



An integrated corporate governance framework for sharia law countries

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Declaration

I, Patrick Ssekitoleko, hereby declare that this thesis entitled *An integrated corporate governance framework for sharia law countries* was conducted by me both in design, content and execution. All resources used in this research were exhaustively cited and entered in the reference list. Aside from the professional guidance from my study leader throughout this research journey, I was not assisted in any form or shape, except as affirmed in the acknowledgement section.

I declare that this work has not previously been submitted by me or any other person for any degree or qualification at this or any other university.

I, Patrick Ssekitoleko, declare that the language in this dissertation was edited by Professor ML Hove of the North-West University.

Date:

.....
Signed: PATRICK SSEKITOLEKO

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Abstract

The purpose of this study was to develop an integrated corporate governance framework for Sharia law countries, with a view to enhancing their economic growth. The OECD model of corporate governance is heavily influenced by western systems and is considered the template for all countries globally, including those in the Sharia law context. However, the Sharia law context is inherently different from the western environment and thus renders implementing the OECD model of corporate governance there inappropriate. Using a positivist philosophy, the study compared data sets of 14 OECD countries against 13 Sharia law countries for a 17-year period from 2002 – 2018 with econometric model techniques to investigate the nature of the relationships between corporate governance determinants of firm-level governance, financial development, institutional environment, macroeconomic fundamentals and economic growth. The test results confirmed that the OECD corporate governance model is not a good fit for the Sharia law countries. At the disaggregated level, only protection of minority shareholders showed positive and significant effects to economic growth for the OECD under pooled and random effects estimations. Only foreign direct investment posted positive and significant effects with economic growth for OECD under fixed effects transformation. Aggregated panel Granger causality estimations showed that a combination of corporate governance, institutional environment, financial development and macroeconomic fundamentals are determinants of economic growth for the OECD while for Sharia law only corporate governance determines economic growth. The study developed an integrated corporate governance framework that suits the Sharia law context after the emendation of the weak and or insignificant relationships between the corporate governance determinants and economic growth. The framework pinpoints the inclusion of collateralised investment, interest rate charging, permission of speculation activities and increased frequency of firm disclosure practices. These would then reinforce the determinants of corporate governance in the framework in a bid to have an incremental effect on the economic growth for Sharia law countries.

Key terms

Corporate governance, financial development, institutional environment, macroeconomic fundamentals, economic growth, Sharia law

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Acronyms

ADF	Augmented Dickey-Fuller
AIC	Akaike Information Criteria
BIC	Bayesian Information Criteria
CEO	Chief Executive Officer
CCM	Common Constant Method
FEE	Fixed Effects Estimator
FEM	Fixed Effects Model
FET	Fixed Effects Transformation
FEVD	Forecast Error Variance Decomposition
GCM	Granger Causality Model
GCR	Global Competitiveness Reports
GDP	Gross Domestic Product
GLS	Generalised Least Squares
G20	Group of Twenty Countries
IFC	International Finance Corporation
IMF	International Monetary Fund
LLC	Levin-Lin-Chu
LSDV	Least Squares Dummy Variable
MAIC	Modified Akaike Information Criteria
MBIC	Modified Bayesian Information Criteria
MQIC	Modified Quasi-Information Criteria
OECD	Organisation for Economic Co-operation and Development
OLS	Ordinary Least Squares
PEM	Pooled Effects Model
PVAR	Panel Vector Autoregression
REE	Random Effects Estimator
REM	Random Effects Model
ROA	Return on Assets
SIC	Schwartz Information Criteria
SOEs	State-Owned Enterprises
SSB	Sharia Supervisory Board
UAE	United Arab Emirates

US	United States
VAR	Vector Autoregression
WB	World Bank
WFE	World Economic Forum
WGI	Worldwide Governance Indicator

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CHAPTER ONE

1.1 INTRODUCTION AND BACKGROUND TO THE STUDY

The purpose of this study is to identify and establish ways that can adjust the prevailing corporate governance principles based on the system of countries in the Organisation for Economic Co-operation and Development (OECD), to suit those principles of the countries governed by Sharia law. The OECD system of governance, together with its structures of laws and culture, has marked differences from those of the Sharia system. This therefore speaks of, to some extent, the incompatibility of corporate governance regimes between the OECD and Sharia law countries, due to country-specific peculiarities in a wide range of factors, *inter alia*, law systems, religion, political history, financial and macroeconomic systems. These differences bear an impact on the general firm-level corporate governance practices that end up exerting an effect on the country's economic growth.

Morck (2005) traces the origins of corporate governance to western countries, although Wells (2010) contends that corporate governance automatically came into being the time that companies began incorporation, thereby triggering the likelihood of clashes between managers and firm owners. Morck (2005) locates the early beginnings of formal governance of firms as far back as the 16th and 17th centuries in which big chartered firms such as the Hudson's Bay Company, among others, were commissioned and endorsed to act on behalf of the then governments of Europe in their quest for colonies outside Europe. The term *corporate governance*, according to Cheffins (2013), was coined by the United States in which it grew in popularity, particularly in the 1970s and that by the 1990s, this corporate governance term has since gained international currency. At the pinnacle of this corporate governance wave, there was the inauguration of corporate governance principles of the Organisation for Economic Co-operation and Development, OECD (1999), which are the blueprint for all other countries to embrace. This perception of the corporate governance principles is also echoed by Bhatti and Bhatti (2009). Indeed, Hafeez (2013) documents that the contemporary model of corporate governance emanated from the launch of the Cadbury committee in Britain, with its endorsements passing on the present-day standards and practices of corporate governance to the rest of the world.

The notion that corporate governance stimulates a country's economic growth was pioneered by international economic organisations based in the west, making other countries, including the Sharia law countries and many institutions all over the world, to jump on to that crusade, despite the several diverse circumstances among countries. A number of assertions by the King IV Report (2016), OECD (2015, 2004, 1999) and World Bank (2016) pronounce that corporate governance spurs a country's economic growth, and that it is an essential ingredient in attaining overall economic efficiency for a country. This then has an implication for countries, including Sharia law countries, developed and not, that once firm-level corporate governance routines, processes and practices are effected by all functional companies in an economy, as well as other systems of corporate governance, then economic growth is realised. This assumption then makes economic growth to be reliant on corporate governance. That said though, the way corporate governance and its determinants relate to economic growth does not necessarily present uniform results due to country-specific peculiarities that affect the application of corporate governance and its contribution towards economic growth. It is assumed therefore that the divergent contexts of countries have differing effects on the determining factors of corporate governance in the way that corporate governance relates to economic growth.

There has been significant acknowledgment that there exists no single worldwide format in realising effective corporate governance (Bhagat *et al.*, 2008; Guillen, 2000; Yoshikawa & Rasheed, 2009). Also, studies from Abu-Tapanjeh (2009), Davies (2008) and Kim & Daniel (2016) caution on the unworkability of having a one-size-fits-all standard of corporate governance within the current business environment, personified by an assortment of cultures, with Kim and Daniel (2016) pointing to individual country differences in economic and legal factors which play major roles in metamorphosing and maintaining good corporate governance practices. Certainly, the Organisation for Economic Co-operation and Development (OECD, 2015) recommends that corporate governance should be based on values and norms instead of solely relying on the regulatory framework. This then conveys that for decent corporate governance to exist, there is also need to not only incorporate tough and fast regulatory frameworks, but also the social aspects of an environment in which business is done, in order to recognise the varied influence of contextual structures. This study then deduces that the variations in the characteristics of countries render the uncritical application of the western principles of corporate governance into other countries including the Sharia law countries, as not an automatically perfect fit.

According to Dittar and Mahrt-Smith (2007), the phenomenon of corporate governance has gained importance because some firms have obtained financial backing through stock markets and ownership diversification has tremendously increased. This has seen the separation of ownership and control of the firm, hence making managerial expropriation of firm owners for private gain commonplace, a confirmation of the forecast of agency theory. Also, executives abuse firm resources to their benefit through disproportionate rewards, incentives or pursuing projects that augur in negative net present value. Corporate governance therefore needs to be specifically contextualised in order to combat these problems of agency by acting as the shield against wastage of firm resources by self-enriching firm managers. Taken together, these constructs ensure not only the survival of the firm but also its profitability.

Corporate governance has noteworthy benefits. Daniel (2003) notes that good quality corporate governance brings about increased economic efficiency and growth, boosts foreign direct investment and better usage of capital. Furthermore, corporate governance lowers the dangers of crisis and increases the economic sturdiness particularly in situations of extreme economic shock. On top of that, corporate governance is necessary in order to lend credence to the market economy. Studies done in the United States reveal that better corporate governance brings about a higher firm value (Gompers *et al.*, 2003; Bebchuk *et al.*, 2009). This then means that corporate governance is of the essence as it provides the necessary assurance of investment security in the markets and the entire business environment. In response, this fosters trust among business parties, thereby prompting increased investment needed to grow the economy. Accordingly, this study strives to establish a framework of good corporate governance among selected Sharia law countries, specifically to identify its place in driving economic growth.

This study begins by presenting the various definitions of corporate governance from an assortment of disciplines in section 1.2, followed by a consideration for the context of corporate governance in which it is applied in section 1.3. Discussions of corporate governance in both the OECD and Sharia regions follow in sections 1.4 and 1.5 respectively. Section 1.6 submits the problem statement that informs this study. Section 1.7 specifies the research questions while section 1.8 outlines the research objectives pursued in the study. The penultimate section is a justification of the study in section 1.9 and lastly, the scope of the study in section 1.10.

1.2 DEFINING CORPORATE GOVERNANCE

Corporate governance relates to the environment, rules, practices and processes by which corporate bodies conduct or direct themselves to fulfil the expectations of investors and all other relevant stakeholders. But various studies have given their interpretations of corporate governance, basing their predispositions on their areas of specialisation. In the King IV Report (2016:20) on corporate governance for Southern Africa, corporate governance is defined “as the exercise of ethical and effective leadership by the governing body towards the achievement of the following governance outcomes: ethical culture, good performance, effective control and legitimacy.” From the King IV Report (2016) definition therefore, effective governance of corporate entities is personified by moral and law-abiding practices and routines that need to be religiously followed in order attend to all parties affected by the firm’s existence. It entails then that these requirements stipulated in ethical codes of good governance for firms become the referral guidelines used to sanction firms and also as precursors of overall performance for the maximisation of firm value.

Delving deeper into the King IV Report (2016), reveals the suggested traditions of firm governance that entail the requirements for integrity, skills and knowledge, rational leadership, answerability for decisions taken, impartial and honest decision-making in the interest of all concerned parties. Additionally, the King IV Report (2016) details ethical firm routines to be enforced and evaluated by the firm management. These ethical guidelines ought to mitigate the ethical risks to the firm and these need to be in sync with both the internal and external parties to the firm. Lastly, the principles enshrined in the rules call for the accountability of the firm to societal standards and adherence to the prevailing laws, procedures, policies of the country in which the firm is registered. In this way, the company management is charged with the task and responsibility of aligning the company’s mission, strategy, rules of conduct and overall purpose of its existence to societal standards and expectations. It is therefore logical to conclude that the decrees of the King IV Report approach corporate governance from a stakeholder’s view in which the firm is in operation to fulfil the interests of all the parties that are directly and indirectly linked to its existence.

Larcker *et al.* (2007) contend that there lies no obvious definition of the notion of corporate governance but that there exists some commonly accepted fundamentals of good corporate governance which are: just treatment of investors, company policy of transparency and decent disclosure, existence of an effective board and the protection of investor rights. In a similar line

of thought, Hakim (2002) and OECD (2015) categorise corporate governance as an assortment of relationships between a company's administration, the board, plus its shareholders as well the entire stakeholders. Again, the concept here being referred to is that of the stakeholder view of corporate governance, in which a company conducts itself in recognition of the vital links to all relevant stakeholders including employees, the state, clients, creditors, contractors, and the entire community.

Agency theorists such as Beeks *et al.* (2016) and Hakim (2002) perceive corporate governance as relating to the instruments through which agency conflicts, arising from the separation of ownership and control of company shareholders, managerial executives, creditors, customers, the workforce, are intertwined and resolved, bearing in mind three critical constituents in corporate governance of transparency, answerability and satisfactory disclosure. Here, corporate governance is viewed as the mechanisms that are put in place to tackle the self-enrichment of managers entrusted by owners of the firm, so as to realise the survival and value-maximisation of the firm. Jensen and Meckling (1976) describe it as the costs of agency through which corporate governance offers solutions, to an extent, to managerial expropriation of firm resources by suggesting measures such as incentives and rewards. All these are driven to strike a balance between managerial and owner interests. In this way, corporate governance strives to control managerial indiscretion and malfeasance that threatens the firm's existence by ensuring that the firm is run in an accountable and open manner.

Comparative studies on country variations of corporate governance systems have established differing accounts in the characterisation of corporate governance. For instance, Judge *et al.* (2010) indicate that corporate governance is the means by which a country uses commercial authority for the benefit of the nation for efficient wealth creation and non-discriminatory sharing within the country's economy. This may allude to the ratified and official institutions that coordinate the administration of key resources from which a country generates income to sustain the well-being of its citizenry. Yet Schiehl *et al.* (2014) describe corporate governance as interconnected bundles of both national and firm level combinations that underpin core structures and processes mainly between the company's shareholders and its stakeholders. The combinations mentioned refer to the prevailing law systems, culture and practices in a country that have a direct bearing on the firm-level corporate governance policies, processes and routines. Essentially, this understanding of corporate governance highlights the uniqueness in the country variations of corporate governance systems.

1.3 THE CONTEXT DEPENDENCE OF CORPORATE GOVERNANCE

The tenets of corporate governance are ingrained in the company law and accounting subjects (Truelove, 2013). And Ryan *et al.* (2002) set forth that in the analysis of accounting and finance research, there is a need to accommodate naturalistic approaches, aside from the scientific methods. Tomkins and Groves (1983), advocate for the recognition of the social setting in which the studied phenomena take place. The classification of corporate governance as a social reality by Othman and Rahman (2011) thus renders correct the interpretation that corporate governance is indeed a social phenomenon whose application and intended effects rely on the context of the greater social arrangements. The diverse definitions of corporate governance above stem from the exposure of various scholars to different social contexts. Therefore, to fully grasp the effect of corporate governance on economic growth, it is imperative to understand the context in which the fundamentals of corporate governance are implemented.

Corporate governance originated in western countries as validated by Cheffins (2013), Hafeez (2013) and Morck (2005), from where it was applied throughout the whole world. Abu-Tapanjeh (2009) affirms that the proclamation of the OECD principles of corporate governance coming into effect in 1999, with its impressive financial sector, its founding ideals went on to be used as the litmus test for companies, investors, policy framers and other various stakeholders internationally. This was carried out without the appreciation of the differences in the nature of society, in which the factors vary from one environment to another. This study, as a result, examines corporate governance in the OECD countries *vis-à-vis* the countries in the Sharia law.

1.4 OECD CORPORATE GOVERNANCE

In examining the history of corporate governance, Morck (2005) identifies that corporate governance has western roots traceable to the period between the 16th and 17th centuries. International economic organisations such as the World Bank and the Organisation for Economic Co-operation and Development (OECD), whose core and founder member governments are in the west, popularised and encouraged the spread of the western principles of corporate governance as stimulators of economic growth. This gave impetus for the implementation of corporate governance principles in other countries as well. Brigham *et al.* (2019) regards corporate governance as the rules, practices and regulations that determine the

functioning of the firm and its management decisions. The revised and improved standards of corporate governance from the OECD (2015) for the G20 and OECD countries offer the foundations of an effective system of corporate governance. These also call for the implementation of corporate governance codes to the pertaining realities of each country in a bid to maintain their relevance. The principles offer a tough but equally malleable framework for institutions, governments and corporations that serve as reference points from which to tailor-make their corporate governance routines and regulations. According to the OECD (2015), these include: governance by the non-uniform financial regulations and practices for member countries, with a view to supporting contracting parties in trade. This is because apart from the set rules and regulations of accounting and auditing routines, laws on labour, insolvency, tax, company, contract among many other legal realms, the OECD governance also entails malleable elements of self-regulation and non-mandatory arrangements aimed at beneficial corporate governance standards.

