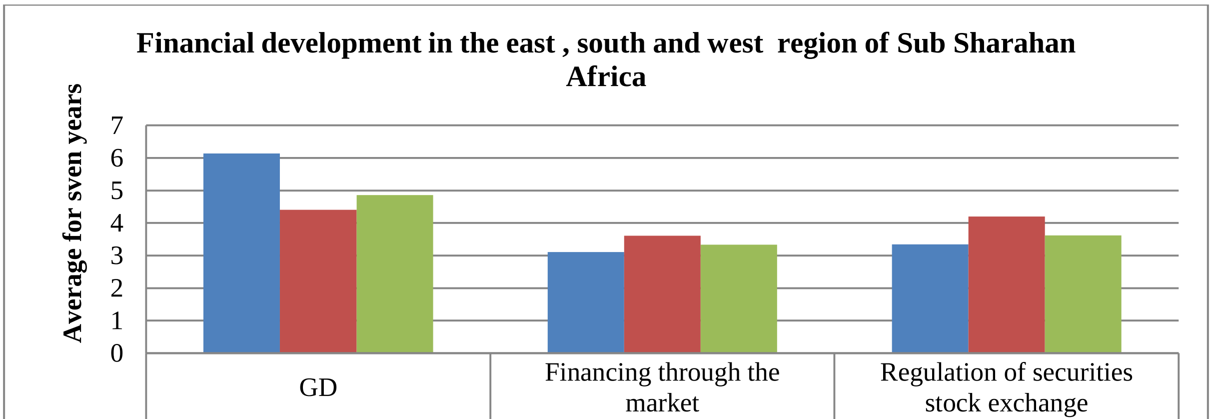
Figure 5.22 Good governance and GDP in regions in Sub Saharan Africa



	GDP	Political stability	Government effectiveness	Voice & Accountability	Control for corruption	Rule of law	Regulation quality
East	6.14	-0.53	-0.42	-0.76	-0.68	-0.25	-0.44
South	4.41	0.16	-0.18	-0.15	-0.14	-0.19	-0.13
West	4.86	-0.39	-0.58	-0.32	-0.36	-0.55	-0.40

The Figure 5.2 shows that there is weak governance in countries in the east region, west region and south. The study found that, countries in the east and west have the weakest good governance compared to those in the south. Further analysis of the results reveals that, political stability is the only good governance indicators that have a positive ranking, although the level of political stability is very low and only in countries in the south region.

Figure 5.23 Financial developments in regions in Sub Saharan Africa



	GD	Financing through the market	Regulation of securities stock exchange
East	6.14	3.11	3.34
South	4.41	3.61	4.20
West	4.86	3.33	3.62

Financing through the market is higher in countries in the south than in the other regions. This could be an indication that countries in the south region have well developed financial market that enables companies to have access to finance.

5.7.3 Empirical evidence from Sub Saharan Africa

Sub Saharan Africa is a region and not country hence corporate governance and economic growth differs with country over time. This section presents findings from the panel data analysis that was conducted to examine whether corporate governance is a determinant of economic growth in Sub Saharan Africa countries. Hieratical or multilevel panel data analysis techniques that enable one to examine the influence of behaviours that occur at multiple levels on the dependent variable was utilised. Analysis of data was structured hierarchically to enable a two level-hierarchical measurement of data namely disaggregated and aggregated level across countries. Panel data models were estimated to analyse the effect of corporate governance on economic growth in Sub Saharan African countries. In an attempt to enhance the findings of this study, the examination of the relationship between corporate governance and economic growth was further analysed on the basis of the legal origin of law, regional block and income group level of the countries. The OLS and LDSV were used to estimate the specified models where each model sought to answer a specific research question of this study.

STATA was used to analyse the data. A nested sequential regression approach was used to enable the study to capture the nested effects of corporate governance on economic growth when an additional variable was introduced. An OLS pooled effect model was estimated to examine the effect of corporate governance on economic development assuming homogeneity. The pooled OLS assumes individual differences are explained by observed variables and the unobserved individual effect is not included. Fixed effect model was estimated for the purposes of taking into account heterogeneity that takes into account unobserved effects. The Hausman and Breusch -Pagan Lagrange multiplier (LM) test were conducted for the purpose of selecting the most suitable model.

5.7.4 Panel summary statistics for corporate governance and economic growth

This section discusses the panel summary statistics for corporate governance, economic growth, legal systems, good governance, financial development and macroeconomic fundamentals.

Table 5.6: Panel data summary statistics corporate governance

		Mean	Standard Deviation	Minimum	Maximum	Observation
Variable						
Economic growth	Overall	5.040	3.534	-17.67	14.05	N=203
	Between		1.946	1.92	10.404	N=29
	Within		2.978	-17	12.592	N=7
Shareholder protection	Overall	4.641	1.478	2	8	N=203
	Between		1.415	2	8	N=29
	Within		0.491	2.014	6.357	N=7
Director liability	Overall	3.749	2.77	0	9	N=203
	Between		2.67	0	8	N=29
	Within		0.878	-1.394	7.177	N=7
Shareholder suit	Overall	5.335	2.176	1	10	N=203
	Between		2.197	2	10	N=29
	Within		0.234	3.763	6.763	N=7
Disclosure and transparency	Overall	4.857	2.026	2	8	N=203
	Between		1.964	1	8	N=29
	Within		0.598	0.59	1.88	N=7
Board efficacy	Overall	4.506	0.521	2.8	6	N=203
	Between		0.473	3.414	5.829	N=29
	Within		0.23	3.72	5.278	N=7

The descriptive panel data summary statistics for disaggregated corporate governance and economic growth is presented in Table 5.6. The results indicate that, the overall score for economic growth across countries over the period is 5.043. We observed that there is an overall high variation in economic growth as indicated by a standard deviation on 3.534 from the average overall mean. The low difference between the mean and standard deviation indicates that although there are differences in economic growth over time within individual specific countries there variations are only minor. The findings reveal that coefficient mean for the between variation for economic growth is higher than the one for the within variations. This indicate that the highest portion of the overall variations is contributed by the between variations across countries over time, meaning that there were no significant changes that were observed in economic growth within specific countries over the period. This study also found a wide range in economic growth disparities within an individual country during the period with minimum estimated at 17. 67 and maximum estimated at 14.05. This wide range indicates there was high variability in economic growth within individual specific country during the period and further analysis indicates that it is the variations within countries during the period that contributed the largest portion of the variations observed in economic growth over time.

Turning to corporate governance, the study found that there are substantial differences in the overall mean score of all the corporate governance indicators such as the protection for minority shareholders, director liability, and shareholder disclosure and board efficacy. The findings show that the coefficient of the mean score for the between variations for all corporate governance indicators is higher than that of the within variation. This reveal that variations between countries are the major contributory factor to the overall variations observed in all the various aspects of corporate governance. This means that countries in the region did not make any material change in their corporate governance practices during the period under study. The findings are consistent with those from the WFE annual survey that found that individual countries in the Sub Saharan Africa region have continued to be ranked low compared to developed countries or other developing countries (WFE, 2015, 2014, 2013, 2012). This indicates that there have not been major changes in corporate governance within countries or alternatively very few individual countries implemented changes in corporate governance.

Table 5.7: Panel data summary statistics legal system

		Mean	Standard Deviation	Minimum	Maximum	Observation
Variable						
Economic growth	Overall	5.040	3.530	-17.670	14.050	N=203
	Between		1.940	1.920	10.400	N=29
	Within		2.970	-16.987	12.592	N=7
Aggregate corporate governance	Overall	4.610	1.230	2.340	7.600	N=203
	Between		1.170	2.430	7.570	N=29
	Within		0.420	2.200	6.000	N=7
Legal rights	Overall	4.072	1.800	1.000	10.000	N=203
	Between		2.153	2.000	9.710	N=29
	Within		1.002	2.202	7.487	N=7
Property rights	Overall	3.672	1.796	2.000	5.600	N=203
	Between		0.820	2.543	5.657	N=29
	Within		1.600	2..414	5.415	N=7
Judicial independence	Overall	3.451	1.049	1.600	5.700	N=203
	Between		1.006	1.829	5.271	N=29
	Within		0.342	2.694	5.293	N=7
Investor protection	Overall	4.762	1.330	2.700	8.000	N=203
	Between		1.300	2.743	8.000	N=29
	Within		0.358	3.219	6.619	N=7
Efficiency of the legal framework	Overall	3.643	7.200	2.000	5.200	N=203
	Between		6.990	2.628	5.071	N=29
	Within		0.287	2.629	4.429	N=7

The results in Table 5.7 show that there is a relatively high variation in legal systems across countries over time. We note that the coefficient of the mean score for explanatory variables of the legal system namely property rights, judicial independence, investor protection and efficiency of the legal framework are estimated at 4.072, 3.672, 3.451, 4.762 and 3.643 respectively. This indicates that across countries in the region overtime more attention might have been paid to investor protection as well as legal rights than property rights, judicial independence and efficiency of the legal framework. The findings in Figure 5.7 help us to understand that variations between countries are the largest contributing factor to the changes observed in legal system. This implies that, there has not been any significant changes in the legal system within countries overtime instead there are time invariant differences that have been in existence in the legal systems and these differences remain evident across the countries. These findings are similar to La Porta *et al* (1999) who found that the legal systems differ from one country to the other. Findings of this study further show that, the variations between countries are the largest contributing factor to the observed overall variation in the legal systems. This suggests that, within individual countries across Sub Saharan Africa there has not been any significant changes in the legal systems in terms of their legal rights, efficiency of the legal framework, judicial independence and investor protection during the period under study. Hence it can be assumed that, countries in the region preserved and maintained the status quo of their legal system. Overall, this leads this study to believe that those countries that are interested in promoting economic growth through improved corporate governance they should first consider reforming their legal systems.

Table 5.8: Panel data summary statistics good governance

		Mean	Standard Deviation	Minimum	Maximum	Observation
Variable						
Economic growth	Overall	5.040	3.530	-17.670	14.050	N=203
	Between		1.940	1.920	10.400	N=29
	Within		2.970	-16.987	12.592	N=7
Aggregate corporate governance	Overall	4.610	1.230	2.340	7.600	N=203
	Between		1.170	2.430	7.570	N=29
	Within		0.420	2.200	6.000	N=7
Political stability	Overall	-0.218	0.881	-2.190	1.620	N=203
	Between		0.733	-2.028	1.014	N=29
	Within		0.503	-2.064	1.993	N=7
Government effectiveness	Overall	-0.383	0.669	-1.540	1.190	N=203
	Between		0.536	-1.450	0.884	N=29
	Within		0.410	-1.290	1.467	N=7
Voice Accountability	Overall	-0.378	0.698	-1.540	0.980	N=203
	Between		0.696	-1.449	-0.924	N=29
	Within		0.134	-0.836	0.357	N=7
Control of corruption	Overall	-0.364	0.664	-1.450	1.270	N=203
	Between		0.606	-1.334	0.930	N=29
	Within		0.293	-1.367	1.620	N=7
Rule of law	Overall	-0.329	0.679	-1.840	1.490	N=203
	Between		0.671	-1.594	-0.852	N=29
	Within		0.232	-1.840	1.010	N=7
Regulation quality	Overall	-0.308	0.611	-2.110	2.600	N=203

	Between	0.563	-1.993	0.900	N=29
	Within	0.254	-1.087	1.492	N=7

The results in Table 5.8 show that 203 observations that in 29 countries over the past seven reveal that is overall weak country governance in all countries during the period under investigation. This is shown by the negative overall mean of all the individual indicators of good governance that is; political stability, government effectiveness, voice and accountability, control of corruption, rule of law and regulation quality estimated at -0.218, -0.383, -0.378, -0.364, -0.329, -0.308. These results confirm the findings depicted in Figure 5.3. Further analysis of the findings indicates that the largest portion of the overall variations seen in all the indicators of good governance arises from the variations between country differences. This means that there are time invariant country specific variances that contribute to the overall differences over time. Moreover, the findings reveal that, within variations countries have the lowest estimation for all the good governance indicators suggesting there were no major changes within individual country specific changes that were observed during the period under study. This indicates that, there were no significant changes that were made in individual countries in Sub Saharan Africa during the seven year period under investigation.

It may be assumed that the weak governance observed across countries in the region might be contributing factor to the poor corporate governance and consequently low economic growth observed in the region. Doidge *et al* (2006) found that weak country governance decreases the benefits of corporate governance towards economic growth. Doidge *et al* (2006) reached the conclusion that, the benefit of corporate governance is smaller if companies operate in country with weak country governance. This implies that when there is poor country governance any attempt to strengthen corporate governance leads to expropriation of the value of shareholders.

Table 5.9: Panel data summary statistics financial development

		Mean	Standard Deviation	Minimum	Maximum	Observation
Variable						
Economic growth	Overall	5.040	3.530	-17.670	14.050	N=203
	Between		1.940	1.920	10.400	N=29
	Within		2.970	-16.987	12.592	N=7
Aggregate corporate governance	Overall	4.610	1.230	2.340	7.600	N=203
	Between		1.170	2.430	7.570	N=29
	Within		0.420	2.200	6.000	N=7
Financing through the market	Overall	3.374	0.869	1.500	6.600	N=203
	Between		0.795	2.071	5.471	N=29
	Within		0.348	2.503	4.874	N=7
Regulation of securities exchange	Overall	3.767	0.972	0.000	6.600	N=203
	Between		0.895	2.200	6.257	N=29
	Within		0.375	0.782	4.781	N=7

Financial development is expected to influence economic growth through its effects on corporate governance. Empirical evidence in Table 5.4 indicates that the overall mean score of financing through the market and regulation of securities is estimated at 3.374 and 3.767, and this is quite low compared to world standards. These findings suggest that there is low financial development in Sub Saharan African countries. These results collaborate with those depicted in Figure 5.9 with the exception that findings presented in Table 5.4 broadens our understanding that the overall low financial development observed in Sub Saharan African countries is largely contributed by variations between countries. As can be seen, the mean score for the between variations for financing through the market and regulation of securities exchange is estimated at 0.795 and 0.895 respectively. This indicate that the differences in financial development in Sub Saharan Africa countries is to a large extent contributed by time invariant country specific differences in the legal system. Financing through the market and regulation of stock exchange has the lowest mean score signified by a coefficient of 0.348 and 0.375 respectively. This means that in Sub Saharan African countries there has not been a major legal change in financial development within individual countries in the given period under investigation. The evidence of minimal changes in individual country's financial development is concerning because financial development is regarded as a predicator of economic growth.

Table 5.10 :Panel data summary macroeconomic fundamentals

		Mean	Standard Deviation	Minimum	Maximum	Observation
Variable						
Economic growth	Overall	5.040	3.543	-17.67	14.05	N=202
	Between		1.946	1.92	10.404	N=29
	Within		2.977	-16.987	12.592	N=7
Gross national saving	Overall	17.09	10.166	-10	49.2	193
	Between		8.124	2.633	32.771	29
	Within		6.381	0.376	36.904	7
Foreign direct investment	Overall	1.16E+09	1.95E+09	-5.58E+08	9.80E+09	202
	Between		1.79E+09	2.63E+09	6.99E+09	29
	Within		8.17E+08	-1.60E+09	4.77E+09	7
Inflation deflation	Overall	7.731	10.684	-9.56	10.38	202
	Between		5.07	1.29	19.95	29
	Within		9.446	-16.538	91.601	7

The results in Table 5.10 show that there is high overall variation in gross domestic product growth across countries and inflation rate in Sub Saharan Africa. The results indicate that overall variation observed in gross national saving and foreign direct investment have been largely contributed by variations between countries. On the other hand, overall variations observed in inflation rate have been largely contributed by variations within country. This means that there have been major changes in inflation within individual countries during the period.

5.7.5 The relationship between corporate governance and economic growth

This section uses multilevel or hierarchical sequential regression to establish whether corporate governance is a determinant of economic growth across countries in Sub Saharan Africa. To improve the understanding of the relationship between corporate governance, additional explanatory variables and economic growth data was analysed at disaggregated and aggregated levels. A disaggregated approach sought to provide an insight into the effect of single explanatory variables on economic growth whilst aggregated measures examine the effect of combined elements of an explanatory variable on economic growth. Five panel data models were estimated for pooled, fixed, random and between effects compared and contrasted in order to assess the significance and consistency of the effect of corporate governance on economic growth. The motivation for using hierarchical models was to capture the effect of behaviours that take place at different levels on corporate governance and resulting influence on economic growth across countries over time.

The study accounted for endogeneity using a hierarchical nested sequential regression approach whereby a block of additional explanatory variables were added sequentially into the first regression model. The inclusion of legal systems, good governance, financial development and macroeconomic fundamentals variables enabled the study to capture the nested effects of the additional variables that assumed to have an effect on economic growth. This study benefited from using a sequential regression model because it enables the study to make a comparison of the influence of the additional block of explanatory variables on the relationship between corporate governance and economic growth. Furthermore the study was able to consider the effect of one or more variables that are assumed to have effect on the observed outcome. Data was further analysed into legal origin and regional level categories. In this chapter presentation of findings are arranged as follow: it commences with a presentation of the findings from the estimation of pooled effects models and fixed effects models that were specified in the previous chapter. Lastly, findings on the model selection that were estimated will be presented and the chapter ends with a conclusion.

5.7.6 Establishing the nature of relationship between corporate governance and economic growth

This section presents findings from the OLS estimates that examined whether corporate governance is a determinant of economic growth. The OLS holds the assumption that there is an absence of unobserved effects and that the error term is correlated to the observed explanatory variable. The OLS tests consist of five regression equations. OLS estimates that sought to answer the research problem that is being investigated in this study namely that, what is the nature variables that affect corporate governance in Sub Saharan African countries and to develop a framework for corporate governance that could be used to enhance economic in this region. Under these circumstances, OLS estimates of each model represent findings of models that were estimated in order to examine specific research question raised in this study. Model1 provides the results of the estimation that sought to establish the nature of relationship between corporate governance and economic growth in Sub Saharan African countries. It should be noted in this study that OLS results in model 2-5 provides results from the hierarchical nested regression models that aims to take into account endogeneity in corporate governance. On this regard, model 2 findings investigates the inclusion of the legal system which consists of legal rights, property rights, efficiency legal system and investor protection has influence on the effect of corporate governance on economic growth in Sub Saharan African countries. Findings in model 3 aims to establish whether the incorporation of good governance as represented by voice accountability, political stability, government effectiveness, regulatory quality and control of corruption has influence on the effect of corporate governance on economic growth. Model 4 provides results that investigate if the inclusion of corporate governance has influence on the effect of corporate governance on economic growth in Sub Saharan Africa countries. Model 5 provides findings that help examine if the macroeconomic fundamentals have influence on the effect of corporate governance on economic growth in the region. Model 6 from fixed effects models estimates for individual country specific time invariant differences.

Table 5.11:OLS estimate for corporate governance and economic growth in Sub Sahara Africa

	Model 1	Model 2	Model 3	Model 4	Model 5
Protection of minority shareholder	-9.753	-8.066	-10.153	-11.390	-10.038
Director liability	3.230	2.169	2.918	3.323	2.865
Shareholder	3.270	2.255	3.058	3.501	3.066
Disclosure and Transparency	3.161	2.247	3.006	3.422	3.020
Efficacy of the board	-0.574	-1.424	-1.467**	-0.970	-0.990
Legal rights		0.373***	0.355**	0.390****	0.386****
Property rights		-0.013	-0.045	-0.037	-0.044
Judicial prudence		-0.751	-0.532	-0.340	-0.270
Investor protection		1.436	1.394	1.462**	1.384**
Efficiency of the legal framework		1.407	1.267	1.325	1.220
Political Stability			1.025***	1.014***	1.028**
Government Effectiveness			-0.421	-0.462	-0.385
Voice and Accountability			-0.316	-0.117	-0.130
Control of Corruption			-0.894	-0.966	-0.930
Rule of Law			0.119***	0.109	0.111***
Regulatory Quality			-0.159	-0.377	-0.324
Financing through market				-0.374	-0.391
Regulation of				-0.324	-.2831014 .

securities exchange					
Gross national saving % GDP					-0.006
Foreign direct investment					0.000**
Inflation deflator					0.028
Constant	8.023	6.503	5.369	3.990	4.227
F	0.570	2.580***	3.400	0.370	1.070
R^2	0.019	0.113	0.175	0.175	0.180
R^2 adjusted		0.094	0.008	0.008	0.005
N	187.	187.	187.	187.	187

***, **, * represents significant level at 1%, 5%, 10% respectively

The results in Table 5.10 in model 1 apply an OLS homogeneity assumption to establish the nature of the relationship between corporate governance and economic growth. The findings show that; director's liability, shareholder suits disclosure and transparency they all have a strong positive and insignificant influence on economic growth estimated at 3.230, 3.270 and 3.161 respectively, this indicates there is an insignificant positive increase in GDP after an increase in any the aforementioned corporate governance explanatory variables. The findings also indicate that, protection of minority of shareholders and efficacy of the board have a strong negative and insignificant influence on economic growth estimated at -9.753 and -0.574, this means that, there is an insignificant decrease in GDP as protection of minority shareholders increases. Considered together, these findings indicate that there is an insignificant relationship between all explanatory variables of corporate governance and economic growth. Further analysis reveals that, the coefficient for R^2 is estimated at 0.019, this indicates that all explanatory variables corporate governance only explain 0.019% of the changes observed in economic growth. Judging by this low R^2 coefficient it can be concluded that corporate governance alone does not provide an adequate explanation of economic growth in any economy holding country specific differences constant. This indicates that explanatory variables of corporate governance alone are not sufficient to make a significant contribution to economic growth in Sub Saharan Africa countries.

5.7.7 Investigating the inclusion of the legal systems has influence on the effect of corporate governance on economic growth

Turning to OLS estimates in model 2 in Table 5.10, these investigates whether the inclusion of the legal system that consist of legal rights, property rights, efficient of the legal framework and investor protection have influence on the effect of corporate governance on economic growth. The regression results show the coefficients of corporate governance remain insignificant after the addition of legal system. The study found that inclusion of the legal system in model 2 culminated into a decrease in the coefficients of director liability, shareholder suits, disclosure and transparency to 2.169, 2.255 and 2.247 all at $p<0.05$ respectively down from 3.230, 3.270, and 3.161 in model 1.This suggests that the inclusion of the legal system decreases the effect of director liability, shareholder suits, disclosure and transparency on economic growth and yet still corporate governance continues to have an insignificant effect on economic growth. These findings conform to the explanation provided by Dodge et al., (2006) that corporate governance is a cost to the business when a country's legal system is weak. It can be inferred that a weak legal system by increasing the cost of implementation of corporate governance it reduces the overall performance of the company and subsequently negatively affects its contribution to economic growth. In other words legal systems indirectly affect economic growth through its effect on the cost of implementation of corporate governance.

At the same time, the findings show that inclusion of legal systems decreases the negative coefficient of the protection of minority shareholders on economic growth to -8.066 at $p<0.05$, suggesting that the incorporation of the legal systems variables strengthens the effect of protection of minority shareholders on economic growth although the effect is insignificant. The results indicate that negative effect of efficacy of the board increases to -1.424, indicating a significant increase in the negative effect of the efficacy of the board on economic growth. Overall, based on a comparison of the coefficients for corporate governance variables in model 1 and model 2, it can be inferred after the inclusion of legal system the effect of explanatory variables of corporate governance on economic growth remains insignificant. This evidence leads us to believe that corporate governance has consistent insignificant effect on economic growth despite the addition of legal systems. These findings are inconsistent with Doidge *et al* (2006) that used a sample of developed countries. The results; however, indicate that only legal rights have weak positive effect on economic growth whilst the rest of the explanatory variables of the legal system have an insignificant effect on economic growth. After the inclusion of the legal systems the R^2 increased to 11.3% compared to 0.0019 in model 1. This indicates that although that corporate government together with the legal systems explain 11.3% of the observed outcome in economic growth. This imply that corporate governance together the legal system they have inadequate power to explain economic growth in Sub Saharan Africa countries. The coefficient for the R^2 adjusted is 0.094, indicating that the inclusion of legal systems explains less than 0.1 percent of the variations observed in economic growth. It can be deduced from this findings that should other additional explanatory variables other than changes in corporate governance and legal systems that explain the observed changes in economic growth within countries.

5.7.8 Investigate whether good governance has influence on the effect of corporate governance on economic growth

In model 3 the OLS estimates sought to establish whether good governance elements presented by represented by voice accountability, political stability, government effectiveness, regulatory quality and control of corruption has influence on the effect of corporate governance on economic growth. The findings show mixed outcomes. After the inclusion of good governance the findings reveal that the coefficient of the efficacy of the board is estimated at -1.467 at 5% significant level. This indicates that the magnitude of negative effects of the efficacy of the board on economic growth not only increases but also becomes very significant after the inclusion of good governance. This suggests that the negative impact of board efficacy on economic growth significantly deteriorates after good governance compared to model 2 and 1 respectively. The increased negative effect of corporate governance on economic growth due to the deterioration of the efficacy of board after the addition of good governance could be an indication that strong good governance is required in order to strengthen corporate governance systems and enhance economic growth. This is because weak governance is expected to diminish the positive benefits of corporate governance (Dodge et al, 2006). We note that similarly, the inclusion of good governance increases the negative effect of protection of minority shareholders although the effect is insignificant. These findings are different from Dodge *et al* (2006) where the inclusion of good governance increased the value to a 23% increase in the value of Tobin’s Q, suggesting that good governance is likely to attract investment that leads to economic growth. On the contrary, in the presence of weak governance the value of the firm is likely to decrease and this discourages investment to the detrimental to economic growth. It important to remember that based on the findings in Figure 5.13 and Figure 5.18 show that Sub Saharan African countries have weak governance. Considering that weak country governance is associated with low or absence of investor protection it can be assumed that companies might increase their board mechanism beyond standard in order to compensate for the poor investor protection that arise from weak country governance. It follows that attempts to increase measures that promotes board efficacy might increase the cost to the company thereby decreasing its overall performance and consequently leading an increase in board efficacy to lead to result in a decrease in economic growth.

After the inclusion of good governance the coefficients for disclosure and transparency, shareholder suits and director liability in model 3 increased to 2.918, 3.058, and 3.006 respectively despite all being insignificant relative to those in model 2 and 1 that is before and after the inclusion of legal system respectively. These findings suggest that the influence of disclosure and transparency, shareholder suits and director liability has a positive and insignificant impact on economic growth. It also indicates inclusion of good governance strengthens the positive effect of disclosure and transparency, shareholder suits and director liability on economic growth although the effect is insignificant. It could be expected that the effect of corporate governance on economic growth is eroded if companies are operating in a country where the legal systems are all weak. *Doidge at el*, (2006) observed that corporate governance has little benefit when there is weak country governance and legal systems. Since the legal systems and governance has influence on the overall performance of the company through corporate governance it can be concluded that weak legal systems and good governance can be a cost not only to the company but the overall economy at large. This is because increasing corporate governance so as to compensate for poor investor protection from the weak country legal and good governance systems leads to expropriation of shareholder wealth. It means that investors will not be willing to make investment when there is country wide risk from the weak legal system and good governance because their investment risk being expropriate by country governance and the legal system.

After adding good governance to corporate governance the coefficient of legal rights is 0.373 at 1% significant level. This suggests that, legal rights in the presence of corporate governance and good governance have a significant effect on economic growth. This reveals that the addition of good governance decreases the influence of legal system on economic growth. It can be inferred from this evidence that weak governance diminishes the positive influence of legal rights in promoting economic growth by giving corporate governance the burden of compensating for the weak investor protection due to weak country legal system and good governance. The study found that political stability has the highest significant influence estimated at 1.025 and rule of law at 0.119 both at 1% significant level. The remaining good governance indicators have a weak negative insignificant relationship with economic growth. Nevertheless an the coefficient for R^2 shows an increase to 17.5 up from 11.3 demonstrating that inclusion of good governance and the legal system to corporate governance provides a better explanation of the observed economic growth than model1 and 2. This indicates that corporate governance provides a better explanation of the changes on economic growth after only after it incorporates both the legal system and good governance. Although the effect of corporate governance on economic growth remains insignificant after adding good governance, the incorporation of good governance in model 4 provides a better explanation of the observed change in economic growth in spite of it being a weak one. A look at the coefficient for adjusted R^2, shows that the addition the good governance explains 0.08% of the variations in economic growth. This indicates that addition of good governance has no explanatory power to explain the observed variations on economic growth.

5.7.9 Examining whether financial development has influence on the effect of corporate governance on economic growth

Model 4 presents results of the influence of financial development on the effect of corporate governance on economic growth after the addition of legal systems and good corporate governance. The results indicate that economic growth does not differ significantly from the previous equation. The findings show that after the inclusion of the financial development the coefficient for director liability, shareholder suit, disclosure and transparency increases to 3.323, 3.501 and 3.422 and are all insignificant. This means that even though the effect of director liability, shareholder suit, disclosure and transparency on economic growth remains insignificant, it increases the positive effect of the aforementioned corporate governance variables on economic growth. The findings further reveal the negative coefficient of protection of minority shareholders significantly increases to -11.390 and this is moderately higher than in the previous equation. There is strong negative inverse relationship between protection of minority shareholders and economic growth after financial development was incorporated.

This trend is diametrically opposed to the influence of financial development on corporate governance and the resulting outcomes espoused in literature. For instance the OCED, 2015 and WFE (2015) consider the presence financial development aspects such as the ability to have access finance through the market as well the presence of well-regulated financial market as instrumental for fostering strong corporate governance systems that enhance economic growth. It may be inferred that the increase in the negative effects of protection of minority shareholders as well as those of the efficacy of the board on the economic growth could be associated with weak financial development observed in Table 5.1 in this study. These findings contradict those observed in developed countries La Porta *et al*, (1999) and could be partly attributed to the absence of developed financial markets that promote corporate governance and in turn stimulate economic growth in the region.

Further analysis show that the addition of financial development strengthens the effect of legal rights on economic growth as shown by a coefficient of 0.390 at 1% significance level. The regression coefficient for investor protection is 1.462 at 5% significance level and implies that there is a strong statistically significant relationship between investor protection and economic growth after taking into account the effect of corporate governance, and financial development. Further analysis shows that the regression coefficient for the efficiency of the legal systems is1.325 and signifies that there is no significant relationship between efficiency of the legal framework and economic growth. The regression coefficient for the legal systems is -0.037 and 0.340 respectively indicating that these legal system factors have no significant effect on economic growth. This show that almost all factors of the legal system with the exception of investor protection and legal rights they have an insignificant effect on economic growth even after taking into consideration the effect of corporate governance on economic growth. The coefficient for political stability is 1.014 at 1% significant level indicating that there is strong positive relationship between political stability and economic growth. These findings suggest that political stability has positive effect on economic growth only in the presence of financial development. Based on the R^2 the inclusion of financial development provides a better explanation of the change in economic growth than in model 1 and 3 although the correlation is weak. The adjusted R^2 suggest that the addition of financial development on explain 0.08% of the variation in economic growth. This suggests that financial development in Sub Saharan Africa countries does not have adequate explanatory power to explain the changes in economic growth.

5.7.10 Investigating whether macroeconomic fundamentals has influence on the effect of corporate governance on economic growth

Model5 shows the results of the effects of corporate governance on economic growth after the inclusion of the macroeconomic fundamentals. The regression results show that inclusion of macroeconomic fundamentals results in corporate governance having inconsistent effect on economic growth. The inclusion of macroeconomic fundamentals decreases the coefficient for shareholder suit, director liability and disclosure and transparency to 2.865, 3.060 and 3.020 respectively and is insignificant. It implies that the inclusion of macroeconomic fundamentals decreases the positive effects of shareholder suit, director liability and disclosure and transparency on economic growth despite the effect being insignificant. According to Nhutu (2014) unstable macroeconomic fundamentals have negative effect of corporate governance .It to enable corporate governance to promote economic growth stable macroeconomic environment is necessary

Further analysis reveal that, the addition of macroeconomic fundamentals weakened the positive effect of shareholder strength, director liability and disclosure and transparency effect on economic growth The findings shows that the regression coefficient for investor protection is 1.384, political stability at 1.028 all at 5% significant level. This indicates that investor protection has the highest significant positive effect on economic growth and this is followed by political stability and lastly foreign direct investment after financial development and the macroeconomic fundamentals are taken into consideration. The study found that, the regression coefficient of legal rights and rule of law is 0.386 and 0.011 both at 5% significant level implying that legal rights has the highest significant effect, followed by rule of law. This is an indication to policy makers that before they can expect corporate governance to enhance economic growth it necessary to first improve investment protection, political stability, foreign direct investment, legal rights and rule of law before considering the possibility of economic growth. R^2 test found that, the addition of the macroeconomic fundamentals explain 18% the change observed in economic growth and this is almost equal to that of the model of 3 and 4. Since model 5 considered the unobserved effects of corporate governance on economic growth after the addition of legal systems, good governance, financial development and macroeconomic fundamentals to be homogenous there is need to consider the effect of heterogeneity. According to Nhutu (2014) unstable macroeconomic fundamentals have negative effect of corporate governance. This suggests enable the development a corporate governance system that can enhance economic growth that, stable macroeconomic fundamentals are necessary.

5.7.11 Comparison by origin of legal law

Legal origin of law, geographical location and income level constitute some the individual country specific levels differences which do not vary overtime but are expected to have influence on economic growth. The section that presents pooled OLS estimates that examine whether or not the effect of corporate governance of economic growth varies with the origin of the legal law, regional block and income level group.

Table 5.12: OLS stimates for corporate governance and economic growth based on the origin of legal law

	Civil law origin					Common law origin				
	Model 1	Model 2	Model 3	Model 4	Model5	Model 1	Model 2	Model 3	Model 4	Model 5
Protection of minority shareholder	-7.665	-11.603	-11.603	-5.992	-12.778	-6.159	-5.777	-4.112	-4.101	4.871
Director liability	2.392	2.515	2.515	1.078	3.107	2.195	3.094	2.452	2.524	-0.484
Shareholder	2.558	2.515	2.515	1.696	4.073	2.127	3.036	2.298	2.400	-0.570
Disclosure & Transparency	2.540	3.447	3.447	1.633	3.909	1.992	3.010	2.244	2.328	-0.682
Efficacy of the board	-0.355	-0.179	-0.179	-0.088	-0.641	-1.253	-2.663	-2.898	-2.527**	-2.819**
Legal rights		0.478	0.478	0.367	0.525		0.465	0.396	0.436	0.44***
Property rights		-0.634	-0.634	0.058	-0.135		-0.014	0.003	0.011	0.010
Judicial prudence		0.708	0.708	0.676	0.522		-0.372	-0.481	-0.386	-0.200
Investor protection		3.356	3.356	2.661	3.117		-3.492***	-3.077***	-3.174**	-3.585**
Efficiency of the legal framework			0.773	0.547	1.040		1.765	2.054	2.265	1.989
Political Stability			0.963	1.007	0.655			-0.015	0.004	0.336
Government Effectiveness			-0.553	-0.576	-0.638			-0.248	-0.194	0.007
Voice and Accountability			-0.041	-0.034	0.232			1.440	1.234	1.582
Control of Corruption			-1.579	-1.463	-1.404			-0.355	-0.309	0.089
Rule of Law			0.074	0.078	0.053			-0.205	-0.138	0.043
Regulatory Quality			-0.516	-0.620	0.022			-0.822	-0.958	-1.229
Financing through market				-0.324	-0.250				0.234	0.521
Regulation of securities exchange				0.046	0.202				-0.783	-1.102
Gross national saving % GDP					0.025					-0.048
Foreign direct investment					0.000					0.000

inflation deflator % GD					0.007					0.003
Constant	7.005	-5.344	-6.333	-5.970	-7.074	9.919	9.035	10.086	8.317	13.026
F	0.210	45.850	1.640	0.090	0.970	1.230	4.020	0.820	0.290	0.980
R^2	0.027	0.393	0.455	0.456	0.482	0.347	0.146	0.159	0.163	0.163
R^2 adjusted		0.367	0.061	0.001	0.026	0.031	0.115	0.013	0.004	0.004
N	85	85	85	85	85.	102.	102	102	102.	102

***, **, * represents significant level at 1%, 5%, 10% respectively

The results in Table 5.12 show that corporate governance has an insignificant effect on economic growth in both civil law and common law countries. Protection of minority shareholders must be considered because minority shareholders are entitled to have control and cash flow rights in the company. The findings show that model 1 coefficients are similar those in model 1 under common and civil law. This suggests that director liability, shareholder protection, disclosure and transparency have strong positive and insignificant effect on economic growth in both common and civil law countries. Similarly protection of minority shareholders and efficacy of the board does not differ significantly between pooled OLS for civil and common law legal countries. The coefficient for R^2 in model 1 under civil law is 0.027 compared to 0.347 in model 1 for common law countries. This suggests that corporate governance exerts moderate power to explain the changes in economic growth in common law compared to civil law countries. These findings suggest that whilst corporate governance explains 34, 7% of the observed changes in economic growth in common law countries, it explains 0.27% of the changes in economic growth observed in civil law countries. This demonstrates that corporate governance has greater influence and better explanation the changes in economic growth in common law than civil countries in Sub Saharan Africa. These findings are similar to (a Porta, *et al* (1997) who found that common law countries have stronger corporate governance mechanism than civil countries. It follows that common law countries should be expected to have higher economic growth owing to strong corporate governance mechanism than civil law origin countries.

The inclusion of components of the legal systems show that the coefficient for R^2 in model 2 estimated is 0.393 in civil law countries compared to a low 0.14.6. These results suggest that corporate governance provides a better explanation of economic growth after the addition of the legal systems in civil countries and rather decreases the explanatory power in common law origin countries. Corporate governance after the addition of good governance and legal systems in model 3 explains 45.5% of the changes in economic growth in civil law countries compared to weak 15.9% in civil law countries. In particular we note that the corporate governance coefficients are higher in civil law countries and lower in common law countries. This further corroborates the aforementioned R^2 findings that corporate governance has higher effect on economic growth in civil law countries than common law countries. This observation is contrary to the one hypothesised in literature and La Porta *et al*, (2000).

The negative effects of protection of minority shareholders on economic growth are higher and stronger in civil law countries than common law countries in model 4 and 5. We note that the inclusion of financial development and good governance have different effects on corporate governance variables on economic growth. For instance in model4 the inclusion of financial development increased the positive effects of corporate governance on economic growth in civil law countries whilst it decreased in common law countries. A similar trend is observed in model 5. The R^2 coefficient increases in model4 and 5 in civil law countries and decreases in common law countries. We note that the inclusion of financial development and macroeconomic fundamentals explains 45,6 % and 48.2% of changes in economic growth compared to a constant 16.3% in common law countries. This evidence suggests that in civil law countries the effect of corporate governance on economic growth is explained by the addition of legal systems, good governance, financial development and macroeconomic fundamentals.

Turning to the adjusted R^2 show that in common law countries corporate governance and legal systems jointly provides the highest explanatory power of the variations observed on economic growth as indicated by R^2 coefficient of 0.146. Adjusted R^2 coefficient is 0.0146 showing that the legal systems explain 0.14 % of the variations in economic growth. On the contrary in civil law countries corporate governance alone provides a low explanation of economic growth as indicated by adjusted R^2 of 0.027. The result indicates that corporate governance, legal systems, good governance, financial development and macroeconomic fundamentals when sequentially added into the regression jointly explain variations in economic growth as demonstrated but increased in R^2 in model 2, 3, 4 and 5. In civil law countries the addition of, legal systems, good governance, financial development and macroeconomic fundamentals have no explanatory power to explain the changes in economic growth as shown by adjusted R^2 estimated at 0.0367, 0.061, 0.001, 0.026. It can be concluded that corporate governance, in addition of the legal system, good governance, financial development and macroeconomic fundamentals all do not have explanatory power to explain the changes observed on economic growth.

5.7.12 Comparison by regional economic block

Disaggregated data sets were also analysed based on the regional block of the country in the region. The section that follows present findings on the nature of relationship between corporate governance and economic growth based on the physical regional block of the country in the region.

Table 5.13: OLS estimates for corporate governance and its effect on economic growth in the east , south and west region in Sub Saharan Africa

	East					**South**					**West**				
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 1	Model 2	Model 3	Model 4	Model 5	Model 1	Model 2	Model 3	Model 4	Model 5
Protection of minority shareholder	-14.947	-20.290	-11.166	3.223	-14.632	-3.182	4.056	42.558	39.328	50.141	7.875	36.095	29.041	37.155	38.585
director liability	5.031	6.408	3.104	3.223	4.231	1.031	-0.202	-14.305	-13.184	-16.703	-2.408	-12.955	-11.310	-14.324	-15.972
Shareholder	4.135	5.932	2.629	2.507	3.301	1.196	0.030	-14.460	-13.035	-16.653	-2.116	-12.162	-11.109	-13.939	-14.258
Disclosure & Transparency	0.106	5.917	2.811	3.178	4.162	0.978	-0.192	-14.445	-13.060	-16.582	-1.814	-11.604	-10.336	-13.150	-13.988
Efficacy of the board	-0.758	-0.850	-0.533	-1.342	-0.943	-1.058	-3.755	-3.464	-1.163	-1.113	-0.215	1.522	0.553	0.441	0.162
Legal rights		0.192	-0.002	-0.256	-0.077		0.219	-0.168	-0.139	-0.153		0.477	0.493	0.595	0.722
Property rights		0.164	-0.014	0.215	0.367		0.020	-0.026	-0.033	-0.045		-2.959	-1.382	-1.771	-2.396
Judicial prudence		0.134	0.416	-1.200	-1.658		-1.118	0.621	1.580	1.644		2.890	1.409	1.653	1.898
Investor protection		1.165	2.061	2.286^{***}	1.995		-3.835	-0.535	-0.606	-1.318		1.793	5.893	6.291	7.341
Efficiency of the legal framework		0.625	0.665	0.861	0.892		3.472	3.806	4.106	3.527		-1.221	-0.702	-1.005	-0.663
Political Stability			-0.292	-0.683	-0.817			2.286^{**}	2.738	2.751			2.571	2.504	2.229
Government Effectiveness			0.794	0.875	0.609			-1.550	-1.720	-1.925			0.009	-0.004	0.267

Voice and Accountability			1.238	1.323	1.167			2.180	1.300	1.903			-1.413	-1.131	-0.316
Control of Corruption			-0.373	-0.345	0.143			-5.214	-6.193	-5.600			-0.273	-0.358	-0.129
Rule of Law			0.039	0.024	0.023			-0.493	0.682	1.531			0.640	0.789	-0.503
Regulatory Quality			0.294	1.372	1.195			0.498	-0.262	-0.370			-1.669	-1.900	-1.766
Financing through market				-0.083	0.713				-1.146	-1.163				-0.073	0.339
Regulation of securities exchange				3.025	2.203				-1.299	-1.304				0.613	0.774
Gross national saving % GDP					-0.032					-0.061					0.113
Foreign direct investment					0.000					3.03E-10					-1.94E-10
inflation deflator % GD					-0.021					0.016					0.039
constant	13.084	9.627	8.535	7.354	8.035	9.133	11.777	9.802	-0.356	5.663	-0.810	-3.852	-6.261	-6.110	-9.316
F	2.430	19.560	12.940	1.860	0.650	0.69	2.86	27.85***	0.23	0.51	18.03***	1.76	16.21***	0.62	7.78
R^2	0.315	0.466	0.498	0.567	0.584	0.037	0.169	0.298	0.334	0.358	0.179	0.316	0.475	0.482	0.519
R^2 adjusted		0.150	0.033	0.069	0.017		0.138	0.129	0.036	0.023		0.136	0.159	0.159	0.037
N	53	53	53	53	53	73	73	73	73	73	65	65	65	65	65

***, **, * represents significant level at 1%, 5%, 10% respectively

The results in Table 5.13 show that corporate governance has an insignificant effect on economic growth in Sub Saharan Africa. We observe that the coefficient for protection of minority shareholders in model 1 is a positive but insignificant in only the west region. This indicates that corporate governance on its own does not play a significant role in economic growth across all the regions. In model 2 the findings indicate that corporate governance has positive but insignificant effect on economic growth even after adding the legal systems in the three regions. Further analysis indicates that the effect of corporate governance remains negative and insignificant even after adding financial development and macroeconomic fundamentals as shown in models 4 and 5.