The fair handling of shareholders who may consist of both minority and non-local shareholders by upholding their rights and to ensure measures to compensate for any encroachment on their rights. The rights of shareholders include freedoms to buy, sell or pass on those shares to any party of their choice, voting process of board members and on key decisions affecting the company, access to information, participation in the sharing of profits commensurable with their equity holdings. The OECD framework for governance champions a business system favouring the profit-maximisation of the firm value primarily for the equity holders. However, this model seems to clash with the calls for the recognition of the stakeholder rights that forms part of the OECD corporate governance. To this effect, the OECD corporate governance advances the collaboration of stakeholders in partnerships for the maximisation of stakeholder value to ensure the long-term sustainability of the corporation. Taking on such an outlook, a firm can only remain competitive when it embraces the contributions of a wide variety of providers of resources such as workers, customers, financiers, creditors, debtors, suppliers, the environment and community. The rights of these stakeholders should always be underpinned by a variety of legal domains and if not, companies owe it to themselves to establish and forge allegiances with stakeholders lest their standing in the broader society suffers.

Minhat and Dzolkarnaini (2019) point out the recognition of the stakeholder agenda as a stark contrast and again far-fetched, with the risk-shifting orientation that advances profit-maximisation by the shareholders, both of which are embedded in the corporate governance

principles of the OECD. Additionally, the conventional governance of business in the OECD region, operates from the principle that money as a good is permissible in a transaction, without any other intrinsic commodity which results in the profiteering arising from speculation and the consequent price volatility. Its operations are entirely financial-based dealings and these are everyday events. Such financial market instruments used include derivatives, options, forward contracts, futures contracts and swaps. Interest rate charging is licit in the conventional financial arrangements which is the reward determined by the providers of capital as money to finance business transactions.

1.5 SHARIA CORPORATE GOVERNANCE

According to Johnson and Sergie (2014), Sharia is a people's ways of behaviour that follows Arabic guidelines in Muslim culture among which contain everyday habits, the fulfilment of one's family and spiritual responsibilities as well as business dealings. It is mainly developed from the Quran and the Sunna, whose mottos, practices and wisdoms are attributed to Prophet Mohammed. And so Sharia (or Shariah or Shari'a) is Islamic law that has an immense influence on the legislation of most Muslim countries. This Islamic law has a direct impact on the financial and corporate governance systems of such countries. It should be noted that Sharia corporate governance, as with corporate governance in many other regions, borrows most of its principles from the OECD corporate governance model, as supported by Abu-Tapanjeh (2009), Bhatti & Bhatti (2009), OECD (2015, 2004, 1999). However, it is not a perfect fit because of the contextual and conceptual differences embedded in the Islamic ethos.

Minhat and Dzolkarnaini (2019) detail the founding ideals of Islamic finance which cumulatively affect corporate governance in the Sharia environment. These principles prohibit the following.

1.5.1 Charging of interest

This interest in Islam is termed *riba*, to refer to any increment in the form of goods, money or any other instrument on top of the real amount, which is judged to be taking advantage of the financially infirm by the mighty and moneyed organisations. This means that interest-based trading is forbidden under Sharia law. It is equally prohibited to use money as a good instead of exchanging real assets for money. The requirements of the Islamic faith demand that there must be an underlying product or the expending of effort in a business transaction in order to

earn any amount of money. Therefore, Sharia calls for the billing of a profit rate instead, that is proportionate with effort expended or the standard of goods in the transaction.

1.5.2 Uncertainties in a transaction

The Islamic term for this is *gharar*, used to refer to massive uncertainties or the asymmetry of information between parties to a business transaction. This is considered a disadvantage as it obstructs a transaction and that all relevant information to a business deal must be revealed to all concerned parties. This includes the presence of the real asset of sale in a deal with its known date of delivery to the buying party. Islamic finance in this prohibition of lack of clarity, endeavours to do away with profiteering by the said seller at the expense of the unsuspecting buying party.

1.5.3 Speculation

Maysir is the commonly used word in Sharia for speculation, a prohibition that is meant to stimulate the use of real constructive effort to harvest income instead of depending on purely speculative activities. Again, this ban is meant to motivate the use of real effort with tangible assets in all business activities. Most contemporary financial dealings involving the forecast of investment products such as futures contracts are considered as *maysir* and therefore forbidden under Sharia. This is especially the case if one of the parties to the futures transaction sets out to gain from the price oscillations than from the transaction of the real asset.

Additionally, the Islamic finance industry is characterised by a calibre of avant-garde finance products that fit in with the strict Muslim teachings of the *Quran*. In this way, it is the Sharia governance that dictates the structuring and implementation of these Islamic finance instruments. Minhat and Dzolkarnaini (2019) demonstrate typical Sharia-compliant products including equity-like products such as *Musharakah* and *Mudarabah*, debt-like instruments such as *Murabaha*, *Tawaruq*, *Inah*, *Ijarah* and *Istisna*, as well as derivative-like instruments that include *Salam*, *Arbun*, *Profit rate swaps* and many variants of *Sukuku*. All these Sharia instruments fundamentally involve real assets in a transaction or at least an amount of effort spent that is deemed deserving of the returns gained, for every party in a transaction, in order to conform to the Islamic principles that focus on the well-being of everyone in society without taking advantage of any party in a transaction.

On that account, Islamic governance of business advances the stakeholder model of business in which the fulfilment of societal goals of fairness and well-being of all in the Islamic community is honoured. This is ensured through the prohibitions stated above that guarantee an economic system that serves all, that is devoid of interest-based trading but rather that of risk-sharing (of profit and loss) and one that consists of economic activities involving real assets instead of speculation.

1.6 ECONOMIC GROWTH IN THE OECD AND SHARIA LAW REGIONS

The Organisation for Economic Co-operation and Development (OECD) was founded in 1948 initially to rebuild the war-wrecked Europe, and this saw the birth of an era of inter-governmental economic co-operation. To this day, its main objective is to model policies that nurture prosperity, egalitarianism, opportunity and welfare for all. This is ensured by working with member governments to establish international standards and solutions to social, economic and environmental challenges in order to have a better world of tomorrow. Its member countries account for approximately 80% of world business and investment (OECD, 2019b). It should also be noted that the OECD membership has expanded over the years to include more countries with whom to partner on global issues in order to inculcate standards and plans that will help achieve around the world through promoting the collective efforts of countries. The OECD group of countries has a big core of advanced economies including the major seven advanced countries, those in the European Union, the Euro Area, among others. The International Monetary Fund (IMF, 2019) through the annual World economic outlook database compares the countries' Gross Domestic Product (GDP) using the GDP per capita, which is GDP on purchasing power parity basis at constant 2011 international dollars divided by the midyear population. The IMF (2019) world economic outlook database reveals that these advanced countries have reported GDP per capita of over \$40 000 in each of the last five years.

Sharia law countries on the other hand, are governed by laws that follow the strict Muslim teachings of the holy Quran. Such countries as reported by Benbouziane & Benmar (2010), Kantor *et al.* (1995) and Piesse *et al.* (2012) share common unique attributes of an Arabic language, Islamic values and ethnicities among them. The Sharia law countries include those from the Middle East and Northern Africa as well as some in the Sub-Saharan Africa all of which belong to the category of the emerging and developing economies. The IMF (2019)

world economic outlook database reports that these countries have registered GDP per capita of about over \$10 000 in each of the last five years.

It is apparent that the economic growth of the OECD countries that are advanced economies, surpasses that of the dominantly emerging and developing Sharia law countries. This chasm in the economic growth between these two sets of countries could point to divergent policies for the economies and therefore creating different economic freedoms in which corporate bodies operate. This consequently has a bearing on the economic performance of firms which poses an aggregate influence on the economic growth figures of these countries.

1.7 RESEARCH PROBLEM

Corporate governance originated in western countries (perceived as the most developed world). In a review of its history by Cheffins (2013), Hafeez (2013) and Morck (2005) these scholars acknowledge that western systems of laws, culture and governance in that particular environment have a direct and strong impact on the standards of corporate governance deemed to be the template for the rest of the world, as defended by Abu-Tapanjeh (2009), Bhatti & Bhatti (2009), Hafeez (2013), Morck (2005) and OECD (2015). Transnational organisations such as the World Bank (2016) and the OECD (2015, 2004, 1999) disseminate international principles of corporate governance on western principles, pushing for the implementation of these standards of corporate governance as a precursor to any country's enhancement in economic growth. However, other origins such as countries in the Sharia law regions have a system of laws, governance and culture that is different from the western systems. This means that the international principles of corporate governance might not be a perfect fit that simply becomes transferred in the Sharia law countries since their system of laws, culture and governance is diametrically different.

Many studies in the field of corporate governance strive to portray the variations in corporate governance systems across countries by focusing on a number of aspects. Aguilera and Jackson (2010) refer to a more wide-ranging comparative assessment of national institutions to explain the contrasts in corporate governance practices around the world. This comparative assessment is supplemented by Bell *et al.* (2014), Filatotchev *et al.* (2013), Judge (2012) and Judge *et al.* (2010) that the nature of conflicts in directing and controlling of firms and how well corporate governance mechanisms succeed depending on the country, hinges on a combination of

supporting factors amongst firm governance mechanisms and unofficial and official national institutions. Law and economics studies identify a clash in the protection of capital rights (La Porta *et al.*, 1998; Shleifer & Vishny, 1997) unlike political economists who point at political alliances inside the state (Cioffi, 2010; Gourevitch & Shinn, 2005), though studies on managerial and industrial affairs credit relational influences within firms (Davis, 2009; O’Sullivan, 2000). The takeaway here then is that corporate governance traditions, rules, regulations and practices differ due to country-specific characteristics which include political and legal cultures, economic systems, governance and other dynamics. Accordingly, this study recognises the diverse systems in the socio-cultural configurations between the countries in the Organisation for Economic Co-operation and Development (OECD) and Sharia law countries. The strict Muslim teachings exert an immense influence on the culture, economy, laws and politics of the countries in the Sharia regions. The effect of this is that corporate governance in Sharia law has a different impact from that of the OECD region, as corporate entities transact in business in an environment watchful of the expectations of the Sharia conduct.

Otto (2010) perceives Sharia law as legal codes that govern particular countries which are embedded within the holy teachings and expectations of the Muslim religion. The Muslim religion that regulates Sharia law countries has a definitive influence on people’s culture, laws and all other aspects of their lives including how they conduct business and the regulations and routines for firm governance. Sharia corporate governance constrains firms domiciled in the Islamic environment to adhere to the strict Sharia-permissible ways of business conduct. Firms deemed not Sharia-compliant in such environments risk their future prospects and sustainability, if they do not share in the Islamic-tinged stakeholder model of governance.

It has been documented above that the Islamic system of governance of business and finance precludes some of the tendencies present in conventional governance, among western countries, and therefore the systems of corporate governance are incompatible with those of the Sharia law countries. The principles detailed in the OECD (2015) guidelines for both the G20 and OECD member countries lay down the rights and responsibilities of both the shareholders as principle providers of finance to the firm as well as taking into account the privileges due to various stakeholders of the firm. In addition, the King IV Report (2016) promotes a stakeholder hybrid of corporate governance that regards the interests of the firm as of prime importance to those of the shareholders and other stakeholders. This is because the firm is regarded as a separate entity in law, from its originators. In this way, the work of the

company management is to ultimately protect the interests of the company over and above any stakeholder's interests and projections. Since the overriding principle in this system is to further the goals of the firm, over and above every other stakeholder, it is then fitting to infer that the profit-maximisation agenda rules supreme in this type of corporate governance system.

The standards demanded in the OECD (2015, 2004, 1999) corporate governance promote both the profit-maximisation goals of shareholders and the considerations of the interests of various stakeholders. This then generates conflict between these philosophies, as it is unclear how shareholders' value can be maximised without compromising the quality of the various stakeholders' benefits and rights. Corporate governance in the Sharia law environment on the other hand, as described by Abu-Tapanjeh (2009), Chapra (1992), Choudhury & Hoque (2004), Chryssides & Kaler (1993), Grais & Pellegrini (2006), Saif Alnasser & Muhammed (2012), Shibani & De Fuentes (2017) and Piesse *et al.* (2012), aims to fulfil the interests and expectations of all the stakeholders to the firm, by ensuring that companies remain committed to the social well-being and prosperity of all in the community, in accordance with the Sharia teachings. This is done by ensuring fairness to the transacting parties in business and even to those inside and outside the business realm (other stakeholders).

The problem in this study is that the OECD model of corporate governance is not a perfect fit for the Sharia law environment due to the divergences in law systems, cultures and governance between the two sets of countries. Even though the OECD model of corporate governance is promoted to be the guideline for all other countries the world over in a bid to enhance their economic growth, the OECD countries exhibit much better economic growth in comparison to their sharia law counterparts. The International Monetary Fund (IMF, 2019) world economic outlook database shows that the advanced economies in the OECD region outperform the emerging and developing Sharia law economies in the GDP per capita figures. A close look at the GDP per capita figures in this database at least for the past five years shows that the advanced economies in the OECD region reported \$46 592.55, \$46 007.99, \$45 175.33, \$44 279.38 and \$43 754.71 for the years 2019, 2018, 2017, 2016, and 2015 correspondingly. For the Sharia law economies which are of emerging and developing classification however, the same database reveals GDP per capita of \$11 397.57, \$11 116.43, \$10 774.54, \$10 431.51 and \$10 119.19 for the years 2019, 2018, 2017, 2016 and 2015 respectively. It can be argued that the incompatibility of the OECD model of corporate governance onto the Sharia law region limits and curtails the growth of the economies in the Sharia law. Therefore this study aims to

identify and establish ways of adjusting and enhancing the current corporate governance model so as to improve its applicability to Sharia law countries. The study aims to reconcile the principles of the OECD with those of the Sharia law to create fitting and commensurate corporate governance standards to the countries in the Sharia environment, with a view to stimulating their economic growth.

1.8 RESEARCH QUESTIONS

- i. What are the differences in corporate governance systems between OECD countries and Sharia law countries?
- ii. What is the nature of the relationships between corporate governance variables and economic growth in selected OECD countries?
- iii. What is the nature of the relationships between corporate governance variables and economic growth in selected Sharia law countries?
- iv. What are the differences in the nature of the relationships between corporate governance variables and economic growth in selected OECD countries and Sharia law countries?
- v. What framework could be developed to enhance the applicability of the corporate governance principles in Sharia law countries?

1.9 RESEARCH OBJECTIVES

- i. To establish the differences in corporate governance systems between OECD countries and Sharia law countries
- ii. To determine the nature of the relationships between corporate governance variables and economic growth in selected OECD countries
- iii. To identify the nature of the relationships between corporate governance variables and economic growth in selected Sharia law countries
- iv. To establish the differences in the nature of the relationships between corporate governance variables and economic growth in selected OECD countries and Sharia law countries
- v. To develop a model and structure that could enhance the applicability of the corporate governance principles in Sharia law countries

1.10 JUSTIFICATION OF THE STUDY

Corporate governance in the Islamic countries varies from that of the conventional systems in the OECD region, due to the influential differences in governance, legislative framework and cultures of the Sharia law states *vis-à-vis* those of the conventional systems in the OECD countries. As a result, this research strives to develop a befitting model which could potentially improve the existing conventional corporate governance system of the OECD region in order to allow a far reaching application to the corporate governance system germane to the countries in the Islamic world, with specific focus on stimulating their economic growth. Bhatti and Bhatti (2009) debate that there exist critical intrinsic dissimilarities between corporate governance systems in the Sharia and those in OECD countries because an Islamic corporation has to display conduct amenable to the principles and expectations of the holy book of the Quran. Studies from Abu-Tapanjeh (2009), Ahmad (2000), Baydoun *et al.* (1999), Minhat & Dzolkarnaini (2019) and Mirakhor (2000) indicate that Islamic corporate governance has similarities with the conventional corporate governance of the west, but that the Islamic religion requires business activities that are characterised by integrity, truthfulness and fair-mindedness while guaranteeing equality to all parties. In this way, Islamic finance and its corporate governance forbids corporate entities to engage in paying interest, speculative activities and other deeds deemed dishonest as noted by Asyraf (2006), Bhatti & Bhatti (2009) and Minhat & Dzolkarnaini (2019), and not in consonance with the Islamic way of life.

Sharia corporate governance is enshrined in strict Muslim teachings that require that all people together with their activities are accountable to Allah, who is the ultimate owner of all on earth (Lewis, 2005). This then suggests that unlike conventional corporate governance of the OECD, that stresses the fair treatment of all stakeholders to the firm, an Islamic corporation is further tasked with maintaining the Islamisation through adherence to the Sharia law, as required by the Sharia traditions. Additionally, Beck *et al.* (2013) and Minhat & Dzolkarnaini (2019) include the risk-sharing principles characteristic of Sharia corporate governance in which investors share profits and losses associated with business dealings, unlike in the conventional corporate governance from the OECD region. In other words, the Islamic corporate governance system includes a spiritual and ethical component that is absent in the conventional corporate governance system of the OECD countries. This then renders critically important this study to identify and ascertain an appropriate corporate governance model that suits the Sharia law countries, as applying the conventional model of corporate governance from the OECD region is not ideal to the context of the Islamic environment.

Corporate governance originated from the western world (Cheffins, 2013; Hafeez, 2013; Morck, 2005), from which it went on to be applied to other countries in the world (Abu-Tapanjeh, 2009; Bhatti & Bhatti, 2009; Hafeez, 2013; Morck, 2005; OECD, 2015), including countries in the Sharia law region, whose context is entirely dissimilar to that of the western countries. In spite of the incommensurable nature of this western-oriented corporate governance system, it has been perceived by inter-governmental economic organisations such as the World Bank (2016) and the OECD (2015, 2004, 1999) as a stimulant to a country's economic growth. This means that any country that implements corporate governance variables has a sure and proven way of enhancing its economic growth, irrespective of its conditions and country-specific factors and peculiarities. However, the international push for the implementation of corporate governance ideals is conceptually based on western principles, despite calls from Abu-Tapanjeh (2009), Davies (2008) and Kim & Daniel (2016) not to apply a one-size-fits-all standard of corporate governance, due to divergent country-specific and contextual characteristics.

There are quite a number of studies about Sharia corporate governance. In fact, some have compared the characteristics of Sharia corporate governance principles with those in the OECD (Abu-Tapanjeh, 2009; Hafeez, 2013). Obid and Naysary (2016) have developed an integrated theoretical framework for Sharia corporate governance through the lenses of the dominant corporate governance theories of agency, stewardship and stakeholder. Other studies on Sharia corporate governance have concentrated on the conjectural, fact-finding and legal nature, advocating for the need for a Sharia code of corporate governance (Bhatti & Bhatti, 2009; Muneeza & Hassan, 2014). There is an absence of an empirical research on a suitable model of corporate governance for Sharia law regions comparing modalities and operational dynamics to those of the OECD region. If corporate governance is to prompt and enhance economic growth even in the Sharia law countries, there is need to establish the conducive factors for corporate governance that could spur economic growth in the Sharia law region. Thus, this econometric study aims to generate and develop a framework for corporate governance that could stimulate economic growth in Sharia law countries and the region.

1.11 SCOPE OF THE STUDY

The study obtained data on economic growth figures and indicators of corporate governance as well as other explanatory variables that determine corporate governance. These are the indicators of institutional environment, macroeconomic fundamentals and financial development for both the Sharia law and OECD countries. Their perspectives of corporate governance as a social phenomenon are dissimilar. This study is limited to establishing the nature of the interaction of the variables of corporate governance, institutional environment, macroeconomic fundamentals and financial development with economic growth in both the OECD and Sharia law countries. Upon determining the differences in the interaction of those variables with economic growth between the two sets of countries, the study develops an integrated corporate governance framework for Sharia law countries that is envisaged to stimulate economic growth. The analysis of indicators of these explanatory variables plus economic growth was executed using panel data methods for 14 OECD and 13 Sharia law countries respectively. The econometric analysis utilised the available data for a 17-year period from 2002-2018.

1.12 CHAPTER OUTLINE

Chapter one: Introduction and background to the study

This chapter introduces the study, its background, definition of corporate governance, corporate governance as a context-dependent phenomenon, descriptions of both OECD and Sharia corporate governance. Following that, a specification of the chapter specifies the research problem from which research questions and objectives emanate. The justification and scope of this study are given and finally the outline of each chapter is shown.

Chapter two: Corporate governance theories, determinants, systems and links to economic growth

This is the literature review chapter that details the roots of corporate governance. It interrogates the determinants of corporate governance with their links to economic growth. These determinants aid in the formulation of the conceptual framework in Chapter three. Also, theoretical views of corporate governance and systems of corporate governance are amply discussed from the literature reviewed. The chapter folds with an analysis of the differences in corporate governance systems between the OECD and Sharia law countries, on the back of

elaborate examinations of the inner workings of corporate governance in the Sharia law and OECD countries. Hence, this chapter answers research question *i* posed in section 1.3.

Chapter three: The determinants of corporate governance and their impact on economic growth

This chapter presents the conceptual framework for the determinants of corporate governance and their effect on economic growth. These determinants were identified from a review of literature on corporate governance determinants and theories in Chapter two. The Chapter examines the notional interactions among the determinants of corporate governance and their impact on economic growth. This conceptual framework highlights the interdependence of constituents and their contributions towards economic growth. Therefore, the theoretical relationships established inform the guidelines for the panel data model specification tests in Chapter five, a bid to answer the research questions in section 1.3.

Chapter four: Research methodology

This chapter deals with the methodology and methods utilised in this study. The study's research paradigm is motivated with regards its epistemology and ontology, which have a bearing on the methodology in answering the research questions posed in Chapter one. A breakdown of the econometric analytical model tests is given with results on the robustness of the tests, which assist in reaching findings for Chapter five. Ultimately, this combination answers the research questions in providing evidence on the nature of the interactions of the variables, rooted from the study's conceptual framework. The chapter also provides the population, sample used, the sources of data and the computer software used for analysis.

Chapter five: The nature of the relationships between corporate governance variables and economic growth

This chapter offers the write-up of the empirical findings by describing the interrelations among the variables of corporate governance, institutional environment, macroeconomic fundamentals and financial development with how they impact economic growth for both the Sharia law and OECD countries. Additionally, this chapter builds on both the economic model estimations to present the short-run, long-run and causality relationships among the variables affecting economic growth, which is key for policy framing. These findings for the bulk of the answers to the research questions *ii* and *iii* that are posed in section 1.3.

Chapter six: Discussion and interpretation of results

This is the penultimate discussion of the research findings in Chapter five, which shows the differences in the nature of the relationships between corporate governance variables and economic growth in the selected OECD and Sharia law countries, thereby aiding to answer research question *iv*. Moreover, this chapter contains the study's contribution as it propounds an integrated corporate governance framework for Sharia law countries that is designed to stimulate their economic growth. This framework is specifically produced from the correction of the weak and insignificant relationships from the various test models, from which the determinants of corporate governance are rectified to enable the stimulation of economic growth for the selected Sharia law countries. In this way, this chapter answers the last research question *v* of this study.

Chapter seven:

This chapter offers conclusions and submits recommendations from the study relative to the research problem under inquiry. These study's conclusions and recommendations intimate the nature of the relationships between the determinants of corporate governance and economic growth among the countries in the Sharia law regions. The study anticipates that these conclusions and recommendations offer pertinent insights into current and future practices in the field of corporate governance.

CHAPTER TWO

CORPORATE GOVERNANCE THEORIES, DETERMINANTS, SYSTEMS AND LINKS TO ECONOMIC GROWTH

2.1 INTRODUCTION

The purpose of this chapter is to critically evaluate existing scholarly literature applicable to corporate governance determinants, theories, the relations of corporate governance to economic growth, corporate governance systems of the Western world as well as a review of Sharia corporate governance practices. It is important to establish whether corporate governance contributes decisively towards economic growth, or does so to an extent. For this reason, there is a need to make sense of the factors responsible for the implementation and privileging of corporate governance and its effect on economic growth. It should be noted though, that the cardinal assumptions of the concept of corporate governance together with its contributions towards economic growth are ingrained within the theories of corporate governance. The ensuing sections in this chapter detail the theoretical connections between corporate governance and its links to economic growth.

This chapter is structured as follows: section 2.2 discusses the link between corporate governance and economic growth; section 2.3 focuses on the determinants of corporate governance; theoretical orientations of corporate governance are detailed in section 2.4; section 2.5 identifies the systems of corporate governance in the western world; section 2.6 discusses the operationalization of corporate governance within the Sharia regions and lastly, section 2.7 concludes the chapter.

2.2 THE CONNECTION BETWEEN CORPORATE GOVERNANCE AND ECONOMIC GROWTH

Many studies concur that corporate governance influences a country's economic growth. Li (1998), Hasan *et al* (2009), Naughton (1995) and Qian (2000) maintain that corporate governance is a precondition for economic growth. Research by Morck *et al.* (2005) links corporate governance to economic growth with the discovery that economic entrenchment of

a few connected families and individuals controlling large chunks of a country's economy, bring about problems of agency, as discussed by Fama (1980) and Fama & Jensen (1983), which then get in the way of resource allocation. This therefore means that such cronyism and its effects of corruption are cancerous tumours which hinder economic growth. Claessens and Yurtoglu (2013) mention that this is not only a developing country malaise, as there have been instances of disgraceful corporate governance in developed economies where huge firms such as Arthur Andersen, Enron and Worldcom have been wiped out due to improper management causing far-reaching consequences including retarded economic growth. Morck *et al.* (2005) state further that such corporate governance complications affect the macroeconomics of a country with regards the level of innovation and overall economic growth levels. In support of this finding, Diallo (2017) argues that corporate governance shapes a country's economic growth via innovation, capital markets and resource distribution.

With regards to innovation, Aron (2000) and Wilson (2016) attribute the legal and policy frameworks, which are both formal and casual, coupled with their independent enforcement to contribute decisively towards economic growth, while both Acemoglu *et al.* (2001) and North (1990) highlight the influence of governance, which creates a healthy atmosphere thereby prompting more investment and spurring economic growth. This speaks to an overall sense of assurance felt by investors in an economy from the existing policies of governance that dispel fears of financial loss. Investors confident in the prevailing rights to their property and investments which ensure fairness in commercial transactions are likely to invest a great deal, and hence increased overall productivity, unlike in countries where investors feel unprotected by existing policies of governance.

The works of Hasan *et al* (2009) and Rajan & Zingales (1998) clarify that companies domiciled in countries with strong corporate governance and effective property rights have indeed better financing possibilities. This makes companies to expand their operations and consequently register improved growth. In support, Acemoglu *et al.* (2005) and Claessens & Laeven (2003) contend that explicit property rights foster the growth of the financial sector which in turn creates a fertile ground for business people to jump into trade and hence adding to overall economic growth of a country. Again, Beck *et al.* (2005) conclude that inadequate corporate governance in the form of corruption and weak legal systems, is to blame for a lower number of entrepreneurial ventures in such economies.

It has been established by Attig *et al.* (2008), Diallo (2017) and Doidge *et al.* (2007) that corporate governance reduces the cost of capital for investment and makes financing opportunities more available (together with its associated greater value of the firm), thereby making companies more appealing to eventual investors. This can be construed as corporate governance lessening the risk of doing business in an environment. The logic is that it is highly profitable to conduct investment in an environment of tight corporate governance. This in turn increases the level of employment and overall growth as confirmed by Claessens and Yurtoglu (2013). In contrast, Wu (2005) observes that poor corporate governance increases the cost of capital, which reduces the total production levels and even inhibits investment levels.

The corporate governance-economic growth relationship is not only one way, as it has also been found to be bi-directional, with causality established from economic growth to corporate governance. Studies that cite this economic growth-corporate governance relationship include Wilson (2016) and Hausmann *et al.* (2005), among others. Despite the acknowledgement by Hausmann *et al.* (2005) of the need for some governance restructuring in this reverse relationship, they still deem it negligible.

It can therefore be stated that there exists various processes or circumstances through which this inverse causality can be explained. Allen *et al.*, (2005) and Hasan *et al.* (2009) cite the case of China as one noteworthy enigma, with Dixit (2004) and Prasad & Rajan (2006) adding that China reported consistent and high levels of growth over three decades which was associated with comparatively inchoate financial and legal systems. Researchers such as Li & Xia (2008), Roland (2000) and Spenner *et al.* (1998) attributed this to the dominance of State-Owned Enterprises (SOEs) in China's local investment scene, which would not want to embrace reforms that would expose them to fresher and more competitive private firms. But eventually, the supervening economic development amplifying the intricacy of trade explain the enhanced governance tools and even motivate the establishment of quality institutions of governance (Dixit, 2003; Greif, 1994; Grindle, 2004, 2007; Li, 2003; Wilson, 2016). Similarly, Chang (2003) and Goldsmith (2007) who scrutinised many facets of governance for the developed countries in the North America and Western Europe, discovered that such countries implemented those governance reforms about 50 years into a period of continuous industrial development and economic growth.

These findings therefore point to the conclusion that robust and up to standard governance practices were not a requirement to achieve economic growth in the initial stages of economic development, but advances in governance could have been brought about by greater economic activity. Again it is worth pointing out that if the corporate governance-economic growth relationship is not only one directional, one may infer that the country characteristics help explain why corporate governance may not always lead to economic growth. It can be surmised that for corporate governance to lead to economic growth, the context of a particular country is of profound importance. And this then leads to the following section which discusses the underlying factors responsible for the development of corporate governance.

2.3 DETERMINANTS OF CORPORATE GOVERNANCE

As detailed above in section 2.2, the corporate governance-economic growth nexus is a multi-dimensional one, and this suggests that the context in which corporate governance is applied has an effect on a country's economic growth. This then means that the preconditions for corporate governance development prior to its contribution towards a country's economic growth need to be established first, as the determinants of corporate governance. In other words, these essential conditions form the bedrock of corporate governance and affect a country's economic growth. The following four factors of institutional environment, financial development, corporate governance at firm level and macroeconomic fundamentals were selected for this study and discussed as the determinants of corporate governance.

2.3.1 Institutional environment

The institutional environment within which firms operate in a particular country is an immense force in shaping the nature of corporate governance standards that are adopted. Stulz (2005) categorises the institutional environment as consisting of corporate governance principles, the degree of contract implementation and competence of courts of law. Additionally, research by Epps and Cereola (2008) cites transnational organisations including the International Finance Corporation (IFC), the World Bank (WB) and the OECD which urge for the introduction of various policy recommendations and laws for all countries in the world in order to ensure stability. It can therefore be interpreted that the legal systems put in place in the country and their enforcement, the policies and practices deemed standard by active firms in an economy as well as the level of investor protection determine the environment in which firms conduct business. In essence, the level of corporate governance in an economy is reflective of the nature

of laws of a country and adherence to the set corporate governance practices of the country's institutional environment. According to Briano-Turrent and Rodriguez-Ariza (2016), corporate governance is there to audit managerial effectiveness and guarantees adherence to the regulations which in turn thwarts irregular and unsuitable conduct.

The institutional or legal environment, together with the relevant origin of those laws for a particular country, explains better the cross-country variations in corporate governance practices. According to Beck *et al.* (2003), Berkowitz *et al.* (2003), Claessens *et al.* (2000), Coffee (2000), La Porta *et al.* (1999, 2000), and Lombardo & Pagano (2000), these differences have far-reaching consequences on the type of proprietorship, market valuations, share earnings, the access and cost of outside capital. It has been established that an institutional environment's offer of legal protection varies with a country's legal origin. This has been confirmed by Coffee (2000) and Johnson *et al.* (2000) that investors in civil law environments get less protection *vis-à-vis* those based in the common law dispensation. This simply translates into the pervasive nature of expropriation of minority investors who are helpless in the face of such weak governance. This has been espoused by Djankov *et al.* (2008) and La Porta *et al.* (1998, 2000) that legal protection tackles self-enrichment of insiders and enables outsiders to hold firm management to account (Mukherjee, 2015).