The study established that the coefficient of R^2, is highest in the east region, followed by the south and the west region is the least. The results indicate that corporate governance in addition to legal systems, good governance, financial development and macroeconomic fundamentals explains 58.4 %, 35. 8% and 51.9 % of the observed changes in economic growth in the east, south and west region respectively. This evidence indicates that the extent to which corporate governance in addition to legal systems, good governance, financial development and macroeconomic fundamentals influences economic growth is highest in the eastern region and lowest in those in the south. The coefficient for adjusted R^2 shows that corporate governance, legal systems, good governance, financial development and macroeconomic development jointly do not provide a strong explanation of the variations in economic growth in the east, south and west region in Sub Saharan Africa.

5.7.13 Comparison by income group level

The level of economic development as measured by the income group level constitutes another country specific differences that may have influence on the nature of relationship between corporate governance and economic growth. The section that follows presents OLS estimates based on income group level.

Table 5.14: OLS estimates for corporate governance and its effect on economic growth in the upper middle income group level countries

	Model 1	Model 2	Model 3	Model 4	Model 5
Protection of minority shareholder	-5.312	-6.432	-3.613	3.204	1.362
director liability	1.819	1.192	0.268	-2.009	-1.716
Shareholder	1.555	1.885	0.860	-1.223	-0.490
Disclosure and Transparency	1.253	1.583	0.616	-1.580	-0.867
Efficacy of the board	-0.718	-1.513	-1.186	-0.465	-1.110
Legal rights		0.395**	0.158	0.352	0.588
Property rights		0.022	0.020	-0.008	-0.026
Judicial prudence		0.012	0.622	1.667	1.753
Investor protection		2.623**	2.817**	2.679**	3.230
Efficiency of the legal framework		1.793	2.503	1.790	1.711
Political Stability			0.118	0.338	0.156
Government Effectiveness			-0.292	-0.288	-0.347
Voice and Accountability			0.153	0.777	1.127
Control of Corruption			-2.508	-2.278**	-2.128
Rule of Law			0.072	0.095	0.088
Regulatory Quality			0.094	-0.942	-0.239
Financing through market				-1.955	-2.213
Regulation of securities exchange				-0.218	-0.040
Gross national saving % GDP					-0.036
Foreign direct investment					0.000
inflation deflator % GD					0.025
Constant	12.035	-0.719	-7.236	-5.860	-4.998
F	2.850	3.810	2.480	0.720	1.280
R^2	0.051	0.223	0.267	0.302	0.336
R^2 adjusted		0.172	0.044	0.035	0.034
N	85	85	85	85	85

***, **, * represents significant level at 1%, 5%, 10% respectively

In model 1, 2 and 3 indications show that the coefficient for protection for minority shareholders has the same negative sign and a strong insignificant effect on economic growth estimated at -5.312-6.432 and -3.613. The results in the same models show that director liability, shareholder suit, disclosure and transparency have strong positive effect but have no significant effect on economic growth. The results in model 5 show that only protection of minority of shareholders has a strong positive effect but insignificant effect on economic growth. All the remaining corporate governance practices have strong and negative influence on economic growth. These results indicates that the addition of the legal system, good governance, financial development and macroeconomic does not have any significant contributions to the role of corporate governance on economic growth. The strong negative effect of almost all corporate governance variables with the exception of shareholder protection in model 4 suggests that an increase in corporate governance has negative effect on economic growth. This implies that the absence of financial development might have compelled companies to increase their corporate governance in an attempt to get finance from foreign market. Under such conditions, an increase in corporate governance results in negative and insignificant effect on economic growth. The implication might be that, corporate governance may possibly have become an expense and liability that erodes company performance and have retrogressive effects on economic growth. Further analysis of the R^2 for model 5 show that the changes in economic growth is best explained by the effect of corporate governance after taking into account the legal systems, good governance, financial development and macroeconomic fundamentals. Under this model we note that there is a decrease in the positive strong influence of protection of minority shareholders on economic growth although its effect if insignificant. This suggests that counties could be over dependent on the macroeconomic fundamentals rather than corporate governance practices to stimulate economic growth. This could be supported by the decrease in the negative influence of corporate governance on economic growth indicated by a decrease in negative coefficients from those in indicated in model 4. The R^2 coefficients show that in the upper income group countries corporate governance explain only 0.51% of the variations in economic growth. Further analysis indicates that corporate governance and legal systems jointly explain 22.3% variations of economic growth. Corporate governance, legal systems and good governance jointly explain 26.7% financial development 30.2% and macroeconomic fundamentals 33.6% of the variation on economic growth. This evidence suggests that macroeconomic fundamentals provide a better explanation of economic growth compared to corporate governance and the other institutional factors. Overall, corporate governance, legal system, good governance, financial development and macroeconomic fundamentals jointly all provide a weak explanation of economic growth in countries in the upper region in Sub Saharan Africa.

Table 5.15 OLS estimates for corporate governance and its effect on economic growth in the lower middle income group level countries

	Model 1	Model 2	Model 3	Model 4	Model 5
Protection of minority shareholder	-13.833	2.848	1.827	16.456	9.362
Director liability	4.658	0.489	0.575	-4.835	-2.326
Shareholder	4.879	0.165	0.224	-4.873	-1.791
Disclosure and transparency	5.079	0.663	0.823	-4.139	-1.619
Efficacy of the board	0.056	-0.417	-0.703	-1.200	-1.377
Legal rights		0.588	0.565	0.610	0.245
Property rights		-0.992	-0.800	-2.712	-1.468
Judicial prudence		0.567	0.317	0.697	-0.302
Investor protection		-3.955	-2.808	-2.240	-3.475
Efficiency of the legal framework		0.001	0.030	-0.037	0.791
Political Stability			0.902	1.089	2.553
Government Effectiveness			0.185	0.269	1.121
Voice and Accountability			0.292	-1.711	-2.187
Control of Corruption			0.017	0.385	0.832
Rule of Law			-0.830	1.625.	-0.704
Regulatory Quality			-1.317	-1.858	-0.051
Financing through market				2.040	1.516
Regulation of securities exchange				0.418	0.045
Gross national saving % GDP					0.035
Foreign direct investment					0.000
Inflation deflator % GD					0.032
Constant	0.778	4.534	3.716	5.167	5.190
F	0.960	59.160	0.820	0.820	2.010
R^2	0.162	0.451	0.475	0.537	0.620
R^2 adjusted		0.289	0.023	0.063	0.083
N	64	64	64	64	64

$^{***, **, *}$ represents significant level at 1%, 5%, 10% respectively

The results for OLS estimates indicate that the effects of corporate governance on economic growth remains insignificant even after taking into account unobserved individual country specific differences that are related to the explanatory variables. The findings show that the effect of protection for minority shareholders on economic growth remain insignificant even after including the legal system, good governance, financial development and macroeconomic fundamentals. Based on the R^2 0.162, 0.451, 0.475, 0.537, 0.620 it is logical to deduce that model 5 has a strong explanatory power of changes on economic growth. This entails that in lower middle income group corporate governance in addition to legal system, good governance, financial development and macroeconomic fundamentals have strong explanatory power of the observed change in economic growth. Adjusted R^2, shows that changes in corporate governance, legal systems, good governance, financial development and macroeconomic fundamentals do not provide an adequate explanation of the variations in economic growth in middle income countries.

5.16: OLS estimates for corporate governance and its effect on economic growth in the lower income group level countries

	Model 1	Model 2	Model 3	Model 4	Model 5
Protection of minority shareholder	-42.751**	-4.105	-56.439	470.560	899.710
director liability	14.255**	0.501	18.441	-160.982	-306.041
Shareholder	14.306**	-5.053	19.633	-154.330	-295.499
Disclosure and Transparency	14.890***	1.678	19.904	-159.119	-304.711
Efficacy of the board	-2.686***	0.202	-2.985	0.237	0.878
Legal rights		3.101	-0.333	-1.060	-0.822
Property rights			-6.115	-10.708	-11.286
Judicial prudence			2.353	5.004	5.225
Investor protection			1.360	1.703	-1.100
Efficiency of the legal framework			-0.058	-2.900	-3.959
Political Stability			3.058	3.392	2.720
Government Effectiveness			-0.514	-0.764	-1.215
Voice and Accountability			1.792	-1.768	-1.355
Control of Corruption			1.687	13.704	23.417
Rule of Law			-2.053	-3.312	-3.465
Regulatory Quality			-1.604	-2.782	-5.284
Financing through market				-5.196	-4.768
Regulation of securities exchange				8.495	9.309
Gross national saving % GDP					-0.123
Foreign direct investment					0.000
Inflation deflator % GD					-0.166
Constant	12.197***	28.639	21.481	53.844	93.263
F	25.290***	218.930***	24.360	1.150	2.890
R^2	0.113	0.320	0.463	0.561	0.599
R^2 adjusted	218.930	0.207	0.143	0.098	0.038
N	35	35	35	35	35

***, **, * represents significant level at 1%, 5%, 10% respectively

In lower income groups, findings indicate that all variables of corporate governance have strong significant effect on economic growth holding the legal systems, good governance, financial development and macroeconomic fundamentals constant. In particular, the change in protection of minority shareholders has strong and significant negative influence on economic growth followed by efficacy of the board. These findings suggest that there might have been over emphasis on protection of minority shareholders and board efficacy in developing strong corporate governance systems that attract investment. The results suggest that the increase in this corporate governance have detrimental impact on economic growth. We observed that all the remaining corporate governance practices have a strong and significant positive effect of on economic growth. Based on the R^2 coefficients although corporate governance has a significant effect on economic growth it does not have an adequate power to explain the observed change in economic growth that is best observed in model 5. The estimation in model 5 indicates that the observed variations in economic growth are as a result of corporate governance together with legal systems, good governance, financial development and macroeconomic fundamentals. Based on the coefficient in model 5, corporate governance has a strong effect on economic growth despite it being insignificant. The insignificant influence of corporate governance on economic growth observed in model 5 suggests the role of corporate governance on economic development is influenced by legal systems, good governance, financial development and macroeconomic fundamentals. If this observation holds, then countries in lower income groups need to develop their legal systems, good governance, financial and economic development in order to enable corporate governance to have a strong and significant impact on economic growth. Based on the R^2 model 5 the highest coefficient of 59.9% indicating that the in addition to corporate governance the legal systems, good governance, financial development and macroeconomic development has influence on economic growth even though this contribution is insignificant.

5.8 Testing for heterogeneity

This study estimated a fixed effect models to account for heterogeneity in order to establish the nature of relationship between corporate governance and economic growth. The fixed effect model assumes that there are unobserved country specific effects that vary with country but are time invariant and are correlated to the explanatory variables. As explained in the previous section, a nested sequential approach is used to include the explanatory variables one at a time to examine the impact of the additional variable on the effect corporate governance on economic growth. The fixed effect model uses each country as dummy variable to test the effect of country specific differences on the observed relationships.

5.17: Estimates of fixed effects models for corporate governance and economic growth

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Protection of minority shareholder	-9.753	-8.066	-10.153	-11.390	-10.038	5.614
Director liability	3.230	2.169	2.918	3.323	2.865	-2.365
Shareholder	3.270	2.255	3.058	3.501	3.066	-1.755
Disclosure and Transparency	3.161	2.247	3.006	3.422	3.020	-1.021
Efficacy of the board	-0.574	-1.424	-1.467***	-0.970	-0.990	-0.825
Legal rights		0.373***	-0.045	0.390***	0.386***	0.098
Property rights		-0.013	-.045	-0.037	-0.044	-0.027
Judicial prudence		-0.751	-0.532	-0.340	-0.270	0.785
Investor protection		1.436***	1.394***	1.325***	1.384***	-0.044
Efficiency of the legal framework		1.407**	1.267	1.014***	1.220	1.331
Political Stability			1.025***.	1.014***	1.028***	0.672
Government Effectiveness			-0.421	-0.462	-0.385	0.012
Voice and Accountability			-0.316	-0.117	-0.130	3.335
Control of Corruption			-0.894	-0.966	-0.930	-0.417
Rule of Law			0.119	0.109	0.111	0.057
Regulatory Quality			-0.159	-0.377	-0.324	-0.022
Financing through market				-0.374	-0.391	-1.264
Regulation of securities exchange				-0.324	-0.283	0.154
Gross national saving % GDP					-0.006	-0.040
Foreign direct investment					0.000	0.000
inflation deflator % GD					0.028	0.002
_Icountry_2						0.133
_Icountry_3						3.857
_Icountry_4						6.822
_Icountry_5						7.423
Icountry 4						6.138
_Icountry_7						7.430
_Icountry_8						8.113

_Icountry_9						13.269
_Icountry_10						5.313
_Icountry_11						4.158
_Icountry_12						6.708
_Icountry_13						4.377
_Icountry_14						7.181
_Icountry_15						0.729
_Icountry_16						3.791
_Icountry_17						-1.069
_Icountry_18						5.405
_Icountry_19						5.405
_Icountry_20						0.339
_Icountry_21						0.339
_Icountry_22						11.643
_Icountry_23						8.801
_Icountry_24						1.930
_Icountry_25						-2.190
_Icountry_26						7.114
_Icountry_27						8.626
Constant	8.023^{***}	6.503^{***}	5.369^{**}	3.990	4.227	-1.547
F	0.710	3.710^{***}	1.830^{**}	0.810	0.510	1.600
R^2	0.019	0.113	0.167	0.167	0.180	0.381
R^2 adjusted		0.094	0.054	0.054	0.005	0.202
N	187	187.	187	187	187.	187

***, **, * represents significant level at 1%, 5%, 10% respectively

The findings in model 1 show that the coefficient for protection of minority shareholders is -9.753 and efficacy of the board is -0.574, signifying that, protection for minority shareholders as well as efficacy of the board of directors have a strong negative and insignificant effect on economic growth. Economic growth decreases as protection for minority increases. Further analysis indicates that coefficient for director liability, shareholder suit, disclosure and transparency are 3.230, 3.270 and 3.161 respectively are all positive although they are insignificant. It means that corporate governance has strong positive and insignificant effect on economic growth. That is, a change in director liability, shareholder suit, disclosure and transparency does not bring any noticeable change in economic growth. The R^2 shows that corporate governance provides about 2% explanation of the observed changes in economic growth. The R^2 in model 1 is consistent with that of the model 1 under the pooled OLS model where corporate governance provides less than one percent explanation of the changes observed in economic growth. These findings confirm the main thesis of this study that corporate governance alone is not adequate to explain economic growth.

Turning to model 2 the result show a slight decrease of 2.169, 2.255 and 2.247 in director liability, shareholder suit, disclosure and transparency and all insignificant. This indicates that the inclusion of unobserved fixed effects for each legal systems decreases the positive effect of director liability, shareholder suit, disclosure and transparency on economic growth event though the effect is insignificant. Similarly, protection of minority shareholder as well efficacy of the board has an insignificant effect on economic growth. The results further indicates that while the addition of legal system decreases the negative effects of protection of shareholders on economic growth it increases the negative impacts of efficacy of the board of economic growth. This suggest that a consistent insignificant effect of corporate on economic growth remains even after legal systems variables where added.

The results indicate that coefficient for investor protection is 1.436 and legal rights at 0.373 and are both significant at 1%. This indicates that investor protection has highest positive significant effect on economic growth and this followed by legal rights. Unlike in the OLS test we observed the efficiency of the legal systems has a strong significant influence on economic growth at 5%. The R^2, coefficient shows a slight increase to 11.3 after the addition of legal systems and this value is similar of model1 under the OLS. This show that the inclusion of legal systems effects increases the relevance of corporate governance combined with legal provides a better explanation of the observed changes in economic growth although it is a weak explanation. On the positive side, the role of corporate governance in economic is explained better after consideration of country legal specific effects.

The country specific good governance effects are similar to that of the previous pooled OLS in model 3. The similarity suggest that even though country specific good governance effects exist across countries these differences are so minor such that they have no material impact on the role of corporate governance in economic growth. It entails that there is consistent insignificant effect of corporate governance on economic growth just as before and after the addition of legal systems effects. The R^2 coefficient in models 1 and 2 are equal, suggesting the inclusion of good governance just as with the incorporation of the legal systems effect so both of these factors have limited ability to explain the observed economic growth within countries in the region. Hence, it can be inferred that the ability of corporate governance to explain the change in economic growth remains insignificant even if country specific effect of the legal systems and good governance are considered.

The insignificant effect of corporate governance on economic growth after the addition of good governance and legal system could be related to explanations provided by García-Meca *et al*, (2014) who expound that corporate governance when used to compensate for the weak country environment reduces its contribution to company performance. Building on this view it can argued that an increase in corporate governance decreases economic growth through decreased company performance. The results suggest that there could be a tendency to increase corporate governance in companies within Sub Saharan Africa to compensate for ineffective country legal systems and weak governance. This could be an indication that corporate governance has consistent insignificant influence on economic growth because it is used as the only source of investor protection with the view of substituting weak investor protection from poor country governance and ineffective legal systems.

We report that there are no significant differences in the magnitude of coefficients of corporate governance variables after considering country specific financial development as well country specific effect macroeconomic fundamentals. R^2 are almost similar and they are all very low indicating the inclusion of financial development and macroeconomic fundamentals all have a weak power to explain the observed change in economic growth. That is to say, the effect of corporate governance on economic growth does not provide an explanation for economic growth even if country specific differences in legal systems, good governance, financial development and macroeconomic fundamentals were taken into consideration.

After adding country specific differences the results show a significant change in the coefficients of corporate governance. The study found a notable factor in protection of minority shareholders at 5.614 that shows strengthening of the positive effect of protection of minority shareholders after the consideration of country specific differences. While it also decreases the negative impact of efficacy of the board down to -0.825 it retrogresses the positive effect of shareholder suits, director liability to negative impact estimated at -2.365, and 1.755, respectively although the effect on economic growth is insignificant. The magnitude of the R^2 coefficient for model 6 is slightly higher than the previous models even though it is low, suggesting that it provides fixed individual country specific differences that provide a better explanation of the changes observed in economic growth. This again suggests that the effect of corporate governance is better understood after country specific differences are taken into consideration. The adjusted R^2 coefficients shows that changes in corporate governance, legal systems, good governance, financial development and macroeconomic fundamentals cannot adequately explain the changes in economic growth.

5.8.1 Comparison of the effect by origin of legal law

The section that follows presents findings on the comparison of the effect of corporate governance on economic growth based on the origin of the legal law using fixed effects models.

Table 5.18: Estimates of fixed effect models for corporate governance and economic growth in countries with civil law legal origins

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Protection of minority shareholder	-7.665	-11.603	-5.038	-5.992	-12.778	21.759
director liability	2.392	2.515	0.747	1.078	3.107	-7.163
Shareholder	2.558	3.479	1.364	1.696	4.073	-9.628
Disclosure and Transparency	2.540	3.447	1.288	1.633	3.909	-11.311
Efficacy of the board	-0.355	-0.179	-0.171	-0.088	-0.641	-1.250
Legal rights		0.478	0.379	0.367	0.525***	0.484
Property rights		-0.634	-0.057	0.058	-0.135	-0.394
Judicial prudence		0.708	0.718	0.676	0.522	1.067
Investor protection		3.356	2.728***	2.661***	3.117***	4.585
Efficiency of the legal framework		0.773	0.583	0.547	1.040	0.276
Political Stability and			0.963	1.007***	0.655	0.396
Government Effectiveness			-0.553	-0.576	-0.638	-0.182
Voice and Accountability			-0.553	-0.034	0.232	6.466***
Control of Corruption			-0.041	-1.463	-1.404	-1.164
Rule of Law			-0.041	0.078	0.053	0.022
Regulatory Quality			-1.579	-0.620	0.022	0.509
Financing through market			0.074	-0.324	-0.250	0.270
Regulation of securities exchange			-0.516	0.046	0.202	0.366
Gross national saving % GDP					0.025	0.067
Foreign direct investment					0.000	0.000
inflation deflator % GD					0.007	-0.039
_Icountry_3						
_Icountry_4						4.647
_Icountry_5						7.538
_Icountry_6						8.491
_Icountry_7						-25.166
_Icountry_8						12.877
_Icountry_9						10.435
_Icountry_10						-1.313
_Icountry_14						-2.489
_Icountry_16						-0.072
_Icountry_19						2.626
Constant	7.005	-5.344	-6.333	-5.970	-7.074	17.275
F	0.430	8.950	1.290	0.060	0.110	1.180
R^2	0.027	0.393	0.455	0.456	0.482	0.586
R^2 adjusted		0.367	0.062	0.001	0.026	0.104
N	85	85	85	85	85	85

***, **, * represents significant level at 1%, 5%, 10% respectively

Results in Table 5.18 above take into account the unobserved country specific differences that are linked to explanatory variables and are time invariant. The findings show that corporate governance has an insignificant effect on economic growth before the inclusion of any additional explanatory variable. The negative effect of protection of minority shareholders increases in model 2 after the addition of legal systems although the effect has insignificant impact on economic growth. The findings show that the inclusion of good governance and financial development show that it has mixed impact on corporate governance effects on economic growth. The inclusion of country specific differences in this model has insignificant influence on economic growth. The results show that whilst it strengthens the positive effect of protection of minority shareholders to 21.759 from the previous model it also worsens the effect of shareholder suits, director liability, transparency and disclosure to strong negative and insignificant increase estimated at -7.163, -9.628, -11.311 and -1.250 respectively. This finding demonstrates the magnitude at which a unit increase in corporate governance decreases economic growth although the effect is insignificant.

The R^2 coefficient steadily increases and it is highest in model 6. The findings indicate that corporate governance with the inclusion of country specific fixed effects together combined with the components of the legal systems, good governance, financial development and macroeconomic fundamentals explain the 58.6% change observed in economic growth. This rate is very high compared to a 0.27% in model 1 and this provides further evidence that corporate governance on its own is not sufficient to explain economic growth. This finding demonstrates the magnitude of the inverse relationship between corporate governance and economic growth in civil law origin countries in Sub Saharan Africa. The adjusted R^2 coefficients shows that changes in corporate governance, legal systems, good governance, financial development and macroeconomic fundamentals cannot adequately explain the changes in economic growth.

Table 5.19: Estimates of fixed effect models for corporate governance and economic growth countries with common law legal origins

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Protection of minority shareholder	-6.159	-5.777	-4.112	-4.101	4.871	124.573
director liability	2.195	3.094	2.452	2.524	-0.484	-41.764
Shareholder	2.127	3.036	2.298	2.400	-0.570	-36.090
Disclosure &Transparency	1.992	3.010	2.244	2.328	-0.682	-38.319
Efficacy of the board	-1.253	-2.663***	-2.898**	-2.527	-2.819	-1.083
Legal rights		0.465**	0.396	0.436	0.442	-0.529
Property rights		-0.014	0.003	0.011	0.010	-0.004
Judicial prudence		-0.372	-0.481	-0.386	-0.200	1.789
Investor protection		1.765	-3.077**	-3.174**	-3.585**	-2.395
Efficiency of the legal framework		1.765	2.054	2.265	1.989	3.008**
Political Stability			-0.015	0.004	0.336	-0.101
Government Effectiveness			-0.248	-0.194	0.007	0.663
Voice and Accountability			1.440	1.234	1.582	-0.893
Control of Corruption			-0.355	-0.309	0.089	-0.267
Rule of Law			-0.205	-0.138	0.043	0.485
Regulatory Quality			-0.822	-0.958	-1.229	1.516
Financing through market				0.234	0.521	-1.518
Regulation of securities exchange				-0.783	-1.102	-0.054
Gross national saving % GDP					-0.048	-0.099
Foreign direct investment					0.000	0.000
inflation deflator % GD					0.003	-0.013
_Icountry_2						-0.160
_Icountry_11						-11.149
_Icountry_12						-5.614
_Icountry_13						14.757
_Icountry_15						1.461
_Icountry_17 -						-22.893
_Icountry_18						1.600
_Icountry_20						23.410
_Icountry_21						-14.395
_Icountry_24						8.115

_Icountry_25						5.197
_Icountry_26						3.405
_Icountry_27						
Constance	9.919	9.035	10.086	10.213	13,457	-32.364
F	0.620***	2.440	0.220	0.180	0.650	1.300
R^2	0.031	0.146	0.159	0.163	0.186	0.350
R^2 adjusted		0.115	0.013	0.004	0.023	0.164
N	102	102	102	102	102	102.000

***, **, * represents significant level at 1%, 5%, 10% respectively

Turning to country fixed effects in common law countries the results show that corporate governance has insignificant effect on economic growth. The results suggest that all corporate governance variables before the addition of any additional explanatory variables they have insignificant effect on economic growth. The results in model2 and 3 shows that the efficacy after the addition of legal systems and good governance is estimated -2.663 and -2.898 at 1% significant level. This indicates that the components efficacy of the board has strong negative and significant effect on economic growth are after good governance is added to legal systems. A further comparison show that there is significant differences between the coefficients of the R^2 in model l, 2, 3 4, 5 and 6 is estimated at 0.031 0.146, 0.159, 0.163, 0.186 and 0.350. This suggests that, legal systems, good governance and economic growth jointly have weak power to explain the observed corporate governance in common law countries. The coefficient of the R^2 in model 6 is 35% that is almost double of the previous equation. This suggests that unobserved country specific in common law countries explain almost 35% of the variations in economic growth in different countries. The coefficient of the adjusted R^2 in model 6 is estimated at 0.16, meaning that corporate governance, legal systems, good governance, financial development, macroeconomic fundamentals and unobserved country specific effects jointly explain only 16% of variations in economic growth.

5.8.2 Comparison by income group level

To enhance the validity of the results this study effects of corporate governance on economic growth were compared based on the income group level. The section below present findings on the effect of corporate governance as well as other additional explanatory variables on factors on economic growth based on the income group level of the country.

Table 5.20: Estimation of fixed effects for corporate governance and economic growth in upper middle income group level countries.

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Protection of minority shareholder	-5.312	-6.432	-3.613	3.204	1.362	-181.693
Director liability	1.819	1.192	0.268	-2.009	-1.716	58.697
Shareholder suit	1.555	1.885	0.860	-1.223	-0.490	72.082
Disclosure and Transparency	1.253	1.583	0.616	-1.580	-0.867	65.260
Efficacy of the board	-0.718	-1.513	-1.186	-0.465	-1.110	-0.869
Legal rights		0.395	0.158	0.352	0.588***	0.250
Property rights		0.022	0.199	-0.008	-0.026	-0.060
Judicial prudence		0.012	0.622	1.667	1.753	3.708
Investor protection		2.623	2.817***	2.679	3.230	1.539
Efficiency of the legal framework		1.793	2.500***	1.790	1.711	1.983
Political Stability			0.118	0.338	0.156	0.369
Government Effectiveness			-0.292	-0.288	-0.347	-0.281
Voice and Accountability			0.153	0.777	1.127	2.558
Control of Corruption			-2.508***	-2.278	-2.128	-0.658
Rule of Law			0.072	0.095	0.088	0.036
Regulatory Quality			0.094	-0.942	-0.239	-0.160
Financing through market				-1.955	-2.213	-2.512
Regulation of securities exchange				-0.218	-0.040	-0.549
Gross national saving % GDP					-0.036	-0.023
Foreign direct investment					0.000	0.000
inflation deflator % GD					0.025	0.002
_Icountry_3						4.611
_Icountry_4						-7.481
_Icountry_8						6.400
_Icountry_9						26.141
_Icountry_10						6.535
_Icountry_14						-3.186
_Icountry_15						-6.213
_Icountry_16						-1.528
_Icountry_19						-52.887
_Icountry_22						4.406
_Icountry_26						-30.259
Constant	12.035**	-0.719	-7.236	-5.860	-4.998	-74.514
F	0.880	3.400	0.710	1.750	0.220	0.740
R^2	0.051	0.223	0.267	0.302	0.336	0.422
R^2 adjusted		0.172	0.044	0.035	0.034	0.085
N	88	88	88	88	88	88

***, **, * represents significant level at 1%, 5%, 10% respectively

Table 5.20 reports results from the estimation of 6 fixed effect models that were estimated using disaggregated variables of corporate governance, legal systems, good governance, financial development and macroeconomic fundamentals and country differences as a dummy variable. Model 1 shows that corporate governance variables have no significant effect on economic growth holding everything constant in countries in the upper middle income group. In particular we observe that property rights and protection of the minority shareholders have the highest negative influence and this is followed by efficacy of the board even though the effect on economic growth is insignificant. The remaining variables of corporate governance, that is, director liability, shareholder suit, disclosure and transparency have positive but insignificant effect on economic growth. These results indicate that corporate governance has immaterial effect on economic growth in developing economies. This view is confirmed by the coefficient of R^2, which is showing that a change in corporate governance explain only 0.51% of the change in economic growth. These findings indicate that, changes in corporate governance give a limited explanation of the changes on economic growth in countries in the upper income group. Given these findings, it can conclude that corporate governance alone is adequate to promote economic growth in countries in the upper middle income group.

Model 2 shows that the effect of corporate governance on economic growth remains insignificant after adding legal system variable in upper middle income countries. We note that the coefficient of protection for minority shareholder deteriorated from -5.312 2 to -6.432 from model 1 to model 2 respectively. The weakening of protection of minority shareholders after the inclusion of the legal system suggests companies in upper middle income group might increase protection of minority shareholders in attempt to compensate for the wear legal system in these countries. It may also be an indication that the legal system in upper income group countries it does not laws and enforcement measures that promote the protection of minority shareholders hence company have to increase their internal corporate governance mechanism to provide for protection of minority shareholders. It follows that, an increase in the legal systems diminishes its effect on economic growth when corporate governance exists in an environment where the legal system is weak or inadequate prompting the company to increase protection of minority shareholder so as to compensate for the poor investor protection from the weak legal system. We note that in both equations 1 and 2 the coefficient of the liability of directors, shareholder suit, disclosure and disclosure has strong and positive contribution to economic growth but the contribution is not significant. This indicates that after including the change in the legal system the resulting change in director's liability, shareholder suit as well as disclosure and transparency on economic growth remains insignificant. These findings seem to that relevant institutions need to review and consolidate the relationship between corporate governance and the legal system in order promotes economic growth in countries in the upper middle income.

The findings in model 3 indicate that the inclusion of good governance has an inconsistent influence on the effect of corporate governance on economic growth. For instance the addition of good governance decreases the negative effect of protection of minority as well efficacy of the board on economic growth. This suggests that there role of protection of minority shareholder and efficacy of the board on economic growth is improved by the inclusion of the good governance to the legal system. The findings also show that the addition of good governance diminishes the positive effect of director liability, shareholder suit, disclosure and transparency although the effect on economic growth still remains insignificant. This indicates that the presence of good governance has inconsistent effect on protection of minority shareholder, director liability, and efficacy of the board, disclosure and transparency and in turn all these corporate governance variables matters for economic growth. For example we note that investor protection, efficiency of the legal framework and political stability all have a strong and significant positive influence on economic growth at 1% significant level. This means that an increase in investor protection and political climate has strong positive contribution to economic growth in countries in the upper middle region. We also note that an increase in control of corruption has strong and significant negative effect on economic growth. The coefficient of R^2 for model 3 is 0.30 compared to 0.051 for model 1. This indicates that corporate governance alone it cannot explain the changes in economic growth, however corporate governance combined with the legal systems ad good governance it explain 30% of the changes in economic growth. This justifies the conclusion that corporate governance on its own it cannot drive economic growth instead it requires the support of have a sound legal systems and good governance.

We observed that, in model 4 after the addition of variables for financial development has inconsistent influence on the effect of corporate governance on economic growth despite the effect being insignificant. The findings reveal that with the exception of protection for minority shareholder all the remaining variables of corporate governance have strong negative insignificant effect on economic growth. The findings Model 5 show a similar trend that corporate governance continues to have an inconsistent and insignificance on economic growth after including the effect of macroeconomic fundamentals. Model 6 show high variations in the effect of corporate governance on economic growth after considering the nested effect of cross country difference in legal system, good governance; financial development and macroeconomic environment were considered sequentially. We note the coefficient of protection minority of shareholder, director liability, shareholder suit , disclosure and transparency as well efficacy of the board are estimated at -181.693, 58.697, 72.082 , 65.260,-0.869 respectively although they all remain insignificant after accounting for the individual country specific variation in the institutional and macroeconomic fundamentals. These findings suggest that the role of corporate governance in economic growth is determined by cross country differences in the legal system, good governance, financial development and macroeconomic fundamentals.

Overall the coefficient for R^2 is estimated at 0.051, 0.223, 0.267, 0.302, 0.336 and 0.422 this indicate that corporate governance alone only explains 0.05% of the changes in economic growth. The findings further reveal that indicates the corporate governance, legal systems, good governance, financial development, macroeconomic fundamentals and unobserved country specific differences jointly explanations 42,2% of the observed variations in economic growth. It is evident from these findings that, corporate governance alone is not adequate to explain economic growth in countries in the upper income group in the region without taking into account country specific differences. This entails that is need to take into account country specific differences corporate governance, the legal system, good governance, financial development and macroeconomic fundamentals. The coefficient for adjusted R^2 are estimated at 0.172, 0.044, 0.035, 0.034 and 0.085, all this indicates that changes in corporate governance, the legal system, good governance, financial development, macroeconomic fundamentals and unobserved country specific differences does not explain much of the observed changes in economic growth in upper income group income levels.

Table 5.21: Estimates of fixed effects for corporate governance and economic growth in lower middle income group level countries.

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Protection of minority shareholder	-13.833	2.848	1.827	16.456	9.362	-23.841
Director liability	4.658	0.489	0.575	-4.835	-2.326	8.611
Shareholder suit	4.879	0.165	0.224	-4.873	-1.791	10.476
Disclosure and Transparency	5.079	0.663	0.823	-4.139	-1.619	9.756
Efficacy of the board	0.056	-0.417	-0.703	-1.200	-1.377	-1.770
Legal rights		0.588***	0.564***	0.609**	0.245	0.179
Property rights		-0.992	-0.800	-2.712***	-1.468	-1.723
Judicial prudence		0.567	0.317	0.697	-0.302	-0.296
Investor protection		-3.955***	-2.808	-2.240	-3.475	-4.921
Efficiency of the legal framework				0.030	-0.037	0.789
Political Stability			0.001	1.089	2.553	0.791
Government Effectiveness				0.185	0.269	1.264
Voice and Accountability				0.292	-1.711	1.121
Control of Corruption			0.017	0.385	0.832	-2.187
Rule of Law			-0.830	1.626	-0.704	-1.791
Regulatory Quality			-1.317	-1.858**	-0.051	-0.092
Financing through market					2.040***	1.999
Regulation of securities exchange					0.418	1.516
Gross national saving % GDP						0.045
Foreign direct investment						0.035
inflation deflator % GD						0.000
_Icountry_3						0.032
_Icountry_4						-4.351
_Icountry_8						-7.660
_Icountry_9						-3.852
_Icountry_10						-0.679
_Icountry_14						0.190
_Icountry_15						-1.818
_Icountry_16						
_Icountry_19						
_Icountry_22						
_Icountry_26						
Constant	0.778	4.534	3.716	5.167	5.190	8.354
F	2.240	5.590	0.350	3.040	1.230	0.140
R^2	0.162	0.451	0.475	0.537	0.620	0.631
R^2 adjusted		0.289	0.023	0.063	0.083	0.010
N	64	64	64	64	64	64

***, **, * represents significant level at 1%, 5%, 10% respectively

The results in table 5.21 show some interesting trends. The findings reveal that corporate governance has insignificant effect on economic growth on its own and even after accounting for legal systems, good governance, financial development, macroeconomic fundamentals and individual country specific difference We note that the coefficient for R^2 are estimated at 0.162, 0.451, 0.475, 0.537, 0.620 and 0.631 indicating that change in corporate governance, legal systems, good governance, financial development, macroeconomic fundamentals and country specific differences jointly explain 63.1% of the changes in economic growth in middle income countries. A further analysis of the adjusted coefficient for R^2 show that in changes in corporate governance, legal systems, good governance, financial development,, macroeconomic fundamentals and country specific differences individual do not have an explanatory power of economic growth. This suggests that the changes in the institutional and macroeconomic fundamentals under investigation might have been insignificant to contribute to a change in economic growth.

This model indicates that almost all corporate governance variables have insignificant positive effect on economic growth. Results in model 1 indicate that the effect of all corporate governance variables with the exception of protection of minority shareholders on economic growth is positive though not significant. We note that in this model the coefficient for protection of minority shareholders strengthens to 2.848 whilst director liability, shareholder suit, disclosure and transparency, efficacy of the board decline to 0.489, 0.165, 0.663 and -0.417 in model 2.

Table 5.22 Estimates of fixed effects for corporate governance and economic growth in lower income group level countries

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
	-42.751	76.890	-56.439	470.560	899.710	792.523
Protection of minority shareholder	14.255	-26.555	18.441	-160.982	-306.041	-270.101
Director liability	14.306	-25.110	19.633	-154.330	-295.499	-259.682
Shareholder	14.890	-25.804	19.904	-159.119	-304.711	-270.007
Disclosure and Transparency	-2.686	-4.105	-2.985	0.237	0.878	1.733
Efficacy of the board		0.501	-0.333	-1.060	-0.822	-0.850
Legal rights		-5.053	-6.115	-10.708	-11.286	-10.584
Property rights		1.678	2.353	5.004	5.225	3.790
Judicial independence		0.202	1.360	1.703	-1.100	-0.283
Investor protection		3.101	-0.058	-2.900	-3.959	-3.667
Efficiency of the legal framework			3.058	3.392	2.720	3.073
Political Stability			-0.514	-0.764	-1.215	-1.214
Government Effectiveness			1.792	-1.768	-1.355	-1.138
Voice and Accountability			1.687	13.704	23.417	20.467
Control of Corruption			-2.053	-3.312	-3.465	-3.475
Rule of Law			-1.604	-2.782	-5.284	-3.166
Regulatory Quality				-5.196	-4.768	-4.410
Financing through market				8.495	9.309	9.478***
Regulation of securities					-0.123	-0.132
Gross national saving % GDP					0.000	0.000
Foreign direct investment					-0.166	-0.144
inflation deflator % GD						6.072
_Icountry_3						
_Icountry_4						
_Icountry_8						
_Icountry_9						
_Icountry_10						
_Icountry_14						
_Icountry_15						
_Icountry_16						
_Icountry_19						
_Icountry_22						
_Icountry_26						
Constant	12.197	28.639	21.481	53.844	93.263	85.489
F	0.740	1.460	0.800	1.780	0.400	0.140
R^2	0.113	0.320	0.463	0.561	0.599	0.603
R^2 adjusted		0.207	0.143	0.098	0.038	0.005
N	35	35	35	35	35	35

***, **, * represents significant level at 1%, 5%, 10% respectively

Corporate governance has insignificant effect on economic growth in all the equation. The coefficients of R^2 suggesting that corporate governance alone explain only 11.3% of the changes in economic growth.in lower income group countries. Further analysis show the model 6 has the highest coefficient of R^2 estimated at 0.603. This indicates that country specific differences on corporate governance legal systems, good governance, financial development and macroeconomic fundamentals jointly provide the best explanation of the changes in economic growth in lower income countries in the region. The coefficient for corporate protection for minority shareholders is 792.523 and insignificant. This indicates that a unit change in protection of minority shareholders has an insignificant effect on economic growth. This is an indication that continued increase in measures that promote protection of minority shareholders in companies in countries in the lower income group has the potential to increase economic growth these economies. It also indicates that there might be a need to increase the level of investor protection in individual countries taking into account individual country specific differences.

Further analysis revealed that the coefficient of director liability, shareholder suit, disclosure and transparency as well as board efficacy are estimated at -270.101, -259.682, -270.007 and 1.733 respectively and are all insignificant. This indicates that with the exception of exception of efficacy of the board and director liability, shareholder suit, disclosure and transparency all have strong and negative insignificant effect on economic growth. This evidence suggests that in lower income countries in the region corporate governance has an insignificant effect on economic growth because of time invariant unobserved individual country specific factors that are related to corporate governance, legal systems, good governance, financial development and good governance. This indicates that in order to strengthen the role of corporate governance in lower income countries policy makers may need to take into consideration first the country specific differences that do not vary over time but are correlated to corporate governance and all the remaining additional variables. The coefficient of adjusted R^2 shows that changes in corporate governance and factors in the institutional and macroeconomic fundamentals have no significant explanation of economic growth. This suggest that changes in that occur in corporate governance, legal systems, good governance, financial development and macroeconomic fundamentals have not been adequate to have significant effect on economic growth.

In attempt to improve our understanding of the relationship between corporate governance and economic growth this study also examined aggregated composite measures of corporate governance, legal systems, good governance, financial development and macroeconomic fundaments. The findings on OLS and LDSV using aggregated variables are presented below.

5. 9 Aggregated composite measures

In an attempt to enhance its empirical findings used aggregated measures to assess the effect corporate governance as well as the other additional variables on economic growth. The section that follows presents findings on the aggregated composite measures.

5.9.1 Determining the nature of relationship between corporate governance and economic growth

Table 5.23: OLS estimates for aggregated corporate governance and economic growth

	Model 1	Model 2	Model 3	Model 4	Model 5
agg_cg	-0.124	-0.391	-0.375	-0.317	-0.322
agg_leg		0.328	0.404**	0.541**	0.521**
agg_gg			-0.139	-0.158	-0.145
agg_fd				-0.168	-0.177
agg_mf					0.093
constant	0.007	0.015	0.013	0.011	0.011
F	0.41	2.89	1.17	1.39	0.98
R^2	0.007	0.034	0.0398	0.051	0.054
R^2 adjusted		0.026	0.006	0.011	0.003
N	195	195	195	195	195

Agg_cg represent aggregated corporate governance , Agg_lg is aggregated legal system , Agg_gg is aggregated good governance , Agg_fd is aggregated financial development , Agg_mf represent aggregated macroeconomic fundamentals ***, **, * represents significant level at 1%, 5%, 10% respectively

As can be seen in Table 5.23 the coefficient for R^2 is very low estimated at suggesting 0.0069, 0.0335, 0.0398, 0.051 and 0.0542 in model 1 to 5 respectively. This indicate that the observed aggregated variables of corporate governance as well aggregated variables of the legal system, aggregated variables of good governance, aggregated variables of financial development and aggregated macroeconomic fundamentals all do not have the explanatory power to explain the changes in economic growth. The findings show that after the addition of good governance the study found that aggregated corporate factors have negative insignificant effect on economic growth. In model 4 the study found that corporate governance continues to have an insignificant influence on economic growth even after the inclusion of financial development. After the inclusion of macroeconomic fundamentals the study found that corporate governance continues to have an insignificant impact on economic growth. The evidence suggests that corporate governance has a consistent negative effect on economic growth despite the inclusion of aggregated variables the legal system, aggregated good governance, aggregated financial development and aggregated macroeconomic fundamentals separately of jointly. This indicates that corporate governance jointly combined with the institutional and macroeconomic fundamentals it explains less than 0.05 of the changes in economic growth. Further analyses show that coefficient for adjusted R^2 is estimated at 0.026, 0.0063, 0.0112 and 0.0033. This indicates that changes that took place in corporate governance, legal system, good governance, financial development and macroeconomic fundamentals variables under investigation were not sufficient to bring a change in economic growth.

5.9.2 Comparison by income group level

This section present findings on the relationship between corporate governance and economic growth using aggregated variables of corporate governance, the legal system, good governance, financial development and macroeconomic fundamentals.