Similarly, with regards transparency, companies in civil law dominions tend to reveal much less corporate governance information unlike their counterparts operating in common law environments (Chung *et al.*, 2015; Li & Moosa, 2015). Elshandidy and Neri (2015) conclude that better governed firms exercise greater voluntary and obligatory risk disclosure practices, which reduces the risk premium asked by investors (Chen *et al.*, 2009) and entitles such companies to greatly lowered cost of capital (Hail and Leuz, 2006). It is those dissimilarities in investor protection that could help justify the contrasts in both company ownership and financing. This is better explained by Chung *et al.*, (2015), La Porta *et al.*, (2000) and Shleifer & Vishny (1997) who show that common occurrences of ownership concentration could be indicative of weak protection of investors, embodied by a single tycoon or a family controlling the company, with such firms typical of cross-listing trends (Chung *et al.*, 2015).

Countries of inferior institutional quality possess less overseas equity assets and liabilities (Stulz, 2005) and this has been found by Mukherjee (2015) to cut off investable inland assets that would have come from outside investors. Moreover, the works of Demirguc-Kunt &

Maksimovic (2002), Globerman & Shapiro (2003) and La Porta *et al.* (1998, 2002) adduce that enhanced investor protection translates into more dependence on equity markets and long-lasting financing all of which reward well-governed firms. This therefore means that poor institutional quality brings about poor financial company performance which would have been boosted by income from equity investment.

La Porta *et al.* (2000) suggest that some investors' rights are firmly enshrined within the laws. These include the right to go to court when expropriation takes place by directors or the bulk of shareholders, to demand unexpected shareholders' meetings, to vote for directors, to collect dividends, to participate in meetings, among others. It should be noted that investor protection laws come in different forms; anti-takeover and competition, insolvency, security, company laws, stock exchange directives and accounting ethics.

With regard to emerging markets, the level of institutional development tallies with the degree of corporate practices and business activity (De Clercq *et al.*, 2010), whereby observing good corporate governance tendencies stands in for a poor regulatory environment as well as in spaces characterised by high concentrated ownership (Briano-Turrent & Rodriguez-Ariza, 2016; Guo *et al.*, 2015; Klapper & Love, 2004). This can be understood as firm-level corporate governance practices acting as substitutes for a country's legal systems that monitor firm conduct. Klapper and Love (2004) motivate that in such a scenario, firms would single-handedly indicate to prospective investors their intentions to offer greater investor rights, lest the unofficial institutions then would come in as substitutes in case formal structures come short (Estrin and Prevezer, 2011). This amplifies the importance of a country's level of institutional environment in directing the business environment and the exercise of corporate governance among firms, parastatals, private firms as well as all stakeholders in the business environment.

2.3.2 Financial development

Financial development relates to the advancement of capital markets (King & Levine, 1993; Holmstrom & Tirole, 1993), coupled with a fully operational banking system (Merton & Bodie 1995; Demiguc-Kunt & Maksimovic, 1998; Levine, 1997, 1999), in which resources are assigned to the most recompensing projects. Anderson & Gupta (2009) and King & Levine (1993) argue that this is executed by managers while putting capital owners' interests ahead of

theirs. This overtly refers to issues of corporate control and agency, which are integral topics of corporate governance, in which case, financial development tasks the company management to ensure that funds for investment are not misused but that returns are got back on what has been invested. And in agreement, La Porta *et al.* (1997) support that both creditor and shareholder rights are vital components in ensuring the development of the financial system. This therefore means that financial development is pivotal for companies to attract and access financing either from within or outside the country's economy, by adhering to governance standards that safeguard investors' rights.

The financial system is tasked with the following six essential duties according to Čihák *et al.* (2013), Levine (1991), Merton & Bodie (1995), Obstfeld (1994), Sirri & Tufano (1995) and Stiglitz (1993):- mobilising of capital and the splitting of shares in numerous ventures, risk management, the delivery of information on pricing in a bid to organise dispersed supervision of the various sectors of the economy, expediting the payment processes so as for trade to go on, and to facilitating the transmission of financial resources including financial instruments as well as goods and services across physical borders and industries over time.

The soundness and expansion of financial institutions demonstrates the development of the financial sector, whereby tools have to exist to ensure high level corporate governance within those institutions and hence advancing economic growth (Levine, 1997), and simultaneously evading mismanagement (Winkler, 1998). The financial sector is charged with the regulation and control of the banks (Dewatripont & Tirole, 1995, Diamond (1984) and Ramakrishnan & Thakor (1984). Winkler (1998) maintains that these corporate governance practices then trickle down to the conduct of banks' dealings with their clients in selecting, inspecting, contract lettering, saving on transaction costs and other acts of intermediation that bank customers who deposit their money into the banks are incapable of doing. This then means that banks act as agents, incorporating the agency theory of Jensen and Meckling (1976) and through the development of the financial sector, there is need to have robust corporate governance that ensures continuity in their service provision. Despite the dependability of banking systems in the western world, gross carelessness of some big banks has brought about a domino effect leading to the financial crisis in the 2007-2009 period, thus making corporate governance vulnerable and culpable.

Besides the banking system, another major channel through which financial development determines corporate governance is through equity markets. Liquid equity markets assist in takeover processes, thereby affecting firm ownership (Jensen & Murphy, 1990; Standard & Poor's, 2004) and even simplifying company management rewards through enhanced company performance (Jensen and Murphy, 1990). All the same, investors are disinclined to buy shares in companies or markets with unsatisfactory standards of corporate governance such as disclosure and transparency processes, thus making such shares to trade at discount prices. Trading shares in an environment of inadequate corporate governance comes with an associated premium for that level of economic insecurity. To the detriment of such a company then, the cost of capital greatly increases (Standard & Poor's, 2004). It can be surmised then that financial development determines corporate governance standards which firms are required to follow in order to obtain capital markets listing where they are able to access finance.

2.3.3 Firm-level corporate governance tools

The role of corporate governance is to configure the interests and conduct of managers and synchronise them with those of the company owners. This applies to companies with a fragmented ownership structure, where agency issues complicate operations. However, with a concentrated firm ownership structure, concerns regarding the safeguard of minority shareholders' rights are likely to emerge, especially the transparency and autonomy of the board of directors (Capulong *et al.*, 2001; Maher & Andersson, 2002). Therefore, the firm ownership structure notwithstanding, the existence of corporate governance mechanisms is meant to enhance firm performance, through increased accountability and transparency in the economy, with rights and responsibilities of concerned parties observed. Consequently, this enables firms operate efficiently in the economy, with resources directed into projects with the highest return, hence contributing towards a country's economic growth.

The degree to which a company complies with internal corporate governance mechanisms is greatly influenced by the legal environment in which it is domiciled. This is embraced by Klapper & Love, (2004) and Standard & Poor's (2004) who find that firm-level corporate governance has a powerful positive correlation with country-level processes of investor protection. Thus, on average, there is high quality firm-level corporate governance in countries that have tough legal protection. Also, companies located in countries that have weak legal

arrangements are inclined towards lower corporate governance rankings (Klapper & Love, 2004; Stulz, 2005). Therefore, the extent to which internal company corporate governance is observed and enforced hinges on the level of investor protection offered by the environment of the country where the firm is based.

How a particular company reacts in such an environment goes a long way in offsetting the effects of governance. Findings from Briano-Turrent & Rodriguez-Ariza (2016), Guo *et al.* (2015) and Klapper & Love (2004) show that firms can independently implement good corporate governance practices, such as providing more elaborate reports, revealing more decisions by the board of directors, embracing generally accepted accounting principles all in a bid to exhibit their transparency, or they may enhance their integrity by issuing equity in important market environments (Standard & Poor, 2004), as a way of showing prospective investors their intentions to offer greater rights to them (Klapper & Love, 2004; Standard & Poor, 2004). This is because investors prefer to deal in companies that exhibit healthy corporate governance practices that act as insurance against misuse of resources by those in charge of the firm management. McKinsey & Company reports (2000, 2002) endorse that around 89% of investors are more inclined to purchase shares of a well-governed company, even if those shares are trading at a premium due to a decreased risk attached to corporate governance standards.

Conversely, firms resident in countries with poor corporate governance practices usually have their stock priced at a discount because investors fear the risk associated with such companies (Bhattacharya, *et al.*, 2003; Gompers *et al.*, 2003; McKinsey & Company, 2000, 2002; Standard & Poor's, 2004) and are therefore faced with a higher cost of capital (Gompers *et al.*, 2003), as their stock trades at a lower volume and is much less liquid (Bhattacharya, *et al.*, 2003). Again, Klapper and Love (2004) show evidence that poorly governed firms are typical of both low returns on assets and market valuation hence they struggle to finance their operations. This leads to the conclusion that adherence to corporate governance at firm-level ensures efficient utilisation of firm resources and attracts even more investment to firms that subsequently boosts firm productivity and the economy.

The board of directors is a significant element of the governance arrangement in large companies (Fama & Jensen, 1983; Williamson, 1964, 1981, 1983, 1984). This board is hired by the company shareholders to look after their interests (Adeusi *et al.*, 2013; Fuzi *et al.*, 2016;

King IV report, 2016). The board is tasked with policy making and execution, treasured judgment, experience and stewardship (Adeusi *et al.*, 2013; Burt, 1980; King IV Report, 2016; Mace, 1971; Pennings, 1980; Standard & Poor's, 2004), advising and sanctioning management decisions and performance management (Baysinger & Butler, 1985; Bedard *et al.*, 2004; Bhagat & Bolton, 2008; Van den Berghe & Baelden, 2005). The board is expected to be independent (Van Essen *et al.*, 2012b), small and manageable (Yermack, 1996) have several dynamic and dedicated committees (Grove *et al.*, 2011). It is also tasked with the employing, removal and rewarding of high-ranking management teams, deciding on matters of importance among decision makers and acting as lasting risk bearers. These traits are elaborated in Abdulazeez *et al.* (2016) and Jensen & Meckling (1976) where the objectives are designed to cut down agency costs and promote the efficient running of the firm, enhancing its productivity and that of the entire economy in return.

A number of committees should be formed among the members of the board for effective governance of the firm. Bruno and Claessens (2010) enumerate an assortment of committees responsible for the audit, remuneration, governance and appointments all of which contribute to the firm value. This is also backed by Abdulazeez *et al.* (2016) who contend that these committees ensure that shareholders' interests are privileged as management's conduct is not always in the interest of the firm's owners. With regards the audit committees, Kyereboah-Coleman (2008) and Xie *et al.* (2003) corroborate that firm performance is bound improve, with Cadbury (1992) and Weir *et al.* (2002) emphasising on improved firm finances consequent upon superior accountability as bad behaviour is lessened through regular evaluation of their work. This significantly boosts the credibility of the firm's financial statements which are vital for the owners and other users of such information (Collier, 1992; Standard & Poor's, 2004). Board committees are another internal governance mechanism that contributes to enhanced financial performance of the firm and hence contributing to the economic growth of a country.

The rights of shareholders also represent firm-level corporate governance mechanisms that protect the rights of minority owners. It is a mechanism that secures equal treatment of all firm owners. Standard & Poor's (2004) opine that a firm's share and control mechanism needs to be homogenous and clearly understood for shares in a similar category, with secure proprietorship and transfer of shares and the voting rights as well as financial reward for owners being commensurate with their monetary stake in the company. Shareholders' general meetings should be accessed by all those with a stake in the company in which satisfactory information

should be disseminated to the owners equally for timely disclosure and transparency. A shareholders' meeting manages decisions that guarantee the contribution of each shareholder. Ensuring equitable rights to all owners eliminates managerial self-enrichment which abuses shareholders' resources injected into viable projects for a return on investment. As a result, this increases firm productivity and financial performance leading to a forward push in the economic growth of a country.

2.3.4 Macroeconomic fundamentals

Macroeconomic fundamentals are factors outside the realm and control of companies, which nonetheless dictate the survival of companies and ultimately sway firm corporate governance. It is debated by Johnson *et al.* (2000) and Ugur & Ararat (2006) that the currency crunches of the Asian developing market economies is partly explained by poor return on investment which therefore made tunnelling activities by firm managers inescapable. That despite insufficient corporate governance standards in that environment, the impending currency crunch unfavourably impacted on investor confidence, as shareholders' firm faith waned thereby leading to colossal capital outflows and a collapse in the equity prices and prices of local currencies. Research by Castern and Takalo (2000) adduces that corporate governance reforms are not even viable in macroeconomic disasters such as credit squeezes and may even worsen the financial crisis. Likewise, Visconti (2011) finds that inflation risks and interest rate volatility hamper the flow of investment. It therefore is of crucial importance to maintain a grip on a country's macroeconomics for corporate governance to impact positively to the firm and all the relevant firm stakeholders in contributing greatly towards economic growth.

2.4 THEORETICAL PERSPECTIVES OF CORPORATE GOVERNANCE

Various scholars and practitioners have divergent viewpoints of the concept of corporate governance. This section presents a survey of abstract perceptions that underpin corporate governance. These are discussed below and they include; shareholder theory, agency, stakeholder, stewardship, resource dependence, transaction cost, political, institutional as well as the various subdivisions of ethics theories.

2.4.1 Shareholder theory

This model is premised on generating benefits to company owners (Danielson *et al.*, 2008; Scott, 2003) and not the short-termist profit maximisation goal of agency theory. Rappaport (1997) posits that this long-term goal of shareholder value maximisation ultimately determines the standard for company strategy and performance. Therefore, it can be presumed that with the shareholder theory, the overall existence of a firm is to maximise the wealth of the shareholders, with a disregard for other firm stakeholders. It designates a system whereby the high-ranking company administration (management) is held responsible by the owners of the company (shareholders). And this is because, company owners essentially invest their personal property in order to maximise their wealth.

Maher and Andersson (2002) reason that firm managers and directors have an implied responsibility to guarantee that the firm operates in alignment with shareholders' interests. Friedman (1962) adds that in order to increase the worth of the company on the market, there is need for managerial effective resource allocation and production. One can therefore gather that this model is an owner-centred view of the firm that serves only its owners, with corporate governance focusing mainly on the relationship between shareholders and management.

The proponents of the shareholder theory such as Sundaram and Inkpen (2004) insist that firm owners are residual claimants who only receive any sort of earning after all the stakeholders' debts have been fulfilled and therefore have reason to hold managers to maximise the total firm value for overall benefit of all participants and thereafter the shareholder value. As well, Tse (2011) holds that it is the shareholders who bare the biggest risk among all the participants in the success of the firm, which justifies them instructing managers to maximise shareholder value. Fault-finders of this model however, argue that it is not cognisant of critical participants around the company that consist of workers, clients, the state, social community, suppliers, among others who are a function of any company prosperity (Tse, 2011).

It important to point out the limitations of this model as it dismisses the significance of all other firm stakeholders without which the firm cannot survive. Moreover, the introverted nature of this model in promoting only the shareholders' interests smacks of the self-seeking tendencies that have made corporate governance culpable for the many corporate failures and scandals as well as the 2007-2008 global economic recession.

2.4.2 Agency theory

This model is also called the simple theory of finance by Turnbull (1997). At the core of this theory is the divergence of interests emanating from company owners who recruit agents (directors and or managers) to run the firm on their behalf (Clarke, 2004). Fama & Jensen (1983), Hawley & Williams (1996), Padilla (2002) and Turnbull (1997) clarify that this separation of ownership from management intrinsically causes a clash in the wishes and interests between the two parties. Even though the owners' aims are to make best use of their wealth invested in the company, the intentions of those left in charge to run the company on their behalf may instead be to maximise their wages, gain connection to a specific deal or to seek a greater piece of the market (Maher and Andersson, 2002), which Jensen and Meckling (1976) categorise as some agency costs that are bound to be incurred in this relationship.