Table 5.24: OLS estimates for aggregated corporate governance and economic growth upper middle income group level countries

	Model 1	Model 2	Model 3	Model 4	Model 5
agg_cg	-0.234	-0.492	-0.486	-0.478	-0.473
agg_leg		0.533***	0.547***	0.707***	0.719***
agg_gg			-0.035	-0.047	-0.056
agg_fd				-0.193	-0.196
agg_mf					0.159
constant	0.094	0.180	0.175	0.133	0.159
F	0.410	7.030	0.040	0.720	0.770
R^2	0.014	0.084	0.084	0.096	0.102
R^2 adjusted		0.070	0.000	0.011	0.006
N	94	94	94	94	94

Agg_cg represent aggregated corporate governance , Agg_lg is aggregated legal system , Agg_gg is aggregated good governance , Agg_fd is aggregated financial development , Agg_mf represent aggregated macroeconomic fundamentals ***, **, * represents significant level at 1%, 5%, 10% respectively

The OLS estimates for developed countries indicate that aggregated corporate governance has negative and insignificant effect on economic growth in countries in the upper income group level. We note that in model 1 aggregated variables of corporate governance holding everything constant have negative insignificant effect on economic growth in countries in the upper income group. This study found that after the addition of the aggregated legal system worsen the negative effect of aggregated corporate governance on economic growth. One possible reason for this could be that increase in aggregated legal systems generates the pressure for improvement in aggregated corporate governance and attempts to increase corporate governance beyond their current or previous standard that could result in companies incurring high costs that erode the performance of company and negates economic growth. Contrary to these findings Claessens and Yortoglou (2013) found that the legal system improves corporate governance and contribute to economic growth in developed countries.

In model 3 the findings show that, the inclusion of aggregated good governance further increases the negative influence of aggregated corporate governance on economic growth. This implies that, the aggregated good governance leads aggregated corporate governance to have a negative effect on economic growth. We note that even after the inclusion of aggregated variables of financial development and aggregated variables of macroeconomic fundamentals, the aggregated corporate governance has no impact on economic growth in countries in the upper middle income. This entails that aggregated corporate governance has an insignificant negative effect on economic growth regardless even after taking into account the aggregated variables of the legal systems, good governance, financial development and economic growth.

Table 5.25: OLS estimates for aggregated corporate governance and economic growth in the lower middle income group level countries

	Model 1	Model 2	Model 3	Model 4	Model 5
agg_cg	0.382	0.470	0.721	0.709	0.675
agg_leg		-0.104	-0.193	-0.222	-0.303
agg_gg			-0.326	-0.323***	-0.181
agg_fd				0.034	0.014
agg_mf					0.233***
constant	-0.082	-0.076	-0.031	-0.033	0.088
F	1.470	0.080	3.390	0.030	5.360
R^2	0.113	0.114	0.182	0.182	0.224
R^2 adjusted		0.001	0.0683	0.001	0.042
N	66	66	66	66	66

Agg_cg represent aggregated corporate governance , Agg_lg is aggregated legal system , Agg_gg is aggregated good governance , Agg_fd is aggregated financial development , Agg_mf represent aggregated macroeconomic fundamentals ***, **, * represents significant level at 1%, 5%, 10% respectively

The findings in Table 5.25 show that, aggregated corporate governance has a positive but insignificant effect on economic in countries in the lower middle income group. Overall the coefficient of aggregated variables of corporate governance in model 2, 3, 4 and 5 are all positive and not significant. This demonstrates that aggregated corporate governance has no significant impact on economic growth even though aggregated variables of the legal system, good governance, financial development and macroeconomic fundamentals are included. Further analysis show that, the coefficient for R^2, in model 5 is estimated at 0.224. This is indicate that aggregated corporate governance combined together with aggregated legal system, aggregated good governance, aggregated financial development and aggregated macroeconomic fundamentals they all do not have the capacity not explain the observed economic growth in middle income group level countries. Similarly, the adjusted coefficient of R^2 are estimated at 0.001, 0, .0683, 0.001 and 0.042, this further indicates that changes in aggregated corporate governance joined with changes in aggregated legal systems, aggregated good governance, aggregated financial development and aggregated macroeconomics fundamentals does not have the power to explain the observed changes in economic growth.

Table 5.26: OLS estimates for aggregated corporate governance and economic growth in lower income level group countries

	Model 1	Model 2	Model 3	Model 4	Model 5
agg_cg	-0.417**	-0.736**	-0.203	-0.062.	0.170
agg_leg		0.285	-0.642	-0.453	-0.587
agg_gg			0.791	0.642	0.883
agg_fd				-0.231	-0.125
agg_mf					-0.66171***
constant	-0.040	-0.012	-0.150	-0.067	-0.201
F	18.44***	0.680	2.000	1.440	5.840
R^2	0.091	0.112	0.148	0.162	0.191
R^2 adjusted		0.020	0.036	0.015	0.029
N	35	35	35	35	35

Agg_cg represent aggregated corporate governance , Agg_lg is aggregated legal system , Agg_gg is aggregated good governance , Agg_fd is aggregated financial development , Agg_mf represent aggregated macroeconomic fundamentals ***, **, * represents significant level at 1%, 5%, 10% respectively

The finding in Table5.26 for OLS estimates in lower income level above show that a change in aggregated variables of economic growth has weak negative significant effect on economic growth holding everything constant. In model 2 the results indicate that aggregated variables of corporate governance have a weak negative and significant effect on economic growth after the inclusion of the aggregated legal sysytem. In particular the findings indicate that the addition of aggregated variables of the legal systems has worsened the effect of corporate governance on economic growth in lower income countries. Corporate governance continues to have insignificant influence on economic growth after the inclusion good governance, financial development and macroeconomic fundamentals. This result provides important information that countries in lower income group that develop corporate governance are likely to strengthen company performance and enhance economic growth. The coefficient for

R^2 for lower income group countries are estimated at 0.091, 0.112, 0.148, 0.162 and 0.191 showing that changes in aggregated corporate governance , aggregated legal systems , aggregated good governance , aggregated financial development and aggregated macroeconomic fundamentals jointly have significant explanation of economic growth. The adjusted coefficients for R^2 are estimated at; 0.020, 0.036, 0.015 and 0.029 showing that changes in aggregated corporate governance together with the changes in institutional and macroeconomic fundamentals do not explain the changes observed in economic growth.

5.9.3 Comparison by origin of legal law

The next section explores the nature of relationship between corporate governance and economic growth using aggregated data sets and categorising data according to the origin of law of the countries.

Table 5.27 OLS estimates for aggregated corporate governance and economic growth in countries with civil law legal origins

	Model 1	Model 2	Model 3	Model 4	Model 5
agg_cg	-0.249	-0.388	-0.328	-0.369	-0.321
agg_leg		0.528**	0.813**	0.878**	0.862**
agg_gg			-0.434**	-0.386	-0.425
agg_fd				-0.144	-0.100
agg_mf					0.318
constant	-0.06	0.121	0.184	0.134	0.228
F	0.22	3.73	3.45	1.02	0.71
R^2	0.013	0.088	0.1452	0.154	0.170
R^2 adjusted		0.075	0.057	0.001	0.016
N	92	92	92	92	92

Agg_cg represent aggregated corporate governance , Agg_lg is aggregated legal system , Agg_gg is aggregated good governance , Agg_fd is aggregated financial development , Agg_mf represent aggregated macroeconomic fundamentals ***, **, * represents significant level at 1%, 5%, 10% respectively

The results in Table 5.27 indicate that aggregated corporate governance on its own it has a negative and insignificant weak effect on economic growth in common law countries. In model 2 after the inclusion of the aggregated legal system the findings show that the coefficient of aggregated corporate governance decline from -0.249 in model 1 to -0.388 in model 2. This suggests that the addition of the aggregated legal system results in a deterioration of the negative influence of aggregated corporate on economic growth although the effect is insignificant.

After the addition of good governance in model 3 show that coefficient of aggregated corporate governance remains negative and insignificant. This indicates that role of aggregated corporate governance variables on economic growth is not significantly influenced by aggregated good governance. Model 4 shows that the negative effect of aggregated corporate governance worsens after adding aggregated financial development. Findings in model 5 reveal that, the addition of macroeconomic fundamental decreases the negative effect of corporate governance on economic growth though the impact is insignificant. Based on the coefficients of R^2in model 1 is 0.013. This means that aggregated corporate governance explain 0.01% of the changes in economic growth. Furthermore, the coefficients of R^2,in model 5 is 0.17. This show that aggregated corporate governance, aggregated legal systems, aggregated good governance, aggregated financial development and aggregated macroeconomic fundamentals all jointly explain only 17% of the changes in economic growth. Moreover, the adjusted the coefficients of R^2 in model 2 until 5 are estimated at less than 0.01. This show that changes in aggregated corporate governance aggregated legal system, aggregated financial development and aggregated macroeconomic fundamentals only explain about 0.01% of the changes in economic growth in common law countries. This implies that, there must be other factors that explain 99.99% of the economic growth in countries with civil law origin the region.

5.28: OLS estimates for aggregated corporate governance and economic growth in countries with common law origins

	Model 1	Model 2	Model 3	Model 4	Model 5
agg_cg	-0.137	-0.254	-0.259	-0.977	-0.103
agg_leg		0.137	0.115	0.179	0.170
agg_gg			0.034	-0.019	-0.003
agg_fd				-0.144	-0.157
agg_mf					0.086
constant	0.050	0.032	0 .037	0.036	0.027
F	0.36	0.23	0.11	0.11	0.73
R^2	0.007	0.009	0.01	0.013	0.016
R^2 adjusted		0.003	0.000	0.004	0.004
N	103	103	103	103	103

Agg_cg represent aggregated corporate governance , Agg_lg is aggregated legal system , Agg_gg is aggregated good governance , Agg_fd is aggregated financial development , Agg_mf represent aggregated macroeconomic fundamentals ***, **, * represents significant level at 1%, 5%, 10% respectively

Table 5.28 results show that change in aggregated corporate governance has negative and insignificant effect on economic growth in common law countries. The findings show that, the negative impact of aggregated corporate governance on economic growth increases to -0.254 after the addition of the aggregated legal system in countries with common law origin in the region. Findings show that in the model 5, there is a decline in the coefficient of aggregated corporate governance after the aggregated legal system, aggregated good governance, aggregated financial development and aggregated macroeconomic fundamentals. The study also found that, the coefficient of the R^2 in model 1 for aggregated corporate governance is estimated at 0.007. This indicate that aggregated corporate governance explain 0.07% of the changes in economic growth in common law countries in the region. Further analysis show that the coefficient of the R^2 for models 2 until 5 all estimated at less than 0.01. This indicate that changes in aggregated corporate governance together with the changes in the aggregated legal system, aggregated good governance , aggregated financial development and aggregated macroeconomic fundamentals when taken into consideration explain less than 0.1% of the changes observed in corporate governance.

5.9.4 Comparison by regional block

Aggregated data sets were also used to investigate the influence of corporate governance on economic based on the regional block. The section that follows presents findings based on the economic block category. .

Table 5.29: OLS estimates of aggregated corporate governance and economic growth according to regional block

	East					South					West				
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 1	Model 2	Model 3	Model 4	Model 5	Model 1	Model 2	Model 3	Model 4	Model 5
agg_cg	-0.36	-0.853 **	-0.856***	-0.856**	-0.931**	-0.226	-0.388	-0.38	-0.252	-0.245	0.649	0.508	0.532	0.892	0.928
agg_leg		0.719**	0.653**	0.697**	0.718**		0.195	0.217	0.408	0.401		0.167	0.245	0.316	0.365
agg_gg			0.109	0.107	0.117			-0.041	-0.125	-0.119			-0.199	-0.17	-0.205
agg_fd				-0.045	-0.025				-0.191	-0.185				-0.361	-0.359
agg_mf					-0.173					-0.035					-0.066
constant	0.237	0.318**	0.335**	0.326**	0.314	-0.055	-0.056	-0.056	-0.099	-0.1	0.181	0.181	0.183	0.295	0.318
F	0.66	12.98	0.18	0.03	0.35	1.31	0.48	0.13	0.22	0.05	7.82	0.27	0.66	3.39	0.43
R^2	0.078	0.315	0.319	0.32	0.324	0.015	0.024	0.025	0.033	0.033	0.334	0.098	0.034	0.011	0.066
R^2 adjusted		0.237	0.004	0.001	0.005		0.009	0.001	0.008	0		0.004	0.017	0.05	0.002
N	54	54	54	54	54	75	75	75	75	75	66	66	66	66	66

Agg_cg represent aggregated corporate governance , Agg_lg is aggregated legal system , Agg_gg is aggregated good governance , Agg_fd is aggregated financial development , Agg_mf represent aggregated macroeconomic fundamentals ***, **, * represents significant level at 1%, 5%, 10% respectively

Analysis of the effect of corporate governance using aggregated values in model1 indicates show that the coefficient for aggregated corporate governance remains negative in the east and south whilst it becomes positive in the west region. This evidence suggests that aggregated corporate governance alone is necessary but insufficient to have strong and positive significant effect on economic growth in the south and west region. Similarly, whilst the effect of aggregated corporate governance is strong and positive it does have significant effect on economic growth in the west at 5% significant level. Further analysis shows that the coefficient of aggregated corporate governance has negative and weak a significant on economic growth after including aggregated legal systems in the east and it remains insignificant in the south and west region.

We further note that aggregated legal systems have positive and significant effect on economic growth only in the east region. According to the coefficient test, a unit change in aggregated corporate governance has 0.856 significant effects on economic growth after adding good governance and legal systems to aggregated corporate governance. This evidence indicates that the role of aggregated corporate governance is influenced by the inclusion of legal systems and good systems in that sequence. It implies that the presence of strong legal systems and good governance is a prerequisite for economic growth. Further analysis shows that in model 4 and 5 after including aggregated financial development variable, the coefficient of aggregated corporate governance remains significant although they have different signs. In model 4, the coefficient of aggregated corporate governance has negative and weak effect on economic growth. In model 5 the coefficient for aggregated corporate governance is estimated at -0.931 at 5% significant level, this signifies that aggregated corporate governance has negative and weak impact on economic growth in the countries in the east region. The study found that aggregated corporate governance has insignificant effect on economic growth in countries in the south and west region. The findings in models 2 until 5 for countries in the east region show the aggregated legal system has got a consistent weak positive and statistically significant effect on economic growth at 5% significant level on its own as well as after the inclusion of the other institutional explanatory variables as well as the macroeconomic fundamentals in countries in the east region.

Further analysis show that, the coefficient for R^2 in model 1 until 5 for all the regions all fall below the standard 0.5. This suggests that, changes in the aggregated corporate governance, the aggregated legal system, aggregated good governance, aggregated financial development and aggregated macroeconomic fundamentals do not have the power to explain the changes observed in economic growth in countries across the east, south and west region. Moreover, the findings reveal that the coefficient for R^2 adjusted for all the regions are all very low, and this further confirms that the changes in aggregated corporate governance, aggregated legal system, aggregated financial development and aggregated macroeconomic fundamentals offer insignificant explanation of the changes observed in economic growth in countries across all the region in Sub Saharan Africa. It follows therefore that there must be other factors that explain more than 99.99% of the observed changes in economic growth observed in the region other than aggregated corporate governance, the aggregated legal system, aggregated financial development and aggregated macroeconomic fundamentals. This is an indication that aggregated corporate governance, aggregated legal system, aggregated financial development and aggregated macroeconomic fundamentals have immaterial contribution to economic growth in countries across the east , south and west region.

5.10 Estimation of fixed effects of corporate governance on economic growth

Aggregated data sets were also used to estimates the nature of the relationship between corporate governance and economic growth using fixed effects models. The following sections present findings on the fixed effects estimates of corporate governance on economic growth that were estimated using aggregated data variables.

Table 5.30 Estimates of fixed effects for aggregated corporate governance on economic growth

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
agg_cg	-0.124	-0.391***	-0.375***	-0.317***	-0.322***	-0.329
agg_leg		0.328**	0.404***	0.541***	0.521**	0.480**
agg_gg			-0.139	-0.158	-0.145	0.384
agg_fd				-0.168	0.093	-0.225
agg_mf					0.093	-0.001
_Icountry_2						-0.416
_Icountry_3						0.538
_Icountry_4						0.593
_Icountry_5						-0.843
_Icountry_6						0.921
_Icountry_7						1.001
_Icountry_8						0.865
_Icountry_9						1.761
_Icountry_10						-0.121
_Icountry_11						1.185
_Icountry_12						0.535
_Icountry_13						0.024
_Icountry_14						-0.360
_Icountry_15						0.621
_Icountry_16						-0.069
_Icountry_17						0.117
_Icountry_18						-0.414
_Icountry_19						1.036
_Icountry_20						-0.308
_Icountry_21						0.936
_Icountry_22						0.474
_Icountry_23						-0.054
_Icountry_24						-0.408
_Icountry_25						-0.471
_Icountry_26						0.622
_Icountry_27						0.755
_Icountry_28						1.094
_Icountry_29						0.971
constant	0.007	0.015	0.013	0.011	0.011	-0.373
F	1.340	5.290	1.290	2.240	0.650	2.250
R^2	0.007	0.034	0.040	0.051	0.054	0.320
R^2 adjusted		0.027	0.006	0.011	0.003	0.266
N	195	195	195	195	195	195

Agg_cg represent aggregated corporate governance , Agg_lg is aggregated legal system , Agg_gg is aggregated good governance , Agg_fd is aggregated financial development , Agg_mf represent aggregated macroeconomic fundamentals ***, **, * represents significant level at 1%, 5%, 10% respectively

The findings in Table 5.30 show that in model 1 the coefficient of aggregated corporate governance alone has an insignificant contribution on economic growth. Based on the coefficient for R^2 in model 1 it is estimated at 0.007. This indicate that changes aggregated corporate governance on its own explains 0.7% of the changes in economic growth in countries in the region after taking into consideration country specific differences in corporate governance across countries. The study found that the coefficient of aggregated corporate governance after the inclusion of the aggregated legal system is weak and negative statistically significant effect on economic growth at 1% significant level. This suggests that cross country variations in the aggregated legal system has influence on the effect of aggregated corporate governance on economic growth. The findings reveal that the aggregated legal systems have a weak positive and statistically significant effect on economic growth at 1% significant level. This indicates that cross country differences in the aggregated legal system has significant contribution to economic growth when it is added to aggregate corporate governance.

The findings show the coefficient for aggregated corporate in model 2, 3, 4 and 5 are estimated at -0.391, -0.375,-0.317 and -0.322 and all are statistically significant at 1%. This suggests that individual country specific differences in the aggregated corporate governance when it is combined with the aggregated legal system, aggregated good governance, aggregated financial development as well as aggregated macroeconomic fundamentals they have a lead aggregated corporate governance have a negative significant effect on economic growth. The coefficient for the coefficient for R^2 in all the first five models is less that 0.5 suggesting that changes in aggregated variables of corporate governance and the additional variables only explain a less than 0.5% of proportion of the variability in economic growth . Moreover the coefficient for adjusted for R^2 are estimated at 0.027, 0.006, 0.011,0.003 and 0.266, indicating that changes in aggregated corporate governance, institutional and macroeconomic fundamentals provide little or no signficant explanation about the changes observed in economic growth.

5.10.1 Comparison by origin of the legal law

Aggregated data sets were estimated using fixed effects models to investigate the nature of relationship between corporate governance and economic growth according to the origin of the legal law.

Table 5.31:Estimates of fixed effects of corporate governance on economic growth in civil law origin countries

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
agg_cg	-0.201	-0.388***	-0.328**	-0.369**	-0.321	-0.430
agg_leg		0.588***	0.814***	0.878***	0.862***	1.408
agg_gg			-0.434***	-0.386***	-0.425***	0.255
agg_fd				-0.144***	-0.099	-0.050
agg_mf					0.318	0.101
_Icountry_3						0.612
_Icountry_4						1.3178**
_Icountry_5						-0.940**
_Icountry_6						1.120**
_Icountry_7						1.500**
_Icountry_8						1.065***
_Icountry_9						1.524***
_Icountry_10						-0.782
_Icountry_14						0.115
_Icountry_16						-0.068
_Icountry_19						1.075***
_Icountry_22						-0.896
_Icountry_23						0.006
Constant	-0.06	0.122	0.184	0.134	0.228	0.075
F	1.21	7.330	5.850	0.880	1.630	3.510
R^2	0.013	0.088	0.145	0.154	0.170	0.489
R^2 adjusted		0.075	0.057	0.009	0.016	0.319
N	92	92	92	92	92	92

Agg_cg represent aggregated corporate governance, Agg_lg is aggregated legal system, Agg_gg is aggregated good governance, Agg_fd is aggregated financial development, Agg_mf represent aggregated macroeconomic fundamentals ***, **, * represents significant level at 1%, 5%, 10% respectively

The findings in Table 5.31 show that aggregated corporate governance on its own it does not have an effect on economic growth. The study found that the coefficient for R^2 in model 1 is

0.013. This further indicate that when country specific differences are taken into consideration aggregated corporate governance alone explain 0.13% of the changes observed in economic growth in countries with civil law origin in Sub Saharan Africa. The study found that the coefficient of aggregated corporate governance in model 2 is -0.388 at 1% significant level. This reveal that aggregated corporate governance has a weak and negative significant effect on economic growth after the inclusion of the aggregated the legal system. The findings show that, after the inclusion of aggregated good governance and aggregated financial development, aggregated corporate governance has a weak negative significant effect on economic growth estimated at -0.328 and -0.369% all at 5% significant level respectively. The coefficient for R^2 for models 2, 3 and 4 are estimated at 0.088, 0.145 and 0.154 respectively. This indicates that inclusion of the aggregated legal system, aggregated good governance, aggregated financial development and aggregated financial development does not have the explanatory power to explain the changes in economic growth. It follows that, even though the addition of aggregated variables of legal system, good governance as well financial development have negative significant effect on economic growth, these variable do not have the explanatory power to explain the changes in economic growth.

The study found that the coefficient for R^2 for model 6 is the high tested estimated at 0.489. This indicate that, country specific differences in aggregated corporate governance, the aggregated legal system, aggregated good governance, aggregated financial development, aggregated macroeconomic fundamentals as well as unobserved cross country differences explain 48.9% of the changes in economic growth in countries with civil law origin in the region. Moreover, the coefficient for R^2 adjusted in model 6 is also the highest estimated at 0.319. This means that, the changes in aggregated corporate governance, the aggregated legal system, aggregated good governance, aggregated financial development, aggregated macroeconomic fundamentals as well as unobserved cross country differences explain 31.9% of the changes on economic growth in countries with civil law origin in Sub Saharan Africa.

Table 5.32: Estimates of fixed effects of corporate governance on economic growth in common law origin countries

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
agg_cg	-0.137	0.050	-0.259	-0.098	-0.103	-0.462
agg_leg		0.137	0.115	0.179	0.170	0.288
agg_gg			0.034	-0.019	-0.003	0.233
agg_fd				-0.144	-.1570	-0.344
agg_mf					0.086	-0.032
_Icountry_2						-0.686
_Icountry_11						0.783
_Icountry_12 .						-0.142
_Icountry_13						-0.943
_Icountry_15						0.001
_Icountry_17						-1.182
_Icountry_18						-0.478
_Icountry_20						-0.662
_Icountry_21						0.269
_Icountry_24						-0.221
_Icountry_25						-1.397
_Icountry_26						-0.077
_Icountry_27						-0.034
_Icountry_28						0.587
Constant	0.050	0.033	0.038	0.036	0.027	0.431
F	0.680	0.250	0.040	0.350	0.350	0.570
R^2	0.007	0.009	0.010	0.013	0.017	0.223
R^2 adjusted		0.003	0.000	0.004	0.004	0.206
N	103	103	103	103	103	103

Agg_cg represent aggregated corporate governance , Agg_lg is aggregated legal system , Agg_gg is aggregated good governance , Agg_fd is aggregated financial development , Agg_mf represent aggregated macroeconomic fundamentals ***, **, * represents significant level at 1%, 5%, 10% respectively

Table 5.32 shows that the aggregated coefficient aggregated corporate governance in model 1 has negative and weak insignificant effect on economic growth estimated at -0.137. This indicates that aggregated corporate governance it has an insignificant effect on economic growth in countries with common law legal origin in Sub Saharan Africa. This trend is inconsistent with that observed in studies that focused on developed economics such as La Porta e*t al*, (1997, 1999 and 2009) and Doidge *et al*, 2006). It also contradicts property rights theory and endogenous theory of economic growth. This suggests that the role of aggregated corporate governance in economic growth in countries with common law legal origin in Sub

Saharan Africa taking into account country specific differences may be in contrast to that property rights theory.

The study found that the coefficient of aggregated corporate governance maintains a consistent negative and insignificant effect on economic growth even after the addition of the aggregated legal system, aggregated good governance, aggregated financial development and aggregated macroeconomic fundamentals. The coefficient of the R^2 to 0.007, 0.009, 0.010, 0.013, 0.017 and 0.223.This shows that aggregated corporate governance, after the inclusion of aggregated legal system, aggregated good governance aggregated financial development and aggregated macroeconomic fundamentals at most explain 0.7% of changes in economic growth. This suggests that should be other factors that explain over 99.93% of the changes in economic growth in countries with common law origin in the region. The coefficient for R^2 adjusted is estimated at 0.003, 0.000. 004, 0.004 and 0.206 indicating that changes in aggregated corporate governance, aggregated institutional and aggregated macroeconomic fundamentals all have no power to explain changes on economic growth.

5.10.2 Comparison by income group level

The section that follows presents findings on the fixed effects estimates of the effect of corporate governance as well as the other additional variables on economic growth on economic growth using aggregated data sets based on the income group level.

Table 5.33: Estimates of fixed effects of aggregated corporate governance for upper income group level countries

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
agg_cg	-0.234	-0.492***	-0.486***	-0.478***	-0.473***	-0.185
agg_leg		0.533***	0.547***	0.707***	0.720**	0.509
agg_gg			-0.035	-0.047	-0.056	0.191
agg_fd				-0.193	-0.196	-0.333
agg_mf					0.159**	-0.030
_Icountry_3						0.412
_Icountry_4						0.196
_Icountry_7						0.658
_Icountry_9						1.669
_Icountry_10						-0.166
_Icountry_14						-0.643
_Icountry_15						0.517
_Icountry_16						-0.184
_Icountry_19						0.850
_Icountry_22						0.360
_Icountry_26						0.569
_Icountry_27						0.654
_Icountry_29						0.620
contant	0.094	0.180	0.175	0.133	0.159	-0.273
F	1.28	6.97	0.03	1.12	0.59	1.490
R^2	0.014	0.084	0.084	0.100	0.102	0.286
R^2 adjusted		0.0702	0.0003	0.011	0.006	0.184
N		94	94	94	94	94

Agg_cg represent aggregated corporate governance , Agg_lg is aggregated legal system , Agg_gg is aggregated good governance , Agg_fd is aggregated financial development , Agg_mf represent aggregated macroeconomic fundamentals ***, **, * represents significant level at 1%, 5%, 10% respectively

The findings in model 1 show that aggregated corporate governance has insignificant negative effect on economic growth. Further analysis show that aggregated corporate governance has weak and negative significant effect on economic growth estimated at -0.492, -0.486, -0.478 and -0.47 all at 1% significant level respectively after the addition the aggregated legal system, aggregated good governance, aggregated financial development and aggregated macroeconomic fundamentals. This indicates that aggregated corporate governance has a weak and negative significant effect on economic growth after taking into account the country specific different in the aggregated components of the institutional environment and macroeconomic factors. The study show that coefficient for R^2 for model 1, 2, 3, 4 and 5 is estimated at 0.013, 0.08, 0.084, 0.100 and 0.102. This show that aggregated corporate governance, aggregated legal system, aggregated good governance, aggregated financial development and aggregated macroeconomic fundamentals they all have no explanatory power to explain the changes in economic growth in countries with common law legal origin in Sub Saharan African countries even after the country specific differences were taken into account. It mean that aggregated corporate governance, aggregated components of the institutional environment as well as macroeconomic fundamentals explain less than 1% of the changes in economic growth in countries with common law origin. This proves that the corporate governance together with the legal system, good governance, financial development and macroeconomic environment have significant contribution to economic growth in Sub Saharan African countries with common law.

Table 5.34: Estimates of fixed effects for aggregated corporate governance middle income group level countries

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
agg_cg	0.382**	0.470	0.721***	0.709**	0.675**	-0.325
agg_leg		-0.104	-0.193	-0.222	-0.303	-0.171
agg_gg			-0.326***	-0.323***	-0.181	0.361
agg_fd				0.034	0.014	0.076
agg_mf					0.233**	0.110
_Icountry_5						-2.218***
_Icountry_11						0.071
_Icountry_12						-0.687
_Icountry_13						-1.046
_Icountry_17						-1.148
_Icountry_18						-1.120
_Icountry_21						-0.407
_Icountry_23						-1.483***
_Icountry_25						-1.549***
constant	-0.082	-0.076	-0.031	-0.033	-0.088	0.796
F	8.110	0.070	5.170	0.040	3.240	3.830
R^2	0.113	0.114	0.182	0.182	0.224	0.537
R^2 adjusted		0.001	0.068	0.001	0.042	0.313
N	66	66	66	66	66	66

Agg_cg represent aggregated corporate governance, Agg_lg is aggregated legal system, Agg_gg is aggregated good governance, Agg_fd is aggregated financial development, Agg_mf represent aggregated macroeconomic fundamentals ***, **, * represents significant level at 1%, 5%, 10% respectively

The results in Table 5.34 show that aggregated variables of corporate governance have positive and weak significant effect on economic growth at *ceteris paribus*. The coefficient of aggregated corporate governance after adding legal systems is insignificant in model 2. Model 3 shows a marginal increase in the coefficient aggregated corporate governance after adding good governance and it has significant effect on economic growth. This suggests that aggregated corporate governance has positive influence on economic growth after the addition of good governance to the aggregated legal system. Looking at model, 4 and 5 aggregated corporate governance maintains a positive and significant effect on economic growth. This implies that aggregated corporate governance maintains a strong and positive effect on economic growth after the inclusion of aggregated financial development and aggregated macroeconomic fundamentals in countries in the middle income group level.

The findings show that model 6 has the highest coefficient of R^2 estimated at 0.537 whilst all the remaining ones are less than 0.5. This indicates that the country specific differences explain 53.7% of observed variations in economic growth. Further the model 6 has the highest coefficient of R^2 adjusted estimated at 0.313. This implies that after changes in country specific differences explain 31.3% of the changes in economic growth. This indicates that countries in the middle income level group can improve their economic growth if they can take into consideration country specific differences in legal system, good governance, financial development and macroeconomic fundamentals in their economies.

5.35: Estimates fixed effects for aggregated corporate governance lower income group level countries

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
agg_cg	-0.417	-0.736	-0.203	-0.061	0.170	-1.124
agg_leg		0.285	-0.642	-0.453	0.587	-0.136
agg_gg			0.791	0.642	0.883	1.998
agg_fd				-0.231	-0.125	0.226
agg_mf					-0.662	-0.765
_Icountry_2						-1.787
_Icountry_6						1.129
_Icountry_8						0.293
_Icountry_20						-1.245
constant	-0.040	-0.012	-0.150	-0.067	-0.201	-0.115
F	3.310	0.730	1.320	0.520	1.030	1.230
R^2	0.091	0.112	0.148	0.148	0.162	0.325
R^2 adjusted		0.020	0.036	0.036	0.015	0.133
N	35	35	35	35	35	35

Agg_cg represent aggregated corporate governance , Agg_lg is aggregated legal system , Agg_gg is aggregated good governance , Agg_fd is aggregated financial development , Agg_mf represent aggregated macroeconomic fundamentals ***, **, * represents significant level at 1%, 5%, 10% respectively

The findings in Table 5.35 show that the coefficient for aggregated variables in model 1 is estimated at -0.417. This means that aggregated corporate governance has negative and insignificant effect on economic growth in countries in the lower income group level in the region. This indicates that aggregated variable of corporate governance has negative and insignificant effect on economic growth. Model 2 indicates that that after adding aggregate variable of legal systems there is an increase in the negative effect of aggregated corporate governance on economic growth. Looking at model 3, the negative effect of corporate governance on economic growth decreases and is remains insignificant after adding good governance. This suggests that upper income level have good governance that has positive influence on effect of corporate governance on economic growth its influence is not adequate to improve the role of corporate governance on economic growth. Based on model 4, the addition of aggregated variable legal system, good governance, financial development and macroeconomic fundamentals all have insignificant influence on the effect of corporate governance on economic growth. The coefficient for $R^{2,}$ are estimated at 0.091, 0.112, 0.148,0.148,0.162 and 0.325 showing that all set of explanatory variables do not have an adequate to explain economic growth. This means that changes in corporate governance, institutional and macroeconomic fundamentals have little power to explain the observed economic growth. The coefficient for R^2 adjusted is estimated 0.020, 0.036, 0.036, 0.015 and 0.133. This means that changes in aggregated variables for corporate governance, legal systems, good governance, financial development and macroeconomic fundamentals do not explain the changes in economic growth in countries in the lower income group level in Sub Saharan Africa.

5.10.3 Comparison by regional block

The section that follows presents findings on the fixed effects estimates of aggregated corporate governance as well as the additional set of explanatory variables on economic growth using aggregated data based on the regional block.

Table 5.36: Estimates of fixed effect or corporate governance in economic growth in countries in the east region

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
agg_cg	-0.360***	-0.853***	-0.856***	-0.8557***	-0.9308***	-0.4072
agg_leg		0.719***	0.653***	0.697***	0.719***	0.133
agg_gg			0.112	0.107	0.1172	0.1383
agg_fd				-0.045	-0.025	-0.039
agg_mf					-0.173	-0.343
_Icountry_4						-0.577
_Icountry_6						-0.179
_Icountry_9						0.885
_Icountry_12						-0.31
_Icountry_17						-0.854
_Icountry_22						0.212
constant	0.237***	0.318***	0.335***	0.326***	0.314***	0.367
F	4.4	17.661***	0.250	0.0711	0.33	3.35
R^2	0.078	0.315	0.319	0.320	0.324	0.574
R^2 adjusted		0.237	0.004	0.001	0.005	0.246
N	54	54	54	54	54	54

Agg_cg represent aggregated corporate governance , Agg_lg is aggregated legal system , Agg_gg is aggregated good governance , Agg_fd is aggregated financial development , Agg_mf represent aggregated macroeconomic fundamentals ***, **, * represents significant level at 1%, 5%, 10% respectively

Table 5.36 reports 6 regression models of aggregated variables of corporate governance, legal systems, good governance, financial development and macroeconomic fundaments as well as country as dummy variable. The results indicates that coefficients for the aggregated variable for corporate governance is has the negative sign and weaker significance effect on economic growth in model, 1, 2, 3, 4, 5 on the other hand it only becomes negative insignificant in model 6. This means that aggregated corporate governance has consistent negative and weak significant effect on economic growth after adding the aggregated legal systems, aggregated good governance, and aggregated financial development and aggregated macroeconomic fundamentals. It also indicates that aggregated corporate governance has no significant effect on economic growth even after taking into account country specific differences that are correlated to the explanatory variables and do not vary overtime. The findings show that on model 6 has the highest coefficient for R^2 estimated at 0.57. This show us that 56% of the changes observed in economic growth is explained by the change in aggregated corporate governance after including aggregated variables of legal system, good governance, financial development and macroeconomic fundamentals and country specific differences. The coefficients of the R^2 adjusted are estimated at 0.237, 0.004, 0.001, 0.005 and 0.246 thus showing that combined changes in the block of explanatory variables have no power to explain economic growth.

Table 5.37: Estimates of fixed effect or corporate governance in economic growth in countries in the south region

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
agg_cg	-0.226	-0.388	-0.38	-0.252	-0.245	-0.68
agg_leg		0.195	0.217	0.408	0.401	0.351
agg_gg			-0.041	-0.125	-0.119	-0.716
agg_fd				-0.191	-0.185	-0.555
agg_mf					-0.035	-0.136
_Icountry_2						1.987
_Icountry_13						0.281
_Icountry_14						-0.397
_Icountry_15						1.322
_Icountry_18						2.581
_Icountry_19						1.474
_Icountry_20						1.579
_Icountry_24						2.665
constant	-0.055	-0.056	-0.056	-0.099	-0.1	-0.809
F	1.1	0.69	0.03	0.6	0.02	1.58
R^2	0.015	0.024	0.025	0.033	0.033	0.237
R^2 adjusted		0.009	0.001	0.008	0	0.204
N	75	75	75	75	75	75

Agg_cg represent aggregated corporate governance , Agg_lg is aggregated legal system, Agg_gg is aggregated good governance, Agg_fd is aggregated financial development , Agg_mf represent aggregated macroeconomic fundamentals ***, **, * represents significant level at 1%, 5%, 10% respectively

The results in Table 5.37 show that the coefficient of corporate governance is negative and insignificant indicating that aggregated variables of corporate governance have a strong negative insignificant impact on economic growth in countries in the south region. The coefficients for aggregated corporate governance in negative and insignificant in model 2,3, 4,5 and 6. This indicate that the aggregated corporate governance negative insignificant effect on economic growth even after the inclusion of aggregated legal systems, aggregated good governance, aggregated financial development and macroeconomic fundamentals. The results show that the coefficients the R^2 in all the models are very low this signifies that aggregated variable of corporate governance jointly combined with aggregated legal system, aggregated good governance, aggregated financial development and aggregated macroeconomic fundamentals play a very limited role in economic growth in countries in south. This evidence is important to regional bodies that seek to promote economic growth in countries in the south. As can be seen in countries in the south region an increase in corporate governance weakens economic growth although the effect is insignificant.

Table 5.38: Estimates of fixed effect or corporate governance in economic growth in countries in the west region

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
agg_cg	0.649***	0.508	0.532	0.892***	0.928***	0.293
agg_leg		0.167	0.245	0.316	-0.205	1.117***
agg_gg			-0.199	-0.17	-0.205	0.971**
agg_fd				-0.17	-0.066	-0.078
agg_mf				-0.361**	-0.066	0.413
_Icountry_5						-1.548***
_Icountry_7						2.678***
_Icountry_8						1.534***
_Icountry_10						-0.244
_Icountry_11						-0.898
_Icountry_16						0.22
_Icountry_21						-0.486
_Icountry_23						0.074
constant	0.181	0.181	0.183	0.295***	0.318	0.235
F	7.56	0.106	1.23	3.72	0.13	2.04
R^2		0.11	0.127	0.177	0.179	0.397
R^2 adjusted		0.004	0.017	0.05	0.002	0.218
N	66	66	66	66	66	66

Agg_cg represent aggregated corporate governance , Agg_lg is aggregated legal system , Agg_gg is aggregated good governance , Agg_fd is aggregated financial development , Agg_mf represent aggregated macroeconomic fundamentals ***, **, * represents significant level at 1%, 5%, 10% respectively

The results indicate that the coefficient for aggregated corporate governance in model one is estimated is 0.649 at 1% significant level. This indicates that countries in the west, corporate governance have a weak significant influence effect on economic growth. The findings show that aggregated corporate governance is estimated at in model 4 and 5 is estimated at 0.892 and 0.928 and all at 1% significant level. This that, corporate governance also has weak but statistically significant effect on economic growth at 1% only after adding aggregated financial development and macroeconomic fundamentals. In other words, aggregated legal systems, corporate governance and the country specific fixed effects that do not vary over time do not have influence on the effect of corporate governance on economic growth. The coefficient for R^2 the individual country specific corporate governance effects on economic growth after including aggregated variable of the legal, good governance, financial development and macroeconomic fundamental variables it on explains 39.7% of the observed variations in economic growth. This indicates that in the west regions aggregated variables of corporate governance are inadequate to explain economic growth even after including the aggregated institutional and macroeconomic fundamental variables.

In the next section correlation tables are presented in order to show the correlation between corporate governance, the legal system, good governance, financial development, macroeconomic fundamentals and economic growth. Using disaggregated and aggregated date sets. The section will also present findings on the model selection.

Table 5.39 Correlation matrix for corporate governance and economic growth

	GDP	Protection of minority shareholder	Director liability	Shareholder suit	Disclosure & transparency	Efficacy of the board	Agg_cg
GDP	1.000						
Protection of minority shareholder	-0.053	1.000					
Director liability	-0.035	0.848***	1.000				
Shareholder suit	-0.019	0.588***	0.347***	1.000			
Disclosure and transparency	0.396	0.117***	-0.269**	0.347***	1.000		
Efficacy of the board	0.413	0.369***	0.369***	0.174***	0.206***	1.00	
Agg_gg	-0.075	0.963	0.790	0.547	0.438	0.645	
Legal rights	0.147	0.404***	0.362***	-0.068***	0.403	0.405***	1.000
Property rights	-0.029	0.185***	0.171***	0.062	0.098	0.318***	0.451***
Judicial independence	0.008	0.506	0.624	0.259	-0.043	0.511	0.249***
Investor protection	0.004	0.940***	0.834***	0.537***	0.325***	0.379***	0.897***
Efficiency of the legal framework	0.049	0.467***	0.540***	0.21***1	0.038	0.596***	0.555***
Agg_lg	0.048	0.680***	0.700***	0.389	0.093***	0.600***	0.737***
political stability	0.086	0.167***	0.229***	0.148	-0.113***	0.245***	0.196***
Government effectiveness	0.455***	0.222***	0.476***	0.386***	-0.070***	0.357***	0.465***
Voice and Accountability	-0.093***	0.487***	0.418***	0.428***	0.036***	0.260***	0.482***
Control of control	-0.093	0.256	0.393	0.130	-0.122	0.310	0.277
Rule	0.197	0.280	-0.006***	0.056	0.135	0.931	0.194
Regulatory quality	-0.093	0.508***	0.513***	0.366***	0.013	0.257	0.488
Agg_gg	-0.050	0.475***	0.530***	0.333***	-0.046	0.358	0.482
Financing through market	-0.060	0.498	0.438	0.329	0.131***	0.658***	0.614***
Regulation of securities	-0.045	0.531	0.507	0.357	0.071	0.691	0.645
Agg_fd	-0.054	0.532***	0.488***	0.355***	0.104***	0.698***	0.651***

Gross national saving	-0.033	0.093	0.166	0.061	-0.101	-0.004	0.066
Foreign direct investment	0.013	0.390***	0.323***	0.219***	0.186	0.116	0.367***
Inflation rate	0.133	0.059	0.118***	0.037	-0.068	0.004	0.044
Agg_mf	0.065	0.286***	0.309***	0.167	0.027	0.066	0.255***

***, **, * represents significant level at 1%, 5%, 10% respectively

The correlation matrix Table 5.38 shows that there is no significant relationship between protection of minority shareholder, director liability, shareholder suits, disclosure and transparency as well the efficacy of the board and GDP. These findings further support the main thesis of this study that corporate governance is necessary but on its own it is not adequate to promote economic growth. Findings in Table 5.38 also show that there is no evidence of correlation between disaggregated variables of the legal system, good governance financial development as well as macroeconomic fundamentals and economic growth. Further analysis show that aggregated corporate governance aggregated legal system, aggregated, aggregated good governance, aggregated financial development and aggregated macroeconomic fundamentals all have no significant correlation with economic growth.

5.10.4 Model selection

The section that follows presents results of pooled effect, fixed effects, between and random effect model that were estimated for corporate governance, legal systems, good governance, financial development and macroeconomic fundamentals.

Table 5.40 : Panel A: Comparison of OLS, FE, BE, RE for corporate governance

	OLS	**FE**	**BE**	**RE**
Protection of minority shareholders	-8.610	0.788	-8.313	-8.015
Director liability	2.906	-0.578	2.755	2.642
Shareholder suits	2.906	-0.010	2.799	2.721
Disclosure and transparency	-0.585	0.233	2.742	2.644
Efficacy of the board	-0.585	-0.945	-0.432	-0.655
Constant	7.991	6.6700	6.967	7.991
No of OB	195			
R-squared	0.0187			
Chi 2				
F-statistic	2.21***			
Overall		0.008	0.005	1.676
Between		0.001	0.032	3.264
Within		0.000	0.017	0.209
Rho				
Hausman	0.995			
BP LM	0.001			

***, ** and * indicates significance at 1%, 5% and 10% respectively

The Hausman coefficient is estimated at 0.995 that is p<0.05, this signifies that we failed to reject the null hypothesis that the preferred model is random effect. This indicates that the random affect model is the suitable model meaning that we have a reason to believe that there are individual cross country differences that influence corporate governance that are not correlated to the explanatory variables. The LM test shows that the coefficient is 0.001 that p>0.05 meaning that we reject the null hypothesis and rather accept the alternative hypothesis that random effect is appropriate. This means that unobserved country specific effects that are uncorrelated to the observed effects and the idiosyncratic errors are uncorrelated to any unobserved effects that exist and varies overtime within different countries. These findings indicate that there are cross country differences that are not uncorrelated to protection of minority shareholders, director liability, shareholder suits, and efficacy of the board, disclosure and transparency that have some influence on economic growth. This implies that is the country specific differences in corporate governance variables that explain the variation in economic growth across Sub Saharan African countries. The implications of this is that, an attempt to promote corporate governance with the view of enhancing economic growth must first take into account individual country specific differences in corporate governance that vary overtime

Table 5.41 :Panel C: Comparison of OLS, FE, BE, RE for good governance and economic growth

	OLS	FE	BE	RE
Political stability	0.928^{**}	0.783^{**}	0.997	0.855^{***}
Government effectiveness	-0.158	-0.004	-0.708	-0.164
Voice and accountability	-0.395	4.512^{***}	0.022	-0.145
Control of corruption	-0.863	-0.435	-2.234^{**}	-0.738
Rule of law	0.164^{***}	0.047	1.228	0.101
Regulation quality	-0.321	0.234	-0.372	-0.300
C	4.672^{***}	6.824^{***}	4.460**	4.777^{***}
No of OB	202	202	202	202
R-squared	0.055			
Chi 2				
F-statistic		2.580		
Overall		0.066	0.004	1.419
within		0.041	0.285	3.158
Between		0.004	0.028	0.168
Wald				
sigma u		4.291^{***}	1.419	
sigma e		3.158	3.158	
Rho		0.648	0.168	
Hausman	0.000			
BP LM	0.0006			

*** , ** and * indicates significance at 1%, 5% and 10% respectively

The Hausman test failed to reject the null hypothesis suggest that the fixed effect is the most appropriate. LM test accept the reject the null hypothesis and accept the random effect as the most suitable model. This means that the OLS is the most efficient estimator of the effect of good governance on the relationship between corporate governance and economic growth. This means that effect there is homogeneity in good governance across countries in Sub Saharan Africa. This proves that political stability, government effectiveness, voice and accountability, control of corruption, rule of law, regulation quality is similar in all countries across Sub Saharan Africa. This finding is similar to the findings of the WFE survey that observed that general trend of weak governance in countries in Africa of which Sub Saharan Africa is part (WFE, 2011, 2012, 2013, 2014, 2015)

5.42 : Panel D: Comparison of OLS, FE, BE, RE for financial development

	OLS	FE	BE	RE
Financing through the market	-0.364	-1.506***	0.900	-0.785
Regulation of securities of exchange	0.122	0.452	-0.890	0.381
C	5.820	8.434	5.332	6.239
No of OB	195	195.	195.	195.
R-squared	0.004			
Chi 2				
F-statistic				
within		0.024	0.023	0.023
between		0.000	0.002	0.002
overall		0.004	0.004	0.004
Wald				
sigma u		2.114		1.547
sigma e		3.207		10.288
Rho		0.303		0.004
Hausman		0.255		
BP LM		0.001		

***, ** and * indicates significance at 1%, 5% and 10% respectively

Based on the Hausman and LM test this study found the random effects model explains the variations of financing through the market and regulation of securities observed within countries across the region. The Hausman test failed to reject the null hypothesis suggesting that the fixed effect is the most appropriate. Lagrange Multiplier test rejects the null hypothesis and accept the random effect as the most suitable model. This means that the OLS is the most efficient estimator of the effect of good governance on the relationship between corporate governance and economic growth. This means that there is homogeneity in good governance across countries in Sub Saharan Africa. It entails that, the political stability, government effectiveness, voice and accountability, control of corruption, rule of law, regulation quality is similar in all countries across Sub Saharan Africa. This finding is consistent with the observation of WFE survey that found there is general weak good governance in countries in Africa in general (WFE, 2011, 2012, 2013, 2014, 2015)

Table 5.43: Panel E: Comparison of OLS, FE, BE, RE macroeconomic fundamentals

Gross national savings	-0.012	-0.053	0.013	-0.022
Foreign direct investment	0.000	0.000	0.000	0.000
Inflation	0.049**	-0.005	0.199	0.027
C	4.913	6.113	3.471	5.183
No of OB	190	190	190	190
R-squared	0.019			
Chi 2				
F-statistic				
within		0.013	0.003	
between		0.012	0.062	
overall		0.000	0.016	
Wald				
sigma u		2.057		1.244
sigma e		3.274		3.274
Rho		0.283		0.126
Hausman	0.647			
BP LM	0.001			

***, ** and * indicates significance at 1%, 5% and 10 % respectively

The results in panel E indicate that we fail to reject null hypothesis that the random effect is the most appropriate model. This indicates that individual country specific differences vary over time to explain the effect of gross national savings, inflation and foreign direct investment effect on economic growth. It means that the country specific differences vary over time that are uncorrelated to gross national saving, inflation and foreign direct investment are independent instead but have influence on economic growth. The results reveal that, inflation has weak and positive significant effect on economic growth.

Table 5.44 Aggregated corporate governance, legal, good governance , financial development and macroeconomic fundamental

	OLS	FE	BE	RE
Aggregated corporate governance	-0.322	0.480	-0.228	-0.334
Aggregated legal systems	0.521	0.480	0.544	0.511**
Aggregated good governance	-0.145	0.384	-0.279	-0.044
Aggregated financial development	-0.177	-0.225	-0.202	-0.197
aggregated macroeconomic fundamentals	0.093	-0.001	0.208	0.050
Constant	0.011	0.016	-0.005	0.003
No of OB	195	195	195	195
R-squared				
Chi 2				
F-statistic				
Within		0.049	0.007	0.031
Between		0.000	0.171	0.090
Overall		0.009	0.045	0.049
Wald				
Sigma u		0.642		0.423
Sigma e		0.902		0.902
Rho		0.336		0.180
Hausman		0.403		
BP LM		0.002		

***, ** and * indicates significance at 1%, 5% and 10% respectively

Based on the findings of the Hausman and LM test, the random effects model is the most appropriate model. This implies the role of corporate governance is influence by individual country specific differences in aggregated variables of the legal systems, aggregated good governance, aggregated financial development and aggregated macroeconomic fundamentals. Based on the random effect aggregated corporate governance has no significant effect.

5.11 Conclusion

In this chapter a hierarchical multiple sequential regression approach was used to examine the effect of corporate governance on economic growth at disaggregated and aggregated level. The results from both the disaggregated and aggregated regression analysis showed board efficacy has strong significant effect on economic growth. Aggregated corporate governance on its own has insignificant effect on economic growth. It was also observed corporate governance continues to have no significant effect on economic growth even after the inclusion of legal systems, good governance, financial development and macroeconomic fundamentals. Corporate governance has effect in that in all countries there is insignificant relationship between corporate governance and economic growth. OLS results show that corporate governance protection of minority shareholders has a negative effect on economic growth in civil law countries. In common law countries the efficacy of the board has strong negative effect on economic growth. Aggregated corporate governance has immaterial effect on economic growth. Corporate governance using both aggregated and disaggregated measures remain with an immaterial effect on economic growth even with the inclusion of institutional and macroeconomic fundamental variables. A comparison by income level shows that protection of minority shareholders has a negative effect in lower income groups; disclosure and transparency have positive effect in lower income group. The addition of disaggregated institutional and macroeconomic fundamentals on all income groups has insignificant effect on economic growth. Aggregated measures show that corporate governance has negative significant effect on economic growth. The addition of aggregated institutional variables does not lead corporate governance to cause economic growth in all income groups. The next chapter presents the short run and causality relationship between corporate governance and economic growth.

CHAPTER 6

The short run and causality relationship between corporate governance and economic growth

6.1 Introduction

This chapter presents findings on the short run and causality relationship between corporate governance and economic growth. The findings are from the panel VAR short run, the panel VAR Granger causality as well as the VAR impulse response forecasts approaches that were used to examine the relationship between corporate governance and economic growth in Sub Saharan Africa using both disaggregated and aggregated data sets. This study used such a multilevel approach as an attempt to capture the existing interdependencies between corporate governance and economic growth because the failure to recognise this aspect may lead to have biased analysis of the observed outcome and provide misguided policy decisions.

In the previous chapter this study used mixed panel models to examine the relationship between corporate governance and economic growth. The study found that there is an insignificant relationship between corporate governance and economic growth in Sub Saharan African countries. The correlations findings in the previous chapter provide a basis for testing the causality and direction of the relationship. The motivation for testing the cause and effect relationship between corporate governance and economic growth is an attempt to avoid the fallacy of dismissing corporate governance as having no effect on economic growth based on the correlations findings yet it might the underlying cause behind economic growth

Three approaches are adopted in this chapter. Firstly, a panel VAR models are conducted to test for the long relationship between corporate governance and economic growth and the additional explanatory variables with data firstly at disaggregated level and subsequently at aggregated level. The main assumption of panel VAR test is that the value of the dependent variable at a given point does not depend only on the value of the explanatory variables at that time but also on the value of the explanatory variables in the past. Secondly a panel VAR Granger causality for the causality relationship between corporate governance and economic growth was conducted at with data at disaggregated and aggregated level. Lastly, panel VAR estimates were used to prepare a panel vector forecast error variance decomposition forecast of the relationship between corporate governance, the additional explanatory set of variables and economic growth and in the next 10 years.

6.2 Short run relationship between corporate governance and economic growth

This section presents findings on the estimation panel vector autoregression for corporate governance and economic growth.

Table 6.1 Panel Vector Autoregression model for corporate governance and economic growth.

	GDP	protection of minority shareholders	Shareholder suits	Director liability	Disclosure & transparency	Efficacy of the board
GDP_{-t-1}	0.149	0.019	-0.005	-0.005	0.016	0.0791
	(0.582)	(0.944)	(0.987)	(0.953)	(0.953)	0.770
$Prmsr_{-t-1}$	-0.698	0.461	-0.120	--0.305	0.305	1.7653
	-	-	-		-	-
$Shrst_{-t-1}$	-0.912	0.498	-0.067	-0.667	0.315	2.2151
	(0.928)	(0.960)	(0.991)		(0.975)	(0.826)
$Dirlia_{-t-1}$	0.875	0.703	-0.092	-0.315	1.245	2.1230
	-	(0.703)		(0.975)	-	(0.826)
$Disctran_{-t-1}$	0.487	0.194	-0.920	-0.164	0.164	-0.8197
	(0.976)	(0.990)	(0.995)	(0.992)	(0.992)	(0.958)
$Effbr_{-t-1}$	-0.494	-0.166	-0.014	--0.108	-0.109	0.5120
	(0.783)	(0.926)	(0.994)	(0.952)	(0.952)	(0.775)

$Prmsr_{-t-1}$, represents protection of minority shareholder in lag 1, $Shrst_{-t-1}$ is shareholder suit in lag 1 $Dirlia_{-t-1}$ represents director liability, $Disctran_{-t-1}$ is disclosure and transparency lag 1 and $Effbr_{-t-1}$ is efficacy of the board lag 1, () numbers in parenthesis represents significant level.

Results in table 6.1show the pane l VAR estimates that examine whether the performance of corporate governance components in the previous period has effect on the observed economic growth as well as on corporate governance. The findings show that all corporate governance lag 1 has a significant relationship with economic growth. This indicates that, none of corporate governance components variables in the previous one period has a significant effect on the current values for economic growth. In the section that follows the study includes legal systems to check if they have effect on the long run relationship between corporate governance and economic growth.

6.2.1 Short run relationship between corporate governance, legal system and economic growth

Table 6.2: Panel Vector Autoregression model for aggregated corporate governance ,legal system and economic growth

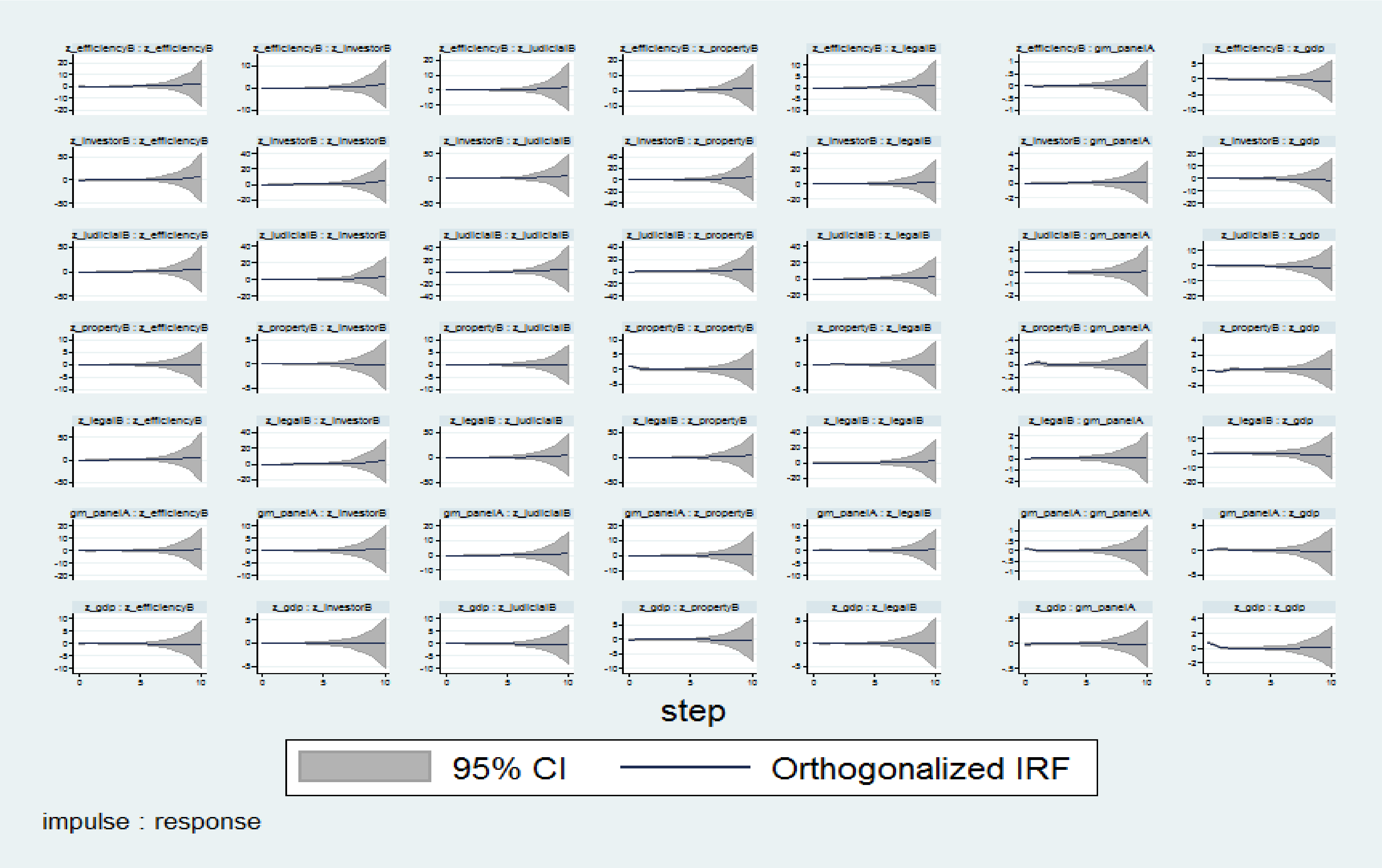
	GDP	Agg_Cg	_leg	pro_	judic_	inve_	eff_
GDP_{t-1}	0.034	0.009	-0.111	-0.020	0.039	-0.024	0.041
	(0.566)	(0.270)	(0.001)	(0.797)	(0.102)	(0.216)	(0.383)
$Agg\_Cg_{\ t-1}$	2.867	0.123	1.872	-0.853	-1.023	-0.772	-2.623
	(0.008)	(0.470)	(0.004)	(0.388)	(0.023)	(0.011)	(0.001)
$leg\_{\ t-1}$	0.239	0.028	0.623	0.074	0.132	0 .130	0.116
	(0.279)	(0.399)	(0.000)	(0.662)	(0.104)	(0.007)	(0.386)
$pro\_{\ t-1}$	-0.197	0.029	-0.067	-0.060	-0.066	0.089	0.012
	(0.004)	(0.033)	(0.113)	(0.831)	(0.040)	(0.001)	(0.863)
$judic\_{t-1}$	-0.249	0.046	0.068	0.711	0.86	0.091	0.809
	(0.393)	(0.227)	(0.639)	(0.011)	(0.000)	(0.206)	(0.000)
$inve\_{\ t-1}$	0.695	-0.048	0.508	0.703	0.666	0.983	0.517
	(0.945)	(0.371)	(0.242)	(0.140)	(0.016)	(0.000)	(0.287)
$eff\_{\ t-1}$	-0.142	-0.027	-0.024	0.055	-0.024	0.113	0.377
	(0.945)	(0.371)	(0.662)	(0.102)	(0.016)	(0.029)	(0.006)

$Agg_Cg_{\ t-1}$Prmsr$_{-t-1}$, represents aggregated corporate governance in lag 1, $leg_{\ t-1}$is legal rights in lag 1 $pro_{\ t-1}$represents property rights , $judic\_{t-1}$ is judicial independence lag 1 and $inve_{\ t-1}$investor rights of the board lag 1, $eff\_{\ t-1}$ represent the efficiency of the legal framework , () numbers in parenthesis represents significant level

An examination of the results in table coefficient show that aggregated corporate governance lag 1 is 2.867 with p=0.008 which is less than 0.05 and this implies means that we reject the hypothesis that $\beta = 0$, and accept the alternative hypothesis that $\beta \neq 0$, This means that we accept the hypothesis that aggregated corporate governance in the one period ago has effect on current economic growth. We note that, the change in aggregated corporate governance is highly significant indicating that aggregated corporate governance past one in the past 12 months has a strong positive and significant effect on economic growth. These results suggest that perhaps countries should review aggregated corporate governance performance every 12 month in order to identify corporate governance practices that may be improved in order to promote economic growth in the future. The results indicate that the coefficient for GDP is 0.034 with p=0.566 that is not less than 0.05. Hence, we fail to reject the null hypothesis that $\beta = 0$, signifying that we cannot reject the hypothesis that GDP in the past period has no effect on current economic growth. Perhaps the GDP performance in the previous one period was not adequate to promote economic growth. Hence these findings indicate to policy makers that there is a need to review measures that have effect on economic growth annually in order to ensure that they have adequate economic growth. Still, regarding economic growth the results indicate that the coefficient for property is -0.197 with p=0.004 that is less than 0.05. Hence we reject the null hypothesis that $\beta = 0$, meaning that we accept the alternative hypothesis $\beta \neq 0$. In other words, we accept the alternative hypothesis that legal rights in the previous one period has effect on economic growth. We note that, the effect on legal system is weak; indicating that change in the previous year legal systems has a weak significant influence on current values of economic growth. This may implies that the immediate effect on the change in the legal system on economic growth is fairly negative. In general, the findings show that increasing property rights, investor protection and efficiency of the legal framework tend to immediately reduce economic growth.

Turning, to the model where aggregated corporate governance is the dependent variable, property rights lag 1 is the only variable that has long run relationship with aggregated corporate governance. We note that coefficient of property rights lag 1 is 0.029 with p= 0.033 that is less than 0.05. This means that we reject the null hypothesis that $\beta = 0$, meaning that we accept the alternative hypothesis $\beta \neq 0$. This means that, we accept the alternative hypothesis that a change in property rights in the previous one period it has an effect on current values of aggregated corporate governance. This shows us that the effect of property rights is highly significant, indicating that a change in last year property rights has weak effect on current values of aggregated corporate governance. Perhaps the changes in property rights in the last 12 month have not been adequate enough to have strong effect on aggregated corporate governance. In general the immediate effect of economic growth, legal rights, investor protection, judicial independence and efficiency efficacy of the legal system separately exhibits insignificant influence current values corporate governance.

Overall these results are contradicting the property rights theory that posits that increase in investor protection through the legal systems promotes the development of strong corporate governance and economic growth. This finding indicates that past behaviour of corporate governance can predict the future outcome of economic growth. This implies that if the past is an indication of future behaviour then there a reflection into past corporate governance practices can help us to measure and influence future corporate governance behaviour that can have enhance economic growth. Due to the use of limited data span which was due to the absence of data on corporate governance in Sub Saharan African countries the assessment of the short run relationship in this study was limited to one lag. This means that the test for the long relationship between corporate governance and economic growth could not be conducted because the seven periods was not long enough test the long run relationship between corporate governance and economic growth. To enhance the validity of empirical findings of this the short relationship between corporate governance and economic growth were conducted using aggregated data sets. The panel VAR test prepare the ground to test for causality and forecast the effect of corporate governance on economic growth in the next ten years.



step
95% CI
Orthogonalized IRF
impulse : response

Figure 6.1 Impulse response function of GDP response to aggregated legal system

The results of z_gdp:gm_panel A from the impulse graph is above; represent the impulse response of GDP to a unit standard shock of aggregated corporate governance when there is unit change in legal system. The results show that a one unit shock in aggregated corporate governance results has no effect on economic growth for the coming 10 years. Implying that, the contribution of corporate governance to economic growth may continue to be insignificant in the next one decade.

6.2.2 Short run relationship between corporate governance, good governance and economic growth

The section that follows findings of the panel vector autoregression for aggregated corporate governance, good governance and economic growth.

Table 6.3: Panel Vector Autoregression model for corporate governance, good governance and economic growth

	GDP	Agg_Cg	pol_	gvtef_	voiacc_	ctnrcrrpt	rul_	regq_
GDP_{t-1}	0.078	-0.002	-0.083	-0.019	0.018	-0.014	0.031	0.024
	(0.1740)	(0.769)	(0.002)	(0.657)	(0.007)	(0.587)	(0.200)	(0.235)
$\mathrm{Agg\_Cg}_{t-1}$	1.116	0.183	-0.866	-1.469	0.107	0.080	1.147	0.465
	(0.009)	(0.133)	(0.002)	(0.000)	(0.105)	(0.001)	(0.000)	(0.005)
$\mathrm{pol}_{\_t-1}$	0.040	-0.026	0.384	0.262	-0.028	0.327	0.055	0.042
	(0.694)	(0.205)	(0.010)	(0.016)	(0.181)	(0.001)	(0.403)	(0.476)
$\mathrm{gvtef}_{\_t-1}$	0.121	0.020	-0.111	-0.323	0.037	-0.017	0.101	0.193
	(0.001)	(0.213)	(0.189)	(0.003)	(0.081)	(0.210)	(0.080)	(0.000)
$\mathrm{voiacc}_{\_t-1}$	-1.335	0.096	2.247	0.361	0.754	0.319	-1.691	1.423
	(0.001)	(0.214)	(0.000)	(0.449)	(0.000)	(0.210)	(0.000)	(0.000)
$\mathrm{ctnrcrrpt}_{t-1}$	-0.289	0.082	0.318	0.818	-0.081	0.248	0.129	-0.118
	(0.235)	(0.038)	(0.026)	(0.449)	(0.038)	(0.161)	(0.293)	(0.198)
$\mathrm{rul}_{\_t-1}$	-0.057	-0.015	0.030	0.006	-0.001	-0.014	-0.019	0.015
	(0.000)	(0.000)	(0.001)	(0.817)	(0.713)	(0.026)	(0.042)	(0.095)
$\mathrm{regq}_{\_t-1}$	-0.258	-0.076	-0.214	0.671	-0.010	0.017	0.096	0.069
	(0.402)	(0.128)	(0.101)	(0.000)	(0.738)	(0.841)	(0.350)	(0.516)

$\mathrm{Agg\_Cg}_{t-1}$ is aggregated corporate governance lag 1 , $\mathrm{pol}_{\_t-1}$ is political stability lag 1, $\mathrm{gvtef}_{\_t-1}$ is government effectiveness lag 1, $\mathrm{voiacc}_{\_t-1}$, voice and accountability lag 1, $\mathrm{ctnrcrrpt}_{t-1}$ is control for corruption lag 1, $\mathrm{rul}_{\_t-1}$ is rule of law lag 1 , $\mathrm{regq}_{\_t-1}$ is regulation quality lag 1 , () numbers in parenthesis represents significant level

Good governance is considered as prerequisite for developing corporate governance that can enhance economic growth. An examination of the model where GDP is the dependent variable show that GDP has aggregated corporate governance has a coefficient of 1.116 with p=0.009 that is less than 0.05. Hence we reject the null hypothesis that $\beta = 0,$ meaning that we accept the alternative $\beta \neq 0$. this implies that we accept the alternative hypothesis that the change in aggregated corporate governance in the last one period has effect on current economic growth. We note that the coefficient change in aggregated corporate governance is highly significant, indicating that the last years change on aggregated corporate governance has strong effect on current economic growth. This implies that there is a possibility that the value of economic growth at any point is dependent not only on the value of aggregated corporate governance at that period but also of values of aggregated corporate governance in the previous one period.

Further analysis showed that the coefficient for government effectiveness lag 1 is 0.121 with p=0.001, thus less than 0.05. This means that we reject the null hypothesis that $\beta = 0,$ meaning that we accept the alternative $\beta \neq 0$. hence we accept the alternative hypothesis that a change in government effectiveness in previous one period has effect on current economic growth. This means that the ability and competence of government to formulate and implement policies that enhance service of has immediate effect on economic growth. We note that government effectiveness is highly statistically significant, but the change government effectiveness in the previous year has weak effect on economic growth. This finding is useful to the government that because it may suggest that they need the government may need to assess and evaluate government effectiveness within every 12 in order to enhance their competence in developing and implementing policies enhance economic growth. In other words since the evidence indicates that a change in governance effectiveness is highly significant there is possibility that an increase in government effectiveness may strengthen the effect of corporate governance on economic growth.

The study also found that the coefficient for voice and accountability is -1.335 with a p=0.001 that is less than 0.05, rule of law 0.057 with p=0.000 that is less than 0.05. These results indicate that the effect of change of voice and accountability is highly significant; it has strong negative effect on current value on economic growth. This finding contradicts those found by Munisi *et al* (2014). The results may be an indication to policy makers that an increase in values voice and accountability in last period alone is not adequate to give a positive effect on voice and accountability of economic growth.

The coefficient for rule of law is -0.057 with a p= 0.05 thus less than 0.05. This signifies that we reject the null hypothesis and rather accept the alternative hypothesis that the change in rule of law in the past one period has effect on the current value of GDP. The results indicates that the effect of the change of corporate governance for the past one year is highly significant, indicating that it has a weak negative effect on economic growth. This information is important to policy makers because it may suggest that it should review its rule of law every 12 months to predict their implication on economic growth. In general the results indicate that all the remaining good governance indicators that a change in political stability, control of corruption and regulation quality all do not significantly cause economic growth.

To asses if corporate governance which is considered as an explanatory variable for economic growth is determined by good governance the in model where aggregated corporate governance is dependent variable will be discussed. The findings indicates that the coefficient for control of corruption is 0.082 with a p=0.038 that is less than 0.05. This implies that we reject the null hypothesis and accept the alternative hypothesis that a change in control of corruption in the previous period has effect on the current values on economic growth. This suggests that, a change in the regulation in the previous one period has significant negative effect on current aggregated corporate governance. It entails that in order to promote corporate governance with the view of enhancing economic growth countries need to first change rule of law and control of corruption because these have effect on the development of corporate governance. This is because changes in rule of law and control of corruption in the last 12 month have an effect on corporate governance as a whole. In other words, the extent to which there are good corporate governance practices such as efficacy of the board, director liability, and shareholder suit protection of minority shareholders, disclosure and transparency is dependent on control of corruption and regulation quality in the previous one period.

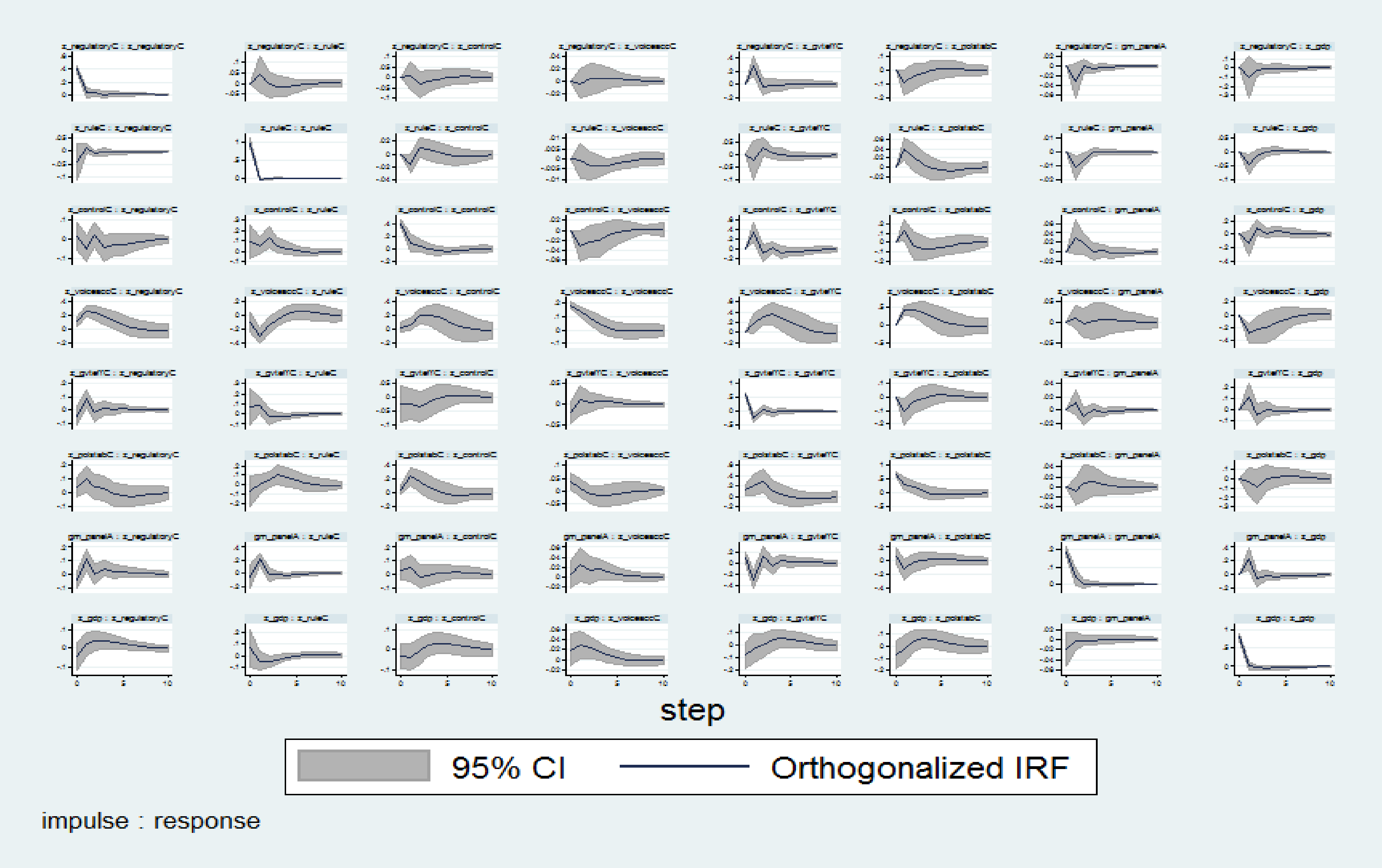

step
95% CI
Orthogonalized IRF
impulse : response

Figure 6.2 Impulse response function of GDP response to aggregated good governance.

The results of z_gdp:gm_panel A from impulse graph is above; represent the impulse response of GDP to a unit standard shock of aggregated corporate governance when there is unit change in good governance. The impulse response graph for GDP to aggregated economic growth show that a standard unit shock in good governance will increase economic growth by 0.02% in the first five years. Thereafter economic growth remains constant zero percent increase in the last five years. This indicates that a change in corporate governance under the given good governance is not likely to lead to an economic growth in the next 10 years.

6.2.3 Short run relationship between corporate governance, financial development and economic growth

This section, present findings on the short run relationship between aggregated corporate governance and a set of financial development explanatory variables.

Table 6.4: GMM panel vector autoregression model for corporate governance, financial development and economic growth

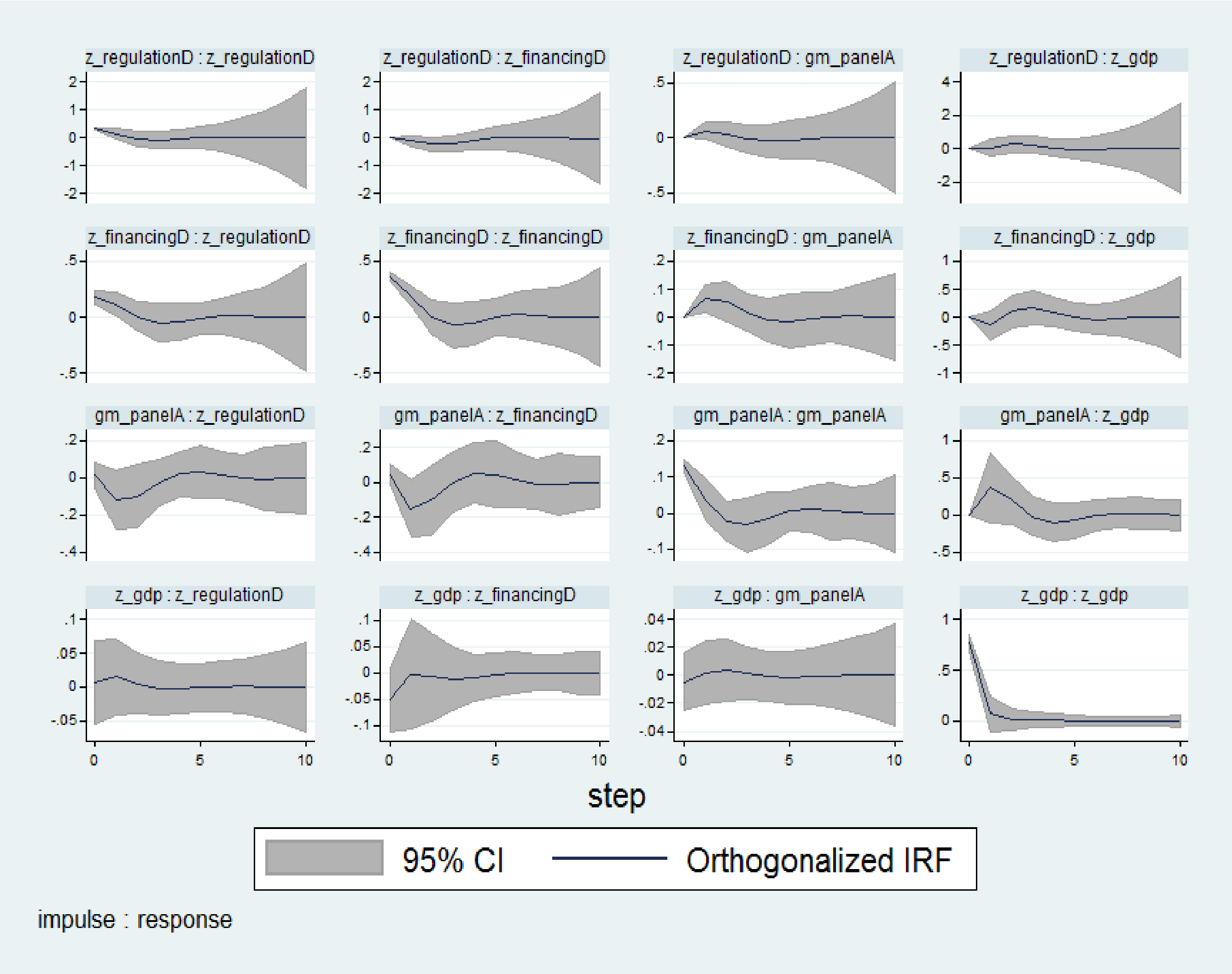
	GDP	Agg_cg	fin_	regsec_
GDP $_{t-1}$	0.082	0.008	0.199	0.018
	(0.377)	(0.420)	(0.491)	(0.575)
Agg_cg$_{t-1}$	2.88	0.250	-1.357	-0.989
	(0.120)	(0.420)	(0.059)	(0.166)
fin$_{\,t-1}$	-0.443	0.084	0.698	0.124
	(0.892)	(0.052)	(0.000)	(0.412)
regsec$_{\,t-1}$	0.097	0.097	-0.342	0.419
	(0.892)	(0.892)	(0.19)	(0.141)

GDP $_{t-1}$ is gross domestic product lag 1, Agg_Cg$_{t-1}$ is aggregated corporate governance lag 1, fin$_{\,t-1}$ is financing through the market lag 1 , regsec$_{\,t-1}$ is regulation of securities of exchange lag 1 , () numbers in parenthesis represents significant level

The results show that a change in aggregated corporate governance in one previous period does not have an effect on economic growth after the introduction of change in financial development. The study found that change in financing through the market in the last one period it has insignificant effect economic growth. We further observed that a change in regulation of securities in the last one period it has insignificant effect on economic growth.

Table 6.4 presents panel vector autoregression model aggregated corporate governance, financial development and economic growth. An examination of the results shows us that coefficient for GDP lag 1 is 0.082 with p= 0.377, aggregated corporate governance is at 2.88 with p=0.120 and all are less than 0.05. This indicates that both cases we fail to reject the null hypothesis that $\beta = 0$. In particular this means that we failed to reject the null hypothesis that a change in GDP lag 1 does not have effect on the current observed GDP. It also means that we fail to reject the null hypotheses that the change in aggregated corporate governance in the previous period does not have an effect on the current observed economic growth. This means that, holding everything constant the immediate change in GDP and aggregated corporate governance changes in economic growth previous one period after taking into account the effect of financial development has no effect on the current observed economic growth. Regarding the strong but insignificant effect of change of aggregated corporate governance on economic growth, this could be indication that the extent of change in aggregated corporate governance was not enough to have effect on economic growth.

Further analysis reveal that the coefficient for financing through the market is -0.443 with p=0.892 and this is greater than 0.05. It means that we failed to reject the null hypothesis that that $\beta = 0,$ indicating that we cannot reject the null hypothesis that financing through the market in the previous one period has no effect on current economic growth. We note that that a change in financing through the market has a negative insignificant effect on economic growth. Perhaps the level of the change in financing through the market was not adequate to lead companies to increase their corporate governance standard beyond local standard in order to attract finance from foreign market in the absence of well development financial market. Further analysis show that regulation of securities lag 1 has coefficient of 0.097 with p=0.892 that is greater than 0.05 and this signifies that we accept the null hypothesis that $\beta = 0$. It means that a change in the regulation of securities of exchange in the previous one period does not have effect on current economic growth. In other words we can say that the changes in regulation of securities in the last 12 months it does not have effect in the current period.



6.3 Impulse graph for GDP response to aggregated financial development

The graph demonstrates that a unit standard change in financial development lead aggregated corporate governance to have positive on economic growth in the first five years and thereafter it maintains a stable negative outcome. In particular, the graph show that the effect of aggregated corporate governance on economic growth is about 0.01% in the next 10 years. This indicates that a change in financial development under current conditions will lead aggregated corporate governance to have insignificant effect on economic growth in the next 10 years.

6.2.4 Short run relationship between aggregated corporate governance, macroeconomic fundamentals and economic growth

The short relationship between aggregated corporate governance, macroeconomic fundamentals and economic growth was estimated in this study. The following section presents the findings.

Table 6.5: Panel vector autoregression model for the effect of aggregated corporate governance and macroeconomic fundamentals on economic growth

	GDP	Agg_Cg	gross_	fdi_	infl_
GDP_{t-1}	0.130	0.013	-0.066	0.103	0.198
	(0.325)	(0.472)	(0.527)	(0.012)	(0.175)
Agg_Cg_{t-1}	2.896	-0.094	1.767	-1.681	-1.611
	(0.085)	(0.787)	(0.355)	(0.064)	(0.547)
$gross\_{}_{t-1}$	-0.268	0.007	0.309	0.074	-0.024
	(0.052)	(0.797)	(0.018)	(0.183)	(0.863)
$fdi\_{}_{t-1}$	-0.174	0.083	0.032	1.103	0.758
	(0.675)	(0.253)	(0.917)	(0.000)	(0.394)
$infl\_{}_{t-1}$	-0.074	0.000	-0.016	0.163	0.051
	(0.219)	(0.984)	(0.012)	(0.003)	(0.515)

GDP $_{t-1}$ is gross domestic product lag 1, Agg_Cg_{t-1} is aggregated corporate governance, $gross\_{}_{t-1}$ is gross national saving lag 1, $fdi\_{}_{t-1}$ is foreign direct investment lag 1, $infl\_{}_{t-1}$ is inflation lag 1 () numbers in parenthesis represents significant level

Results in Table 6.5 show the GMM estimate for panel VAR effects of aggregated corporate governance and macroeconomic fundamentals on economic growth. An examination of the results further show that aggregated corporate governance has the highest positive significant effect on GDP as shown by coefficient of 2.896 with p=0.085. This means that we reject the null hypothesis and accept the alternative hypothesis that changes in aggregated corporate governance in the previous period affect economic growth. We observed that with exception of gross national saving changes in all the remaining macroeconomic fundamentals in the previous year have a negative and insignificant effect on GDP. The changes in the gross national saving in the previous year have a negative significant effect on the current economic growth.

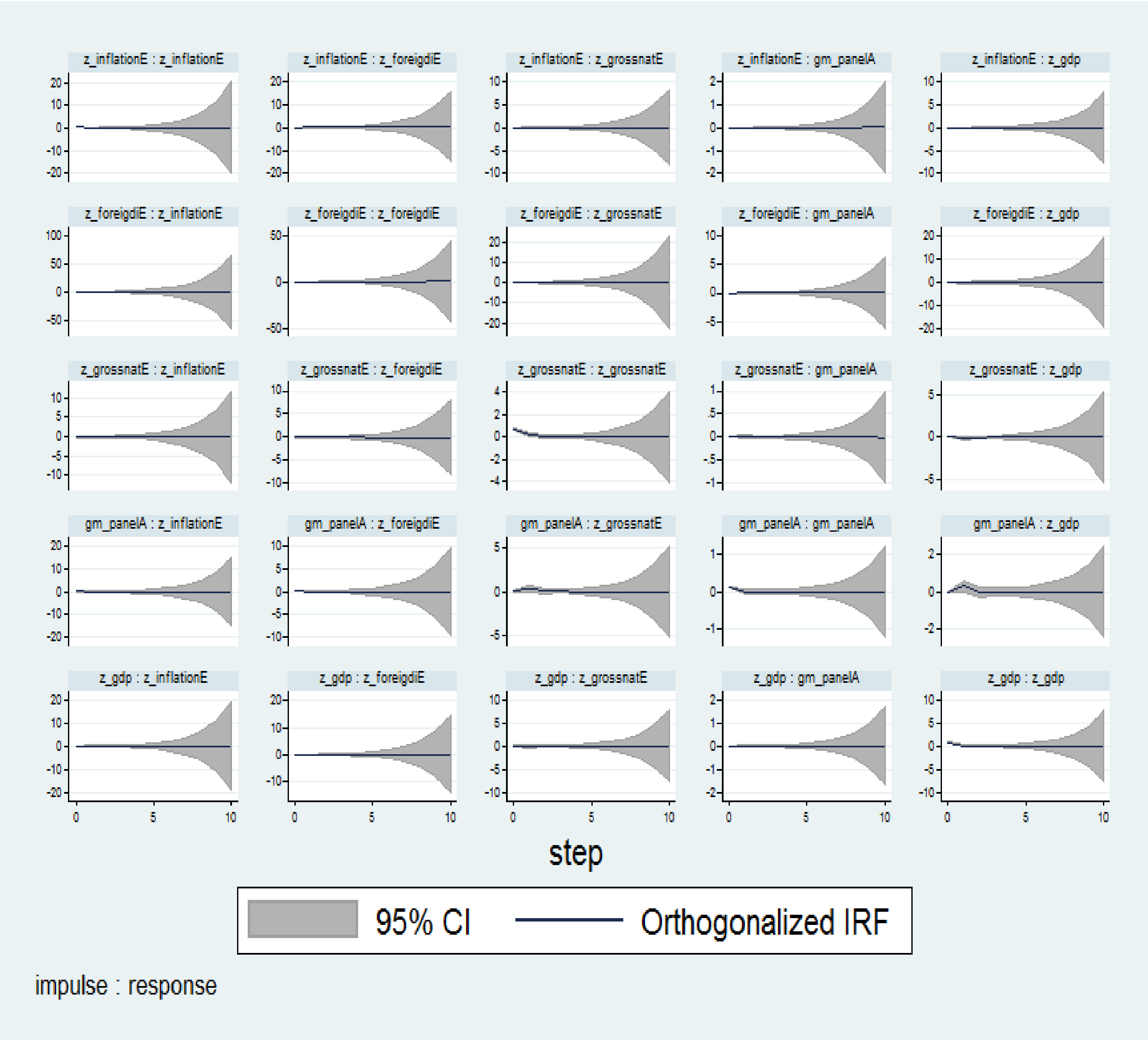


Figure 6.4 Impulse graph for GDP response to aggregated macroeconomic fundamentals

z_gdp:gm_panel A indicates the response of economic growth to aggregated corporate governance under a standard unit change in macroeconomic fundamentals. The findings reveal that aggregated corporate governance is expected to contribute a constant growth rate of less than 0.0%1 in the next period 0 to 10 years. This means that aggregated corporate governance under the present conditions of macroeconomic condition may continue to have no significant relationship with economic growth in the long run.