This self-interest of the agency theory as discussed by Abdullah & Valentine (2009), Borlea & Achim (2013) and Daily *et al.* (2003) may happen surreptitiously or otherwise. Explicitly, managerial opportunism could be revealed through privileges such as posh office space, the use of private jets, among others (Eisenhardt, 1989; Fama, 1980; Fama & Jensen, 1983) or implicitly in the form of disregarding profit-making for firm owners (Stano, 1976), or favouring less risky ventures that to them have minimal threat in terms of future contract fulfilment even when such projects do not make the best use owners' capital investment, or concentrating on temporary incomes that are parallel with their contract period rather than lasting income growth focus for the firm (Baker and Anderson, 2010). It can be seen that these costs of agency mean a loss of property rights tantamount to expropriation on the part of the firm owners. Therefore, the focus of corporate governance in this theory should be to put in place firm governance tools that enable the control and monitoring of managerial opportunism, which will ensure firm survival and wealth maximisation of the firm value. This explains as stated by Bosch (1995), why there is need to hire independent directors who are tasked with monitoring the activities of the board of directors of the company.

Nicholson and Kiel (2007) ascribe this managerial aggrandisement to managers being much more informed and experienced *vis-à-vis* the owners, while research by Grossman & Hart (1986), Hart & Moore (1990), Hawley & Williams (1996), Shleifer & Vishny (1996) and Turnbull (1997) credit the impossibility of contracting managers explicitly in all scenarios of firm management, all of which get in the way of firm value growth.

It has been suggested by Holmstrom & Milgrom (2004) and Jensen & Meckling (1976) that this agency conflict may be controlled through issuing of equity ownership to managers within the company, as well as long-lasting incentive payments designed to achieve proper alignment with firm owners which goes a long way in limiting managerial self-interested pursuits. It is thus seen that all these rewards to managers are agency costs incurred by the firm in a bid to implement corporate governance internally within the firm (Jensen & Meckling, 1976). Such suggestions, nonetheless, have been found wanting by Baker & Anderson (2010) and Holmstrom & Milgrom (2004) in thoroughly tackling the owner-manager conflict because generally firm managers find a way to swindle firm owners' resources.

Figure 2.1 offers an illustration of the agency theory

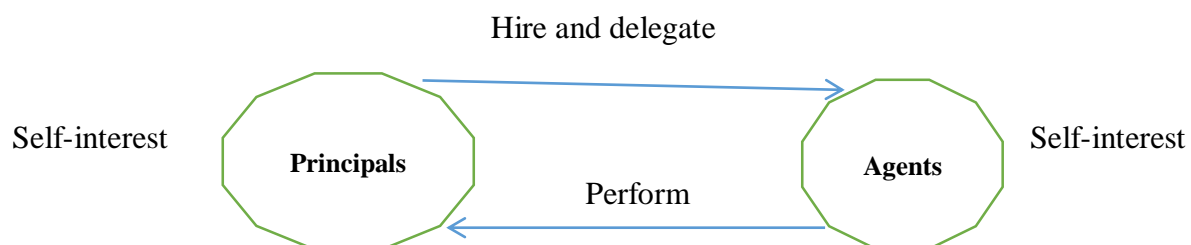


Figure 2. 1 The agency theory of corporate governance

Source: Adapted from Abdullah and Valentine (2009: 90)

2.4.3 Stakeholder theory

Abdullah and Valentine (2009) state that this model proposes that the firm is accountable not only to its principal owners but to a more extensive area of parties all of which are affected directly and or indirectly by the firm's existence. In other words, a stakeholder is any party that can affect a firm or be affected by the firms' operations or existence. This is expounded on by Donaldson and Preston (1995) that a stakeholder relates to the real or possible dangers and gains that occur to them or what they expect to happen due to activities of the company or lack thereof. Therefore, the lack of stakeholder buy-in risks the firm's survival (Freeman, 1984; Todd, 2010). It can be perceived that the stakeholder model offers a holistic view of corporate governance by taking into consideration all the parties internal and external to the firm. In this case, the firm's overall goal is to maximise the value of all its stakeholders as advanced by

Blair (1995) unlike in the shareholder theory where the overarching goal is to maximise shareholder value.

Yet again in the context of the stakeholder theory, a firm has a long-lasting mutual reliance with all its carefully considered business linkages of stakeholders (American Law Institute, 1992; Hollingsworth & Lindberg, 1985). There is also a great influence by the input of those legally bound to the company including its clients, creditors, contractors, workers, as well as community members from the company's vicinity, the local municipality, the state, and the entire world on the whole (Abdullah & Valentine, 2009; Clarkson, 1994, 1995; Freeman, 1984; Sundaram & Inkpen, 2004; Todd, 2010), with no interest of a group superseding those of another (Donaldson and Preston (1995). That said, questions on the extent each stakeholder is attended, the firm's main objective of stakeholder value maximisation notwithstanding. Thus, it is essential to make all firm stakeholders feel that they own the company with each having a voice in the process of creating value for all. This explains why Porter (1992) recommends board membership of all important employees, contractors, creditors, advisors, clients with major roles in the firm governance structure. In essence, such a corporate governance measure aims to recognise all firm stakeholder interests hence fostering value-creation for all parties.

Below is Figure 2.2 that demonstrates the stakeholder theory

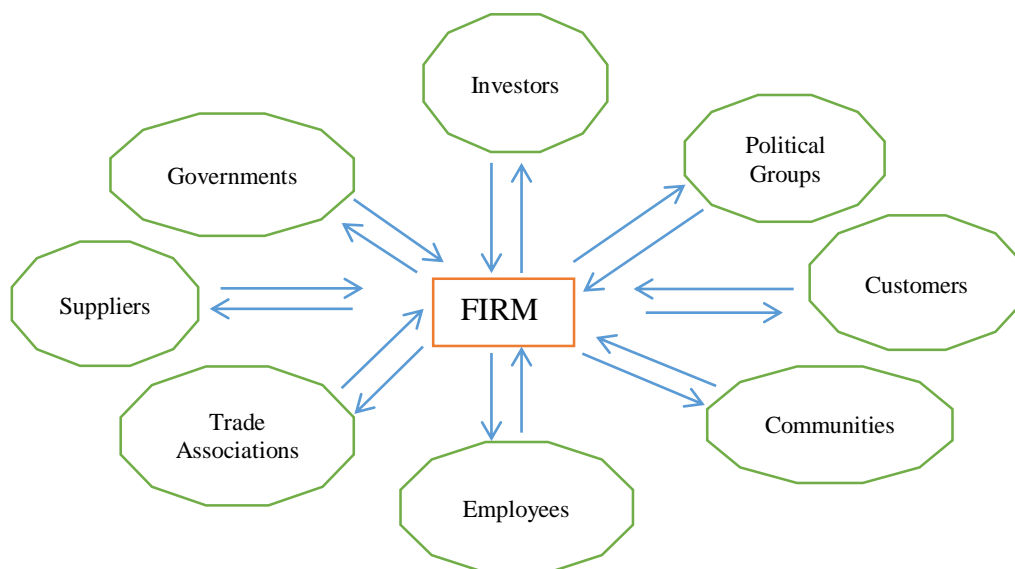


Figure 2. 2 The stakeholder theory of corporate governance

Source: Donaldson and Preston (1995: 69)

2.4.4 Stewardship theory

This model assumes that the agents hired to run the company (managers) are honest and dependable human beings who are good custodians of assets or funds to which they are assigned (Donaldson, 1990; Donaldson & Davis, 1991, 1994; Donaldson & Preston, 1995). This theory is of the expectation that agents conduct themselves as the owners and not as overseers (Davis *et al.*, 1997; Tricker, 2015) of the company, for which Todd (2010) predicts the firm to achieve huge earnings levels for the shareholders too. It is apparent with this theory, that there is a naïve assumption and blind trust in the management of the company by agents to execute their duty without fault and to act in good faith to promote the interests of the firm owners. There is a total disregard of the opportunistic and devil-may-care behaviour of agents who are tasked with managing resources that are not theirs. Abdullah and Valentine (2009) draw attention to the similarities this model has with the Japanese style of workers who embrace the custodian duty and owner-like ethic while executing their jobs at various workplaces in the country.

This theory is crafted on the conviction that insiders (executive directors) are inclined to make sound decisions that will not cause loss to other company owners (Davis *et al.*, 1997; Donaldson & Davis, 1991, 1994) lest they imperil their status as highfliers (Daily *et al.*, 2003; Donaldson & Davis, 1991, 1994; Fama, 1980). Outside directors as autonomous monitors of company activities are discouraged by this model because they are not as well-informed and lack the necessary ability to act as efficient management supervisors (Donaldson & Davis, 1994). It would however seem negligent to leave the overall decision-making solely in the hands of company insiders as advocated by this theory, as this exposes the firm and its minority owners to possible collusion and conflicted transactions involving firm insiders. Corporate governance in such a scenario is left to grapple with the resulting expropriation and misallocation of firm resources that hurts the firm's survival and hence causing loss to those detached owners. Figure 2-3 underneath is a portrayal of the stewardship theory

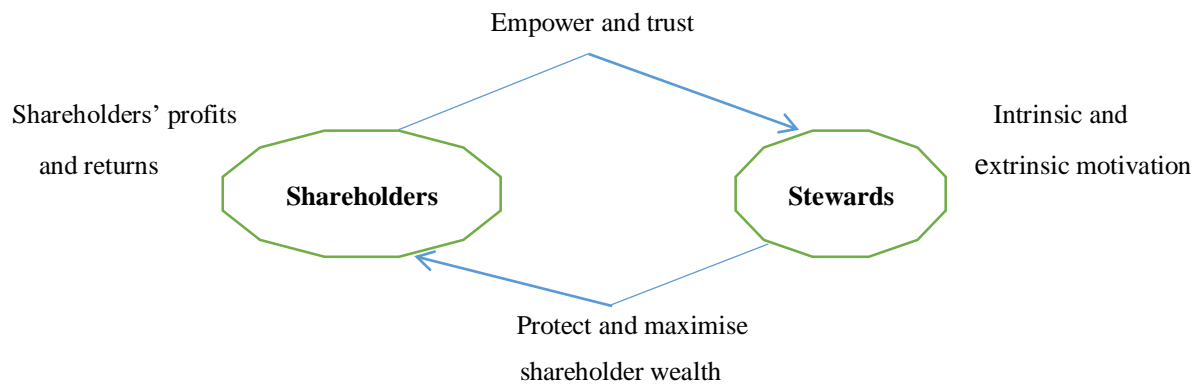


Figure 2. 3 The stewardship theory of corporate governance

Source: Adapted from Abdullah and Valentine (2009: 91)

2.4.5 Resource dependence theory

This theory relates to the significance of the firm's board of directors as a link between the company and the vital resources required to get the best performance for the firm (Abdullah & Valentine, 2009; Pfeffer, 1973; Pfeffer & Salancik, 1978). Directors of the company are categorised into business connoisseurs, insiders, support consultants- lawyers, financiers, public relations gurus and well-respect members of the community- politicians, clerics (Hillman *et al.*, 2000), among others. Therefore this theory appreciates the contribution of firm directors in their professional capacity in adding value to the firm. Corporate governance in this model is charged with utilising the skills, experience and connections brought on the table by each of these directors to further the agenda of the company.

Korac-Kakabadse *et al.* (2001) and Zahra & Pearce (1989), emphasise that one obligation of the board lies in its capability to connect, as well as access vital resources to the firm. Some of the resources paramount to the firm include access to; suppliers (Banerji & Sambharya, 1996; Hillman *et al.*, 2000), finance (Burt, 1983; Mizruchi & Stearns, 1988; Stearns & Mizruchi, 1993), information (Baysinger & Zardkoohi, 1986; Hillman *et al.*, 2000), abilities/ talents (Hillman *et al.*, 2000), clientele (Frooman, 1999; Hillman *et al.*, 2000; Mizruchi, 1992, 1996) coupled with many other important stakeholders (Freeman & Evan, 1990; Hillman *et al.*, 2000). On the report of studies such as Hillman *et al.* (2000), and Palmer & Barber (2001), the firm's board is considered a high-priority resource in itself due to its connections to the environment outside the firm. Daily *et al.* (2003) confirm that the provision of such resources improves upon

the firm's operations, performance and overall continued existence, which positions the company strategically with a comparative advantage (Barney, 1991; Wernerfelt, 1984).

It is appropriate though for this model to have comparisons with the agency traits in the agency theory, in which firm management acts on behalf of the owners and the firm itself. In this case however, this model assumes that the board of directors acts as caretakers of the firm as expected in the stewardship theory. Johnson *et al.* (1996) draws the analogy of a law firm in which members of the outside directors give invaluable advice at meetings and to other members of the executive, which advice would not come cheaply to the firm.

2.4.6 Transaction cost theory

This is the discovery of Cyert and March (1963) and later expanded by Williamson (1996). This theory taps from diverse disciplines including economics, law and management, locating the firm as an organisation that consists of people with varying ideas and goals. The basis of this model is that companies have taken over the resource apportionment duty from the market, and so their influence extends as far the output and pricing levels. This therefore makes one single transaction to be the unit of analysis in this model. Williamson (1996) cautions that with many transactions happening coupled with managers negotiating on behalf of the company, there lies a greater likelihood of managerial duplicitous and opportunistic conduct. This thus points to the corporate governance obstacles of the agency theory, which hinders the administration of resources according to the expected return.

2.4.7 Political theory

Political theory deals with the partisan influence of the state in the corporate governance of firms through state capitalisation or the way in which certain laws are implemented. This has a direct impact on the way corporate bodies operate especially regarding the issues of earnings distribution, special rights and other benefits (Abdullah & Valentine, 2009; Borlea & Achim, 2013; Pound, 1993). Thus the political theory of corporate governance brings to the fore the state as a major force in corporate power play, and the company governance framework (Hawley & Williams, 1996; Turnbull, 1997).

The theory submits that political influence of the state is crucial especially in the canvassing and lobbying for the promulgation of laws within the country that should govern corporate

bodies. Borlea and Achim (2013) for instance, offer two cases; one of countries such as Venezuela, Brazil, Columbia, Greece and Chile in wherein laws have been adopted sanctioning dividend distribution procedures which require compulsory bonus provisions. Case two is that of Romania which is still generally considered less attractive to potential foreign investors as attributable to over two decades of state shareholding in most major companies. This theory relates quite fittingly with socialist China where the state is the dominant participant in the economy, with government fingerprints literally evident in the allocation of resources, production, price-setting, output targets, governance and laws that regulate the overall country's production.

On the other hand, firms also have exerted their influence in moulding the political and legal landscape in which they operate over time. Monks (1996) mentions the influence of the modern company in shaping accounting and regulatory structures. And Pound (1993) complements that active capitalists pursue corporate system changes through dispersed stockholder backing instead of changing it by themselves which according to Pound (1992) is much more effectual and less costly unlike the takeovers that happened in the late 20th century.

2.4.8 Institutional theory

The institutional theory is emphatic on the robust legal systems which should shore up effective corporate governance in an economy. North (2005) maintains that institutions are a combination of both casual and official regulatory sanctions that impact on the business environment. Boliari and Topyan (2007) categorise casual institutions to be manifested as company norms and traditions along with policy which are viewed as precursors to taking part in corporate governance routines. However, Campbell (2007), Dasgupta *et al.* (2000) and Wang (2008) classify official institutions as the laws governing company activity and business or state initiatives.

Institutions are mechanisms through which company activities are controlled as well as acting as enablers through which companies gain legitimacy to the market and to all relevant stakeholders. According to DiMaggio & Powell (1983), Filatotchev *et al.* (2013), Meyer & Rowan (1977), Scott (2001) and Trevino *et al.* (2008), the institutional framework comprises of three essential structures. These are; cultural thought processes, regulations and routines all of which facilitate firm decision-making via human exchanges. North (1990) stratifies the

regulation structure as a standardising and coercing arm that controls and authorises firm conduct. The routine structure relates to the moral responsibility companies have towards society, while the cultural thought post is attached to institutions that delineate the conceptualisation of reality or norms (Scott, 2001).