Table 6.6: Panel VAR model for aggregated corporate governance, legal systems, good governance, financial development and macroeconomic fundamentals on economic growth

	GDP	Agg_Cg	Agg_leg	Agg_gg	Agg_fd	Agg_mf
GDP_{t-1}	0.136	-0.003	-0.008	0.029	0.029	-0.149
	(0.000)	(0.324)	(0.251)	(0.010)	(0.010)	(0.000)
$Acg_{\ t-1}$	4.224	0.221	0.130	-1.459	-0.029	-0.149
	(0.000)	(0.004)	(0.375)	(0.000)	(0.350)	(0.550)
Agg_leg$_{t-1}$	-0.998	-0.048	0.414	-0.029	-0.029	0.046
	(0.000)	(0.004)	(0.000)	(0.350)	(0.000)	(0.395)
Agg_gg $_{t-1}$	0.760	0.010	0.297	-0.212	-0.212	-0.635
	(0.000)	(0.634)	(0.000)	(0.000)	(0.000)	(0.000)
Agg_fd$_{t-1}$	-0.503	0.070	-0.005	0.472	0.472	-0.090
	(0.000)	(0.000)	(0.005)	(0.000)	(0.035)	(0.144)
Agg_mf$_{t-1}$	-0.142	0.017	-0.154	-0.041	-0.041	0.174
	(0.000)	(0.022)	(0.000)	(0.000)	(0.035)	(0.000)

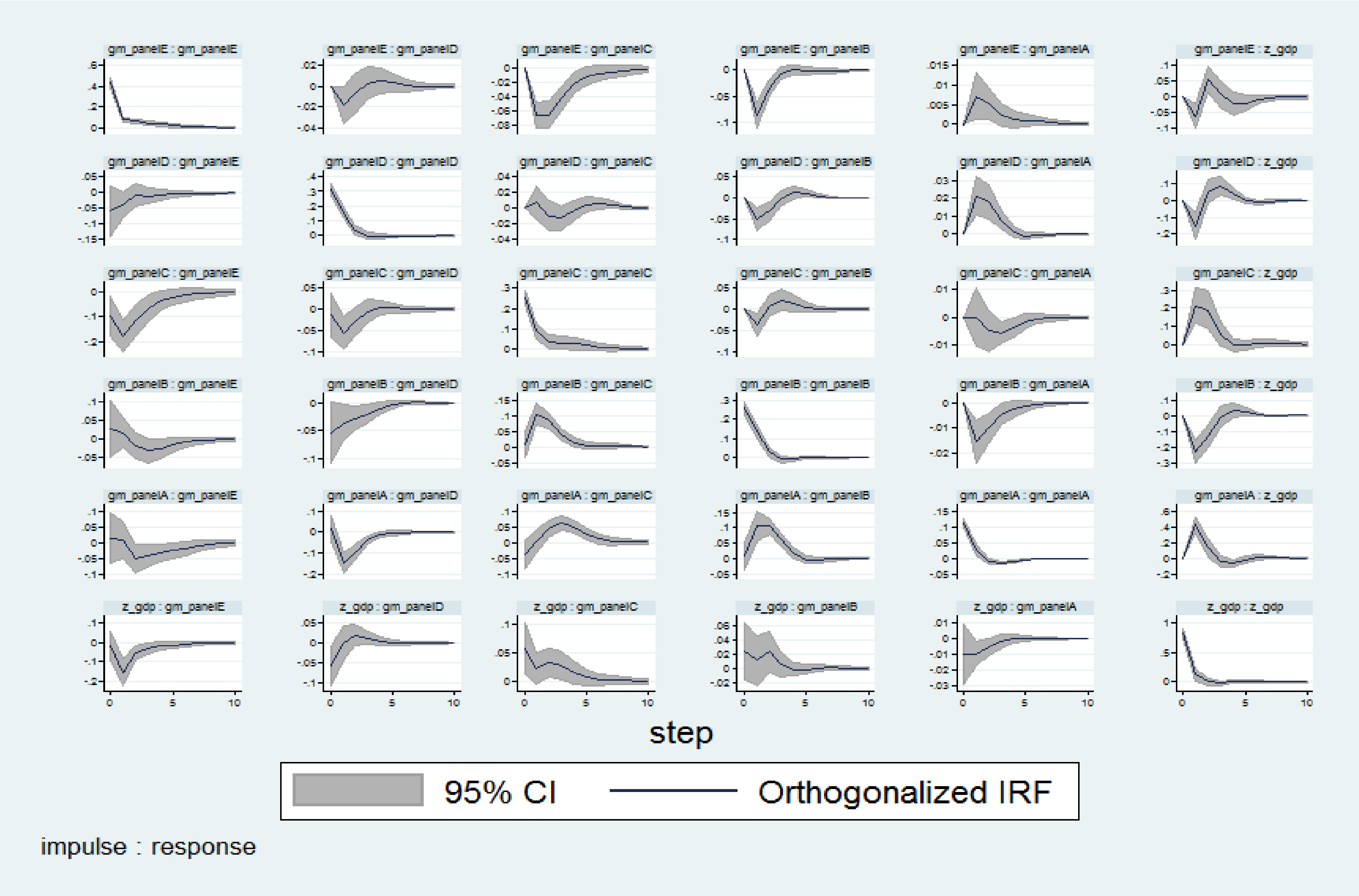
GDP $_{t-1}$ is gross domestic product lag 1, Agg_Cg$_{t-1}$ is aggregated corporate governance lag 1Agg_leg$_{t-1}$aggregated legal systems Agg_gg$_{t-1}$ aggregated good governance lag 1, Agg_fd$_{t-1}$ is aggregated financial development lag 1, Agg_mf$_{t-1}$ is aggregated macroeconomic fundamentals, () numbers in parenthesis represents significant level

Table 6.6 show results for GMM estimates panel VAR model for the effects of aggregated corporate governance, aggregated legal systems, aggregated good governance, aggregated financial development and aggregated macroeconomic fundamentals on economic growth. An examination of the results shows an interesting effect compared to disaggregated data analyses. Firstly, the model where GDP is the dependent variable show that aggregated corporate governance, aggregated legal system, aggregated financial development and aggregated macroeconomic fundamentals all have significant effect on economic growth. The coefficient for GDP is 0.136 with p=0.000, thus is less than 0.05. This means that we reject the null hypothesis and accept the alternative hypothesis that changes in GDP in the previous period has effect on current values on economic growth. This means that the value of GDP at given period is dependent not only on the value of GDP at given point but also on the values of GDP in the past.

The study also found that the coefficient for aggregated corporate governance is 4.224 with p=0.000 thus p is less than 0.05. Hence we reject the null hypothesis and accept the alternative hypothesis that a change in aggregated corporate governance in the previous one period has effect on economic growth. Important to note that this findings show that change in aggregated corporate governance is highly significant, indicating that changes in aggregated corporate governance in the last year have a strong positive effect on values of GDP. It means that economic growth is dependent not only the value of aggregated corporate governance at the time period but also on the values of aggregated corporate governance in the past. Further analysis indicates that aggregated corporate governance has the highest strongest significant effect on economic growth amongst all the other aggregated explanatory variables that have significant effect on economic growth.

Turning to the model where corporate governance aggregated is an independent variable, the findings show that, the coefficient for aggregated corporate governance in the previous one period is 0.224 with p= 0.004. This means that we reject he null hypothesis and rather aspect the alternative hypothesis that a change in aggregated corporate governance has effect on aggregated corporate governance. We note the immediate effect of aggregated corporate governance is highly significant, indicating that a change in previous one period has strong positive effect on economic growth. This means that an increasing in aggregated corporate governance in a given a period will tend to have an immediate effect not only on GDP but also on aggregated corporate governance in the next period.

Further analysis reveals that changes in aggregated financial development and aggregated macroeconomic fundamentals in the previous one period all have a significant effect on current effect on aggregated corporate governance. We note that a change in aggregated coefficient of aggregated legal systems over one period has got a significant effect on weak and negative effect not only on GDP but also on aggregated corporate governance.



gm_panelE : gm_panelE
gm_panelE : gm_panelD
gm_panelE : gm_panelC
gm_panelE : gm_panelB
gm_panelE : gm_panelA
gm_panelE : z_gdp
gm_panelD : gm_panelE
gm_panelD : gm_panelD
gm_panelD : gm_panelC
gm_panelD : gm_panelB
gm_panelD : gm_panelA
gm_panelD : z_gdp
gm_panelC : gm_panelE
gm_panelC : gm_panelD
gm_panelC : gm_panelC
gm_panelC : gm_panelB
gm_panelC : gm_panelA
gm_panelC : z_gdp
gm_panelB : gm_panelE
gm_panelB : gm_panelD
gm_panelB : gm_panelC
gm_panelB : gm_panelB
gm_panelB : gm_panelA
gm_panelB : z_gdp
gm_panelA : gm_panelE
gm_panelA : gm_panelD
gm_panelA : gm_panelC
gm_panelA : gm_panelB
gm_panelA : gm_panelA
gm_panelA : z_gdp
z_gdp : gm_panelE
z_gdp : gm_panelD
z_gdp : gm_panelC
z_gdp : gm_panelB
z_gdp : gm_panelA
z_gdp : z_gdp
step
95% CI
Orthogonalized IRF
impulse : response

Figure 6.5 Impulse graph for GDP response to aggregated macroeconomic fundamentals

In figure 6.5 z_gdp:gm_panel A show the response of GDP aggregated corporate governance when there is one standard unit shock to in aggregated legal systems, aggregated good governance, aggregated financial development and macroeconomic fundamentals. The result show that after a unit standard deviation in the aforementioned aggregated variables of aggregated corporate governance increases its contribution to economic growth in the first five years by about 0.01% and then it remains constant for the last five years.

6.3 Causality and direction of causal relationship between corporate governance and economic growth

The next section presents the findings on the causality test for the relationship between corporate governance and economic growth. The causality test could not detect a relationship between corporate governance and economic growth hence the section that follows uses aggregated corporate governance rather than its disaggregated variables.

Table 6.7:Panel Vector Autoregression Granger causality test for aggregated corporate governance and legal systems

Source of causality →	GDP	Agg_Cg	_leg	pro_	judic_	inve_	effe_
GDP_{t-1}		1.218	14.849	0.066	2.675	1.533	0.762
		(0.270)	(0.000)	(0.797)	(0.102)	(0.216)	(0.383)
Agg_Cg$_{t-1}$	7.145		8.201	0.747	5.202	6.447	11.826
	(0.004)		(0.000)	(0.388)	(0.023)	(0.011)	(0.001)
leg$_{_t-1}$	1.174	0.712		0.191	2.642	7.235	0.751
	(0.279)	(0.399)		(0.622)	(0.104)	(0.007)	(0.386)
pro$_{_t-1}$	8.310	4.554	2.513		4.969	10.699	0.030
	(0.004)	(0.033)	(0.113)		(0.040)	(0.001)	(0.863)
judic$_{_t-1}$	0.730	1.462	6.449	6.449		1.600	16.477
	(0.945)	(0.227)	(0.011)	(0.011)		(0.206)	(0.000
inve$_{_t-1}$	0.005	0.169	2.179	2.179	4.969		1.135
	(0.000)	(0.681)	(0.140)	(0.140)	(0.026)		(0.287)
eff$_{_t-1}$	0.945	0.799	0.098	0.098	5.853	4.757	
	(0.386)	(0.371)	(0.755)	(0.755)	(0.016)	(0.029)	
All$_{t-1}$	39.517	16.724	48.864	6.732	39.061	36.428	36.428
	(0.000)	(0.010)	(0.000)	(0.346)	(0.000)	(0.000)	(0.000)

GDP is gross domestic product Agg_Cg _ is aggregated corporate governance, leg _ legal rights pro_ property rights, judic_judicial independence, inve_investor protection , effe_ effectiveness of the legal framework , () numbers in parenthesis represents significant level

With the aim of testing the causality and direction of the flow between aggregated corporate governance and economic growth panel VAR Granger causality was conducted the results are shown in Table 6.7. The results reject the null hypothesis of Granger causality in favour of the --

alternative hypotheses that there is Granger causality in aggregated corporate governance and property rights only. We fail to reject the null hypothesis of none Granger causality between legal rights, judicial prudence, investor protection and efficiency of the legal framework. This implies that an increase in legal rights, judicial prudence, investor protection and efficiency of the legal framework in the last year is weak and has insignificant positive effect on economic growth. That is, aggregated corporate governance including all the legal systems explanatory variables Granger causes GDP. In particular the coefficient change of aggregated corporate governance in the last one's year period is 7.145 with p=0.004 this is less than 0.05, showing that it has high positive significance effect on economic growth. This means that a change aggregated corporate governance in the previous one period Granger causes a change in the current values of economic growth. It indicates that there is strong and positive effect causal relationship running from aggregated corporate governance to economic growth. The findings also indicate that there is strong and significant positive relationship that runs from property rights to economic growth. This means that an increase in aggregated economic growth in the last 12 month increases economic growth. We note that property rights have the strongest and significant positive impact on economic growth. It means this result is consistent with the property rights theory which posits that property rights are the underlying cause for economic growth. Of interest to note is that the coefficient of all the changes in aggregated corporate governance and legal system combined is 39.519 with p=0.000 thus p is less than 0.05. This indicates that aggregated corporate governance and aggregated legal system jointly cause economic growth. It entails that, combined changes in aggregated corporate governance, property rights, legal rights; judicial prudence, investor protection and efficiency of the legal framework jointly have a strong and positive significant effect on economic growth. One possible reason could be that individual elements of legal systems have insignificant impact on corporate governance implying that individual legal components have limited power to influence corporate governance and its ultimate effect on economic growth. In other words there is strong and positive Granger causality running from aggregated corporate governance jointly with legal systems. The impact of change jointly in aggregated corporate governance and various legal systems aspects on economic growth is statistically significant in the short run.

Regarding the direction of causality there are some interesting pattern that emerges. Firstly, in the model where aggregated corporate governance we note that the coefficient of GDP is 1.218 with p=0.270 thus p greater than 0.05. This indicates that we fail to reject the null hypothesis that a change in GDP in the last one period has effect on aggregated corporate governance. This evidence that in the short run there is GDP has strong and insignificant positive impact on aggregated economic growth. The results indicate that GDP does not Granger economic growth in the short run. We find that Granger causality is unidirectional running from aggregated corporate governance to GDP. This indicates that if a change in aggregated corporate governance is to cause a change in economic growth then the change in aggregated corporate governance must precede a change in economic growth, otherwise the change in aggregated corporate governance will not explain the change in economic growth.

An examination of the model 2 where aggregated corporate governance is the dependent variable the study found a strong and significant positive Granger causality from GDP, legal rights, property rights, judicial independence, investor protection and efficiency of framework. In particular the coefficient for all changes jointly, is 16.724 with p=0.010. This provides evidence of a Granger causality flowing from joint change of in GDP and all the legal systems variables in the last one period to aggregated corporate governance. This implies that joint change in GDP and all the legal system should precede the change in aggregated corporate governance if the joint change in GDP and all aspects of legal systems is to cause a strong and significant positive change in aggregated corporate governance otherwise the change in aggregated corporate governance cannot be attributed to the joint change in GDP and all the explanatory variables of the legal system. In simple terms if a strong and positive significant change in aggregated corporate governance that results in strong and significant positive contribution to economic growth is to take occur then a joint change in GDP and all legal systems must take place first before a change in corporate governance can occur.

Regarding the above proposition this section focuses on analysis of the direction of causality which present in Table 6.7. In general the results overwhelmingly failed to reject the null hypothesis of Granger noncausality with the exception of only property rights. The study analysis found that there is Granger causality that flows from aggregated corporate governance to property rights. Further analysis show there in bidirectional Granger causality that flows in both sides between aggregated corporate governance and property rights. This suggests that there is mutual symbiotic relationship whereby the strength and functionality of either aggregated corporate governance or property rights is dependent on the strength or functionality of the other. In fact the evolution of corporate governance and property is believed under the property theory to have resulted from a symbiosis between various legal laws that determines and govern the society on the ownership, allocation and usage of economic resources. This information is important to institutional policy makers because it may indicate that they need to understand the effect of corporate governance and economic growth is influenced by the interaction between property rights and corporate governance.

This information is important to policy makers because it seems to suggest that the absence of property rights has the potential to erode corporate governance and vice versa. This indicates that if companies operate in legal systems that are devoid of strong property rights then, the cost of corporate governance on company and the overall economy is higher than the benefits. This is because a company will have to increase their corporate governance standards in order to substitute for weak investor protection due to the absence property rights. This symbiotic relationship suggests that the long term interaction between property rights is necessary for the sustainability of aggregated corporate governance in view of its contribution to economic growth.

The findings indicate that there is a unidirectional Granger causality that runs form aggregated corporate governance to legal rights. There is a unidirectional Granger causality that runs from aggregated corporate governance to judicial impendence. The findings also show that there is unidirectional Granger causality that runs form aggregated corporate governance to investor protection. Further analysis also shows that there is unidirectional Granger causality that runs form aggregated corporate governance to judicial independence. There is an increase in unidirectional Granger causality that runs form aggregated corporate governance to efficiency of the legal framework. Overall this evidence suggests that changes in aggregated corporate governance in the previous one period have been the underlying force behind changes in the legal system within countries in Sub Saharan Africa. This direction of relationship contradicts the proposition of the property rights and institutional theories which expect the legal system to provide a foundation for the development of corporate governance systems that promote economic growth. As such, this evidence suggests that there might have been tendencies to demand an increase in aggregated corporate governance in attempt to compensate for poor investor protection from the weak legal system.

Under these conditions the insignificant relationship between corporate governance and economic growth in Sub Saharan Africa observed in Chapter 6 could be attributed to the unidirectional Granger causality that flows from aggregated corporate governance to legal systems. This implies that in Sub Saharan Africa there is a tendency amongst companies to strengthen their corporate governance beyond local standards in order to compensate for poor investor protection from the weak legal system. This view is supported an examination of p-values in model 1 which shows that with the exception of the property rights all the remaining legal systems variables have insignificant contribution to aggregated corporate governance. In particular, an analysis of the coefficients and p-values we find that the contribution and effects of legal system variables are as follows: legal rights are 1.174 with p= 0.279, judicial independence, 0.730 with p=0.005, investor protection is 0.005 with p= 0.000 and efficiency of the legal systems at 0.945 with p=0.386. These findings provide evidence that an increase in these legal aspects at an individual level has insignificant effect on aggregated corporate governance. One possible reason is that there change in the individual elements of legal system has been necessary but insufficient enough to individually contribute to a strong and positive effect on aggregated corporate governance. This is because the same table shows that although it is only property rights that have a weak and a significant positive contribution to aggregated corporate governance and the all remaining explanatory variables have an insignificant effect but when combined all the legal systems have jointly a strong and significant positive effect on aggregated corporate governance. It can be concluded that in order for the legal system to have significant effect of corporate governance then a change should first start in all legal systems variables namely legal rights, investor protection, judicial independence and efficiency of the legal systems.

Table 6.8: Panel Vector Autoregression Granger model for economic growth , corporate governance and economic growth

Source of causali →	GDP	Agg_Cg	pol_	gvtef_	voiacc_	ctnrcrrpt	rul_	regq_
GDP_{t-1}		0.086	3.397	0.198	7.333	0.295	1.642	1.410
		(0.769)	(0.065)	(0.657)	(0.007)	(0.587)	(0.200)	(0.235)
Agg_Cg_{t-1}	6.840		9.619	18.863	2.623	0.133	27.499	7.758
	(0.009)		(0.002)	(0.000)	(0.105)	(0.715)	(0.000)	(0.005)
pol_{t-1}	0.155	1.605		5.825	1.790	11.530	0.699	0.509
	(0.694)	(0.205)		(0.016)	(0.181)	(0.001)	(0.403)	(0.476)
$gvtef\_{t-1}$	0.155	1.552	1.725		3.042	0.182	3.066	18.121
	(0.694)	(0.213)	(0.189)		(0.081)	(0.669)	(0.080)	(0.000)
$voiacc\_{t-1}$	1.921	1.546	46.419	0.573		1.570	28.464	18.121
	(0.166)	(0.214)	(0.000)	(0.449)		(0.210)	(0.000)	(0.000)
$ctnrcrrpt_{t-1}$	10.343	4.296	4.964	10.850	4.283		1.104	47.647
	(0.001)	(0.038)	(0.026)	(0.001)	(0.038)		(0.293)	(0.198)
rul_{t-1}	41.736	91.157	10.628	0.136	0.112	4.951		2.781
	(0.000)	(0.000)	(0.026)	(0.713)	(0.713)	(0.026)		(0.095)
$regq\_{t-1}$	0.703	2.321	2.688	0.112	0.112	0.040	0.873	
	(0.402)	(0.128)	(0.101)	(0.738)	(0.738)	(0.8410	(0.350)	
All_{t-1}	51.162	191.582	55.810	18.914	18.914	37.684	84.099	85.447
	(0.000)	(0.000)	(0.000)	(0.008)	(0.008)	(0.000)	(0.000)	(0.000)

Agg_Cg_{t-1} is aggregated corporate governance , GDP $_{t-1}$ is gross domestic product lag 1 pol_{t-1} is political stability , $gvtef\_{t-1}$ is government effectiveness , $voiacc\_{t-1}$, voice and accountability, $ctnrcrrpt_{t-1}$ is control for corruption , rul_{t-1} is rule of law, $regq\_{t-1}$ is regulation quality, () numbers in parenthesis represents significant level

Tables 6.8 represent results for GMM panel VAR model that estimates the effect of aggregated corporate governance and good governance on economic growth. There is evidence of unidirectional Granger causality relationship that run from aggregated corporate governance to economic growth. In particular the coefficient for aggregated corporate governance is 6.840 with p=0.009 thus indicating that the change in aggregated corporate governance is highly significant. This means that null hypothesis that a change in aggregated corporate governance within the previous one year period does not Granger causality can be rejected. That is there is change that aggregated corporate governance has strong and significant positive effect on economic growth. That is the impact of aggregated corporate governance is statistically significant in the immediate future. Further analysis shows rule of law has the highest and most strong significant positive effect on economic growth and followed by control of corruption beyond that all impact of all the remaining corporate governance indicators is insignificant. However, when combined the change in one period in GDP, aggregated corporate governance and all corporate governance indicators jointly, have strong and significant positive effect on economic growth. This indicate that change in individual political at stability, regulation quality, government effectiveness and voice and accountability at individual level has limited impact on economic growth unless the change is considered jointly.

Now turning to model 2 where aggregated corporate governance is a dependent variable the study found that a change in GDP and all good governance all joint coefficient of 191.582 with p=0.000. This indicates that change in the last one period in GDP, political stability, government effectiveness, rule of law, regulation quality and control of corruption, voice and accountability jointly has strong and significant impact on corporate governance. This indicates that that combined GDP and all good governance indicators Granger cause aggregated corporate governance.

Further analysis shows an unusual pattern. We note that there is unidirectional Granger causality relationship from political stability to aggregated corporate governance. There is a unidirectional Granger causality relationship that flows from aggregated corporate governance to government effectiveness. The observed unidirectional causality relationship from aggregated corporate governance to political stability is concerning because this may suggest the presence of aggregated corporate governance that is being driven to compensate for strong and significant changes in political stability. In such a case where aggregated corporate governance has to substitute for weak investor protection from political stability may possibly lead corporate governance to have an insignificant effect on economic growth. Presumably, under such circumstances countries should consider improving their political stability first, in order to promote the development of aggregated corporate governance that a positive impact of economic growth. The same argument applies for the unidirectional relationship that flows from aggregated to government effectiveness. In nutshell such causality relationships are contradictory to the endogenous theory of economic growth. This explain why despite corporate governance being an underlying cause for economic growth in Sub Saharan Africa it has insignificant impact on economic growth. This information is important because it may be an indicator to policy makers that they may need critically review political stability and government effectiveness with the view of stimulating aggregated corporate governance and ultimately economic growth.

Table 6.9: Panel Vector Autoregression model for corporate governance , financial development and economic growth

	GDP	Agg_Cg	fin_	regsec_
Source of causality →				
GDP		0.651	0.474	0.314
		(0.420)	(0.491)	(0.575)
Agg_Cg	2.424		3.563	1.922
	(0.120)		(0.059)	(0.166)
fin_	2.767	3.786		0.672
	(0.0960	(0.052)		(0.412)
regsec_	0.018	2.955	1.720	
	(0.892)	(0.086)	(0.0860	
All	3.648	9.173	9.173	1.932
	(0.302)	(0.027)	(0.027)	(0.587)

GDP $_{t-1}$ is gross domestic product lag 1, Agg_Cg$_{t-1}$ is aggregated corporate governance lag 1, fin_ $_{t-1}$ is financing through the market lag 1 , regsec_ $_{t-1}$ is regulation of securities of exchange lag 1, () numbers in parenthesis represents significant level

Financial development is expected to shape economic through its influence on corporate governance and firm performance. The study found that there is causality between GDP, aggregated corporate governance, financing through the market and regulation of securities of exchange jointly does not cause economic growth. Further analysis shows that there is unidirectional causal relationship that runs from regulation of securities to GDP.

Table 6.10: Panel Vector Autoregression model for corporate governance , macroeconomic fundamentals and economic growth

Source of causality →	GDP	Agg_Cg	gross_	fdi_	infl_
GDP_{t-1}		0.518	0.400	6.244	1.837
		(0.472)	(0.527)	(0.0120	(0.175)
Agg_Cg_{t-1}	2.963		0.855	3.437	0.363
	(0.085)		(0.355)	(0.064)	(0.547)
$gross_{\_t-1}$	3.78	0.066		1.772	0.030
	(0.052)	(0.797)		(0.183)	(0.863)
$fdi_{\_t-1}$	0.176	1.305	0.011		0.726
	(0.675)	(0.253)	(0.917)		(0.394)
$infl_{\_t-1}$	1.513	0.000	0.053	8.538	
	(0.219)	(0.984)	(0.818)	(0.003)	
All	6.854	1.745	2.125	13.076	2.051
	(0.144)	(0.783)	(0.713)	(0.011)	(0.726)

$GDP_{\ t-1}$ is gross domestic product lag 1, Agg_Cg_{t-1} is aggregated corporate governance, $gross_{\_t-1}$ is gross national saving lag 1, $fdi_{\_t-1}$ is foreign direct investment lag 1, $infl_{\_t-1}$ is inflation lag 1, () numbers in parenthesis represents significant level

The model for GDP shows that all the p-values for all coefficients for lag one for aggregated corporate governance is 2.963 with a p 0.085. This indicates there is a Granger causality that flows from aggregated corporate governance and economic growth. The findings also show that all explanatory variables of the macroeconomic fundamentals in period one do not Granger cause economic growth. The findings also reveal that aggregated corporate governance and all the individual explanatory variables of the macroeconomic fundamentals jointly do not Granger cause economic growth.

Table 8.6.11: Panel Granger causality

Source of causality →	GDP	Agg_Cg	Agg_leg	Agg_gg	Agg_fd	Agg_mf
GDP_{t-1}		0.971	1.318	6.601	17.757	17.756
		(0.324)	(0.251)	(0.010)	(0.000)	(0.000)
Agg_Cg_{t-1}	122.74		0.786	99.453	0.352	0.358
	(0.0000)		(-0.375)	(0.000)	(-0.550)	(-0.550)
Agg_leg_{t-1}	71.392	8.272		0.874	0.724	0.724
	(0.000)	(0.004)		(0.350)	(0.395)	(0.395)
Agg_gg_{t-1}	17.362	0.227	96.905		29.890	28.890
	(0.000)	(0.634)	(0.000)		(0.000)	(0.000)
Agg_fd_{t-1}	17.362	17.685	0.030	18.773	2.130	2.130
	(0.000)	(0.000)	(0.862)	(0.852)		(0.144)
Agg_mf_{t-1}	8.916	5.278	52.989	4.460	2.130	
	(0.003)	(0.022)	(0.000)	(0.035)	(0.144)	
All	270.485	304.504	189.344	147.322	142.23	56.738
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)

$GDP_{\ t-1}$ is gross domestic product lag 1, Agg_Cg_{t-1} is aggregated corporate governance lag 1Agg_leg_{t-1}aggregated legal systems Agg_gg_{t-1} aggregated good governance lag 1, Agg_fd_{t-1} is aggregated financial development lag 1, Agg_mf_{t-1} is aggregated macroeconomic fundamentals () numbers in parenthesis represents significant level

The panel vector autoregression results indicate that the coefficient of aggregated corporate governance, aggregated legal system, aggregated good governance, aggregated financial development and aggregated macroeconomic fundamentals is 270.485 with p=0.000. This signifies that all combined all aggregated corporate governance, aggregated legal system, aggregated, aggregated good governance, aggregated financial development and aggregated macroeconomic Granger causes economic growth. In particular it indicates that coefficient of change is corporate governance is highly significant with 122.740 followed by aggregated legal systems, good governance, financial development and macroeconomic fundamentals at 71.392, 17.362, 15.679 and 8.916 respectively. Indicating aggregated corporate governance, aggregated legal system, aggregated good governance, aggregated financial development and aggregated macroeconomic fundamentals performance all jointly or when combined they cause economic growth. This implies that a changes in combined elements of corporate governance, legal system, good governance, financial development and macroeconomic fundamentals should take place if a change in these institutional factors is to cause a change in economic growth otherwise the change in economic growth cannot be explained by a change in these variables.

In the model with aggregated corporate governance is the dependent variable the coefficient for GDP is 0.971 with p=0.266. This indicates that GDP does not Granger cause corporate governance. The coefficient of the change in GDP has a positive but weak contribution to the cause of aggregated corporate governance but it does not provide an explanatory power of aggregated corporate governance. In other words last year's changes in GDP do not explain the observed current value of corporate governance. Since the results for model 1 where economic growth is the dependent variable indicates that change in aggregated corporate governance is highly significant, indicating that last period change in aggregated corporate governance has strong explanatory power for values of GDP it can be concluded that there is unidirectional causal relationship. This evidence indicate that there is unidirectional that runs from aggregated corporate governance to GDP that is economic growth. This means that changes in corporate governance must precede changes in GDP if at all changes in aggregated corporate governance is to explain the changes in economic growth, otherwise the changes in economic growth cannot be attributed to changes in aggregated corporate governance.

Turning to the model where aggregated legal systems are the legal systems, the coefficient for GDP is 1.238 with p=0.251 and this signifies that GDP does not Granger cause, aggregated legal systems. Further analysis in an model where GDP is the dependent variable show that the change in the coefficient aggregated legal systems change in aggregated legal systems is 8.272 with p=0.004 and this signifies that aggregated legal systems Granger causes GDP. This indicates that change is aggregated legal systems is highly significant indicating that previous period values of aggregated legal systems provides a strong explanatory power of current values of GDP. These results show that there is unidirectional relationship that flows from aggregated legal systems to GDP. This means that changes in aggregated legal systems must precede changes in GDP in order for changes in aggregated legal systems to explain the changes in GDP, otherwise changes in GDP cannot be attributed to changes in aggregated legal systems. This suggests that a change in aggregate legal systems must occur first in order to cause a change in GDP.

In the model where aggregated good governance in a dependent variable, the coefficient for GDP is 1.238 with p= 0.266 and this signifies that GDP does not Granger cause aggregated good governance. Further analysis in the model where GDP is the depend variable indicate that change the coefficient of aggregated good governance is 0.227 with p=0.634 indicating that aggregated corporate governance does not Granger cause aggregated corporate governance. This finding supports this study main thesis that corporate governance alone is necessary but is not adequate to cause economic growth.

Further analysis in model 5 where aggregated financial development is the dependent variable the change in coefficient of GDP is 6.601 with p=0.01 this means that GDP Ganger causes aggregated financial development. The results in the model where GDP is a dependent variable, the coefficient for aggregated financial development is 17.685 with p=0.022 signifying that aggregated financial development Granger causes GDP. It means that change in aggregated financial development is highly significant; indicating that the change in previous period in aggregated financial development provides a strong causes changes in GDP. This findings show that there is a bidirectional relationship that run between GDP and financial development. For instance in aggregated financial development cause a change in GDP and vice versa, implying that there is direct interrelationship between GDP and aggregated financial development.

The results for the model where the aggregated macroeconomic fundamental is the dependent variable, the change in coefficient in GDP is 6.0601 with p=0.010. This indicates that the GDP Granger causes aggregated macroeconomic fundamental. An analysis in the mode where GDP is the dependent variable, the change in coefficient in aggregated macroeconomic fundamentals is 5.278 with p=0.022. This show that aggregated macroeconomic fundamentals Granger causes GDP. In particular the change in the macroeconomic fundamentals is highly significant, indicating that the previous period aggregated macroeconomic fundamentals provide a strong explanatory power for current values of GDP. These result show that there is bidirectional causality relationship that flows between aggregated macroeconomic fundamentals and GDP. For example a change in aggregated macroeconomic fundamentals may cause a change in GDP and change in GDP may cause a change in aggregated macroeconomic fundamentals.

The result indicates the coefficient for aggregated legal system is 8.272 at p= 0.004 signifies that there is causality relationship between aggregated legal system and aggregated corporate governance. Further analysis indicates the coefficient for the coefficient for aggregated corporate governance is 32.208 at p=0.000. Overall these results indicate that there is unidirectional causality relationship between aggregated corporate governance and aggregated legal system. This means that a change in aggregated legal systems may cause a change in aggregated corporate governance.

The findings reveal that the coefficient of aggregated financial development is 17.685 at p=0.000, and this means that we reject the null hypothesis and rather accept the null hypothesis that aggregated corporate governance. It means that aggregated financial development Granger causes aggregated corporate governance. It is important to report that aggregated financial development has the highest contribution to the overall contribution of aggregated corporate governance indicated by that coefficient for aggregated corporate governance is 17,685 at p=0.000. This signifies that aggregated financial development has a strong positive contribution to the causality of aggregated corporate governance at 5% significant level. Overall these results indicate that, there is bidirectional causal relationship between aggregated corporate governance and aggregated financial development that flows in both directions.

The results show that macroeconomic environment coefficient is 54.006 at p=0.000 and this signifies that we reject the null hypothesis and accept the alternative hypothesis aggregated macroeconomic fundamentals Granger causes aggregated corporate governance. Further analysis showed that the coefficient for aggregated corporate governance is 0.358 with p=0.550, this signifies that we accept the null hypothesis that aggregated corporate governance does not Granger causes aggregated macroeconomic fundamentals. These findings indicate that there is unidirectional relationship that flows from aggregated macroeconomic fundamentals to aggregated corporate governance. This implies that a change in the macroeconomic fundamentals must precede change in aggregated corporate governance if the change in aggregated corporate governance is to be explained by change in aggregated macroeconomic fundamentals. It also implies that countries should consider changing their macroeconomic fundamentals first before contemplating a change in aggregated corporate governance. Overall, the results indicate that last years aggregated macroeconomic fundamentals have strong explanatory power for current observed aggregated corporate governance

With regard to aggregated corporate governance there are interesting patterns of Granger Causality that have emerged. Firstly that aggregated corporate governance Granger causes economic growth. Further analysis revealed there is a unidirectional causal relationship that flows from aggregated corporate governance to economic growth. It means that past values or performance of aggregated corporate governance provide strong explanatory power of economic growth. Secondly there is causality in single direction from aggregated legal systems to aggregated corporate governance. In other words past values of aggregated legal systems explain the current values of aggregated corporate governance. Alternatively past values of aggregated corporate governance explain current values of aggregated legal systems. Thirdly there is no causal relationship between agitated corporate governance and aggregated good governance. Fourthly, there is bidirectional causality relationship between aggregated corporate governance and financial development. Lastly there is a unidirectional causal relation that flow between macroeconomic fundamentals to corporate governance.

6.4 Forecasting the effect of corporate governance on economic growth in Sub Saharan Africa using a panel VAR

A panel VAR forecast were estimated from the panel VAR Granger causality test for aggregated corporate governance and economic growth that were estimated in the previous chapter. The model predicts economic growth that will arise in response to change in aggregated corporate governance as well as other additional explanatory variables. The forecast will also predict the performance of aggregated corporate governance, aggregated legal systems, aggregated good governance, aggregated financial development and aggregated macroeconomic fundamentals in the next 10 year period starting from 2015. Such information is relevant and necessary in enabling a prediction of the future in terms of the effect of corporate governance on economic growth in Sub Saharan Africa and provides scientific empirical evidence that further provide research based solutions

Table 6.12: Panel vector forecast error variance decomposition forecast test results for corporate governance and economic growth in Sub Saharan Africa

Response variable and Forecast horizon	GDP	Agg_cg	Agg_leg	Agg_gg	Agg_fd	Agg_mf
GDP						
0	0	0	0	0	0	0
1	0	0	0	0	0	0
2	0.693	0.181	0.053	0.046	0.023	0.004
3	0.643	0.185	0.066	0.076	0.024	0.006
4	0.635	0.185	0.065	0.078	0.031	0.006
5	0.631	0.187	0.065	0.077	0.032	0.007
6	0.63	0.187	0.066	0.077	0.032	0.007
7	0.63	0.187	0.066	0.077	0.032	0.007
8	0.63	0.187	0.066	0.077	0.032	0.007
9	0.63	0.187	0.066	0.077	0.032	0.007
10	0.63	0.187	0.066	0.077	0.032	0.007
Agg_cg						
0	0	0	0	0	0	0
1	0.008	0.992				
2	0.014	0.932	0.017	0	0.032	0.004
3	0.016	0.901	0.024	0.002	0.052	0.005
4	0.015	0.895	0.025	0.004	0.055	0.006
5	0.015	0.895	0.025	0.005	0.055	0.006
6	0.015	0.894	0.025	0.055	0.005	0.006
7	0.015	0.894	0.025	0.005	0.055	0.006
8	0.015	0.894	0.025	0.005	0.055	0.006
9	0.015	0.894	0.025	0.005	0.055	0.006
10	0.015	0.894	0.025	0.005	0.055	0.006
Agg_leg						
0	0	0	0	0	0	0
1	0.047	0.021	0.001	0.931	0	0
2	0.047	0.047	0.047	0.021	0.001	0.931
3	0.04	0.016	0.119	0.778	0.001	0.048
4	0.047	0.062	0.165	0.633	0.003	0.089
5	0.048	0.08	0.161	0.618	0.003	0.09
6	0.048	0.085	0.16	0.615	0.003	0.09
7	0.048	0.086	0.159	0.614	0.003	0.09
8	0.048	0.086	0.159	0.614	0.003	0.09
9	0.048	0.086	0.159	0.614	0.003	0.091
10	0.048	0.086	0.159	0.614	0.003	0.091
Agg_gg						
0	0	0	0	0	0	0
1	0.029	0.003	0.027	0.002	0.94	0

2	0.02	0.141	0.026	0.022	0.789	0.002
3	0.021	0.188	0.028	0.026	0.736	0.002
4	0.021	0.193	0.03	0.025	0.727	0.002
5	0.021	0.194	0.031	0.025	0.726	0.002
6	0.021	0.194	0.031	0.026	0.726	0.002
7	0.021	0.194	0.031	0.026	0.726	0.002
8	0.021	0.194	0.031	0.026	0.726	0.002
9	0.021	0.194	0.031	0.026	0.726	0.002
10	0.021	0.194	0.031	0.026	0.726	0.002
Agg_fd						
0	0	0	0	0	0	0
1	0.001	0.001	0.004	0.048	0.018	0.929
2	0.091	0.001	0.004	0.154	0.019	0.731
3	0.091	0.001	0.004	0.154	0.019	0.731
4	0.094	0.015	0.008	0.198	0.018	0.667
5	0.094	0.018	0.01	0.2	0.018	0.66
6	0.094	0.02	0.011	0.2	0.017	0.657
7	0.094	0.021	0.011	0.2	0.017	0.656
8	0.094	0.022	0.011	0.201	0.017	0.655
9	0.094	0.022	0.011	0.201	0.017	0.655
10	0.094	0.022	0.011	0.201	0.017	0.655
Agg_mf						
	0	0	0	0	0	0
1	0.001	0.001	0.004	0.048	0.018	0.929
2	0.091	0.001	0.004	0.154	0.019	0.731
3	0.094	0.01	0.005	0.189	0.018	0.684
4	0.094	0.015	0.008	0.198	0.018	0.667
5	0.094	0.018	0.01	0.2	0.018	0.66
6	0.094	0.02	0.011	0.2	0.017	0.657
7	0.094	0.021	0.011	0.2	0.017	0.656
8	0.094	0.021	0.011	0.2	0.017	0.656
9	0.094	0.021	0.011	0.2	0.017	0.656
10	0.094	0.021	0.011	0.2	0.017	0.656

Agg_cg represent aggregated corporate governance, Agg_lg is aggregated legal system, Agg_gg is aggregated good governance, Agg_fd is aggregated financial development, Agg_mf represent aggregated macroeconomic fundamentals

Table 6.12 shows that the magnitudes of the coefficient for economic growth are estimated at 0.630 from period two until period 10. This signifies that a standard unit change in economic growth will be preceded by a 0.630 unit change in economic growth starting from year two until end of year 10. The finding reveals that increasing economic growth causes a marginal increase in economic growth. It entails that is predicated that changes in economic growth will continue to have insignificant effect on economic growth in the next 10 years. This study found that an increase in aggregated corporate governance by unit standard deviation results in an increase in economic growth in the first 3 years is estimated at 0.008, 0.0014 and 0.016 and this can be followed by a decline in economic growth of about 0.015 from the fourth until 10 year. This show that an increase in aggregated corporate governance leads to a positive insignificant increase in economic growth in the first three years and this is followed by a decrease by 0.001 leading economic growth to be estimated at 0.015for the last six years thereafter.

The results indicate that there are no major differences in forecast GDP in the next 10 in response to a shock in aggregated legal systems, aggregated good governance, aggregated financial development and aggregated macroeconomic fundamentals. These predictions indicate that the past and future performance of corporate governance together with the aggregated, legal systems, aggregated good governance, aggregated financial development and aggregated economic growth all in the next year ten year period have no significant contribution to economic growth in the next 10 years.