Also, it has been announced by DiMaggio & Powell (1983), Ntim *et al.* (2013), Scott (1987, 2001) and Wang (2008) that firms embrace corporate standards and rules so as to fit in with societal expectations and consequently gain assurance and acceptability among the public. It can thus be interpreted that the institutional theory defines the acceptable code of conduct for companies in their bid to achieve their objectives by ensuring that firms adhere to the set rules and regulations and not harm society. Therefore the institutional theory is inclined to demand a fully operational legal system that holds firms accountable in order for corporate governance to function.

2.4.9 Ethics theories

Abdullah and Valentine (2009) specify that theories of ethics relate to morality and the use of reason to determine what is and what is not acceptable business conduct. These authors further state that company ethical standards and guidelines greatly influence corporate governance. This study revealed forms of ethics theories of corporate governance among which include; business, feminist, discourse, virtue and postmodern, which are discussed thus;

2.4.9.1 Business ethics theory

This brand of theory investigates the environment, goings-on and choices of business to address what is deemed as acceptable or not, mainly due to the ever-increasing influence of business within the community where commerce is a vital contributor of employment opportunities to the society. As a result, whenever business enters into a crisis, there are far-reaching effects on to the community, thereby making the company stakeholders' load to be much more challenging. Thus this theory identifies the advantages and disadvantages related with moral matters between the company and the business environment (Crane and Matten, 2007). A striking observation about this theory is that it explores both the company and outside environments to establish what is right and wrong in accordance with societal fixed traditions and beliefs. Accordingly the business ethics theory can be said to tap into the stakeholder theory so as to ascertain that all parties attached to the firm's existence maximise their value.

2.4.9.2 Feminist ethics theory

This theory is categorical on the virtues of compassion, love, care, shared relations, and discourages hostilities against one another. It is important in an organisation to have all these qualities and not just a one-sided focus on the business end of things. This is especially true of an organisation that is viewed as a web of actions thereby impacting on many collective levels and relations (Abdullah and Valentine, 2009).

2.4.9.3 Discourse ethics theory

Also labelled as argumentation ethics, this theory related to the peaceable resolution of conflicts. It discusses a kind of dispute with an effort to determine moral veracities through inquiring assumptions of dialogue (Habermas, 1996). This type of resolution according to Meisenbach (2006) endorses sincerity and cultural equanimity. This ethics model endorses honesty as a virtue which is in agreement with disclosure, transparency and reporting standards, one of the cornerstones that enforce firm-level corporate governance.

2.4.9.4 Virtue ethics theory

This highlight of this theory is decent character with a disposition to act according to the needs of the situation (Annas, 2003). Abdullah and Valentine (2009) illustrate this in a situation where a member of the board of directors of a company acts in good conscience which ends up lifting his or her goodness of character, which ultimately generates many non-material benefits to the firm.

2.4.9.5 Postmodern ethics theory

This attends to the importance of intuition in a particular situation and so, the theory transcends the nominal value of courtesy. The model goes ahead to give an all-embracing style for companies towards the realisation of their goals while giving as much attention to their motivating values and these form the rationale for their existence (Balasubramanian *et al.*, 2009).

2.5 CORPORATE GOVERNANCE SYSTEMS IN THE WESTERN WORLD

There exist various models of corporate governance because companies function in diverse business contexts. Koslowski (2009) is of the supposition that the existing corporate governance practices stem from the very rationale of the firm's existence while Franks and Mayer (1992) argue that the variations in corporate governance among countries particularly those in the western world, are due to the firm ownership and control arrangements rather than through the techniques in the financial systems used to finance those companies. This investigation revealed the prevalence of two systems of corporate governance in the western world - the Anglo-Saxon (commonly referred to as the American system) and the continental European model. Ooghe and De Langhe (2002) caution that comparing these models in isolation leads to ineffectual results but rather that, there should be an examination of the dissimilarities and parallels between the two. This tallies with Koslowski (2009), who holds the opinion that the firm's inception structuration to a greater extent influences its governance criteria. In consequence, in the eyes of the Anglo-Saxon model, a firm's overall goal is financial gain whereas that of the European model is to serve a number of goals and thus giving rise to various perceptions of both the firm and the corporate governance standards.

2.5.1 The Anglo-Saxon model

This system is also known as the shareholder value or principal-agent system or the American system, which gained popularity in the later stages of the 20th century as a result of the then global equities markets boom in the USA and UK (Cernat, 2004; Dennis & McConnell, 2003; Koslowski, 2009; Luo, 2007; Miller, 1994). The Anglo-Saxon system of corporate governance has been named by Hasan (2009) to be common in such countries as Australia, New Zealand, Canada, South Africa and majority of South East Asia countries, spanning all the continents the despite its western origins.

This model can be said to represent the shareholder theory of corporate governance, whereby the interests of the firm owners take centre stage. Franks & Mayer (1997) and Luo (2007) label the model to of a diffused type of shareholding, where the company owners' main concern is short-term gain, with the task to run the company being left to managers. Cernat (2004) clarifies that owners of firms in such a system hold very tiny bits of shares and this offers them virtually no motivation to supervise the firm managers and to even dictate the level of decision-making.

Quite the opposite, those with a bigger stake in companies have a lot to lose if they leave the overall running of the company to managers without supervision (Denis and McConnell, 2003).

A fully operational country's institutional framework is critical in this system of corporate governance that is required to uphold shareholders' rights. This explains the findings of Cernat (2004) and Luo (2007) who confirm that the Anglo-Saxon corporate governance system is familiar in countries of common law, emblematic of high quality levels of investor protection, and as stated by Luo (2007), underline timely, truthful and dependable disclosure and transparency practices to company owners. This system is heavily reliant on a well-oiled capital markets in which discontented shareholders are free to sell their stakes (Cernat, 2004; Ooghe & De Langhe, 2002) with a very bigger number of companies present and active on the stock exchange (Franks and Mayer, 1992). This American system therefore is vulnerable to company ownership coups typical of equity markets (Koslowski, 2009). That said, the American model of corporate governance depends on a fully functional financial markets and legal systems that should always be protected as solid institutions.

Another characteristic of this model is that there is no close contact between the company owners and management. Denis and McConnell (2003) pronounce the existence of a unitary board of directors, which is composed of both insiders and outsiders, tasked with appointing of the management team that is fireable by the firm owners. Cernat (2004) and Piesse *et al.* (2012) point out that for greater governance effectiveness, many of the listed firms have compensation and audit board committees. It is important to monitor management's work through some of these committees in order to reflect the true value of the firm and to streamline governance within the firm. Also, there is not much presence of labour unions (Pryor, 1996) where employees are forbidden from partaking in strategy formulation and control (Freeman and Rogers, 2006).

Figure 2.4 below is an annotation of the American system of corporate governance in which company ownership is greatly fragmented, with the running of the company put in the hands of the firm board of directors, tasked to drive the owners' agenda of share value maximisation. This they do by appointing the managers who in turn recruit various employees. Ideally, the diagram shows that firm owners' ambitions are primarily for financial gain are mirrored through the organogram trickling down to the last members in the chain (employees). Here, employees' conduct at the company is expected to be in agreement with furthering shareholder

rationale for firm ownership. Thus, corporate governance discussions centre on shareholder-agency relations and the degree of protection of shareholder rights and interests.

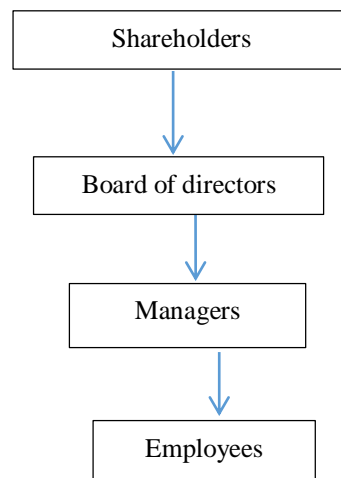


Figure 2. 4 The Anglo-Saxon model of corporate governance

Source: Researcher's own (2020)

2.5.2 The European model

This is also termed as the stakeholder system by Adams (2003), Cernat (2004), Hutton (1999), Iqbal & Mirakhor (2004), Ooghe & De Langhe (2002) and Snyder (2007), as it takes into consideration all interested parties besides the shareholders, thereby excising the free-rider problems (Koslowski, 2007). This means that unlike in the Anglo-Saxon system where the managers' duty is to maximise shareholder interest, in the European model, it is the interest of all the stakeholders who have a right to partake in the decision-making. Freeman (2010) describes stakeholders as components of groups with reasonable entitlement to the firm whether openly or indirectly. These maybe owners, creditors, employees, directors, customers, suppliers, government, trade associations, social community, political groups among others.

It is believed by Hasan (2009) and Mizruchi (2004) that particularly after the highlight of a rise of managerial power in the American corporate world as documented by Berle and Means (1932), there followed the loss of shareholder power in the shareholder system, against the backdrop of the financial crisis (Koslowski, 2009). The European model is deemed a contrast to the American system, arriving from an increased involvement of various parties in the system (Jackson, 2005; Vitols, 2004). This system has been described as the "Germanic

system” by Saif Alnasser and Muhammed (2012: 224), and Iqbal & Mirakhor (2004) and Luo (2007) mention it as commonly found in countries of civil law type including Germany, Greece, the Netherlands, Austria, Italy and France, where numerous companies are an integral part of the commercial and social arrangement. In essence the countries mentioned above pride themselves in complying with good corporate governance principles of disclosure and transparency, checks and balances, minimisation of conflict of interest to mention but a few, which nurture confidence and commitment of investors, employees, customers, regulation bodies, suppliers, partners together with many other firm-related parties.

One distinctive feature of the continental European model is the two-tier board of directors norm (Cernat, 2004; Odenius, 2008). Hence, the European model of corporate governance has the supervisory and the board of executives (Cernat, 2004; Fohlin, 2005; Piesse *et al.*, 2012), with both boards charged with appointing the managerial team (Odenius, 2008) and to push the firm’s agenda. Albert-Roulhac and Breen (2005:5) declared that the supervisory board is composed of outside directors which in France and German are termed as “conseil de surveillance”. Dockey *et al.* (2000) contend that the supervisory board possesses the strongest bond between the management team and the shareholders, while directing managerial conduct to maximising shareholder value. It is also tasked with the hiring, termination, appraisal and compensation of the management team (Odenius, 2008), however, its decision-making power is handicapped which restricts its monitoring activities (Scott, 2005). It can be understood that the supervisory board’s role is to ensure non-partisan and ethical decision-making processes which furthers the goal of all the relevant firm stakeholders, as endorsed by Albert-Roulhac (2008) and Albert-Roulhac & Breen (2005).

The management board consists of agents of stakeholders including workers, banks as well as shareholders (Cernat, 2004; Shibani & De Fuentes, 2017; Piesse *et al.*, 2012). Also, in Germany, this model is commonly applied to firms with an employee figure of 2000 and beyond and those occupying the stock exchange, with rampant block holding by institutions especially of banks and the government just like in France and Italy (Piesse *et al.*, 2012).

This system is premised on the critical role played by banking institutions and a widespread nature of cross-ownership ties into corporate funding and governance (Adams, 2003; Albert 1993; Piesse *et al.*, 2012; Smyser 1992). In this way, banks own sizeable share portions of

companies in such a system which helps them to keep an eye on activities of companies they fund, unlike in the American system of corporate governance (Albert 1993; Smyser 1992). With the European model of corporate governance, one reckons that in banks working with credit-worthy companies, signifies that banks act as enforcers of good quality corporate governance practices at firm-level. Only firms that satisfy bank credit conditions may obtain loans and this translates into easier monitoring of such firms by the banks.

Contrasted with the American model of corporate governance, there is less emphasis placed on financial markets and the receipt of dividends in the European model. Dittus and Prowse (1996) attribute this to fewer availability generously traded shares typical of illiquid equity markets. Prowse (1995) alerts of the challenge in making aggressive takeovers in this corporate governance system, yet Dittus and Prowse (1996) report the potential in acquiring huge stakes in companies as it enables greater influence on the direction and management of the corporation (Dittus and Prowse, 1996).

Employees, as stakeholders in the European corporate governance system, also play a significant role, unlike in the American system. According to Koslowski (2009), there exist enormous incentives and firm-level contributions in Europe such as the works council. Consultation goes on among the management board, the supervisory board and the representatives of the council of workers in order to reach a bidding agreement (Cernat, 2004; Streeck, 1997).

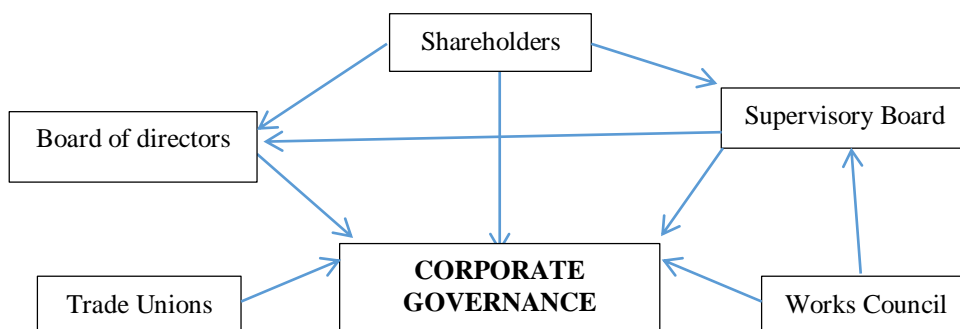


Figure 2. 5 The European corporate governance model

Source: Cernat (2004: 153)

Figure 2.5 above shows the constituent groups to the firm in which numerous relationships interact for the overall maximisation of the interests and goals of all the contributing stakeholders in the continental European model.

2.6 CORPORATE GOVERNANCE AND THE SHARIA LAW

This section describes the Sharia and how it operates in sub-section 2.6.1, while sub-section 2.6.2 specifies the operationalization of corporate governance within the Sharia environment.

2.6.1 Defining the sharia law and its way of life

Sharia law countries are governed by laws that follow the strict Muslim teachings of the holy Quran. Such countries as reported by Benbouziane & Benmar (2010), Kantor *et al.* (1995) and Piesse *et al.* (2012) share common unique attributes of an Arabic language, Islamic values and ethnicities among them. These include; Oman, United Arab Emirates, Bahrain, Qatar, Kuwait and Saudi Arabia, which form the major countries of the Gulf Confederation Council, and the Middle East and North Africa region. It should be understood that the Islamic code of ethics is the overarching influence in the way that people carry themselves as they go on about their lives within the countries typified by the Sharia.

Several Islamic scholars help better explain the propagation of the Islamic faith emanating from the Quran towards its influence into the Islamic ethnology. It is pronounced by Al-Faruqi (1982) and Choudhury & Hoque (2004) that Islam is premised on a guiding tenet of *Tawid*, deduced as the oneness of Allah from the holy Quran. This means that Allah is the sole owner and creator of all things on earth, and that human beings who are answerable to him are there to simply manage and look after all the creations on his behalf (Iqbal & Mirakhor, 2004; Yusuf *et al.*, 2016). By and large, Baydoun & Willett (1995, 2000), Sirico (2001) and Williams (2008) defend that in Islam, there is no separation between matters to do with religion and the nonspiritual. And so Choudhury and Alam (2013) explain that it is impossible for any methodical thought or rational analysis, decision, and proposal in the Islamic view, occurring with a lack of the essential and natural engagement of that foundational principle of Islam.

This in essence underscores the alignment of people's behaviour within the Sharia to the teachings of the holy Quran, as non-adherence spells harsh punishment as stipulated in the Muslim code. As backed by Baydoun *et al.* (2012) and Islam & Hussain (2003), the Islamic

religion requires obedience to a strong ethical behaviour that is galvanised by weighty societal expectations, and the anxiety of retribution all of which foster moral conduct within the Sharia environment.

2.6.2 Corporate governance within the Sharia environment

The standards of corporate governance particularly within the countries in the Gulf are perceived by Baydoun *et al.* (2012) to be at lower implementation levels among companies and institutions in these countries unlike in the much industrialised countries of the west. This then leaves a big gap of corporate governance that requires the advancement of governance standards for competitiveness as it is in the western countries. Corporate governance in the Sharia regions, especially in the Gulf area, as likened to several less industrialised nations is categorised by Omran *et al.* (2008) and Piesse *et al.* (2012) as of emergent-natured institutions, with enforcement struggles (Singh and Singh (2010) as well as, with limited levels of transparency (Amico, 2016; Gavin, 2010; Koldertsova, 2011; Piesse *et al.*, 2012). The degree of the dismally low transparency and information release levels is exhibited by Musa (2002) with revelations that when issuing new shares, most companies only invite existing equity owners in the same company, or a rich few and connected family business owners. Such opaque practices render companies unattractive for potential investors and cause the general stock market to be illiquid. Additionally, the concentration of wealth in the hands of a few is partly responsible for major corporate governance complications of agency.

The underdeveloped nature of corporate governance in the Sharia region as documented above, explains the concentrated ownership structure of businesses. According to the World Bank (2003), Sharia corporate governance is characteristic of a few shareholders in control. This dents corporate governance ambitions within the Middle East and North Africa region, where state-owned enterprises (SOEs) and family-owned businesses are predominant (Amico, 2016; Koldertsova, 2011; Saidi, 2004, 2005). This is the opposite of a diffused ownership type witnessed in the industrialised countries which separate issues of proprietorship and control of the firm. Concerning family-owned businesses, besides the leadership emanating from the family head, there is an entrepreneur-like management with personal relation-based trading and unclear communication tendencies (Gavin, 2010; Singh & Singh, 2010). This may then get in the way of streamlining effective corporate governance practices among such firms due to corporate governance problems intrinsic to family ownership. Yasser (2011) outlines corporate

governance challenges of family-controlled firms to include; related-party transactions and other implicit forms of expropriation of partners by the controlling family.

Capital markets of both the Gulf Confederation Council and the Middle East and North Africa regions are less developed in comparison to that in the western world. Findings from Amico (2016) and Oyelere & Al-Jifri (2011) show that apart from the United Arab Emirates (UAE) and Saudi Arabia that have converted into global centres of finance (Amico, 2016), the other regional countries' equity markets are small in nature and faced with liquidity impediments. In the Gulf Confederation Council countries, non-citizen investment into capital markets was only accepted about 15 years ago, with Oman registering first foreign investors in 2002 in its Muscat Securities Market (Hawser, 2005; Singh & Singh, 2010), and subsequently Bahrain (Singh and Singh, 2010). However, UAE is held to have the harshest corporate governance rules among the Gulf Confederation Council, with Jordan and Morocco being the most lenient (Shehata, 2015).

Corporate governance in both the Middle East and North Africa and Gulf Confederation Council regions, that are major Islamic communities, is regulated by a body called "The Hawkamah" (Singh and Singh, 2010:9), which is tasked with observing individual firms and countries within this region, in a synchronised effort to formulate and institutionalise standard corporate governance policy frameworks and open markets. One gathers that "The Hawkamah" is the enforcer of Sharia-ingrained corporate governance policies among companies domiciled in a strict Muslim environment.

Islamic corporate governance is dependent on the code of consultation (*shura*) amongst all affected parties in accordance with the holy Quran (Baydoun *et al.* (1999). This *shura* norm is considered by Chapra (1992) as a commitment rather than a choice for the firm to the service of the community. This means that the business decision-making in an Islamic environment follows the protocol of having an input from customers, workers, suppliers of finance and logistics, owners, as all the stakeholders concerned within the Islamic environment being affected by the firm's existence. These traditions are also observed by Archer *et al.* (1998), Baydoun *et al.* (1999), Cernat (2004), Chapra & Ahmed (2002), Choudhury & Hoque (2004), Chryssides & Kaler (1993), Hasan (2009), Lewis (2005), Nienhaus (2006), Saif Alnasser & Muhammed (2012) and Piesse *et al.* (2012) that businesses within an Islamic environment need to take into consideration and ensure the prosperity of the workers, social community and all

connected parties to the company, not just the shareholders. It is therefore a befitting interpretation that the Sharia corporate governance model is in some way analogous to the stakeholder model of the continental Europe, in which the corporation is accountable to a host of stakeholders.

Abu-Tapanjeh (2009) argues that there is comparability in the requirements of corporate bodies of an Islamic environment to those of the general corporate governance principles demanded by the Organisation for Economic Co-operation and Development (OECD, 1999). This is credited to the principle tenets of integrity, trust, justice and morality which are founding commonalities demanded of companies in the Sharia, but as well as in OECD precepts (Gambling & Karim, 1991; Klein, 2013; Mohammed, 2009; OECD, 2004; Tan, 2006; Taylor, 2008). Certainly, Saidi (2004) emphasises that corporate governance values of transparency and answerability play a mammoth contribution in improving the Middle East and North Africa region while Al-Yafi (2010) insists that comprehensive corporate governance is a precondition for private sector improvement and in attracting foreign investment.

Within the Sharia environment, corporate bodies, together with their institutions are expected to conduct themselves in agreement to the dos and don'ts of Allah (Chapra, 1992; Hasan, 2009; Choudhury & Hoque, 2004; Choudhury & Alam, 2013; Yusuf *et al.*, 2016) to whom they are accountable. This entails embracing the norms of social justice and overall betterment of everyone's welfare. While investigating Islamic financial institutions, Ahmad (2000) and Farook (2008) reiterate that firms in the Sharia environment distance themselves from profit and loss rationing, termed as a social waste by (Choudhury, 1989) and instead give back just enough proceeds to firm owners and creditors and the remainder is reallocated to the improvement of the communities and all the relevant stakeholders. A critical component of social waste is the charging of interest (*riba*) that is objectionable and was supplanted with other Sharia-accommodating instruments (Abu-Tapanjeh, 2009; Grais & Pellegrini, 2006; Saif Alnasser & Muhammed, 2012) such as unit trusts, joint-venturing (*murabaha*), equity contribution (*musharakah*), among others (Aggarwal and Yousef, 2000). It should be noted that these substitute financial instruments are based on widespread involvement or consultation (*shura* principle, a central principle of the Quran teachings) of the businesses, the entire economy and society, as endorsed by Baydoun *et al.* (1999). Other prohibited activities in the Sharia norms include; speculation (*gharar*) and trading of money (Chapra & Ahmed, 2002;

Choudhury, 1989). These Sharia obstacles could partly explain the largely underdeveloped nature of the regional stock exchange market.

Moreover, companies doing trade in the Sharia environment have a duty to pay a reserve tax (*zakat*) on retained income and distribute it to the community, as the Sharia practice dictates. Chapra (2007) reports an equivalent of 2.5% tax, as a yearly payment particularly on unused wealth and properties, with a view to maintaining an all contributory economy to keep transforming the welfare of all. Hence, this enables not only the national but also an international capital stream across the Islamic world, which eventually enables the protection of peoples' privileges and commitments to collective ownership (Yusuf *et al.*, 2016). These disclosures again underscores that a firm in the Sharia region exists to maximise the interests of all its stakeholders while adhering to the stipulations of the Muslim faith.

An Islamic firm is not only formed to conduct business within the boundaries of an Islamic milieu, it is inherently incorporated as an institution with the task to further the Islamic agenda and principles enshrined within the holy Quran. This is corroborated by Grais & Pellegrini (2006), Hasan (2009) and Shibani & De Fuentes (2017) who refer to the open nature of Islamic business dealings called upon by the Quran with all the relevant stakeholders that enhance effective risk and product expansion. This islamisation process extends to even the creation of Islamic-specific markets for products which gain automatic support as a result of the participatory (stakeholder) and complaisant nature promoted within the Sharia setting.

Every Islamic corporation within the Sharia regions features the Sharia Supervisory Board (SSB), whose mandate is akin to that of the European model, although the SSB advances further by ensuring compliance to the Sharia principles. With its membership being well-versed with financial know-how and the Sharia law (Grais and Pellegrini, 2006), this institution is regarded as the most high of all authority in a Sharia corporation (Shibani and De Fuentes, 2017). As averred by Archer & Abdel Karim (2002), Chapra & Ahmed (2002), Hassan (2009), Islamic Financial Services Board (2005), Garas & Pierce (2010), Safieddine (2009), Saif Alnasser & Muhammed (2012) and Quttainah *et al.* (2013) the SSB exists to uphold regulations, business transactions and all its ideologies and to be the clearing office for products that satisfy the Sharia norms. Therefore, the company's SSB acts guarantees the implementation of Sharia laws by the firm, which ensures the maximisation of all stakeholder interests without flouting the Quran-influenced regulations of the country.

Choudhury and Hoque (2013) reveal that the Sharia Supervisory Board (SSB) has a social welfare function, which is in agreement with the Muslim teachings as well as the stakeholder principles. Therefore, for a lasting faithfulness to Sharia norms which results in societal well-being, the SSB is worthy of the board of directors' respect regardless of its unanimity in decision-making (Saif Alnasser and Muhammed, 2012). Apart from social prosperity, the SSB is also tasked with the determination and disbursement of *zakat* and removal of income deemed discordant to Sharia norms (Grais and Pellegrini, 2006), monitoring of firm employee conduct in accordance with Sharia codes and to stop personal enrichment (Shibani and De Fuentes, 2017), among others.

Figure 2.6 underneath displays that the Islamic corporate governance style is underpinned by the divine oneness of Allah (*tawhid*) as with the SSB as a well-respected apparatus to ensure that the conduct of all business by firms within the Islamic world is in sync with the Sharia code. This is done in consultation with all the relevant stakeholders that contribute both directly and indirectly to the company (*shura* principle) in a bid to realise the Sharia vision of social justice and welfare for all in the community.

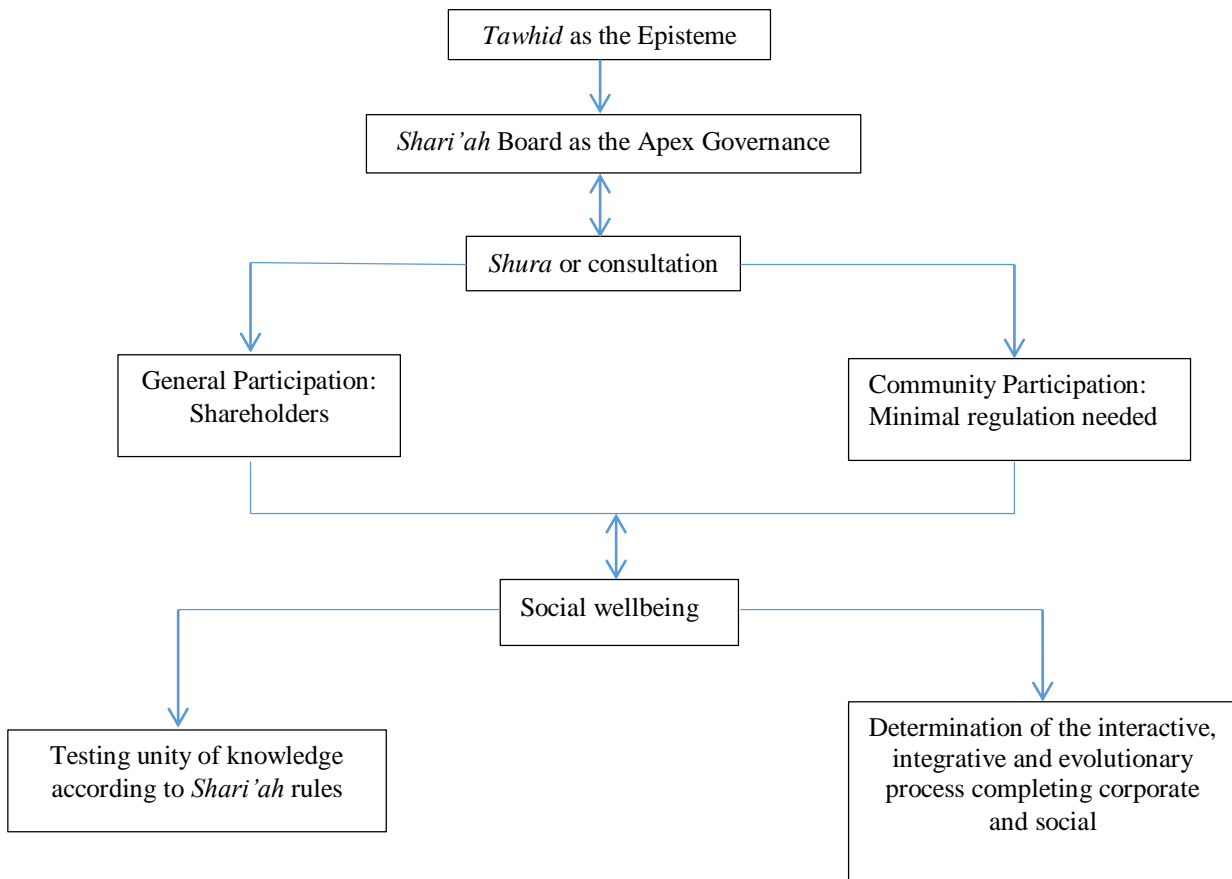


Figure 2. 6 Islamic system of corporate governance

Source: Choudhury and Hoque (2004: 86)

Table 2.1 below gives a summary of the differences in the corporate governance systems between the OECD and Sharia law countries and aids in answering research question one: **What are the differences in corporate governance systems between OECD countries and Sharia law countries?**

Table 2.1 Differences in corporate governance systems between OECD and Sharia law countries

OECD COUNTRIES	SHARIAH LAW COUNTRIES
<ul style="list-style-type: none"> ✓ Anglo-Saxon/ American model - Shareholder value system - Unitary boards (insiders + outsiders) - Diffused ownership structure - Principle-agent dynamics - Present in common law jurisprudence - Heavily reliant on stock markets ✓ Continental European model - Stakeholder system - Two-tier boards (supervisory + management) - Free-rider issues - Big block ownership - Banking institutions are majority owners & key monitors of governance - Heavy influence of unions/employees - Common in civil law jurisprudence - Less emphasis on stock markets 	<ul style="list-style-type: none"> ✓ Stakeholder system but deeply rooted in Muslim teachings - Engendered by <i>tawid & shura</i> principles of social welfare for all - Concentrated ownership with few or small groups in control - The <i>Hawkamah</i> regional body enforcing Quran-endorsed corporate governance routines - Rampant state & family ownership - Entrepreneur-like management - <i>Sharia</i> supervisory board within each firm to ensure <i>Sharia</i> compliance - Only <i>Sharia</i>-compliant products & services are offered - <i>Zakat</i> taxation to cater to welfare of all - <i>Riba</i> (interest) charge forbidden - Less emphasis on stock markets as speculation is discouraged by <i>Sharia</i> - Encourages equity distribution, joint-venturing, unit trust investing instead of profit sharing

2.7 CONCLUSION

From the literature survey, Chapter two explicated the connection between corporate governance and economic growth, with the relationship being discussed by several researchers as dual directional. Also, four determinants of corporate governance were revealed which are; institutional environment, financial development, macroeconomic fundamentals and firm-level factors. Nine theoretical perspectives of corporate governance were discussed so as to anchor the study, with the last theory of ethics was found to have five sub-forms. For the most part, all the theories explored business in the eyes of the company, its owners, and all the other

interested parties concerned as interpretations of the rationale for the firm's existence. The study identified two corporate governance systems in the western countries; the American model which is owner-centred and the European model which is majorly a stakeholder view. Corporate governance in the Sharia environment was found to be of a stakeholder type meant to do good for all in the community, but immensely anchored within the traditions of the Islamic faith. A key feature is the existence of the Sharia Supervisory Board, present in all companies, which is a device tasked with the overall islamisation of the way business is conducted in the Sharia regions.