Table 6.12 also shows the forecast for corporate governance in the next 10 years in response to GDP, aggregated corporate governance, aggregated financial development and aggregated macroeconomic fundamentals. The results reveal that a standard deviation increase in economic growth will lead to increase in economic growth to constant 0.018 from year 2 to 0.018 for the next 10 years. The result indicates that a unit increase in standard deviation of aggregated corporate will result in 0.992 responses in the first two years and thereafter a constant 0.894 for the remaining 8 years. A unit standard deviation increase in aggregated legal systems results in a 0.021% increase in aggregated corporate governance the first year and a continuous increase to 0.086 in the 7 years thereafter the rate of increase remain constant. The results reveal that a standard deviation increase in aggregated good governance increase will prompt a 0.003 increase in aggregated corporate governance in the first year, a stable increase to 0.194 in the fourth year and thereafter the rate of increase remains at constant 0.194 for the last 6 years. There are significant differences in the response of aggregated corporate governance to a shock in aggregated financial development and aggregated macroeconomic fundamentals. Overall these findings show that aggregated variables.

6.5 Conclusion

In this chapter panel VAR techniques were used to examine further the relationship between corporate governance and economic growth. VAR tests were conducted to investigate the short run relationship between corporate governance and economic growth using disaggregated and aggregated data sets. This study found that at disaggregated level components of corporate governance, legal systems, governance, financial development and macroeconomic fundamentals have no long run relationship. The panel VAR estimates for the short run indicate that aggregate corporate governance, aggregated legal system, aggregated good governance aggregated financial development and aggregated macroeconomic fundamentals all at lag one have a strong and positive effect on economic growth.

The panel VAR short and long relationship provided basis to further test for causality between aggregated corporate governance and economic growth. This study found that at disaggregated level corporate governance does not Granger cause economic growth. Results using aggregated data showed that there is unidirectional Granger causality that flows from corporate governance to economic aggregated corporate governance. Results using aggregated data indices show that all aggregated variables of corporate governance, good governance, legal systems, financial development and macroeconomic fundamentals cause economic growth. A panel VAR response forecast shows that a one unit shock in aggregated corporate governance has no effect on economic growth for the coming 10 years. In particular the findings show that it is predicted aggregated corporate governance will affect economic growth by about 0.008 in the first year to about 0.015 in the subsequent 9 years. The next chapter presents a discussion of the results with the intention of building the basis for recommendations and conclusions on corporate governance and its role in economic growth in Sub Saharan Africa.

CHAPTER: 7

Discussion and interpretation of the results

7.1 Introduction

This chapter presents a discussion and interpretation of the findings presented in the previous chapter in relation to the research questions raised in this study. The research problem being under investigation in this study was to establish the nature of relationship between corporate governance and economic growth in Sub Saharan African countries. This chapter discusses findings from the perspective of the conceptual framework presented in Chapter 3. The discussion aims to provide a summary of the key findings. This chapter also presents an integrated framework of corporate governance for enhancing economic growth in the Sub Saharan African countries context. The integrated framework of corporate governance for enhancing economic growth in Sub Saharan African countries t is the contribution of this study to the research problem under investigation. It was formulated and designed after the discussion and interpretation of empirical evidence presented in the previous chapter.

7.1.1 State of corporate governance and economic growth in Sub Saharan Africa

This study observed trends in Sub Saharan African countries has been experiencing low economic growth for the past 7 years. Promoting sustainable economic growth is one of the primary objectives of various regional economic blocks such as the SADC, East African Community (EAC) and ECOWAS, NEPAD and AU. SADC for example, through frameworks such as Regional Indicators Strategic and Development Plan (RISDP), Trade and Foreign Industry Investment (TIFI) Directorate and other strategies used in driving its mission of achieving economic development. SADC's core principles for promoting regional economic include efficient productive cooperation, integration of good governance, peace and security. SADC principles however do not directly recognise the link between corporate governance and economic growth although there is acknowledgment of the need to attract investment and effective production. NEPAD identifies corporate governance as a fundamental for strengthening economic growth in the region. However, it does not have a framework of corporate governance for enhancing economic growth in Sub Saharan African countries.

Various institutions such as NEPAD, IMF and World Bank have recommended that countries in Africa should adopt strong corporate governance in order to enhance economic growth. Inasmuch as there are increased recommendations to adopt corporate governance in order to increase economic growth, there is little discussion about the framework that can be used in Sub Saharan African countries. The Sub Saharan Africa region is made up of 49 countries each with its own peculiarities that need to be taken into account when assessing the role of corporate governance on economic growth. A KPMG survey, for instance, found that countries in Africa continue to lag behind in disclosure and transparency which is one key element of corporate governance (see KPMG 2008, 2011, 2008). Most studies on corporate governance in Africa have focused on firm level and these cannot help us to understand factors that determine corporate governance and the effects on economic growth at cross country level. Aware of the gap in knowledge about the role of economic growth in Sub Saharan Africa, this study focused on establishing whether corporate governance is a determinant of economic growth in Sub Saharan Africa.

The findings on the state and characteristics of all these explanatory variables were presented in Chapter 6. The dialogue aims to create awareness about the characteristics and background of corporate governance and its role in economic growth across Sub Saharan Africa. Although in the beginning the discussion of the results of these explanatory variables is separate, it is important to remember that they are not independent; instead they tend to reinforce each other. Presumably an understanding of the state and possible consequences of the observed corporate governance, legal systems, good governance, financial development and good governance across countries and over time across the region provides a basis for a discussion on establishing the nature of the relationship between corporate governance in Sub Saharan African countries. The results from panel VAR short run estimates, panel VAR Granger causality and panel VAR forecast build on results from chapter 5 and 6.

7.1.2 Determinants of corporate governance and economic growth in Sub Saharan African countries

Sub Saharan African countries are characterised by generally low economic growth and weak corporate governance, legal systems, lack of good governance, low financial development and unstable macroeconomic fundamentals. This finding is similar to that observed by WFE (2008, 2009, 2010, 2012, 2013, 2014, 2015). In Sub Saharan African countries the differences in the development of corporate governance is largely attributed to country specific differences. This study reached the conclusion that, adaption and implementation of corporate governance in the region is still low because no major individual country changes have been observed during the period under study. It can be concluded from the findings of this study that, it is necessary to adopt country specific approaches to the adoption and implementation of corporate governance in order to enable countries to promote economic growth.

7.1.3 Economic growth

The descriptive statistics revealed that economic growth in Sub Saharan Africa is increasing at a slow rate. Furthermore panel summary statistics show that the overall rate of economic growth across all countries is low and is largely contributed by country specific differences that have been in existence overtime. The findings further show that there has not been any major economic growth within individual countries during the period under investigation. This evidence suggests that individual country specific differences play a significant role in explaining the observed variations in economic growth. It can assumed that the fact that the magnitude of the variations of economic growth are small because corporate governance and economic growth in the region is affected by similar factors. This has important implications for regional economic growth policy makers such as those of SADC, EAC, ECOWAS, AU and NEPAD because it could be suggesting that if there are common obstacles hindering economic growth then similar strategies could be devised to address this. One such strategy might be the development of a regional codes of corporate governance such as the one developed by OECD and the European Union for its member countries to promote economic growth in the Sub Saharan Africa region. The high level of similarities suggests that individual countries may use similar strategies that have worked in other countries but may not be applicable in countries with different contexts.

7.1.4 Corporate governance

Corporate governance practices are equally low across all the countries over time. The establishment of corporate governance could help to promote accountability and transparency thus minimise governance risk in the separation of ownership from control (Cadbury, 1992, OCED, 1999, 2004, 2015, King Report, 1994, 2002, 2009). Basically, corporate governance mechanisms aim to promote free enterprise and enable companies to maximise value creation in an accountable and transparent manner. Using the aforementioned explanatory variables the section that follows focuses on a discussion and interpretation of the relationship between corporate governance and economic growth. Corporate governance is proxied by the protection of minority shareholders, director liability, and shareholder suit, efficacy of the board, disclosure and transparency.

7.1.5 Protection of the minority shareholders

The descriptive statistics in this study provide preliminary evidence that overall protection of minority shareholder is generally low within countries across Sub Saharan African countries. It was seen that protection of the minority shareholder differs across Sub Saharan African countries. For instance, the findings show that countries such as South Africa, Ghana and Mozambique rank high in this provision on the contrary other countries such as Ethiopia, Senegal and Mauritania have the lowest protection for minority shareholders. The differences in corporate governance across countries in the region can be attributed to various reasons. For instance Porta *et al* (1997) points out that, the availability or non-availability and enforcement of legal laws that provide for investor protection contributes to differences in corporate governance across countries. The type of ownership has influence on the type of protection for minority shareholders in the company (Keasey *et al*, 2005). Literature further attributes the source of origin of legal laws of a country as contributing to differences (La Porta *et al,* 2008, 1998, 1197). This implies that sound protection of minority is influenced by the origin of legal law and system. Minority shareholders have an interest in the company because they expect a return on their investment and for this reason countries in Sub Saharan Africa may need to consider improving protection for minority shareholders in the long run. This is because low protection has potential to decrease company performance because it gives the impression that there is unequal treatment of shareholders.

Minority shareholders are groups of shareholders who have little control over management or controlling shareholders. Because they own a small percentage of shares in the company, as such their protection is necessary because they have injected their money into the company and are entitled to certain rights. Protection for minority shareholders is important for corporate governance because their rights and interests could easily be dominated by a large controlling shareholder. Literature on corporate governance has examined the effect of protection of the minority shareholders at firm level with limited analysis of the effect on economic growth. Studies have found that investor protection plays a significant role in enhancing company access to finance and company performance (Ammann et al., 2011, Arora et al., 2016). This means that protection of minority shareholders is important. The protection of minority shareholders underscores the need for equal treatment of all shareholders. The OECD

(1999, 2004, 2015) argues that countries should establish protection of minority shareholders in order to attract investment from such groups.

7.1.6 Director liability

Director liability is generally low across countries in Sub Saharan Africa. As noted in the preceding section, directors have certain legal and statutory duties, responsibilities and liabilities as well. Director liability is one mechanism that contributes to differences in corporate governance at firm level across countries. This study found that countries such as South Africa, Nigeria and Mauritius rank highest in director liability. High director liability entails that in courts rescission is available when there are unfair transactions that culminate into conflicts of interest. In such cases, shareholders are able to directly sue for damages caused to the company. On the other hand countries such as Ethiopia are estimated be at 0, Senegal 1 and Zimbabwe 2, demonstrating that director liability varies across countries. Low director liability indicates that it is not easy for shareholders to hold directors accountable for any ultra vires conduct. Alternatively there might be non-enforcement of the available laws that provides for director liability (Djnakov *et al*, 2007). It follows that countries seeking to improve director liability may need to review the content of their laws and enforcement.

7.1.7 Shareholder rights

Shareholder rights are developing at a slow pace in Sub Saharan Arica because countries have not made any significant changes in this aspect. The overall shareholder rights across the countries are low across countries over time. Differences between countries explain the overall differences observed in overall shareholder rights. This evidence indicates that countries need to review their corporate governance systems and ensure that they strengthen shareholders' rights. There is a tendency for countries to emphasise different aspects of corporate governance while neglecting others. For example Botswana, which has the highest in protection for minority shareholders and director liability, is ranked lowest on shareholder rights alongside other countries such as Senegal, Ethiopia and Rwanda. This demonstrates that various aspects of corporate governance receive attention. Countries with low shareholder rights must understand that shareholders have certain specific property rights.

7.1.8 Disclosure and Transparency

Disclosure and transparency is, like other corporate governance components, growing at a low pace. Countries have not made significant change inside their countries to improve disclosure and transparency. This is an essential element of corporate governance given the increasing demand for stakeholder’s involvement in decision making. KPMG (2013, 2011, 2008) observed that there is high absence of disclosure and transparency in Africa. This proves that little was observed about the presence of disclosure and transparency. This is an indication that countries need to review their disclosure and transparency techniques because the practice has direct implications on accessing funding for the firm. According to the Standard and Poor (2008) disclosure and transparency enables stakeholders to control and monitor management use of resources and to make informed decisions about the company.

7.1.9 Efficacy of the board

We observe that efficacy of the board in almost all countries is above the standard average. This implies that a majority of countries in the region recognises the need to monitor and control the agency problem by balancing power and control of the company thus ensuring that interest of stakeholders are achieved. This demonstrates that a majority of companies have structures, procedures and process that ensure board effectiveness. It is also an indication that, the directors are efficient in performing their duties, responsibilities in terms of, giving strategic decision, monitoring and retaining effective control of the company. Moreover, it implies that board of directors are effective in ensuring compliance with corporate governance practices that enable a company to control conflicts of interest such as appointing independence and competent non-executive directors.

Analysis of board effectiveness measures the ability of the board to provide independent oversight of company management and provides leadership, accountability and responsibility to the stakeholder for the performance of the company. Having an effective board of directors that ensures that company achieve its objectives is of critical importance in corporate governance. The Cadbury Report (1992) describes the extent of effectiveness of the board to discharge their responsibilities as the essence of good corporate governance systems that drive company efficiency and competiveness of any economy. This view suggests that company performance is determined by the extent of effectiveness of the board in running and controlling the company.

7.1.10 Development of corporate governance patterns overtime

Good corporate governance is necessary because it reduces managerial expropriation, misuse of investor resources and improves control, monitoring of management by the board. Findings show that the level of corporate governance practices varies and evolve over time. The OECD (2004) explains that corporate governance practices vary because principles are evolutionary and vary with countries. The OECD (2004) further recommends the need for countries to continuously review their corporate governance practices in order to adapt and keep abreast. Continual review entails that corporate governance practices should be regularly assessed to strengthen practices that enhance principles of accountability and transparency reflected by an increase in the magnitude of corporate governance indicators.

Findings in this study show that there have been minor changes on corporate governance practices. With the exception of efficient boards, there has been minimal increase in all the remaining corporate governance principles. This finding is supported by the panel data summary statistics which revealed that the overall mean average of all corporate governance practices is equally low. The variations observed in corporate governance are largely due to variations that existed between countries. This suggests that there are little efforts to improve the level of investors' protection provided by individual companies in countries across the region. La Porta *et al* (1997) describes corporate governance as a mechanism through which investors provide themselves assurance against expropriation by insiders. It may be deduced that the low corporate governance practices observed in Sub Saharan African countries reflect an absence of investor protection. In addition it can be assumed that it is likely that companies in Sub Saharan Africa are accessing capital at high cost have lower market valuation and low company performance and all this in turn has a negative effect on economic growth. It means that the low corporate governance signals the absence of protection for investors at individual country level.

The fluctuations in corporate governance over time suggest that investor protection in the region is not predictable and thus it is unreliable to attract investment. Others studies have found a correlation between corporate governance , firm accesses finance, return on investment, return on assets and the performance of the firm overall firm (García-Meca et al, 2014, Akpan and Amran, 2014, Liu *et al*, 2015, Oba *et al*, 2014). It is evident that corporate governance practices are required to enable companies to maximise value creation through access to cheaper capital. This indicates that the low and moderate performance observed in corporate governance implies that corporate governance practices are perceived as not providing adequate transparency and accountability that provide investors with confidence and protection they require to make investment decision. In light of the above it can be concluded that corporate governance strengthens investor protection, boosts investor confidence and enhances company performance and all this matters for economic growth. This suggests to policy makers that they need to identify measures to strengthen corporate governance system in their countries.

7.1.11 Development of the legal system patterns overtime

There were marginal changes in the performance of variables of the legal systems under investigation suggesting that either very few countries have undertaken legal reforms or the majority have maintained their status quo. The changes in the legal system might have not been adequate to provide the necessary investor protection that can facilitate the development of corporate governance systems required to stimulate economic growth. This study found that there is an inverse relationship the between legal systems and economic growth. This could be an indication to policy makers that they should consider reforming legal system in order to ensure that their laws provide adequate investor protection that can enable corporate governance to promote economic growth. Findings from La Porta (1997) suggest that the legal system is an important external factor that supports the development of corporate governance systems at firm level. The strength of investor protection supports and complements the development of corporate governance at firm level (Gracia *et al*, 2014). La Porta *et al* (1998) provided evidence that the efficiency of the legal framework plays an important role in determining the extent to which contracts are enforced, creditors' as well as shareholders' rights are protected. Such contractual arrangements provide an important basis for the legal system that protect and enforce contracts, ensuring that creditors and shareholder rights and claims are observed.

7.1.12 Development of good governance patterns overtime

All good governance factors that is, political stability, government effectiveness, rule of law, regulation quality, voice and accountability matter for providing investor protection at country level but all these were observed to be continually negative in Sub Saharan Africa and therefore perceived as high governance risk factors. It can be assumed that the observed weak governance may explain the inverse relationship between good governance and economic growth found in this study. This is because literature suggests that weak governance erodes the benefit of corporate governance; in fact the cost of corporate governance are higher than the benefit (Doidge et al, 2006) because companies try to increase corporate governance in order to compensate for the poor investor protection arising from weak governance. Under such a situation the benefits of increase in corporate governance are diminished by weak governance and this leads to a decrease in economic growth. This study is lead to conclude that, good governance deficiency partly explains the insignificant effect of corporate governance on economic growth as observed in this study.

The extent of country level protection for investors is another factor that affects the development of corporate governance in addition to internal firm governance mechanisms and the legal system. Joe (2003) suggests that whilst corporate governance aligns the interest of shareholders with those of managers, country governance aspects such as political aspects have an effect on the extent to which corporate governance may be required in a country. The King Report (2002, p.9) cautions that all enterprises regardless of how steadfast a particular company's practices may be suffer the consequences of weak country governance. One of the consequences as observed in studies that shares in companies in countries where there is weak governance are even undervalued (Black *et al*, 2014, Gracia *et al*, 2014, Standard and Poor, 2008). Under these conditions, Joe (2003) posits that any attempt to explain corporate governance should take into account the role of the country environment. In this study the findings showed that a continuous negative and weak governance in the period studied.

7.1.13 Development of financial development patterns overtime

Financial development plays an important in determining the allocation of domestic and international finance to local companies. Companies are expected to have high standards of corporate governance in order for them to have access to financing g through the market in the financial market systems hence the level of financial development affects the level of corporate governance within an economy. Studies have found that cross country differences in the financial development have an influence on the level of corporate governance, and ultimately economic growth in an economy (Asongu, 2015, Claessens and Yortoglou, 2013, La Porta *et al*, 1997). This means that financial development determines the ease and cost at with companies can have access to finance. This study found that financing through the market is moderately low during the period, suggesting that companies across Sub Saharan Africa might have been struggling to access finance through the financial markets.

7.1.14 Development of macroeconomic fundamentals patterns over time

Macroeconomic fundamentals have an influence on the environment in which the firm operates and affect company performance. This study found that the macroeconomic environment during this period was characterised by high instabilities in inflation rate, low gross national savings and erratic foreign direct investment. Macroeconomic stability has direct effect on operations and governance. Nhuta (2014) found evidence that macroeconomic fundamentals have influence on corporate governance.

7.1.15 Cross country variations in corporate governance in Sub Saharan Africa

Corporate governance is not an end in itself but rather a means to an end for creating investor confidence and attracting investment and all this matters for economic growth. This implies that corporate governance is not just about structures, processes and procedures but rather linked to outcomes on company performance and ultimately economic growth. Findings in this study reveal that although there are variations in the level of performance of corporate governance practices across countries, overall there is low performance. For instance a cross country analysis of corporate governance patterns during the period of the study indicates that there are tendencies to emphasise one or a few constructs of corporate governance, but never the entirety as discussed here (WFE 2015, 2014, 2013). Corporate governance promotes accountability, responsibility and transparency thereby proving an enabling environment for companies to maximise value creation. South Africa is leading in all corporate governance practices unlike the remaining countries in the region. The high performance of corporate governance in South African countries may be attributed to the presence of a code of corporate governance namely the King Code. It can be inferred from the South African case that a code of corporate governance is perhaps useful for promoting standard practices across the economy.

Building a community of companies with common corporate governance codes might be necessary for formalising transparency and accountability in value creation and this could be an imperative for economic growth. This study suggests that a code of corporate governance is important because it promotes a uniform standard of corporate behaviour, accountability and transparency. Dallas (2005) elucidates that even if corporate governance is a driver for economic growth there should be a minimum level that is required in order to stimulate the expected economic growth rate. South Africa thus can be used as a case study in Sub Saharan Africa to provide several corporate governance related lessons to other countries that are interested in promoting economic growth. South Africa may provide a blue print for other countries in Sub Saharan Africa to implement good corporate governance in their economies.

7.1.16 Cross country variations in legal system

The legal system governs how companies are formed, managed, specifying the rights and duties of managers, directors and shareholders rights amongst many (Dallas, 2005). A strong legal system provides investor protection, minimises investor expropriation by governing and regulating conflicts interest, ensures enforcement of contracts and upholding the rights of all stakeholders. Findings on the state of the legal system were explored in order to identify the position of the legal systems across countries in the region. The study found that there are differences in legal rights, investor protection, judicial independence and efficiency of the legal framework within countries across the region.

The evidence shows that only South Africa appears to have a balance performance in all aspects of the legal systems meaning that in all the remaining countries there are large disparities. For instance there is low performance in the efficiency of the legal system, judicial prudence and property rights in some countries whilst there is a high presence in legal rights and investor protection. The overall implication of these trends is that the benefits of investor protection provided by legal rights might be diminished by the weak performance in efficiency of the legal system, judicial independence and property rights in some countries. For instance it is not adequate to have laws that provide for the right for investors to be protected when there is no enforcement of such laws. Moreover even if countries have strong legal systems and yet there are weak property rights, the absence of property rights will negate the presence of strong legal system. This study argues that balanced performance in the legal systems is necessary to promote corporate governance and strengthen investor protection with a view of enhancing economic growth. The WFE (2014), counsels that that the institutional environment in which governments, individuals and businesses interact to create wealth plays a very important role in promoting economic growth.

7.1.17 Cross country variations in good governance

Scholars have agreed that good governance provides countrywide protection for investors and this has direct impact on corporate governance in a country. Good governance provides accountability, transparency and responsibility thereby ensuring that, the protection of investors which in necessary for promoting economic growth (Doidge *et al*, 2006, WFE, 2014, 2045). This suggests that weak governance environment is a cost to the business and economy at large because it reduces economic growth. The absence has detrimental effect on corporate governance and ultimately negatively affects economic growth. This study found that there are variations in good governance across Sub Saharan Africa but there is prevalence of weak governance in all the countries across the region. That particular deficiency in good governance is expected to negate the benefits of economic growth.

The weak governance explains the negative correlation between good governance and economic growth found in this study. This is because no investor will invest if they expect no good return on their investment due to governance risk (Standard and Poor, 2008). Doidge (2006) has found evidence that cross country good governance is correlated to the influence of corporate governance effects on economic growth. In sum, weak governance erodes the positive effects of corporate governance on economic growth because it increases the cost of business and ultimately negatively affecting economic growth.

7.1.18 Cross country variations in financial development

There is evidence from cross country level studies show that financial development is an important factor that determines economic growth. Results observed in this study indicate that there is low financial development across countries in Sub Saharan Africa. This suggests that any improvement in corporate governance may fail to promote economic growth in the absence of well-developed financial systems. Arun and Turner (2009) points out that, corporate governance matters for economic growth because it affects how and the cost at which the companies finance their real investment. There is a general consensus amongst the various scholars that poor financial development has detrimental effects on the funding of the business and ultimately negative impacts on economic growth (Asongu, 2015, Fernandez and Tamayo, 2015, Naik and Phadi, 2015). If the cost of raising funds is high to it implies that the benefits of improved corporate governance might be lower than costs.

In corporate governance literature studies have found that corporate governance should increase access to finance and reduce cost of finance and all this enhance company performance and ultimately positive affect economic growth. Doidge *et al* (2006) expounds that the cost of improving corporate governance is high in countries with underdeveloped market this is because companies in such countries have increase the standard of their firm level corporate governance beyond local standards in order to raise funding from the external finance sources. The low financial development that is characterised by financing through the market and low regulations of securities in the countries over the time period explains the negative correlation between financial development and economic growth. This is because the cost implementing corporate governance so as to attract investors is will be higher than the benefit.

7.1.19 Cross country variations in macroeconomic fundamentals

The study found evidence that there is instability in the macroeconomic fundamentals of in countries across Sub Saharan Africa. The WFE (2014) points out that, companies cannot operate efficiently when they are high rates of inflation. Corporate governance essentially has to device strategy to reduce external threats from the unstable macroeconomic fundamentals. This evidence suggest that countries in Sub Saharan Africa countries need to take action to minimise their macroeconomic stability when their inflation rates are very high, gross national saving and foreign direct investment is low in order to create an environment that can enable companies to maximise value creation. In sum, the study found that Sub Saharan Africa is characterised by low corporate governance, economic growth, legal systems, good governance, financial development and macroeconomic fundamentals. The implications of the weak institutional environment and unstable macroeconomic fundamentals observed can be summarized as follows:

i. Firstly, there is overall low corporate governance across Sub Saharan Africa. Literature suggests that low corporate governance can increase the cost of finance, reduce investment, decrease operational efficiency and leads to lower company performance and negative contribution to economic growth.
ii. Secondly there is weak legal system in Sub Saharan Africa countries. In accordance to the agency and property rights theory, weak legal systems indicate low protection for property rights and investor protection. The absence of investor protection is associated with the risk of expropriation of investment and all this increases the cost of implementing corporate governance at firm level with the detrimental effect of reducing revenue and negatively affecting economic growth.
iii. Thirdly, the study found that good governance is generally very weak across all countries in the sample. Weak good governance is associated with high cost of corporate governance which outweighs the benefit of implementing corporate governance because it expropriates revenue and decreases economic growth.
iv. Fourthly, the overall financial development in countries across the region is low. This puts local companies under high pressure to implement high corporate governance practices than local standards for companies in an attempt to have access to external finance. Consequently, the benefit of corporate governance might be eroded by the high cost incurred in implementing high corporate governance than local standards.
v. Lastly, the macroeconomic fundamentals in Sub Saharan Africa countries are generally unstable and such an environment can increase the operational cost of business and in turn reduce economic growth.

This summary indicates that Sub Saharan Africa countries are characterised by low corporate governance, economic growth, legal systems, good governance, financial development and macroeconomic fundamentals. It means that corporate governance in Sub Saharan Africa countries is determined by weak institutional and macroeconomic fundamentals. These combined affect different economies in different ways. For instance the effect of corporate governance on economic growth in South Africa is not the same as in Nigeria or Zimbabwe because there are some unobserved country specific differences. This study reached the conclusion that although corporate governance and economic growth varies across countries there is generally low corporate governance and economic growth in Sub Saharan African countries.

7.2 Establishing the nature of relationship between corporate governance and economic growth

Results from nested OLS estimates of corporate governance and economic growth indicate that all components of corporate governance, that is, protection of minority shareholders, director liability, and shareholder suit, efficacy of the board as well as disclosure and transparency have an insignificant effect on economic growth. This entails that an increase in any corporate governance practice has immaterial effect on economic growth. The insignificant relationship between corporate governance and economic growth could partly be attributed to the overall weak corporate governance observed within Sub Saharan Africa during the period under instigation. This view is supported by evidence from the summary of the panel data statistics for corporate governance which indicates that overall corporate governance in countries across Sub Saharan Africa is generally low.

Furthermore, the overall variations in corporate governance are largely contributed by variation between countries rather than variations within countries. Combined all this evidence lead this study to believe that the insignificant relationship observed between corporate governance and economic growth is contributed by the low changes in corporate governance observed within countries. Inferences can be drawn that in countries across the region, corporate governance on its own, has insignificant effect on economic growth. The observations show that change in corporate governance practices in Sub Saharan Africa might not only have been insignificant but immaterial to promote company performance and ultimately stimulate economic growth. In that case further measures might be required to identify the necessary levels of corporate governance that is required to stimulate economic growth since most, if not all, countries in the region are not meeting this standard.

These findings are collaborated by observation from the WFE surveys that observed that there is a continuous absence of strong corporate governance in companies in less developed countries. The WFE surveys points out that, companies in developing countries are mostly factor driven meaning that they are only competing on the basis of their natural factors of production and this implies that there is low productivity, low wages and low competitiveness of the products on the global market and less innovation (WFE, 2013, 2014, 2014). The WFE recommends that in order to maintain competitiveness in developing countries requires well-functioning public and private institutions such as corporate governance and good country governance (WFE 2013). This implies that economic growth observed in Sub Saharan Africa could mostly be arising from the exploitation of their natural resources and not effective corporate governance. It follows that if companies in the region can implement good corporate governance that can enable them to attract investment and thus will also be able to efficiently utilise their natural factors of production thus increase the potential to increase their competitiveness and, efficiency in productivity.

The OLS test under the assumption of homogeneity found that there is an insignificant relationship between all corporate governance practices and economic growth. The insignificant relationship between corporate governance variables and economic growth ranges between strong positive and negative effect. One of the key aspects of the results of this study is that these findings are in contrast to the results obtained in previous studies where others found a positive significant relationship between corporate governance and economic growth (Doidge et al, 2006). It is also in contrast to a policy recommendation that corporate governance can enhance economic growth in all economies. This indicates that corporate governance alone at the present moment in the Sub Saharan Africa context is not adequate to promote economic growth. This finding further justifies the need to account for endogeneity and heterogeneity. This is true especially since the OLS estimates in model 1 are based on the assumption of strict exogeneity. Verbeek (2004) explains that strict exogeneity assumes that the current observation of the explanatory variable (e.g. corporate governance variables) is allowed to be dependent upon current, future and past values of the error term, an assumption this study argues to be unrealistic. The weakness in the OLS assumption of exogeneity further justifies the need for this study to take into account endogeneity that may arise from the effects of missing variables and this may lead the OLS results to be biased. Moreover, literature has suggested that institutional and macroeconomic fundamentals are other explanatory factors that have influence on the development of corporate governance (La Porta *et al* (1997). Inferences can be drawn from this literature that, there is a possibility that the institutional and macroeconomic fundamentals influence economic growth through its effect on corporate governance. .To account for endogeneity this study discusses the findings from the nested OLS estimates that were presented in model 2- 5.

7.2.1 Examine if the legal system influence the effect of corporate governance on economic growth

The findings in model 2 after the addition of the legal system show that, the relationship between corporate governance and economic growth remains insignificant. The effect varies from weakening the negative effect of protection of minority shareholder to weakening the positive and strong effects of director liability, shareholder suits, disclosure and transparency as well as increasing the negative effect of the efficacy of the board. This findings is consistent with Doidge *et al* (2006) findings who concluded that the benefit of corporate governance are less where there is a weak investor protection due the weak legal system. This means that within the legal system factors such as the legal systems, investor protection, and efficacy of the legal systems and efficiency of the legal framework play an important role in determining the overall level of investor protection provided by the legal institution in the system. This view is supported by Parades (2004) who suggest that the legal foundation for supporting shareholder's rights is still in the nascent or not available at all in developing countries. This entails that countries that need to promote corporate governance and encourage economic growth must first strengthen their legal system this is because the strength of the legal system is seen as an important factor in determining the level of investor protection available at country level. Overall, these findings confirm that principles and tenets of the property rights theory that posits institutional regulation and governing of issues related to human behaviour in the exploitation of resources are relevant and applicable to the Sub Saharan Africa context. This further justifies the argument of this study that in order to explain corporate governance and its role in economic growth there is need to consider the legal system.

The consistent insignificant effect of corporate on economic growth even after the addition of the legal system could be partly explained by the weak legal system that is observed within countries across Sub Saharan Africa during this period. Dallas (2004) points out that, inadequacies in terms of the content and enforcement of the laws will result in effective legal systems. It is possible that the legal system does not provide adequate investor protection to investors or alternatively if it does it could be that there is an absence of enforcement of laws that protect investors if at all they are available. For instance, the overall results on the state of legal system indicates that whilst overall investors protection and investor were high property rights, judicial prudence and efficiency of the legal systems are equally low. This signal post that there are some deficiencies in the legal systems of some of the countries within the sample. The weak legal systems tendencies are concerning because the legal systems determine the level investor protection available in country and this is important for supporting corporate governance and enhancing economic growth (La Porta *et al*, 1997). Based on this view it can be concluded that corporate governance has insignificant effect on economic growth partly because of the weak legal system observed across most if not all countries in the region. Claessens and Yortoglou (2013) propound that well-functioning legal systems matter for the development of effective corporate governance. It can deduced that it is not the legal systems per se that matter rather what is of significant importance is the content and enforcement of the laws that provide for investors protection that makes an legal systems to contribute effectively to good corporate governance and economic growth. Based on evidence observed and discussed here this study concludes that corporate governance has insignificant influence on economic growth when there is a weak legal system that is ineffective in providing terms of laws and enforcement of laws that protect investors.

7.2.2 Examine if good governance influence the effect of corporate governance on economic growth

Literature suggests that corporate governance consists of firm level mechanism that seeks to provide investor assurance against expropriation of their investment by insiders (La Porta, *et al* 1997, Jensen and Meckling, 1976, Fama and Meckling, 1980).Studies have found that good governance have effect at micro and macroeconomic level (Doidge *et al*, 2006). Evidence in this study from the OLS estimate even after the addition of good governance efficacy of the board has strong and negative significant effect on economic growth and other than that all of the corporate governance variables have no significant effect on economic growth. These results are expected because as observed in the previous chapter, good governance in Sub Saharan Africa countries is generally weak meaning that companies have to increase their board efficacy in order to compensate for weak investor protection from weak governance. Country governance risk increases the cost of corporate governance because companies will have to increase their internal firm governance in order to compensate for poor investor protection associated with weak governance. The increase in corporate governance in the presence of weak governance overburden the company with costs and this further reduce company performance and this in turn has negative impacts of economic growth. The findings that good governance matters for explaining the effect of corporate governance match those found by Doidge *et al* (2006) in study of developed economies. Inferences can be made that the role of corporate governance is influenced by good governance. It can be concluded that, those countries in need of promoting economic growth should first consider improving their good governance first.

7.2.3 Examine if financial development has influence on the effect of corporate governance on economic growth

Financial development is another institutional factor that is regarded as important for the development of corporate governance and economic growth. Evidence observed in this study found that corporate governance has insignificant effect on economic growth even after the addition of financial development. The findings show that the addition of financial development strengthens the effect of director liability, shareholder suit, efficacy of the board and disclosure and transparency it increases the negative effect of protection of minority shareholders on economic growth. The increase in the negative effect of protection for minority shareholder on economic growth could be showing the growing demand for the protection of minority shareholder that arises when a firm exists in a country with underdeveloped financial development face when there is need to raise finance through the market. Minority shareholders need to be protected because they are exposed to a risk of being dominated by controlling large shareholders or management by virtue of them being small in size. Claessens and Yortoglou (2013) points out those investors are demanding strong governance for their finance in the global financial market. Since financial development in Sub Saharan Africa was observed to be generally low during that period it entails that companies that require financing through the market were expected to strengthen their corporate governance practices. This increase attempts to strengthens corporate governance makes firms to incur higher costs, leading to reduction in revenue and as highlighted earlier this can reduce economic growth.

7.2. 4 Determining if macroeconomic fundamentals influence of corporate governance on economic growth

Stable macroeconomic fundamentals are imperative for creating an environment that enables companies to maximise wealth creation**.** This study found that the effect of corporate governance on economic growth remains insignificant after the addition of corporate governance. These results suggest that corporate governance effects on economic growth are indirectly or directly linked to the macroeconomic fundamentals. The WFE (2013) notes that a stable macroeconomic environment is required to enable the efficient functioning of the business and further argues that an economy cannot grow unless the macroeconomic environment is stable. The study found that macroeconomic fundamentals in the region are characterised by low gross national saving and this implying that there could be a shortage of finance in the domestic market. Under the unstable inflation observed in countries across the regions, it companies might have faced challenges to operate. Furthermore the inconsistent foreign direct investment across the region may have meant that companies had limited access to foreign investment. All these macroeconomic fundamentals matters for the efficiency of company operation and performance and thus influence the way it should be governed. Talamo (2011) found that corporate governance practices played a significant role in attracting foreign direct capital inflows. This view suggests that companies in Sub Saharan Africa might have been trying to increase corporate governance in order to attract foreign investment. Given that the region's macroeconomic fundamentals have been observed to be unstable this may suggest that this has imposed high cost of corporate governance on companies as they tried to attract foreign capital inflow and this further negatively affects economic growth.

A comparison of the results from the OLS model estimates after adding legal systems, good governance, financial development and macroeconomic fundamentals show that, the effect of corporate governance on economic growth remains insignificant. These findings lead this study to conclude that the weak legal systems, poor good governance, underdeveloped financial development and macroeconomic stability can be associated with insignificant effect of corporate governance on economic growth observed in Sub Saharan Africa.

7.2.5 Comparison on the basis of cross country variations across source of legal origin

There is a general consensus among scholars in literature that country level investor protection varies with legal origin of the law and this shape economic growth through its influence on corporate governance and economic growth (Asongu, 2011, Djankov *et al*, 2008, Doidge *et al,* 2006, Mahoney, 2003, La Porta *et al,* 1999). Common law origin is associated with legal laws that provide high investor protection than civil law countries as such are expected to grow faster. A comparison of OLS models found that corporate governance has insignificant effect on economic growth in both civil and common law countries holding everything constant. This observation contradicts those observe in several studies such as Claessens and Yortoglou (2013) and La Porta *et al,* (1997). One important reason for this observation is that there are differences in legal source of origin, there are marginal differences in the strength of legal systems across countries in Sub Saharan Africa as shown by cross country variations in legal systems found in the previous chapter. Turning to endogeneity the study found that all corporate governance variables have insignificant effect on economic growth after adding the legal systems and good governance in both civil and common law countries. However the addition of financial development and macroeconomic fundaments lead the efficacy of the board to have a strong and significant negative effect on economic growth in common law countries whilst the effect in civil law countries is insignificant. The strong negative significant effect of efficacy of the board could be an indication that common law countries might have been under pressure to promote board efficacy in attempt to attract finance through the market or foreign direct investment given that the region is character by low financial development.

7.2.6 Comparison on the basis of cross country variations across regions

OLS results found that corporate governance has insignificant effect on economic growth across region even after adding the legal systems, good governance, financial development and macroeconomic fundamentals. Despite the addition of the legal system, good governance, financial development and macroeconomic fundamentals having an insignificant effect on economic growth, it provides a strong explanation of the observed changes in economic growth in countries in east and west. This evidence suggests that the effect of corporate governance on economic growth is influenced by the addition of the legal system, good governance, financial development and macroeconomic development in countries in the west and east despite their influence being insignificant. This evidence suggests that the effect of corporate governance on economic growth varies significantly with the geographical location of the country.

7.2.7 Comparison on the basis of cross country variations across income level group

This study found evidence that corporate governance has strong significant effect on economic growth on economic growth holding everything constant in lower economic growth in lower income group countries. In particular protection for minority shareholder has the highest strong negative effect on economic growth and this is followed by efficacy of the board. This means that economic growth decreases as protection of minority shareholder and efficacy of the board increase. This information could be an indication that there are countries in the lower income group place more emphasises on protection of minority shareholder and efficacy of the board than other corporate governance practices and this may further increase the cost of incurred in these corporate governance practices.

7.3 Testing for heterogeneity

This section discusses the finding that was obtained from fixed effect estimations that sought to test for unobserved effects and country specific differences.

7.3.1 Establishing country specific effect on the effect of corporate governance on economic growth

The study found that corporate governance has no significant effect on economic growth after taking into account heterogeneity in corporate governance systems at country level. That is the unobserved individual country level specific differences that are fixed overtime have no influence on the effect of corporate governance on economic growth. A comparison of all the fixed effect model show that after the addition of block of legal systems, good governance, financial development, macroeconomic fundamentals and unobserved country specific differences that effect of corporate governance on economic growth remains insignificant. It implies that there are no major individual country specific differences that have influence on the impact of corporate governance on economic growth across countries in Sub Saharan Africa. It may be that, whilst there were cross country differences observed in corporate governance practices across Sub Saharan Africa the magnitude of the differences were minimal. For example, all countries within the sample seem to put more emphasises on efficacy of the board, disclosure and transparency whilst governance practices such as director liability is generally lowest in all countries observed. As highlighted earlier the presence of corporate governance mechanism varies with countries for instance the study found that there is high presence of all corporate governance practices in South Africa whilst in the rest of countries there are large discrepancies were observed.

7.3.2 Determining the influence of good governance on the effect of corporate governance on economic growth

The consequences of the observed weak corporate governance is analysed from neoclassical assumptions about economic agent behaviour. It can deter investment; affect the finance of the corporation and this further affects company performance and economic growth. In accordance with the paradigms of the neoclassical economic theory, investors as economic agent are rational individual who seek to maximise self-economic interest. In this regard the presence of corporate governance practices is linked with the availability of internal investor protection in terms of expropriation of their investment (La Porta *et al*, 1997). Many studies have provided evidence that corporate governance is fundamental, investors will not invest they expect that they will not be able to get a return on their investment (Ammann *et al*, 2011, Black *et al*, 2015). Based on this view it can inferred that the weak corporate governance systems observed across Sub Saharan Africa signpost the absence of protection for investors at firm level and inconsequence reduce investment and negatively influence economic growth.

Country governance influence economic growth by shaping the environment because it predicates the environment in which company operates ownership structures hence the way it is governed. Djnakov *et al* (2006) found the presence of good governance to have a positive significant effect on investor protection and is associated with corporate governance and faster economic growth. This finding could be an indication of weak country governance. Studies have found that weak country governance can negatively affect the functioning of corporate governance (Amman *et al*, 2013). A weak country governance environment may be characterised by poor protection for investors due to the absence of rule of law and political instability. Under such conditions the companies increase their corporate governance in an attempt to provide investor protection that is missing due to the weak country governance. Ultimately the benefits of increased corporate governance could be an expropriation of shareholder investment. Arthur Levitt cited in King Report (2002, p.9) points out that all enterprises in a given country regardless of how steadfast a particular company's practices may be are bound to suffer the consequences of country governance. This indicates that investor protection at country level supersedes corporate governance at firm level. Therefore it can be concluded that good governance is necessary for the development and implementation of effective corporate governance in any country.

7.3.3 Determining the influence of financial development on the effect of corporate governance on economic growth

Corporate governance after the addition of financial development has an insignificant effect on economic growth. Under the neoclassical economics paradigms the financial market is assumed to be perfectly competitive meaning that all the available information represents a measure of the value of the stock asset in the market. For instance there is equally low disclosure and transparency observed in this study and which can be collaborated with findings from the KPMG surveys for the period staring 2008 until 2013. The KPMG surveys observed that, the there is a consistent weak disclosure and transparency in countries in Africa with the exception of South Africa and a few others. Weak disclosure and transparency according to finance theories in particular the agency theory and efficiency market hypothesis represents a risk to the company. This is because it indicates that information regarding the utilisation of investor resources in the companies is not freely available. It implies that weak corporate governance is seen as reflecting the presence of existence of a high risk of expropriation of investor resources by internal insiders or those in control of the company because of the absence of control mechanism that minimise individual opportunistic behaviour. This empirical evidence and theoretical explanations highlights the implications of weak corporate governance mechanism on company performance and ultimately economic growth. It thus entails that countries in need of promoting economic growth may need to revisit the performance of their corporate governance systems first.

7.3.4 Comparison of fixed effects by cross country variation in origin of legal law

In Sub Saharan Africa context this study found evidence that in both common and civil law origin countries corporate governance does not play a significant role in economic growth. The insignificant role of corporate governance in economic growth could be associated with the weak legal systems observed across countries in Sub Saharan Africa. As noted earlier on, there are no major differences observed in the strength of the legal systems across the region. This may suggest that in Sub Saharan Africa the source of origin of the legal law has significant influence on the effect of corporate governance on economic growth. These findings are different from those observed by different studies such as those by Asongu (2011), La Porta *et al* (1997) and Claessens (2006). Findings in this study indicate that there are minor differences in the legal systems of countries across the region. For instance the study observed that all countries in the region seems to put emphasis on the legal rights and investor protection overlooking other legal aspects such ensuring the efficiency of the legal framework, judicial independence and property rights. Based on this observed it can argued that legal rights and investor rights are necessary but they may not be sufficient to support the development of strong corporate governance systems that can stimulate economic growth in the absence of other legal aspects such as enforcement of the laws or the content of the laws themselves. The weak legal systems observed across the region lead corporate governance to have an insignificant impact on economic growth because a weak legal system contradicts the fundamentals principles of the property rights theory. The role of legal system is to govern the behaviour in the society and this including safeguarding the interest of the property owners who invest their private property in order to provide a good and services to the society. It can be argued weak legal system observed in both common law and civil by failing provide adequate investor protection it has led corporate governance to have a minimal contribution to economic growth. It can be concluded that, the legal systems in both common and civil law countries in Sub Saharan Africa does not provide enough investor security to attract investment and build strong corporate governance system that can facilitate economic growth.

7.3.5 Comparison of cross country variation across income group level

Different countries in different income group levels are growing at different economic growth rate. The study found that corporate governance has a weak significant effect on economic growth in lower income group income level. This study reached the conclusion that disaggregated variables of; corporate governance, the legal system, good governance, financial development and macroeconomic growth all have no insignificant effect on economic growth in Sub Saharan African countries regardless of the country's income group level.

7.3.6 Comparison of cross country variations across regional block

The regional block in which a country resides might have influence on the nature of relationship between corporate governance and economic growth. Evidence found in this study indicate that disaggregated variables of; corporate governance, the legal system, good governance, financial development and macroeconomic fundamentals have an insignificant influence on economic growth regardless of the regional block in which the country is in. Presumably, corporate governance might be having a little contribution to economic growth in countries across all the regional blocks partly because the economic regional economic growth policies are neoclassical economic growth oriented that overlook the influence of corporate governance on economic growth. If current regional economic growth policies are based on models that overlook corporate governance it entails that they only put emphasis on the macroeconomic fundamentals rather than corporate governance as the main drivers of economic growth. Under such conditions regional economic growth policies might need to develop new models that take into account the influence of corporate governance on economic growth.

7.4 Aggregated measures

According to the findings of this study a single explanatory variables have no explanatory power to explain the effect of corporate governance in economic growth in Sub Saharan. Dallas (2004) argues that an aggregated composite measure approach is required to provide a holistic understanding of the joint effect of corporate governance. He argues that using aggregated corporate governance may have strong explanatory power the nature of relationships surrounding corporate governance. Building upon this advice this section check the robustness of the previous finding using aggregate corporate governance, aggregate legal system, aggregate good governance, aggregated financial development and aggregated macroeconomic fundamentals. The section that follows present a discussion of the findings of the nature of relationship between corporate governance and economic growth using aggregated corporate governance, aggregated legal system, aggregated good governance, aggregated financial development and aggregated macroeconomic fundamentals.

7.4.1 Examining whether corporate governance determine economic growth OLS

The study found that the effect of aggregated corporate governance on economic growth is insignificant holding everything constant. This means that all variables of corporate governance combined have an insignificant effect on economic growth. This could be an indication that all corporate governance variables jointly combined are not adequate to stimulate economic growth. It follows therefore that there is a possible that all the corporate governance variables that were combined are not strong enough to have significant and positive impact on economic growth.

Pursing this further, the study found that aggregated corporate governance continues to have no significant impact on economic growth despite the addition of aggregated variable of the legal system. This evidence demonstrates aggregated corporate governance in the presence of weak aggregated legal system may not be effective in making any important contribution to economic growth. The legal system might have detrimental effects on the development of corporate governance systems and further on economic growth to provide strong protection might due to different factors such as; a weak property rights, inefficiency legal framework work and the absence of judicial prudence. In accordance with Djnakov *et al (*2008) the legal system plays a very important role in reinforcing the strength of corporate governance systems. It can be inferred that the legal system promotes corporate governance by controlling control agency opportunism behavioural tendencies through private enforcement and public enforcement of laws. This implies that a weak legal system indicates that a country's legal systems has limited capacity or no ability at all to provide investor protection against expropriation of their investment by those in control of the company on their behalf. It can be argued therefore that to facilitate the development of corporate governance that promote economic growth it is necessary to consider the legal system as whole and not just focus on single aspects in isolation.

This study found that aggregated corporate governance notwithstanding the legal origin of the legal system of the country it has no effect on economic growth even after adding the aggregated legal system, good governance, financial development and macroeconomic fundamental. This reveal that the effect of corporate governance on economic growth in Sub Saharan African countries is limited if any at all.

The OLS based on the regional block found that aggregated corporate governance has a negative and weak significant impact on economic growth in countries in the east region holding everything constant. The study observed that aggregated corporate governance has a consistent negative and significant effect on economic growth after the inclusion of aggregated legal system, aggregated good governance, and aggregated financial development and aggregated macroeconomic fundamentals. In addition the study found that aggregated corporate governance has insignificant contribution on economic growth in countries in the south region although countries in this region have the highest performance in aggregated corporate governance, aggregated good governance, aggregated legal system, aggregated financial development and aggregated macroeconomic fundamentals. Furthermore the study findings revealed that the west region has the lowest performance in all the indicators and similarly to the south region, aggregated corporate governance has immaterial effect on economic growth.

Good governance involves the mechanism through which power and authority is exercised in order to ensure that institutions are well governed to the end of the maximisation of the overall wellbeing of the citizens of a nation. This study found that aggregated corporate governance has no effect on economic growth after the addition of aggregated good governance. This might be an indication that institutions Sub Saharan African countries are not working efficiently and effectively. This view is supported by the institutional theory principles that posit that good governance is required in order to promote well-functioning institutions. It means that weak aggregated good governance erodes the functional fabric of aggregated corporate governance and its resulting effect on economic growth. Given the possibility that there is weak governance and maladministration it can be concluded that it might be necessary for countries to review their good governance in order enhance corporate governance to the end that it can contribute to economic growth.

This study found evidence that aggregated corporate governance has insignificant influence on economic growth after the addition of aggregated financial development and aggregated macroeconomic fundamentals. This means that aggregated corporate governance plays no significant role on economic growth even after the influence of aggregated financial development and unstable macroeconomic fundamental are taken into consideration.

Turning to the nature of relationship between corporate governance and economic growth using aggregated data sets based on income group level. The OLS estimates show that aggregated corporate governance has a negative and negative effect on economic growth at 1% level in lower income group countries. It also found that after the inclusion of aggregated legal systems, aggregated variables of corporate governance maintains a negative and weak significant influence on economic growth. This evidence further reveals that weak aggregated corporate governance when combined with the aggregated legal system, aggregated good governance, aggregated financial development and aggregated macroeconomic fundamentals it has a negative impact on economic growth in lower income groups. The study further found that aggregated corporate governance has immaterial effects on economic growth in all income level groups after the addition of aggregated variables of good governance, financial development and macroeconomic fundamentals. This finding provides evidence there are marginal differences in aggregated corporate governance, good governance, financial development and macroeconomic fundamentals across countries in the lower, upper and middle income groups. Under such conditions it is possible for similar corporate governance strategies to be used to promote economic growth across all countries regardless of their income level group level in Sub Saharan Africa.

To account for heterogeneity the study estimated fixed effects models using aggregated data sets for corporate governance, legal system, good governance, financial development and good governance. In addition fixed effects models where estimated based on the country's origin of the legal law, income group level and regional block. The section that follows presents a discussion on the fixed effects models under the outlined categories

7.4.2 Estimating the fixed effects of aggregated corporate governance on economic growth

The study found that aggregated variables of corporate governance have negative significant effect on economic growth. The findings also revealed that aggregated corporate governance has an insignificant effect on economic growth even after the addition of aggregated legal system, aggregated good governance, and aggregated financial development, aggregated macroeconomic fundamentals as well as country specific differences. This finding indicates that even unobserved individual country specific differences in the aggregated legal system, aggregated good governance, aggregated financial development and aggregated macroeconomic fundamentals has no influence on the effect on aggregated corporate governance on economic growth across countries. These findings suggest that aggregated corporate governance provide have higher explanatory power of the observed changes in economic growth. It means that emphasis should be placed on putting in place adequate corporate governance practices that can meet the minimal requirements that can stimulate economic growth.

7.4.3 Comparison of cross country variations based on legal origin of law

The study found that aggregated corporate governance alone has insignificant impact on economic growth in both common and civil law countries. This means that aggregated corporate governance on its own is not sufficient to stimulate positive significant effect on economic growth in both common and civil law countries. The test for endogeneity showed that aggregated corporate governance has a negative and weak significant effect on economic growth only in civil law origin after aggregated legal system, good governance and financial development included sequentially. This study concludes that in the presence of weak institutional environment the ability of corporate governance to contribute to economic growth is limited in both common law and civil law countries.

Literature suggests that legal origins influence economic growth through corporate governance and finance. Findings show that after the categorisation of countries according to their legal law of origin corporate governance has insignificant influence on economic growth on both civil and common law countries. It implies that this study found no evidence that support the proposition by La Porta *et al* (2008) and Beck *et al* (2003) that common law common law countries tend to have better strong legal systems and financial development that promotes good corporate governance and enhance economic growth faster than in common law countries. On the contrary, in Sub Saharan Africa while common law countries appeared to have strong corporate governance than civil law countries it seems corporate governance has higher relevance in civil law countries than otherwise. This study assumes that weak environment observed in Sub Saharan Africa in particular inefficiency legal framework, weak property rights and low judicial independence can crowd out investor protection and devour the benefits of corporate governance at firm level and ultimate immaterialise the contribution that a company makes to economic growth at given point of even in the future period.

7.4.4 Comparison of cross country variations based income level group.

An analysis of regional results show mixed results. In the upper income level group aggregated corporate governance on its own is not adequate to have any meaningful effect on economic growth rather it has consistent negative and weak significant effect on economic growth after the study takes into account the influence of aggregated variables of legal systems, good governance, financial development and macroeconomic fundamental. This implies that the role of aggregated corporate governance in economic growth is influenced by aggregated variables the institutional environment together with the macroeconomic fundamentals. It means that although individual cross country different specific fixed aggregated corporate governance effect explain the changes in economic analysis it is however to provide explanation of the variations in economic growth across countries in Sub Saharan Africa in upper income level.

In the middle income level group aggregated corporate governance has a positive and significant effect on economic growth. This implies that aggregated corporate governance is a determinant of economic growth in middle income level countries. The findings show that corporate governances has a consistent weak and significant positive effect on economic growth after the addition of aggregated variables of good governance as well as those of financial development and macroeconomic fundamentals. It means that an increase in aggregated corporate governance after the addition of these variables has positive notable contribution to economic growth. This study reached the conclusion that improved legal system, good governance, financial development and macroeconomic fundamentals have the potential to enhance the positive contribution of corporate governance on economic growth. Turning to lower income, results indicates that there is insignificant relationship between aggregated corporate governance and economic growth before and even after adding aggregated legal system, aggregated good governance, aggregated financial development and aggregated macroeconomic fundamentals.

7.4.5 Comparison of cross country variations based on regional block

The study found evidence that in the east region, aggregated corporate governance has a consistent weak negative and significant effect on economic growth before and after the addition aggregated legal system, aggregated good governance, aggregated financial development and aggregated macroeconomic fundamentals. This means that aggregated corporate has effect on economic growth in countries across the east region. There is also evidence that aggregated corporate governance has a significant effect on economic growth in the west regional block whilst is in insignificant countries in the south regional block. This means that improved aggregated corporate governance benefits countries in the east and west region than those in the south region.

7.5 The short run relationship between corporate governance and economic growth

Panel VAR short run relationship and causality model helped us to understand although disaggregated corporate governance has insignificant effect on economic growth. Aggregated corporate governance has short run relations relationship with economic growth. Aggregated corporate governance lag 1 after adding a block of legal systems has strong and positive significant short run relationship with GDP. This indicates that aggregated corporate governance in the past has period it has influence on economic growth after taking into account the effect of the legal systems. It means that the changes in aggregated corporate governance take at most one period to have effect on economic growth significant effect on corporate governance during the period. In this study we conclude that aggregated corporate governance has a significant long run relationship with economic growth.

7.5.1 Causality and direction of causal relationship between corporate governance and economic growth

The results from the previous chapter indicate that corporate governance despite being the underlying cause for economic growth it does have effect on economic growth in Sub Saharan Africa. This implies the entire causative properties of corporate governance must be critically and stringently reviewed to possibly invigorate the relationship between corporate governance and economic growth in the region. Findings from the Panel VAR Granger causality showed that unidirectional that runs from macroeconomic environment, financial development, good governance and legal systems to corporate governance. The study also found that aggregated corporate governance has a strong and positive contribution to economic growth. Moreover, the study observed that, aggregated corporate good governance aggregated legal systems; aggregated financial development and aggregated macroeconomic fundamentals are determinants of corporate governance. It means that those Sub Saharan African countries should first consider changing their aggregated corporate good governance, aggregated legal systems; aggregated financial development and aggregated macroeconomic fundamentals in order to promote the development of aggregated corporate governance that can enhance economic growth.

7.5.2 Panel VAR forecast for corporate governance and economic growth

Understanding the impact of the past and current behaviour of corporate governance is important for the purpose of controlling, monitoring and taking correction measures to the end that desired results are attained**.** It can also provide a basis for evaluation of the performance of the variable understudy. The impulse response forecast show that corporate governance is predicated to have an insignificant contribution on economic growth estimates at less than 0.01% in the next 10 years. These findings indicate that unless intervention measures can be taken to develop conducive environment that enable the development of corporate governance, then corporate governance is most likely to continue to have an insignificant contribution for the next decade.

7.6 A corporate governance framework for enhancing economic growth in Sub Saharan African countries

Based on the discussion and conclusions drawn on the nature of relationship between corporate governance and economic growth this study proposed that integrated corporate governance framework is required for enhancing economic growth in Sub Saharan African countries. The integrated corporate governance framework for enhancing economic growth in Sub Saharan Africa countries is the contribution of this study to the research problem under investigation. The framework was formulated and designed after a discussion and interpretation of empirical evidence in the previous chapter. The framework identifies the factors that determine the development of corporate governance and enable it to contribute to economic growth in Sub Saharan African countries. The framework outlines the causal relationship between corporate governance, institutional environment, macroeconomic fundamentals and economic growth.

7.6.1 Towards an integrated corporate governance framework for enhancing economic growth

An integrated corporate governance framework for enhancing economic growth was formulated and developed based on the findings from the panel VAR Granger causality test. The integrated framework corporate governance was drawn from the following aggregated level panel VAR Granger Causality models that were estimated in this study:

$$\Delta EcoGr_{i,t-p}=\alpha_i+\sum_{p=1}^{p}\gamma_i^{(p)}\Delta\, EcoGr_{i,t-p}+\sum_{p=1}^{p}\beta_i^{(p)}\,\Delta Agg\_lg_{i,t-p}+\sum_{p=1}^{p}\beta_i^{(p)}\,\Delta Agg\_Cg_{i,t-p}+ \sum_{p=1}^{p}\beta_i^{(p)}\,\Delta Agg\_gg_{i,t-p}+\sum_{p=1}^{p}\beta_i^{(p)}\Delta\, Agg\_FD_{i,t-p}\,\varepsilon_{it}+\sum_{p=1}^{p}\beta_i^{(p)}\,\Delta Agg\_MF_{i,t-p}+\varepsilon_{it}$$

(PGCM1)

$$\Delta Agg\_Cg_{i,t-p}=\alpha_i+\sum_{p=1}^{p}\gamma_i^{(p)}\Delta\, EcoGr_{i,t-p}+\sum_{p=1}^{p}\beta_i^{(p)}\,\Delta Agg\_Cg_{i,t-p}+\sum_{p=1}^{p}\beta_i^{(p)}\,\Delta Agg\_lg_{i,t-p} +\sum_{p=1}^{p}\beta_i^{(p)}\,\Delta Agg\_gdg_{i,t-p}+ +\sum_{p=1}^{p}\beta_i^{(p)}\Delta Agg\_\, FD_{i,t-p}\,\varepsilon_{it}+\sum_{p=1}^{p}\beta_i^{(p)}\,\Delta Agg\_MF_{i,t-p}+\varepsilon_{it}$$

(PGCM2)

$$\Delta Agg\_lg_{i,t-p}=\alpha_i+\sum_{p=1}^{p}\gamma_i^{(p)}\Delta\, EcoGr_{i,t-p}+\sum_{p=1}^{p}\beta_i^{(p)}\,\Delta Agg\_Cg_{i,t-p}+\sum_{p=1}^{p}\beta_i^{(p)}\,\Delta Agg\_lg_{i,t-p} +\sum_{p=1}^{p}\beta_i^{(p)}\,\Delta Agg\_gg_{i,t-p}+ +\sum_{p=1}^{p}\beta_i^{(p)}\Delta\, Agg\_FD_{i,t-p}\,\varepsilon_{it}+\sum_{p=1}^{p}\beta_i^{(p)}\,\Delta Agg\_MF_{i,t-p}+\varepsilon_{it}$$

(PGCM3)

$$\Delta Agg\_gg_{i,t-p}=\alpha_i+\sum_{p=1}^{p}\gamma_i^{(p)}\Delta\, EcoGr_{i,t-p}+\sum_{p=1}^{p}\beta_i^{(p)}\,\Delta Agg\_Cg_{i,t-p}+\sum_{p=1}^{p}\beta_i^{(p)}\,\Delta Agg\_lg_{i,t-p} +\sum_{p=1}^{p}\beta_i^{(p)}\,\Delta Agg\_gdg_{i,t-p}+ +\sum_{p=1}^{p}\beta_i^{(p)}\Delta\, Agg\_FD_{i,t-p}\,\varepsilon_{it}+\sum_{p=1}^{p}\beta_i^{(p)}\,\Delta Agg\_MF_{i,t-p}+\varepsilon_{it}$$

*(*PGCM4)

$$\Delta Agg\_FD_{i,t-p}=\alpha_i+\sum_{p=1}^{p}\gamma_i^{(p)}\Delta\, EcoGr_{i,t-p}+\sum_{p=1}^{p}\beta_i^{(p)}\,\Delta Agg\_Cg_{i,t-p}+\sum_{p=1}^{p}\beta_i^{(p)}\,\Delta Agg\_lg_{i,t-p} +\sum_{p=1}^{p}\beta_i^{(p)}\,\Delta Agg\_gdg_{i,t-p}+ +\sum_{p=1}^{p}\beta_i^{(p)}\Delta Agg\_\, FD_{i,t-p}\,\varepsilon_{it}+\sum_{p=1}^{p}\beta_i^{(p)}\,\Delta Agg\_MF_{i,t-p}+\varepsilon_{it}$$

(PGCM5)

$$\Delta Agg\_MF_{i,t-p} = \alpha_i + \sum_{p=1}^{p} \gamma_i^{(p)} \Delta\, EcoGr_{i,t-p} + \sum_{p=1}^{p} \beta_i^{(p)}\, \Delta Agg\_Cg_{i,t-p} + \sum_{p=1}^{p} \beta_i^{(p)}\, \Delta Agg\_lg_{i,t-p} + \sum_{p=1}^{p} \beta_i^{(p)}\, \Delta Agg\_gg_{i,t-p} + + \sum_{p=1}^{p} \beta_i^{(p)} \Delta Agg\_FD_{i,t-p}\, \varepsilon_{it} + \sum_{p=1}^{p} \beta_i^{(p)}\, \Delta Agg\_MF_{i,t-p} + \varepsilon_{it} \quad \textit{(PGCM6)}$$

where, are$\Delta EcoGr_{i,t-p}$, $\Delta Agg\_Cg_{i,t-P,}$ $\Delta Agg\_Lg_{i,t-P}$, $\Delta Agg\_\, gg_{i,t-P}$, $\Delta Agg\_FD_{i,t-P}$, $\Delta MF_{i,t-P}$ stands for change in economic growth, aggregated variables of corporate governance, legal systems, good governance, financial development and macroeconomic fundamentals over one period respectively. PGCM represents panel granger causality model.

It is important to note that the analytical framework for assessing the effect of corporate governance on economic growth begins at disaggregated corporate governance at firm level. The integrated framework is based on the principles of cause and effect relationship from the panel VAR Granger causality test which hold the assumption is that the performance of the dependent variables is dependent on the performance of explanatory and independent variables both in the previous past period and current period. In this regard the framework proposes that effect economic growth is caused by the performance of aggregated corporate governance, aggregated legal system, aggregated good governance , aggregated financial development and aggregated macroeconomic fundamentals in current period as well as the one in the previous period. The integrated framework based on the panel vector autoregresssion Granger causality identifies underlying factors that determine corporate governance and cause economic growth as well as the direction of the flow of the causal relationship. The causal relationship between corporate governance and economic growth can be summarized as follows below.

i. There is a Granger causality relationship between aggregated corporate governance and economic growth. The direction of causality flows from aggregated corporate governance to economic growth

$$\boxed{\boldsymbol{Aggregated\ corporate\ governance\ \rightarrow economic\ growth}}$$

This means that aggregated corporate governance is a determinant of economic growth.

ii. There is a Granger causality relationship between aggregated legal systems and corporate governance. The direction of causality flows from aggregated values of legal systems to aggregated corporate governance:

$$\boxed{\boldsymbol{Aggegated\ legal\ systems\ \rightarrow Aggregated\ corporate\ governance}}$$

This means that the aggregated legal system is underlying factor that cause aggregated corporate governance.

iii. There is a Granger causality that flows between aggregated good governance and corporate governance. The direction of causality flows in both directions between aggregated corporate governance to aggregated corporate governance:

$$\boxed{\boldsymbol{Aggegated\ good\ governance\ \leftrightarrow Aggregated\ corporate\ governance}}$$

It means that aggregated good governance is an underlying factor that cause aggregated corporate governance and vice versa.

iv. There is a Granger causality that flows between aggregated financial development and aggregated corporate governance. The direction of causality flows from aggregated financial development to aggregated corporate governance:

$$\boxed{Aggregated\ financial\ development\ \ \rightarrow Aggregated\ corporate\ governance}$$

This means that aggregated financial development is an underlying factor that cause aggregated corporate governance.

v. There is a Granger causality that flows between aggregated values of macroeconomic fundamentals and corporate governance. The direction of causality flows from aggregated macroeconomic fundamentals to aggregated corporate governance:

$$\boxed{Aggregated\ macroeconomic\ fundamentals\ \ \rightarrow Aggregated\ corporate\ governance}$$

This means that aggregated macroeconomic fundamentals determines aggregated corporate governance.

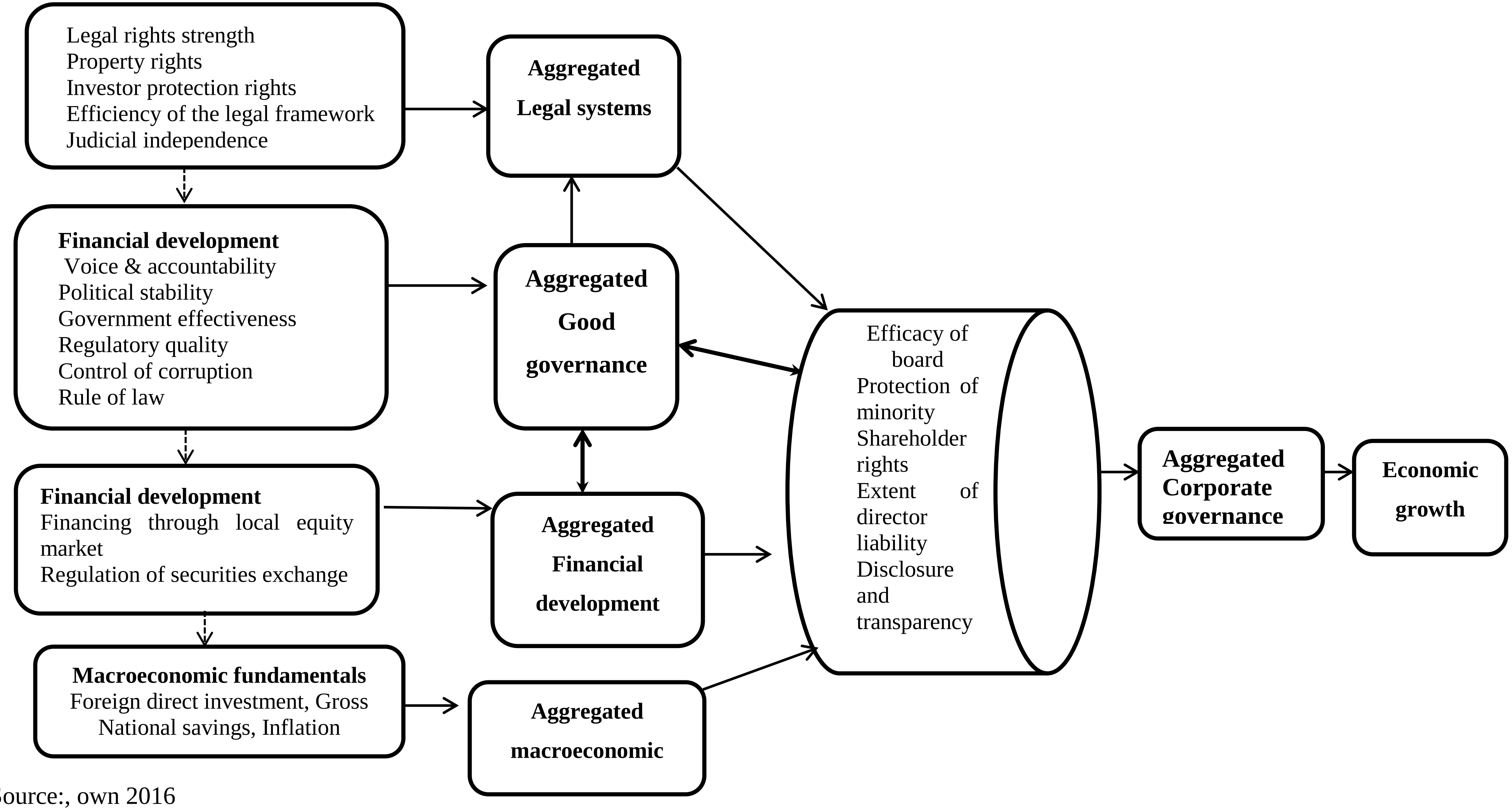
Each of the categories presented in this model was based on findings from panel VAR Granger causality test using aggregated and disaggregated data for each category. In this study a framework was designed and formulated that captures the interrelationship between the explanatory variables that explain cause and direction of relationship between corporate governance and economic development are formulated and depicted in below. The integrated framework of corporate governance for enhancing economic growth in Sub Saharan Africa countries is presented in Figure 7.1.The section that follows provides guidelines and principles underlying the integrated framework of corporate governance for enhancing economic growth.

7.6.2 Components of the integrated framework

The integrated framework assumes that corporate governance is a function of corporate governance, institutional environment and macroeconomic fundamentals. The integrated framework of corporate governance for enhancing economic growth consists of the following components:

1. Corporate governance mechanisms at firm level that consists of disclosure and transparency, shareholder rights, efficacy of the board, protection of minority shareholder and directors liability.
2. The institutional environment that is made up of legal systems, good governance and financial development components.
3. Macroeconomic fundamentals that is inflation, gross national savings and FDI.

Figure 7.1 An integrated corporate governance framework for enhancing economic growth in Sub Saharan African countries



Source:, own 2016

7.6.3 Firm level determinants of corporate governance

The integrated framework suggests that aggregated corporate governance at firm level is an underlying factor that determines economic growth. In accordance to the framework a change in aggregated corporate governance is to contribute to a change in economic growth then the change in aggregated corporate governance should precede the change in the economic growth. If not, the change cannot be attributed to economic growth. The agency theory help us to understand that after a company is formed corporate governance is required. The primary objective of corporate governance is to ensure that the firm achieves its objective of maximising shareholders' long-term value (Waweru, 2014 p.560). The integrated framework suggests that corporate governance contributes to economic growth by protecting investors' interests, attracting investors and ensuring efficient utilisation of company resources.

The board of directors plays a key role in monitoring and controlling opportunistic agency behaviour thus enabling the company to maximise performance. The board is responsible for providing strategic leadership, strategy formulation, implementation monitoring and control (Cadbury, 1992 King Report, 1992, 2004, 2009). The efficacy of the board shapes economic growth by monitoring and controlling investors' interests from being expropriated by those who have control, power or authority over the firm. The OCED (2015, p.13) points out that sound corporate governance systems should ensure that there is strategic monitoring of management by the board. This means that the board ensures accountability and transparency. In the integrated framework board efficacy should take place first to enable corporate governance to contribute meaningfully to economic growth. Director liability contributes to economic growth by assuring investor's right to act against breach of fiduciary and statutory duties. In the framework director liability must take place first before economic growth can occur. Regarding protection of minority rights the OED (2015) recommends that "the corporate governance framework should protect and facilitate the exercise of shareholders' rights and ensure the equitable treatment of all shareholders, including minority and foreign shareholders. All shareholders should have the opportunity to obtain effective redress for violation of their right." This study found that there is high shareholder suit in many countries in the Sub Saharan region. This means that there is increase in mechanisms that seek to protect shareholder rights such as the rights to trade and transfer their shares freely, the right to vote, remove directors, call for extraordinary meetings as well the rights to approve the issue of new shares.

The integrated framework delineates the causal relationship between corporate governance and economic growth. The integrated framework in Figure 7.1 shows that there is unidirectional relationship from aggregated corporate governance to economic growth. This implies that current economic growth is caused by past values of aggregated corporate governance. This view is in line with agency, property rights, and neoclassical and institutional theory perspectives. In the framework, aggregated legal systems, financial development and macroeconomic fundamentals are the underlying determinants of aggregated corporate governance. The framework assumes that if a change in the aggregated legal system, financial development and macroeconomic fundamentals is to lead aggregated corporate governance cause economic growth then a change in aggregated legal system, financial development and macroeconomic fundamentals must precede the change in aggregated corporate governance. If this is not the case, then the change in aggregated corporate governance cannot be attributed to the change in aggregated legal system, aggregated good governance, and financial development and aggregated macroeconomic fundamentals.

7.6.4 Aggregated corporate governance

In the integrated framework corporate governance variables only cause economic growth when analysed jointly. This implies that if corporate governance variables are considered as individual elements then, that they do not have the capacity to cause economic growth. This entails that an integrated approach is required whereby all aspects of corporate governance must be implemented fully in order to avoid deficiencies in other practices. The integrated approach posits that aggregated corporate governance can only lead to economic growth when it supported by the aggregated legal system, aggregated good governance, aggregated financial development and aggregated macroeconomic fundamentals. The framework is based on the assumption that economic growth is caused by the changes in aggregated corporate governance in the current as well previous years which in in turn is caused by the changes in the current as well as previous values of aggregated legal system, aggregated good governance, aggregated financial development and aggregated macroeconomic fundamentals.

7.6.5 The influence of aggregated legal systems on the effects of aggregated corporate governance on economic growth

The framework in Figure 7.1 shows that there is a causative relationship between aggregated corporate governance and aggregated legal system. This means that aggregated corporate governance is caused by changes in current as well as the past values of aggregated legal systems. Legal systems influence economic growth by providing and enforcing the laws in the principal agency relationship. The legal system determines economic growth through its influence on corporate governance by making legal laws that safeguard and protect the interests of shareholders. This implies that countries may need to review the connection between the legal system and corporate governance in their countries in order to facilitate effective coordination.

7.6.6 The influences of aggregated good governance on the effect of aggregated corporate governance on economic growth

The integrated framework shows that aggregated good governance causes aggregated economic growth and vice versa. Governance consists of the traditions and institutions by which authority in a country is exercised. It entails that there is a complementary relationship between aggregated good governance and aggregated corporate governance. That is, if there is a weak governance in the country, investor protection provided by aggregated corporate governance compensates for the weakness of country investor protection weak governance.

7.6.7 The influence of financial development on the effect of corporate governance on economic growth

The integrated framework suggests that existing aggregated corporate governance is determined by not only current but past performance of financial development. In the integrated framework financial development is a determinant of economic growth, that is, the level of financial development determines the effectiveness of corporate governance in a given context. It implies that countries in Sub Saharan Africa should promote financial development in the region before they can expect corporate governance to lead to economic growth.

7.6.8 The influence of aggregated macroeconomic fundamentals on the effects of corporate governance on economic growth

The integrated corporate governance framework for enhancing economic growth in figure 7.1 shows that there is causality that runs in both directions between macroeconomic fundamentals and aggregated corporate governance. This means that macroeconomic fundamentals are also underlying factors that determine the development of corporate governance and influence economic growth. This proves that in order to support the development of corporate governance to the end that it enhances economic growth it is necessary have stable macroeconomic fundamentals.

7.7 Conclusion

This chapter presented discussion and interpretation of the results. To facilitate the discussion research questions and findings were summarized on the basis of pooled effect model, fixed effects model using aggregated and disaggregated data. The discussion also summarized findings on the basis of findings on the basis of origin of the legal law, income group level and regional economic block. Furthermore, the short run relationship and Granger causality, VAR forecast test were also discussed. The chapter concluded by presenting and discussing an integrated corporate governance framework for enhancing economic growth in Sub Saharan African countries. The framework identifies and explains factors that determine corporate governance and have an influence on its effect on economic growth. In sum, the integrated corporate governance framework for enhancing economic growth in Sub Saharan Africa posits that a sound legal system, financial development and macroeconomic fundamentals must take place first before corporate governance can have a significant contribution to economic growth.

CHAPTER: 8

Conclusions and recommendations

8.1 Introduction

This chapter presents recommendations based on the discussion and analysis of findings from the previous chapter. The conclusions and recommendations drawn in this chapter envisage addressing the main research questions raised in this study. In addition the implications and contribution of this study will also be outlined. In light of the research problem under investigation in this study this chapter will conclude by highlighting possible future research issues on the nature of relationship between corporate governance and economic growth in Sub Saharan African countries.

8.2 Conclusions from empirical findings

Based on the descriptive statistics, this study reached the conclusion that corporate governance in Sub Saharan African countries is growing at a slow pace and suggesting that they are still at a nascent stage in most countries across the region. Regarding the research question whether the legal system, good governance, financial development as well as macroeconomic fundamentals are have influence on the effect of corporate governance on economic growth in the region the study found that corporate governance has no significant effect on economic growth even after the inclusion of the aforementioned explanatory variables. Given these points, this study draw the conclusion that, the weak institutional environment and macroeconomic instability observed in Sub Saharan African countries are some of the major factors that contributes to the insignificant relationship between corporate governance and economic growth observed in countries in the region.

Pursing this further, as shown in the analysis of pooled and fixed effects estimation this study observed that corporate governance has no effect on economic growth proving that corporate governance on its own it is not adequate contribute to economic growth. We also note that corporate governance has an insignificant effect on economic growth even after the inclusion of legal system, financial development and macroeconomic fundamentals in common law countries but has immaterial effect in civil law countries. Analysis based on the income group level indicate that corporate governance variables, namely protection of minority shareholders as well as disclosure and transparency have positive and strong significant effect on economic growth in lower income group level countries whilst these variables remain insignificant in both the middle and upper income group level countries. The study reached the conclusion that the effects of corporate governance are context dependent because aggregated corporate governance has a negative significant effect on economic growth in lower income groups, suggesting that an organizational context dependence approach might be effective in lower income groups for a short period whilst it builds proper corporate governance structures. The study also analysed the effect of corporate governance on economic growth depending on the economic regional block context where the country is peer reviewed in terms of its practices. This could be an indication that countries in the east region might have conducive conditions that enable corporate governance to contribution towards economic growth.

Furthermore, the study also took into account the effects of cross country differences in corporate governance, the legal system, good governance, financial development and macroeconomic stability the relationship between corporate governance and economic growth. The study reached the conclusion that aggregated legal systems influence legal rights strength, property rights, investor protection rights, efficiency of the legal framework and judicial independence to promote the development of corporate governance. Additionally, the study concluded that all the differences in variables of good governance combined explain the cross differences in corporate governance because corporate governance has significant effect on economic growth after the inclusion of good governance and the legal system. It was further concluded that the effect of cross country corporate governance on economic growth is influenced by cross country differences in aggregated financial development because corporate governance has an effect on economic growth after the inclusion of financial development, good governance and the legal systems. Moreover the study concludes that across Sub Saharan Africa countries within the sample macroeconomic fundamentals variables all combined have no significant effect on corporate governance and economic growth because corporate governance had no effect on economic growth after adding macroeconomic fundamentals, good governance and legal systems.

The study also examined if the effects of cross country corporate governance differences and the variations in economic growth across countries vary according to the source of the origin of the legal law, income group level and regional economic block. The study made the following conclusions: firstly, in lower income group level countries the presence of corporate governance practices namely the efficacy of the board, protection of minority shareholder rights, director liability, disclosure and transparency is adequate to enhance the efficiency of company performance and ultimately economic growth. Secondly, the legal systems that are legal rights strength, property rights, investor protection rights, efficiency of the legal framework and judicial independence all combined promote economic growth by providing protection to investors. Thirdly, the study concluded that across all countries in the middle income group strong aggregated corporate governance can lead economic growth because despite the current corporate governance practices being weak it has some limited positive effect on economic growth. Lastly, the study concludes that presence of good governance, financial development and macroeconomic contexts can improve the effectiveness of corporate governance on economic growth. Based on this evidence it can be argued that until such a time when the institutional environment is strengthened and macroeconomic stability is enhanced, corporate governance will continue to have weak positive effect on economic growth.

This study also investigated the long run relationship between corporate governance and economic growth. The study concluded that corporate governance mechanisms namely the efficacy of the board, protection of minority shareholders, shareholder rights, and extent of director liability, disclosure and transparency should be continuously in place because they take more than one period to have effect on economic growth. Still on this issue, this study concluded that if the level of corporate governance practices does not change, it will have no effect on economic growth in the long run because one unit shock in corporate governance has insignificant effect on economic growth in the next 10 years.

However, the study observed that all components of corporate governance combined make a positive and strong contribution to economic growth in the presence of legal systems, leading to the conclusion that legal rights strength, property rights, investor protection rights, efficiency of the legal framework, judicial independence are required to enhance the effect of all component of corporate governance on economic growth. The study also concluded that there is need to strengthen the existing legal systems because if corporate governance continues to exist at the current level, it has no significant effect on its influence on economic growth in the next 10 years. Similar conclusions were drawn that good governance must be strengthened in order to promote the development of corporate governance that can contribute to economic growth in the long run. Moreover, it is concluded that if aggregated values of financial development and macroeconomic fundamentals are not improved in the short run there will continue to have little or immaterial contribution to economic growth due to their failure to facilitate the development of aggregated corporate governance.

The short run and long relation between corporate governance and economic growth was also investigated using aggregated values for corporate governance and all the additional explanatory variables. Based on the short run relationship, it can be suggested that improved aggregated corporate governance together with those aggregated legal systems, aggregated good governance, aggregated financial development and aggregated macroeconomic fundamentals have the potential to make a positive contribution to economic growth in the long run. This is because the study made the following conclusions based on empirical findings on the short run relationship between corporate governance and economic growth:

i. Aggregated corporate governance that consists of the efficacy of board, protection of minority shareholders, shareholder rights, director liability as well as disclosure and transparency all combined has a significant and positive effect on economic growth in the short run.
ii. The aggregated legal system that is made up of the legal rights strength, property rights, investor protection rights, efficiency of the legal framework and judicial independence have negative significant effect on economic growth in the short run.

iii. Aggregated good governance that consist of voice and accountability, political stability, government effectiveness, regulatory quality, control of corruption have weak positive contribution to economic growth in the short run.
iv. Aggregated financial development that consists of regulation of securities of exchange and financing through the market is still weak to led corporate governance to have a strong positive effect on economic growth in the short run.
v. Aggregated macroeconomic fundamentals have negative influence on economic growth because it is still weak promote corporate governance practices to have strong positive effect on economic growth in the short run.

Further analysis building on the findings from pooled and fixed effects estimations the study examined the short run relationships between aggregated corporate governance and economic growth. The study found evidence that aggregated corporate governance jointly combined with disaggregated values of the legal system in the past one period leads to strong positive economic growth. A similar conclusion was arrived at regarding the aggregated values of corporate governance and the disaggregated variables of good governance in the past one period. This study also concluded that financial development and macroeconomic stability do not cause economic growth.

Finally the study drawing on the the findings from the short run relationships the study used aggregated values of corporate governance as well as aggregated variables for all the additional variables to investigate causality and the direction of relationship between corporate governance and economic growth. Based on the causality test it was concluded that:

i. Aggregated corporate governance that consist of the efficacy of board, protection of minority shareholders, shareholder rights, director liability, disclosure and transparency all have strong and positive impact on economic growth in the presence of strong aggregated legal systems, good governance, financial development and macroeconomic fundamentals.

ii. The aggregated legal system that is made up of legal rights, property rights, investor protection, efficiency of the legal framework and judicial independence all combined cause positive and strong corporate governance.
iii. Aggregated good governance that promotes voice & accountability, political stability, government effectiveness, regulatory quality, control of corruption all combined cause positive and strong impact on corporate governance.
iv. Aggregated financial development that promotes regulation of financial securities and financing through the market all combined cause strong positive and significant impact on corporate governance
v. Aggregated macroeconomic fundamentals, stable inflation, gross national saving and FDI all combined cause strong and positive and significant effect on corporate governance.
vi. Aggregated good governance aggregated legal systems, aggregated good governance, aggregated financial development and aggregated macroeconomic fundamentals all cause a positive and significant contribution to economic growth.

Based on the causality test, this study concluded that, the aggregated legal system, aggregated good governance, aggregated financial development and aggregated macroeconomic fundamentals are the underlying factors that cause aggregated corporate governance and its effects on economic growth. In sum, the aggregated legal system, aggregated good governance, aggregated financial development and aggregated macroeconomic are antecedents of aggregated corporate governance. To sum up, the panel var prediction revealed that corporate governance will contribute about 0.01% on economic growth in the next 10 years. Based on the conclusions drawn from this study, the section that follows draws insight on the implications of this study to policy, contribution of the study, methodology of research, recommendations and future research.

8.3 Policy implications

The results observed in this study have the following policy implications. This is because according to Boer (2013), OCED (2012) as well as Shrives and Brennan (2014) practitioners globally are faced with the challenge of making strategic decisions and policies about corporate governance and economic growth. Against this context this study has the following implication to policy

i. Countries need to develop codes of corporate governance that are context specific in order to promote economic growth in their economies. This is because the implementation and effect of corporate governance on economic growth varies with the circumstances of a country.
ii. Companies must have in place corporate governance mechanisms such as; the efficacy of board, protection of minority shareholders, shareholder rights, director liability, disclosure and transparency before economic growth can be expected in Sub Saharan African countries.
iii. The aggregated legal systems that provide protection for investors' rights through mechanisms such as strong legal rights, property rights, investor protection rights, efficiency of the legal framework and judicial independence all combined ought to be in place to ensure effective corporate governance first before economic growth can be expected.
iv. Countries need to first promote aggregated good governance in all aspects such as voice & accountability, political stability, government effectiveness, regulatory quality, control of corruption all combined to ensure effective corporate governance first before economic growth can be expected.
v. Financial development systems such as regulation of securities of exchange and financing thorough the market should be in place to ensure the development of effective corporate governance first before economic growth can be expected.
vi. Macroeconomic fundamentals such as stable inflation, gross national savings and FDI should be in place to ensure effective corporate governance first before economic growth can be expected.

In sum this study recommends that policy makers should use the intergrated framework of corporate governance for enhancing economic growth in Sub Saharan Africa developed in this study. The use of such an integrated framework may enable policy makers to coordinate, control and monitor the performance of the institutions that are related to the legal system, good governance, financial development and macroeconomic fundamentals because these all have influence on corporate governance and economic growth. It important for policy makers to consider this framework although various institions such as Cabdbury Report, OCED, King Report, World Bank, IMF have emphased corporate governance as a driver for economic growth efforts have not yet been made to develop an integrated framework for enhancing economic growth from the Sub Saharan Africam countries context. As such at insititutional level the study informs policy in terms of policy formulation, review, adaptation, monitoring and evaluation of effective governance practices at country and firm level which pomotes economic growth.

8.4 Contribution of the study

Comparative studies on corporate governance have focused mostly on developed economies (Djnakov, *et al* 2006, Doidge *et al*, 2008, Porta *et al*, 2000, 1999, 21997, Claessens, 2006). Given that there are large contextual differences between developed economies and Sub Saharan African economies, findings from this study can be generalised to the region. Sub Saharan Africa is a region with the largest number of underdeveloped economies in the world. As explained in Chapter 1 countries in the region are expected to adapt corporate governance to enhance economic growth in their individual economies and all this prevails in a background where there is an absence of integrated framework for enhancing economic growth in Sub Saharan African countries. Furthermore, amidst the absence of cross country empirical evidence, there is debate on the issue of underlying determinants of corporate governance in literature (Christopher, 2010). Moreover, there is an absence of integrated framework that delineates the components and relationships that are necessary for the development of corporate governance so that it contribute to economic growth in Sub Saharan African countries. Ayogy (2001), Okeahalam and Akinboade (2003) Okeahalam (2001) focused on Africa although they made recommendations that institutional environment promotes economic growth through effective corporate governance they did not identify specific factors that influence corporate governance and economic growth. In the absence of empirical evidence, it remains a challenge for Sub Saharan Africa countries to understand antecedents of corporate governance and economic growth to make strategic decisions regarding institutional factors that need to be monitored and controlled as well developing an environment that supports and maintains its functionality. Paredes Paredes

(2004) suggests that there are differences between corporate governance in developed and developing countries but he did not provide empirical evidence of these factors and moreover their effect on the role of corporate governance on economic growth. This study contributed a conceptual framework that identified the variables associated with the relationship between corporate governance and economic growth. This study also contributed methodologically through the use of hierarchical panel data systems and empirically through its findings which provide evidence that explain the observed phenomenon.

8.5 Theoretical contributions

This study using a multi causal integration model analysed seven theories related to corporate governance and its role in economic growth and this culminated in the development of an integrated framework for corporate governance and its role in economic growth. The framework identifies components and explains the conceptual relationships between corporate governance and economic growth. This conceptual framework for corporate governance and its role in economic growth contributes a theoretical view for promoting the development of corporate governance to the end that it can enhance economic growth in developing economies region which is missing in corporate governance and economics literature.

This theoretical contribution to the corporate governance discipline provides evidence that empirically validated corporate governance theories have their origins in developed countries whose contexts are differ from those of developing countries in general in specific Sub Saharan Africa. The study found that, the agency theory, stakeholder, stewardship, resource dependence, shareholder, property right, institutional, organizational theory were relevant to the context of developing economies as well the systems theory, neoclassical economic growth, endogenous growth, Solow-Swan model and Harrod –Domar also still have relevance in Sub Saharan Africa. This is because the findings showed that investor protection at firm level and country level by the institutional environment provides protection against internal abuse of investors' resources by internal management. This promotes accountability and transparency in management behaviour. In so doing, investor protection provide confidence, increases capita access for the company, attracts and returns new investment which matter for capital production. Moreover, corporate governance enhances productivity of the company by promoting ethical behaviour through well-structured corporate governance practices, processes, procedures and principles. Ultimately these play a significant role in fostering stewardship, minimising agency problem and enabling creation of wealth for shareholders.

As a contribution to addressing the gap in literature this study developed an intergrated framework of corporate governance for enhancing economic growth in Sub Saharan Africa countries drawing on empircal findings from this study . The need for new framework follows the advide of Benn *et al* (2009) and Hutchson (2011) who propose that new approaches to understanding corporate governance are required in order to have a better understanding of various aspects surrounding the concept of corporate govenance. Against this backdrop, the integrated framework of corporate governance for enhancing economic growth developed in this study important highlight for the incorporation of the legal system, good governance, financial development and macroeconomic fundamentals dimension in country practice and policies. Such an integrated framework is required because the existing concept has it foundation in the Cadbury Report which only focused on limited aspects of corporate governance. Keasey *et al,* (2005) asserts that corporate governance under the Cadbury Report was based on terms of reference that were limited to financial aspects. For this reason this code does not incorporate the role of the institutitional and regulatory environment focus on promoting corporate governance and ultimately economic growth in different countries. As shown in Fig 7.1 the proposed integrated framework suggests that before economic growth can be achived there must be effective aggregated corporate governance practices that are supported by the aggregated legal systems, aggregated good governance, aggregated fianancial development and aggregated macroeconimc fundamentals.

This study contributes to literature on corporate governance in Africa. In particular, the findings are of relevance to Sub Saharan Africa countries that have been plagued by low corporate governance and poor economic growth for many decades as highlighted in the WFE survey for the past years since 2006 to 2015 as well as by various regional bodies such a NEPAD. In addition this study offers the integrated framework of corporate governance for enhancing economic growth in Sub Saharan Africa in response to calls for new models that takes into account the context of developing economies context by various scholars (Gutsavson *et al,* 2011, Okeahalam and Akinboade, 2003, Paredes, 2004). Empirical evidence in this study suggests that in Sub Saharan African countries although corporate governance alone is necessary it is not adequate to cause economic growth in the absence of the supporting aggregated legal systems, aggregated good governance aggregated financial development and aggregated macroeconomic fundamentals. This insight help policy makers to identify underlying factors that determine corporate governance and ultimately cause economic growth that should be managed and controlled with the view of stimulating and sustaining economic growth in Sub Saharan African countries.

8.6 Contribution to practice

The study also makes a contribution to practice given that there is growing recognition of the corporate governance as the driver for economic development. This study gives input for policy formulation and strategic decision making considering the existing limitations in current perspectives. The study provides an integrated framework of corporate governance that provides a basis to identify the functions and relationships between corporate governance, legal systems, financial developments, macroeconomic fundamentals and economic development. It also helps to identify and understand elements or practices which constitute good governance, strong legal system, good corporate governance, financial development and macroeconomic fundamentals. It enables companies and countries to evaluate their performance, identify their weaknesses and strengths and then formulate strategies, policy and practices to manage their corporate governance and economic development challenges. In essence the study suggests to policy makers and practitioners that low corporate governance and poor economic development observed in Sub Saharan Africa can be solved through an integrated approach.

Moreover, intergrated framework outlines the interplay between corporate governnance, good good, legal systems, finanancial development, macroeconomic fundamentals and economic growth. As such, it creates awareness to practitioners about the interrelationship between corporate governance and good governance factors such as good accountability, political stability, corruption control and effectiveness as well as legal systems elements such as property rights, protection of shareholder and investors. Insights from this study extend existing corporate governance frameworks developed by institutions such Cadbury Report, 1992, King Report, 1994, 2004, 2009, 2016, OCED, 1999, 2004 , 2016. It can be postulated that corporate governance cannot not be understood in isolation from the country's institutional environment because it predetermines its development. At local and regional level the study is relevant to several economic development institutions such as King Committee, IODISA, African Union, AU South African Development Committee (SADC) and NEPAD.

i. Defining and delineating the role of corporate governance, institutional environment and financial markets on economic development

The integrated analytical framework provides insights into the role of the institutional environment in supporting the development of corporate governance that leads to economic development in a country. It also explains the role of the legal system in strengthening corporate governance. Moreover, it suggests that sound good governance and legal systems provide a strong institutional environment which facilitates effective corporate governance and as a result, mediates efficiency in the macro and financial economic performance in any economy. As has been noted in literature review most studies have examined corporate governance from a multi-fragmented perspective (Dalwai *et al*, 2015, Luo, *et al*, 2015. Consequently there is general lack of understanding of the role of corporate governance in economic development.

ii. Assisting practitioners in developing and fostering effective governance practices

The study assists practitioners in terms of developing and fostering effective governance practices. This is because this study outlines the implications of corporate governance from an integrated perspective. The framework assists practitioners to understand that sound corporate governance consists of different mechanisms which can be categorized as board of directors, shareholder rights, stakeholder management, disclosure and transparency. Furthermore it provides a list of indicators which measure the performance of overall dimensions, for instance disclosure is assessed by the availability of integrated reports and audit committees whilst shareholder rights are measured by the availability of shareholder rights and protection of minority shareholders amongst others. As such it provides useful insights to the board of directors, policy makers, regulators, law makers, development agency and other stakeholders in terms of decision making, policy formulation, and supporting, coordinating, adapting, compliance, assessing and even evaluating corporate governance. It enables stakeholder to evaluate the consequences of corporate governance at firm and country level in Sub Saharan Africa or another country.

8.7 Contributing to improved social wellbeing

The study provides some insights which may help to improve social wellbeing. It helps us to understand that a low GPD indicates low economic development and low economic activity consequently result in low salaries, low employment creation, low spending power, low productivity and low standards of living. It also highlights that high GDP per capita leads to high spending power thus leading to high standards of living in terms health, education amongst other social wellbeing dimensions. Such knowledge from this study indicates that strong corporate governance supported by good governance and legal systems has benefits to the firm and economy. After all, it advocates for good governance at country and firm level as groundwork for economic development and social welfare.

8.9 Methodological contribution to research

This contribution of this study to methodology is that it used a system view of solving corporate governance as a research problem in social science. Instead of using conventional reductionism scientific research methods allow corporate governance to be examined as part of the systems important for developing a holistic understanding of the practice. The study further contributed a hierarchical modelling approach to appreciate micro and macro behaviours that affect corporate governance and influence economic growth. An aggregated approach helped to determine whether composite measures of corporate governance has a better explanatory power than single individual components.

8.10 Recommendations

Based on the analysis and discussion of the empirical findings, this study makes the conclusion that: although there is an existence of insignificant relationship between corporate governance and economic growth, corporate governance is the underlying determinant for economic growth in Sub Saharan African countries. As such, an integrated framework of corporate governance for enhancing economic growth developed in this study might be used to promote the development of corporate governance and cause economic growth in in Sub Saharan African countries.

Since corporate governance is necessary but sufficient to promote economic growth, this study recommends that Sub Saharan Africa should consider an integrated framework of corporate governance framework for enhancing economic growth that identifies the best possible path that should be followed in order promote the development of corporate governance that supports economic growth. This integrated framework was developed based on the findings of the panel VAR Granger causality. The framework that identifies the direction and causal relationship between aggregated corporate governance aggregated legal system, aggregated good governance, aggregated financial development and aggregated macroeconomic fundamental that can cause economic growth was developed. Based on the insight from the finding and conclusion drawn in this study the following recommendations are made:

- Companies should tighten the effectiveness of their internal governance without necessarily increasing the cost of implementing good corporate governance. Strict measures should be taken to ensure that directors disclose any interests where they may have material benefits, proper procedures should be followed to authorize any transaction and proper disclosure after the transaction should be followed. Disclosure and transparency ensure that shareholders have material information on time and companies should use different methods to disseminate information such as their websites, internet, newspapers or any other media. Along with these companies financial records should be published and have been prepared according to recognized international accounting standards. Various ways of upholding shareholder rights such as their rights to participate and access to information concerning material and key issues in the organization, voting rights and others should be created and maintained.

- Countries in Sub Saharan Africa need to strengthen their institutional environment factors indicated in the integrated framework in Figure 8.1. By and large, the empirical evidence on corporate governance demands that these countries lobby for legal reforms in individual Sub Saharan African countries in order to enable them to develop an effective corporate governance framework that can contribute to economic growth.
- Good governance is a necessity that enables aggregated corporate governance to cause economic growth. This entails that strong good governance in terms of aspects as voice and accountability, political stability, government effectiveness, regulatory quality, control of corruption should be maintained by the government and the public sector in order to enhance investor confidence and support the development of corporate governance systems that leads to economic growth.
- There is need to promote the financial development and macroeconomic stability in order to ensure the development of effective corporate governance systems that contributes to economic growth. For instance regional economic blocks like SADC, EAC, ECOWAS and others might consider developing a financial market that enables companies in their regions to have access to capital and this would speed up the pace of legal reform, strong good governance and macroeconomic fundamentals stability.
- Regional blocks such as SADC, ECOWAS, EAC, COMESA, NEPDA, AU at their regional level need to develop a code of corporate governance for Sub Saharan just like the OECD and EU. Sub Saharan Africa might need to incorporate corporate principles in the regional economic development policies.
- The regional code can focus on Sub Saharan Africa because their jurisdiction is based on either common or civil law unlike Arab Maghreb Union (AMU) that is based on sharia law. In sum, an integrated framework for corporate governance and its role in economic growth developed in this study can a provide spring board for further development of country or regional specific corporate governance for enhancing economic growth in Sub Saharan Africa countries.
- Institutions such as Africa Union, NEPAD may consider building a United State of Africa because there are similarities in economic growth and institutional patterns across Sub

Saharan Africa which might be a strategic political decision that might accelerate economic growth in member states.

8.11 Future research

The integrated framework for corporate governance for enhancing growth in Sub Saharan African countries developed in this study could guide the development of strategy, policy and research tools for exploring the relationship between corporate governance and economic growth in the region. The framework allows comparative finance and economic researchers, policy makers to examine the relationship between corporate governance and economic growth across different countries in the region. Future studies may consider:

i. Comparing the findings of this study to the AMU or other developing countries that are operating under different legal and regulatory frameworks in particular the remaining Arabian community which are part of Africa but were not included in this study which only focused on Sub Saharan Africa. The Arabian community is based on a different judicial jurisdiction as such it might be of interest to find out the effect of corporate governance on economic growth in that region. This is because most the Sub Saharan African countries are of the common or civil law legal origin unlike the AMU group of countries that has Sharia Law. These differences in the legal origin may have implication in the role of corporate governance on economic growth in countries in AMU and that of Saharan Africa region. Findings from such studies might provide information that would help to validate common factors that determine corporate governance and economic growth in developing economies in Africa.

ii. Future research may make a comparative analysis of the role of corporate governance on economic growth in Sub Saharan Africa comparable and European Union.

iii. Future studies may use the proposed integrated of framework corporate governance for enhancing economic growth in Sub Saharan Africa countries to further explore the relationship between corporate governance and economic growth using countries based on different categories such on the income level group and any other.

iv. Research in the future could make a comparative study of the role of corporate governance between individual specific countries in Sub Saharan Africa.

v. Future studies the nature of the relationship between corporate governance and economic growth using a longer time period in order to address the limitations of short lag encountered in this study. Longer periods are likely to create longer time lags that could confirm the long run and short run relationship between corporate governance and economic growth.

Lastly, future studies may consider empirically validating the integrated framework for corporate governance and its role in economic growth using data from other regional blocks such as European Union. European Union countries would provide interesting results because all the countries in that block follow a set of corporate governance principles from the OECD code. Findings from such studies would provide a spring board for the development of code of corporate governance that can be used to stimulate and sustain economic growth in Sub Saharan African countries according to their economic blocks.

Bibliography

Adegbite. E., Amaeshi.K., and Nakajima. C. 2013. Multiple influences on corporate governance practice in Nigeria: Agents, strategies and implications. *International Business Review*, 22.524-538.

Adegbite. E. and Nakajima. C. 2011. Corporate governance and responsibility in Nigeria. *International Journal of Disclosure and Governance*, 8. 252-271.

Afolabi. A. A. 2015. Examining corporate governance practices in Nigerian and South African firms. *European journal of accounting auditing and finance research*, 3. 10-29.

Afolabi. A.A .2015. The Impact of External Factors on Corporate Governance system of firms: Empirical Evidence from Sub-Saharan Africa Anglophone Countries (SSAA*). Journal of Management and business studies,* 4(1) .016-035

Aggerwal. R and Williamson.R. 2007. Did new regulation target relevat corporate governance attributes. Working Paper

Akpan. E. O., and Amran. N. A. 2014. Board characteristics and company performance: Evidence from Nigeria. *Journal of finance and accounting*, 2. 81.

Alix V. M., Luce. R.and Mayfield. C. 2011. The effects of firm performance on corporate governance. *Management research review*, 34. 266-283

Ammann. M., Oesch. D., & Schmid, M. M. 2011. Corporate governance and firm value: International evidence*. Journal of Empirical Finance,* 18: 36-55.

Andrews.D.W. and Lu. B., 2001. Consistent model and moment selection procedures for GMM estimation with application to dynamic panel data models. *Journal of Econometrics*, 101(1).123-164.

Andreasson. S. 2011. Understanding corporate governance reform in South Africa Anglo-American divergence, the King Reports, and hybridization. *Business & Society*, 50: 647-673.

Arora. A., Sharma. C., Eweje, G. and Eweje. G. 2016. Corporate Governance and Firm Performance in Developing Countries: *The International Journal of Business in Society*, 356-369

Arun. T.G and Turner. J. 2009. Corporate governance and development, Reforms, Financial systems and legal frameworks. Cheltheham . Edward Elgar Publishing Limited.

Ayogu. M, D. 2001. Corporate governance. The record and policies for good governance , Abidjan , African Development Bank. Economic research papers#66.

Asongu. S. A. 2015. Law, Finance, Economic Growth and Welfare: Why Does Legal Origin Matter? *Institutions and Economies,* 7**,** 30-55. Bansal, P. & Desjardine, M. R. 2014. Business sustainability: It is about time. *Strategic Organization,* 12**,** 70-78.

Barro. R.J 1996. Determinants of economic growth: A cross-country empirical study. NBER Working Paper 5698

Black, B. S., Kim, W., Jang, H., & Park, K.-S. (2015). How corporate governance affect firm value? Evidence on a self-dealing channel from a natural experiment in Korea. *Journal of banking & finance*, 51. 131-150.

Beck.T., Demirgüç-Kunt. A and Levine, R. 2003. Law and finance: why does legal origin matter? *Journal of comparative economics,* 31. 653-675

Beer. E. and Reznsburg. R. 2011. Towards a theoretical framework for the governing of stakeholder relationships: a perspective from South Africa. *Journal of Public Affairs*, 11. 208-225

Berle . A and Means .G. 1932. The modern corporation and private property . New York.Macmillan.

Benn. S., Dunphy. D and Martin. A. 2009. Governance of environmental risk: New approaches to managing stakeholder involvement. *Journal of Environmental Management*, 90(4).1567-1575.

Biswas. P. K. 2013. Corporate governance reforms in emerging countries: A case study of Bangladesh. *International Journal of Disclosure and Governance*,15.76-85

Burrell. G and Morgan. G. l979, Sociological Paradigms and Organizational Analysis. Aldershot. Gower.

Cadbury Report. 1992. http://www.ecgi.org/codes/documents/cadbury.pdf . accessed May 2015.

Chartered Institute of Secretaries and Adminstrators (CISA), 2010. Unpublished Study module for Corporate governance.

Claessens. S. 2006. Corporate governance and development. The World Bank Research Observer, 21: 91-122.

Claessens. S. and Yurtoglu. B. B. 2013. Corporate governance in emerging markets: A survey. *Emerging markets review*, 15.1-33

Claessens. S., Djankov, S. and Lang. L.H., 2000. The separation of ownership and control in East Asian corporations. *Journal of financial Economics, 58*(1). 81-112.

Cresswell. J.W.2014 . Research design. Qualitative, quantitative and mixed method approaches. 4th ed. California. Sage Publications, Inc.

Cyert. R.M and March. J.G. 1963. A behavioral theory of the firm . Englewood Cliffs, NJ: Prentice.

Daily. C.M. and Dalton. D.R. 1997. Separate but not independent: Board of leadership structure in large companies. *International Corporate Governance –An international review,* 5: 126-136 .

Dallas. G.S 2004. Governance and risk: An analytical handbook for investor, managers, directors and stakeholder. New York: McGraw-Hill

Dalwa, A.R, Basiruddin. R and Rasid S.Z. 2015. A critical review of relationship between corporate governance and frim perfomance : GCC banking sector perspective. *Corporate Governance,* 15. 1.18-30

Delis. M.D., Staikouras, P.K. and Tsoumas. C., 2016. Formal enforcement actions and bank behavior. *Management Science*, 18 (5):58-64

Demsetz. H. and Lehn . K. 1985. The structure of corporate ownership : Causes and consequences. *The Journal of political economics*, 93(6).1155-1177

Djankov. S., Mcliesh. C. and Ramalho, R. M. 2006. Regulation and growth. *Economics Letters*, 92, 395-401

Djankov, S. La Porta.R, Lopez-de Silanes.F and Shleifer.A. 2008. The law and economics of self dealing, Journal of financial economics 88.430-465

Doidge. C., Karolyi. G. A., and Stulz, R. M. 2008. Why do countries matter so much for corporate governance? *Journal of Financial Economics,* 86(1).1-39.

Dua. P. and Dua. S. 2015. A review article on Corporate Governance Reforms in India. *International journal of research*, 2. 806-835.

Dulewicz. V and Herbert. P. 2004. Does the composition and practice of the boards of directors bear any relationship to the performance of companies, *International review Blackwell publiching LtD*, 12(3) .256-271

Easy of doing business available at *www.doingbusiness.org/rankings.* accessed on October 2016.

Ehikioya. B. I. 2009. Corporate governance structure and firm performance in developing economies: evidence from Nigeria. Corporate Governance: *The international journal of business in society*, 9:231-243.

Fama, E. F. and Jensen. M. C. 1983. Separation of ownership and control. *Journal of law and economics,* 301-325.

Fernández. A. and Tamayo. C. E. 2015. From Institutions to Financial Development and Growth: What are the Links? *Journal of Economic Surveys*.283-295.

Freeman. R. E. 1984. Strategic Management: A Stakeholder Approach. Boston, Mass. Pitman.

Friedman. L. M. 1974. The legal system. A social science perspective: Russell Sage Foundation.

Furubotn. E and Pejovich.S. 192. Property Rights and Economic Theory. A Survey of Recent Literature. *Journal of Economic Literature, 10* (4).1137-1162.

García-Meca. E., García-Sánchez, I.-M. and Martínez-Ferrero. J. 2014. Board diversity and its effects on bank performance: An international analysis. *Journal of Banking & Finance*.

Gutsavson. R , Kimani. N.N and Ouma. D,A. 2009. The Anglo-American model of corporate governance in Sub Saharan Africa: Explanatory and normative dimension. Cheltheham. Edward Elgar Publiching Limited.

Gilula, Z. and Haberman, S.J., 1994. Conditional log-linear models for analyzing categorical panel data. *Journal of the American Statistical Association*, *89*(426). 645-656.

Guerrini . L. 2006. The Solow–Swan model with a bounded population growth rate. *Journal of mathematical economics* 42.14–21.

Hagemann, H. 2009. Solow's 1956 Contribution in the Context of the Harrod-Domar Model. *History of political economy*, 41. 68-89

Hsiao, C. 2007. Panel data analysis—advantages and challenges. *Test*. 16(1).1-22.

Marie L'Huillier. B., 2014. What does "corporate governance" actually mean?. *Corporate Governance*, 14(3).300-319.

Hutchinson. A. C. 2010. Hurly-Berle-Corporate Governance, Commercial Profits, and Democratic Deficits. *Seattle UL Rev*. 34.1219-1241.

Jackson, M.C. 2010. Systems Approaches to Management. Los Angeles. Kluwer Academic Publishers.

Jensen. M. C., and Meckling. W. H. 1976. Theory of the firm: Managerial behavior, agency costs, and ownership structure: *Journal of financial economics,* 34(4).305-350.

International Monetary Fund (IMF). 2016 available at www.imf.org .accessed on May 2016.

Ilaboya, O. J. & Obaretin, O. 2015. Board Characteristics and Firm Performance: Evidence from Nigerian Quoted Companies. *Academic Journal of Interdisciplinary Studies*, 4.283-296.

Isukul. A.C and Chizea J. C. 2015. Environmental factors influencing corporate governance: The Nigerian reality. *Sage Open*, 1-11.

Kadenge. P. and Tafirei. F. 2015. The Impact of Bank and Stock Market Developments on Economic Growth in Zimbabwe: 1988 To 2012. *Botswana Journal of Economics*, 12: 74-94.

Kang. J.-K. and Shivdasani. A. 1995. Firm performance, corporate governance, and top executive turnover in Japan. *Journal of financial economics*, 38(1). 29-58.

Kaufmann. D., Kraay. A. and Mastruzzi. M. 2010. The worldwide governance indicators: methodology and analytical issues. *Hague journal on the rule of law,* 3:220-246.

Keasey. K, Thompson. S and Wright .M. 1997. Corporate governance, economic, management and financial issues. Oxford. Oxford University Press.

Keasey. K, Thompson. S and Wright .M . 2005 .Corporate governance, Accountability, Enterprise and International Comparison. West Sussex. John Wiley & Sons Ltd.

King Report on Corporate Governance for South Africa (1994) https://www.saica.co.za/Technical/LegalandGovernance/King/ accessed at May 2015

King Report on Corporate Governance for South Africa (2002) available at

https://www.saica.co.za/Technical/LegalandGovernance/King/ .accessed at May 2015

King Report on Corporate Governance for South Africa (2009) available at http://www.iodsa.co.za/?kingIII accessed at May 2015

King Report on Corporate Governance for South Africa (2009) available at http://www.iodsa.co.za/?kingIII. accessed at October 2016

Klapper. L. F. and Love. I. 2004. Corporate governance, investor protection, and performance in emerging markets. *Journal of corporate Finance,* 10. 703-728.

KPMG International The KPMG Survey of Corporate Responsibility Reporting .2008 available www.kpmg.com/za/. accessed at May 2015.

KPMG International Survey of Corporate Responsibility Reporting . 2011.vailable at from www.kpmg.com . accessed October 2015

KPMG International Survey of Corporate Responsibility Reporting .2013. www.kpmg.com . accessed October. 2015.

Koop, G. 2009, Analysis of econometric data.4th Edition. Sussex. John Wiley & Sons Ltd, West .

Koornhof, C. 2001. A systems approach to research inquiry in accounting: A research note.

La Porta, R., Lopez-de-Silanes, F., Shleifer, a. & Vishny, R. W. 2000. Investor protection and corporate governance. *Journal of financial economics,* 58.3-27.

La Porta. R., Lopez-de-Silanes. F., Shleifer. A and Vishny, R. W. 2002. Investor protection and corporate valuation. *The journal of finance*, 57. 1147-1170.

La Porta, R., Lopez-de-Silanes, F., Shleifer, a. & Vishny, R. W. 1999. Investor protection: origins, consequences, and reform. National bureau of economic research.

La Porta. R., Lopez-de-Silanes. F., Shleifer. A. and Vishny. R. W. 1999. Legal determinants of external finance. *Journal of finance*. 1131-1150.

Lancaster .G .2005. Research Methods in Management. A concise introduction to research in management and business consulting. Burlington. Butterworths.

Liang. K.Y. and Zeger. S.L., 1986. Longitudinal data analysis using generalized linear models. *Biometrika*.13-22.

Leung. N. W. and Cheng. M.-A. 2013. Corporate governance and firm value: Evidence from Chinese state-controlled listed firms. China Journal of Accounting Research, 6. 89-112.

Levine, R. 1997. Financial development and economic growth: views and agenda. *Journal of economic literature*, 35 : 688-726.

Levine, R. 1999. Law, finance, and economic growth. *Journal of financial Intermediation*, 8: 8-35.

Levine. R. and Zervos. S. 1998. Stock markets, banks, and economic growth. *American Economic Review*, 537-560

Liu. Y., Miletkov, M. K., Wei.Z. and Yang. T. 2015. Board independence and firm performance in China. *Journal of Corporate Finance*, 30, 223-244.

Luo. X., Wang, H., Raithel, s. & Zheng, Q. 2015. Corporate social performance, analyst stock recommendations, and firm future returns. *Strategic Management Journal*, 36, 123-136.

Maddala. G.S. 2005. Introduction to econometrics. 3rd ed . West Sussex. John Wiley & Sons Ltd.

Mahoney. P.G (2001) , "The Common Law and Economic Growth: Hayek Might Be Right," *The Journal of Legal Studies* 30 (2). 503-525.

McGee. R. W. 2009. An Overview of Corporate Governance Practices in South Africa Corporate Governance in Developing Economies. *Springer.* 287-290 .

Miletkov, M. K., Poulsen, A. B and Wintoki, M. B. 2014. The role of corporate board structure in attracting foreign investors. *Journal of Corporate Finance*, 29**,** 143-157.

Mitroff. I. I., Betz. F., Pondy.L. R. and Sagasti. F. 1974. On managing science in the systems age: two schemas for the study of science as a whole systems phenomenon. *Interfaces*, 4(3): 46-58.

Mukherjee.C, White. H and Wuyts . M. 1998. Econometrics and data analysis for developing countries. London. Routledge.

Muhammad.N., Islam, A. R. M. and Marashdeh. H. A. 2015. Financial development and economic growth: an empirical evidence from the GCC countries using static and dynamic panel data. Journal of Economics and Finance, 1-19.

Munisi. G, Hermes. N and Randoy.T.2014. Corporate boards and ownership structure: Evidence from Sub Saharan Africa. *Internationa Business Review,* 23.785-796.

Musvoto.S. W. 2008. Applying the representational theory of measurement to accounting. University of Pretoria.

Muswaka.L. 2014. A Critical Analysis of the Protection of Stakeholders' Interests under the South African Companies Act: (Part 1). *Mediterranean Journal of Social Sciences*, *5*(3), 61-66.

Negash. M. 2008. "Rethinking Corporate governance in Ethiopia" , working paper series, Metropolitan State College of Denver.

Nelson. M. W. 2014. Determinants of quality corporate governance in Sub-Saharan Africa. *Managerial Auditing Journal*. 29 (5). 455 - 485

New Partnership for African Development (NEPAD) . 2016. available at www.nepad.org accessed at May 2016.

Nhuta.S . 2014. A hyperinflationary environment causes deviation from and dismantling of corporate governance trends: case of Zimbabwe. *International journal of education and research,* 2(11): 463-472.

Oba. B., Tigrel. E and Sener. P. 2014. Board structure in listed firms: evidence from an emerging economy. *Corporate Governance,* 14, 382-394.

Okeahalam, C.C .2004. Corporate governance and disclosure in Africa: Issues and challenges", *Journal of financial regulation and compliance*, 12 (4): 359 – 370

Okeahalam, C.C and Akinboade , O. (2003). A review of corporate governance in Africa: Literature, Issues and Challwnges, Paper prepared for the Global Corporate Governance Forum.

Organisation for Economic Co-operation and Development (OECD) Principles of Corporate Governance 1999 available at www.oecd.org. accessed 15 May 2016

Organisation For Economic Co-Operation and Development(OECD) .2004. Principles of Corporate Governance available at www.oecd.org accessed at May 2015

Organisation For Economic Co-Operation and Development(OECD) . 2015. Principles of Corporate Governance 2004 available at www.oecd.org accessed at October 2015

Osman. R.H, Alexiou.C and Tsaliki.P. 2011. The role of institutions in economic development: Evidence from 27 Sub Saharan African countries. International Journal of Social Economics, 39 (2). 142-160

Paredes. T.A. 2004. A Systems Approach to Corporate Governance Reform: Why Importing U.S. Corporate Law Isn't the Answer. *William & Mary Law Review*, 45(3): 1055-1157

Prasad. B.C. 2003. Institutional economics and economic development: The theory of property rights, economic development, good governance and the environment. International Journal ofSocial Economics, 30 (6). 741 - 762

Raymon. C & Holloway D. 2011 Qualitative Research methods in publishing market communication. 2nd ed. New York. Routledge.

Ramos , R.G and Olalla, M.G. 2014. Board independence and firm perfomace in southern Europe : A contextual and contigency approach. *Journal of Management & Organisation,* 20(3): 313-332

Rediker, K and Seth, A. 1995. Board of directors and substitution effect of alternative governance mechanisms. *Strategic Management Journal*, 16: 85-99

Repko, A.F. 2012. Interdisciplinary research process and theory. 2nd Edition. California. Sage Publication Incl

Rossouw, G. (2002).Business ethics and corporate governance in Africa. *Business and Society*. 44 (1) 94-106

Ryan .B, Scapens R.W and Theobald .M. 2002. Research Methodology and Finance Methodology in Finance and Accounting 2nd Edition,.UK Lightening Sources

Romer, P.M. 1994. The origins of endogenous growth. *The Journal of Economic Perspectives*, 8(1): 3-22.

Rwegasira, K. 2000. Corporate Governance in Emerging Capital Markets: whither Africa?. *Corporate Governance*, 8(3): 258-268

Sato R. 1964. The Harrod-Domar Model vs the Neo-Classical Growth Model. *The Economic Journal*, 74 (294): 380-389.

Shleifer, H, A and Vishny, R.W. 1997. A survey of corporate governance. *The Journal of Finance*, 52(2), 737-783

Solow, R. M .1994. Perspectives on Growth Theory. *The Journal Of Economic Perspectives*, 8 (1): 45-54

Solow, R.M.1956. A contribution to the theory of economic growth. *The Quarterly Journal Of Economics.* 70(1): 65-94.

Spitzeck, H and Hensen, E.G. (2010). Stakeholders governance: How stakeholders influence corporate decision. Corporate governance, T*he International Journal Of Business In Society*, 10(4): 378-391

Smith, M. 2011. Research Methods in accounting .2nd ed. Sage Publications Ltd. London.

Smith, A. 1776. The Wealth of the Nations. S.I, Penguin Classics

Solomon, J. 2011. Corporate governance and Accountability 3rd Edition. West Sussex. John Wiley & Sons.

Souissi, M., & Khlif, H. (2012). Meta-analytic review of disclosure level and cost of equity capital. *International journal of accounting & information management,* 20: 49-62.

Standard and Poor . 2008. available at www.standardandpoors.com. accessed May 2015.

Talamo. G. 2011 Corporate governance and capitals flows. Corporate Governance: *The Internal Journal Of Business Society*, 11 (3).228-243

Treiman, D.J. 2009. Quantitative data analysis :Doing social research to test ideas. San Franscisco. Jossey –Bass.

Tricker, B. 2009. Corporate governance: Principles , policies, and practices. New York, Oxford Unirversity Press Inc.

Ujunwa, A. 2012. Board characteristics and the financial performance of Nigerian quoted firms. Corporate Governance: *The International Journal Of Business In Society,* 12: 656-674.

United Nations (UN) Environment Programe (UNEP) A report by the Asset Management Working Group of the United Nations Environment Programme Finance Initiative June (2014) available at www.unepfi.org .accessed May 2015.

UN List Of Least Developed Countries. available at www.un.org/en/development/desa/policy/cd .accessed May 2015.

UN World Economic Situation and Prospect: available www.un.org/en/development/desa/policy/.../2014. accessed October 2014.

Verbeek, M. 2004. A guide to modern econometrics. West Sussex. John Wiley & Sons Ltd.

Visconti. R.M . Inflation Risk and Real Corporate Governance available http://ssrn.com/abstract=1976542. accessed October 2016.

Wahba, H. 2014. Capital structure, managerial ownership and firm performance: evidence from Egypt. *Journal of Management & Governance,* 18: 1041-1061.

Waweru, N. 2014. Factors influencing quality corporate governance in Sub Saharan Africa: an empirical study. *Corporate Governance,* 14: 555-574.

Weber, E .2011. Context-Dependence in Searle's Impossibility Argument: A Reply to Butchard and D'Amico. *Philosophy of the Social Sciences*. XX(X), 1-12

Welman, Kruger, Mitchel. 2008. Research Methodology 4th Edition. Capetown. Oxford University Press.

Wintoki, M. B., Linck, J. S. & Netter, J. M. 2012. Endogeneity and the dynamics of internal corporate governance. *Journal of Financial Economics,* 105, 581-606.

Word Bank , 2016. Global Indicators available at (http://data.worldbank.org/indicator/CM.MKT.TRNR).accessed May 2015.

World Bank Group Reports on the Standard of Report and Codes (ROSC),2015. available at http://www.worldbank.org/ifa/rosc.html. accessed. May 2014

World Economic Forum. 2015. The Global Competitiveness Report, 2015–2016 available available at www.worldeconomicforum.org. accessed. May 2016.

World Economic Forum. 2014. The Global Competitiveness Report, 2014–2015 available available at www.worldeconomicforum.org. accessed. May 2015.

World Economic Forum. 2013. The Global Competitiveness Report, 2013–2014 available available at www.worldeconomicforum.org. accessed. May 2014.

World Economic Forum. 2012. The Global Competitiveness Report, 2012–2013 available available at www.worldeconomicforum.org. accessed. May 2014.

World Economic Forum. 2011. The Global Competitiveness Report , 2011–2012 available available at www.worldeconomicforum.org. accessed. May 2014.

World Economic Forum. 2010. The Global Competitiveness Report 2010–2011 available available at www.worldeconomicforum.org .accessed May 2014.

World Economic Forum. 2009. The Global Competitiveness Report , 2009–2010 available available at www.worldeconomicforum.org accessed. May 2014.

World Economic Forum. 2008. The Global Competitiveness Report, 2008–2009 available available at www.worldeconomicforum.org. accessed May 2014.

World Economic Forum. 2007. The Global Competitiveness Report 2007–2008 available available at www.worldeconomicforum.org. accessed May 2014.

World Economic Forum. 2006. The Global Competitiveness Report, 2006 available available at www.worldeconomicforum.org . accessed May 2014.

Yoo, T.and Jung, D. K. 2014. Corporate governance change and performance: The roles of traditional mechanisms in France and South Korea. *Scandinavian Journal of Management*.

Welman, Kruger, Mitchel. 2008. Research Methodology 4th Edition. Capetown. Oxford University Press.

Zagorchev, A. and Gao, L. 2015. Corporate governance and performance of financial institutions. *Journal of Economics and Business*, 82, 17-4

Appendix

Appendix 4.1 Table List of countries

List of countries			
_Icountry_1	Botswana	_Icountry_15	Zambia
_Icountry_2	Cameroon	_Icountry_16	Benin
_Icountry_3	Côte d'Ivoire	_Icountry_17	Burkina Faso
_Icountry_4	Namibia	_Icountry_18	Burundi
_Icountry_5	South Africa	_Icountry_19	Chad
_Icountry_6	Cabo Verde	_Icountry_20	Ethiopia
_Icountry_7	Ghana	_Icountry_21	Gambia, The
_Icountry_8	Kenya	_Icountry_22	Madagascar
_Icountry_9	Lesotho	_Icountry_23	Malawi
_Icountry_10	Nigeria	_Icountry_24	Mali
_Icountry_11	Senegal	_Icountry_25	Mozambique
_Icountry_12	Swaziland	_Icountry_26	Rwanda
_Icountry_13	Mauritania	_Icountry_27	Tanzania
_Icountry_14	Mauritius	_Icountry_28	Uganda
		_Icountry_29	Zimbabwe

Appendix 5.2 Post estimation test

Appendix 5.3 Selection order criteria for corporate governance

```
Sample:  2010 - 2013                    No. of obs     =      108
No. of panels   =       29
Ave. no. of T   =     3.724

+----------------------------------------------------------------------+
lag     CD        J      J pvalue     MBIC       MAIC       MQIC
-------+----------------------------------------------------------------
1   .9999356   34.02052    .563035  -134.5362  -37.97948  -77.12972
2   .9990221         .          .          .          .          .
+----------------------------------------------------------------------+
```

Selection order criteria for legal systems

```
Sample:  2012 - 2013                    No. of obs     =       57
No. of panels   =       29
Ave. no. of T   =     1.966

+----------------------------------------------------------------------+
```

lag	CD	J	J pvalue	MBIC	MAIC	MQIC
1	.9988904	13.613	.326101	-34.90362	-10.387	-19.915
2	.9960688	9.75158	.2828965	-22.59283	-6.24842	-12.60041
3	.9724287	3.644889	.4561922	-12.52732	-4.355111	-7.531109

Selection order criteria for good governance
Sample: 2012 - 2013 No. of obs = 51
No. of panels = 26
Ave. no. of T = 1.962

lag	CD	J	J pvalue	MBIC	MAIC	MQIC
1	.9903771	14.03283	.298617	-33.14908	-9.967175	-18.82567
2	.9888526	4.853642	.7730984	-26.60096	-11.14636	-17.05202
3	.9808656	1.314689	.8588784	-14.41261	-6.685311	-9.638141

Selection order criteria for financial development
Sample: 2012 - 2013 No. of obs = 57
No. of panels = 29
Ave. no. of T = 1.966

lag	CD	J	J pvalue	MBIC	MAIC	MQIC
1	.9921896	11.58563	.479505	-36.93098	-12.41437	-21.94236
2	.9843102	6.039855	.6427674	-26.30455	-9.960145	-16.31214
3	.9599012	3.849219	.4267963	-12.32299	-4.150781	-7.326779

Selection order criteria for macroeconomic development
Sample: 2012 - 2013 No. of obs = 50
No. of panels = 26
Ave. no. of T = 1.923

lag	CD	J	J pvalue	MBIC	MAIC	MQIC
1	.9919754	7.355617	.8332464	-39.58866	-16.64438	-25.38169
2	.9911772	6.003157	.6468782	-25.29303	-9.996843	-15.82172
3	.9848941	4.724829	.3167143	-10.92326	-3.275171	-6.187608

Selection order criteria for aggregated corporate governance
Sample: 2012 - 2013 No. of obs = 57
No. of panels = 29
Ave. no. of T = 1.966

lag	CD	J	J pvalue	MBIC	MAIC	MQIC
1	.9938545	10.79429	.5466253	-37.72232	-13.20571	-22.7337
2	.9933694	7.349417	.4994446	-24.99499	-8.650583	-15.00258
3	.972247	6.055025	.1950765	-10.11718	-1.944975	-5.120972

Table Eigenvalue stability condition
Eigenvalue stability condition for corporate governance variables
Eigenvalue stability condition

Eigenvalue Real	Imaginary	Modulus
.2404114	1.44617	1.466017
.2404114	-1.44617	1.466017
1.264133	0	1.264133
.1771063	0	.1771063
-1.31e-15	0	1.31e-15
-2.46e-16	0	2.46e-16

At least one eigenvalue lie outside the unit circle. pVAR does not satisfy stability condition.

Eigen value test for aggregated corporate governance and legal systems

```
+---------------------------------+
Eigenvalue
Real     Imaginary   Modulus
--------------------+----------
1.484429         0   1.484429
.6669605         0   .6669605
.5911571         0   .5911571
.2619531         0   .2619531
.1510941         0   .1510941
-.1486248         0   .1486248
-.0636178         0   .0636178
+---------------------------------+
```

At least one eigenvalue lie outside the unit circle. pVAR does not satisfy stability condition.

Eigen value test for aggregated corporate governance and good governance

Eigenvalue stability condition

```
+---------------------------------+
Eigenvalue
Real     Imaginary   Modulus
--------------------+----------
.5992115  -.2989032   .6696249
.5992115   .2989032   .6696249
.4124007          0   .4124007
-.2960771   .0249957   .2971303
-.2960771  -.0249957   .2971303
.2611263          0   .2611263
.0561264          0   .0561264
.0383964          0   .0383964
+---------------------------------+
```

All the eigenvalues lie inside the unit circle. pVAR satisfies stability condition.

Eigen value test for aggregated corporate governance and financial development

Eigenvalue stability condition

```
+---------------------------------+
Eigenvalue
Real     Imaginary   Modulus
--------------------+----------
.3852979  -.5374876   .6613225
```

.3852979 .5374876 .6613225
.5559768 0 .5559768
.1216149 0 .1216149
+----------------------------------+
All the eigenvalues lie inside the unit circle. pVAR satisfies stability condition

Eigen value test for disaggregated corporate governance and financial development

Eigenvalue stability condition

Eigenvalue		
Real	Imaginary	Modulus
1.090301	0	1.090301
.3971045	0	.3971045
-.1854974	0	.1854974
.0980761	-.0855866	.1301691
.0980761	.0855866	.1301691

At least one eigenvalue lie outside the unit circle. pVAR does not satisfy stability condition.

Eigenvalue test for aggregated governance and other additional variables model

Eigenvalue		
Real	Imaginary	Modulus
.6275825	0	.6275825
.2464644	-.4453229	.5089766
.2464644	.4453229	.5089766
.3961588	-.24658	.4666299
.3961588	.24658	.4666299
-.1133599	0	.1133599

All the eigenvalues lie inside the unit circle. pVAR satisfies stability condition.