The next chapter is a thorough description of the conceptual framework for the determinants of corporate governance and the effects towards economic growth. It is a comprehensive examination of the inter-relationships among the corporate governance determinants' proxies in how they reinforce or undermine each other as measures of corporate governance determinants and their contribution, whether directly or indirectly, towards the economic growth of a country.

CHAPTER THREE

THE DETERMINANTS OF CORPORATE GOVERNANCE AND THEIR IMPACT TOWARDS ECONOMIC GROWTH

3.1 INTRODUCTION

This chapter explains and justifies the study's synthesis of factors that determine corporate governance with its constituents that affect economic growth of a country. It is made up of the determinants of corporate governance as discovered by the literature review in chapter 2 which impact a country's economic growth. This chapter gives a thorough examination of the interconnections among the variables as mentioned in the research questions in a bid to ascertain those relationships among the variables that determine corporate governance to affect economic growth of countries, which will be executed using the econometric models specified in the following chapter. To appreciate the interconnectedness among the corporate governance determinants towards economic growth, this chapter is arranged thus: section 3.2 offers an annotated diagram of the conceptual framework, sections 3.3.1 to 3.3.4 discuss the internal corporate governance mechanisms and how they are linked to the determinants such as the institutional environment, financial development and the macroeconomic fundamentals of a country.

3.2 A CONCEPTUAL FRAMEWORK FOR THE DETERMINANTS OF CORPORATE GOVERNANCE AND THEIR IMPACT ON ECONOMIC GROWTH

Corporate governance systems, processes and practices are determined by the factors of institutional environment, financial development, and macroeconomic fundamentals as detailed in Chapter Two. This section itemises the constituents of the conceptual framework for the corporate governance determinants with their effect towards economic growth. Figure 3-1 below is an illustrative representation of the holistic view that economic growth is a function of corporate governance after being acted on by the variables of financial development, macroeconomic fundamentals and the institutional environment within a particular country. Particularly, the illustration intends to show the interdependence among the

variables within the conceptual framework in Figure 3.1. In other words, the economic growth of a country is affected by any change in one variable impacting another. A weakness in one variable negatively influences another and hence a reduction in the general productivity levels of a country. Thus, the conceptual framework should be viewed as an interpretation that the constituent variables reinforce each other in contributing to a positive and significant economic growth of a country.

Corporate governance routines and policies can be internally manifested at firm level in the form of company disclosure and transparency practices, efficacy of corporate boards, protection of minority shareholders and board of director liability. Through these mechanisms, firm conduct is regularised to ensure its efficient operation by increasing firm value and adding to the overall productivity levels of a country in the process. That said, firms exist in a milieu that should enable their productivity grow, short of which the rigour in the internal corporate governance routines and policies becomes curtailed in contributing to a country's economic growth.

One of the necessary conditions that impact on corporate governance is a country's institutional environment. The seminal research on institutions by North (1990) delineates institutions as literally the rules of the road in the political, social and business interactions among humans. Regarding business interactions, the institutional environmental factors direct firm activity in accordance with both the shareholder and other various stakeholder interests. These factors are investor protection, efficiency of legal framework, judicial independence and property rights. A country's robust institutions on its own ensure higher general productivity levels by stimulating investor confidence in the economy as it offers a cautionary option, of a trusted legal apparatus as a remedy in case investors do not receive due returns from their investment. This means that the institutional environment helps tackle corporate governance problems of agency by demanding alignment to the set regulations within the firm environment. Further, sound institutions of a country are reflected by the dependability of its financial sector and macroeconomics which foster a healthy business environment needed to enhance a country's economic environment.

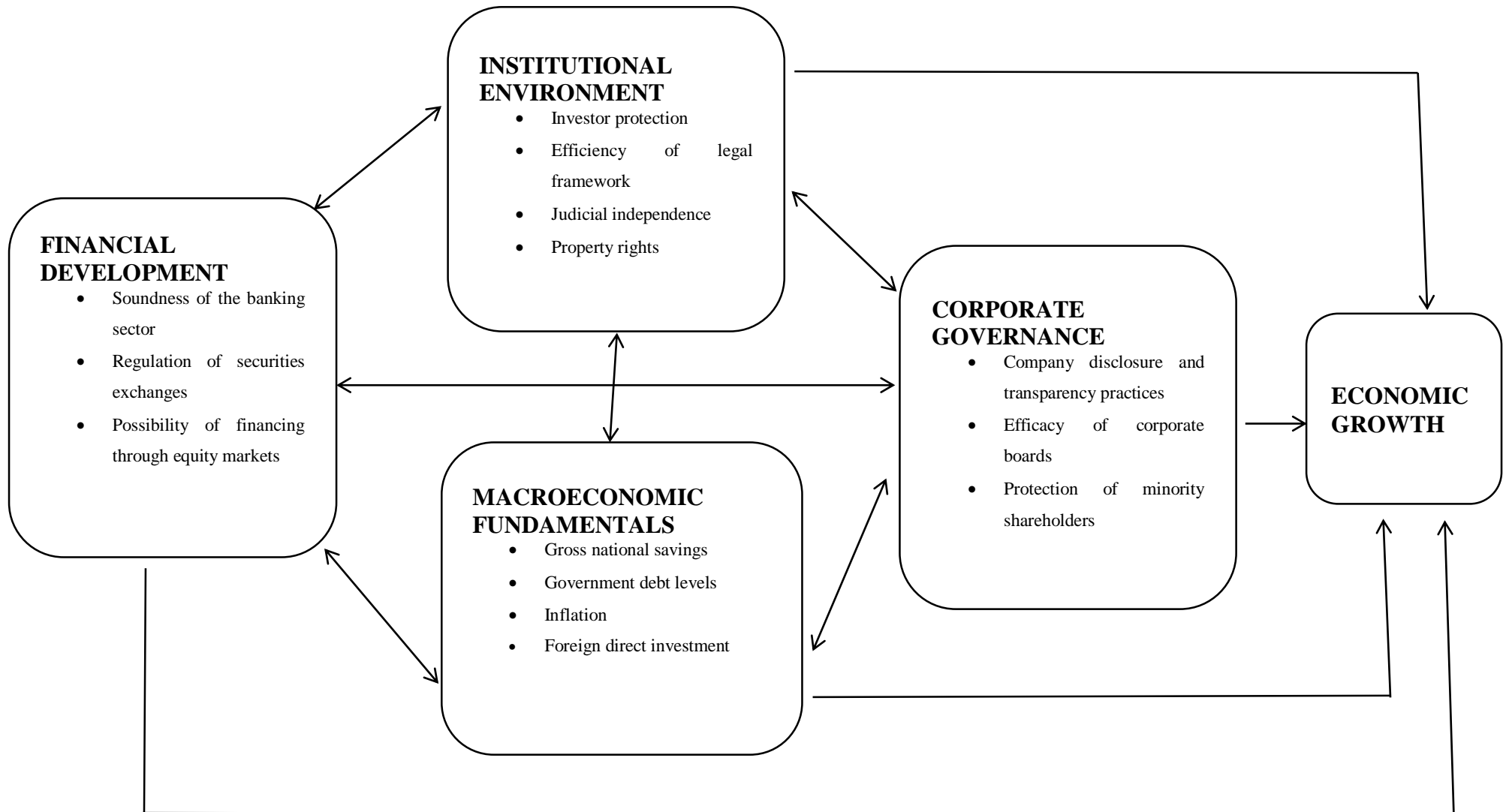


Figure 3. 1 Conceptual framework for the determinants of corporate governance and their effect on economic growth

Source: Own research (2020)

Macroeconomic fundamentals constitute another variable in the conceptual framework, categorised as external to the firm, albeit weighty factors of an immense force that can determine the survival of the firm. The macroeconomic factors are gross national savings, government debt levels, inflation and foreign direct investment. It is inconceivable that firms are able to efficiently conduct business in an economic environment with poor general national savings levels from which investment funds emanate or an economic environment of high interest rates. Therefore, though exogenous in nature, favourable macroeconomic conditions have a direct impact on a country's economic growth by enabling the inflows of foreign direct investment and the financing of investment via the capital markets all of which enhance a country's economic growth.

Lastly, the soundness of the banking sector, regulation of securities exchanges and the possibility of financing through equity markets make up the financial development conditions as another variable that impacts on corporate governance to influence a country's economic growth. Financial development is presumed to improve on the economic growth of a country especially when the resources mobilised from savings to investments are channelled to the right parties to produce returns needed for growing the economic growth of a country. This is made possible by effective corporate governance mechanisms that ensure effective resource allocation by cutting out corruption and wastage which would stand in the way of growth. Still, a weak institutional environment of ineffective laws and enforcement scares away investment and disinvest any chance of furthering the financial sector thereby weakening the economic productivity of the country.

3.3 DETERMINANTS OF CORPORATE GOVERNANCE AND ECONOMIC GROWTH

The factors of institutional environment, financial development and macroeconomic fundamentals were selected for this study and discussed as the determinants of corporate governance in conjunction with the internal corporate governance (firm-level). These facets are deemed critical in exerting an influence on a country's economic growth. Firstly, section 3.3.1 reviews the inner workings of firm governance and how they affect a country's economic growth. The remaining sections review the influence of the determinants onto corporate governance to bring about an impact on a country's economic growth.

3.3.1 Firm-level corporate governance

Corporate governance directs firm activities to ensure that shareholders maximise their value as well as that of the firm's relevant stakeholders. Corporate governance strives to maintain acceptable levels of transparency and accountability, particularly to the company owners who should be protected from agency clashes scrutinised by Jensen & Meckling (1976) and Fama & Jensen (1983), arising from the incongruous interests of the owners (principals) and the management (agents). Since company owners are not involved in the daily running of the business, such separation of powers from the management (agents) leaves so big a room for agency aggrandisement, as clarified by Nicholson and Kiel (2007), at the cost of firm owners who are the suppliers of capital to finance the operations of the company. Even though firm shareholders compensate and maintain agents' welfare for running the firm on their behalf, agents disregard the stewardship role entrusted to them and instead engage in self-enrichment which has deleterious effects on the shareholders and even jeopardise the firm's existence. Corporate governance mechanisms are called upon particularly within the company to minimise the costly agency self-dealing to enable shareholders maximise their value. According to Baysinger & Hoskinson (1990), Dharwadkar *et al.* (2000) and John & Senbet (1998) these corporate governance tools should improve the monitoring of firm management and guarantee that agents produce the highest possible returns to the owners. The overall effect on all firms in a country should culminate in a boost to a country's general productivity and income levels.

This section anatomises the internal (firm-level) corporate governance mechanisms that task company management (directors and managers) with the protection of shareholder interests and inform their answerability in a bid to maximise the value of the firm and its owners. These interconnected facets contribute to a country's economic growth. These corporate governance tools are company disclosure and transparency practices, efficacy of corporate boards and protection of minority shareholders.

3.3.1.1 Companies disclosure practices

Company disclosure and transparency relates to the availability of company-specific information to parties external to the firm in an economy (Bushman *et al.*, 2004) that holds firm management and directors accountable, with Balic (2004) insisting that company

disclosure and transparency is dependent on three pillars: aptness, quality and content of disclosure. The concept of disclosure and transparency can be subdivided into two: financial and governance transparency. With regards to financial transparency, Malin (2002) and Patel *et al.* (2002) point out that disclosure practices encompass the revelation of company financial information of annual reports, financial situation, and performance. A robust governance transparency of the firm, on the other hand, includes other facets that are of interest to both investors and other stakeholders (suppliers, clients, workers and surrounding communities). These may be, as Balic (2004) and Malin (2002) enlist, the structure of the firm's ownership, shareholder rights, management and board, general strategy and mission, its operations and major corporate activities. All these features facilitate the process of capital apportionment and are essential for informing investment decisions by the parties interested in the company. Therefore disclosure practices by firms in a country should translate into a more efficient utilisation of capital and other resources because resource allocation is improved through transparency. In this way, investors are able to evaluate the attached risk and return projections for any project and this encourages more investment hence, increased profitability and incomes by firms in a country. Sadka's (2004) study of 30 countries as well as Bushman *et al.* (2004), Bushman & Smith (2003), Hossain & Reaz (2007) and Rajan & Zingales (1998) support this conclusion that companies disclosure and transparency boosts throughput in all factors of production, which is then reflected in a country's economic growth.

Healy and Palepu (2001) emphasise the importance of companies disclosure and transparency practices in alleviating information asymmetry and agency problems. This then means that the existence of information equilibrium, from either mandatory or voluntary disclosure regimes, among corporate insiders and outsiders enables all the interested parties to fairly assess the firm's performance. To the investors, Diamond (1985) approves disclosure and transparency as it saves the cost of getting such firm-specific information as it is obtained freely, which then frees up more resources for additional investment. This indicates improved resource allocation that is necessary for increased economic growth of a country.

The concepts of disclosure and transparency are considered by Balic (2004), Beeks & Brown (2006) and OECD (1999) as principal firm corporate governance ideals in which companies with better disclosure quality are more investor-friendly unlike less transparent firms. This therefore implies a correlation between the general firm disclosure practices of a country and its economic growth, with countries whose firms that indulge more in disclosure practices

receiving more funds for investment and hence reporting a higher EG than countries of lesser disclosure practices. A deeper explanation is provided by Balic (2004) and Botosan (1997) who add that low levels of companies disclosure practices are responsible for a lack of investor confidence and hence an unwillingness to invest in certain markets. It is also the reason why company shares in some countries are priced much lower than their intrinsic value and why the cost of capital is higher than that of those countries with more transparency. It can be interpreted that low levels of disclosure and transparency raise the cost of capital because investors are in the dark regarding investment-specific information which renders their investments risky. This then scares off possible investment funds towards companies in low disclosure and transparency environments which subsequently reduces the growth in the general income levels of the relevant country.

A country's institutional and legal framework impacts on the general levels of firm disclosure and transparency as asserted by a number of authors, such that the existence of strict accounting laws and regulatory structures together with their enforcement apparatuses demand conformity from companies to adequate disclosure and transparency. This has been clarified in the works of Ball (2001), Bushman *et al.* (2004), Cooke & Wallace (1990), Patel *et al.* (2002), Radebaugh *et al.* (2006) and Wallace & Gernon (1991). Bushman *et al.* (2004) reveal that firm governance transparency is correlated with a country's legal or judicial system, with higher companies disclosure practices reported in countries of a common law heritage that are characterised by judicial independence and efficient legal systems. This portends the strength of investor protection afforded by the extant country laws and their enforcement in asking for greater transparency from local firms which then installs confidence in the economy among investors, thus lifting a country's economic growth. La Porta *et al.* (1998) further explicate that the maintenance of accounting standards manifests into observance and verification of contracts among investors and concerned parties which consolidates and cultivates corporate governance.

Also, the levels of companies disclosure practices in a country denote the ability of firms generally to raise financing through equity markets. This is echoed by quite a number of authors including, Frankel *et al.* (1995), Healy *et al.* (1999), Lang & Lundholm (1996, 1993), Malin (2002), among others. Particularly, the study of Patel *et al.* (2002) clarifies the existence of considerable variations in disclosure and transparency among countries, with more frequent and higher quality disclosure and transparency cited in Anglo-Saxon corporate governance

systems that utilise financial markets for corporate ownership and control, unlike in the poorly developed financial market economies. The guarantees of protection from expropriation offered by the levels of companies disclosure practices in country, also raises the value of companies thereby attracting more investment to firms by raising capital through the equity markets. A combination of these facets increases the overall growth levels of a country's income. More disclosure and transparency encourages further inflows of foreign direct investment into a country as documented by Malin (2002). Trust by foreign investors in the prevailing firm-level corporate governance mechanisms of disclosure and transparency allays any fears of expropriation of their capital by firms' insiders, and hence increased firm investment, profitability and overall income levels in the reporting country. According to Botosan (1997), Botosan & Plumlee (2002), Cheung *et al.* (2010), Mitton (2002), OECD (1998) and Rajan & Zingales (1998), higher quality disclosure and transparency of a country encourage more firms to jump into the market on the back of a lowered cost of external financing due to adequate companies disclosure practices, hence contributing more to economic growth.

3.3.1.2 Efficacy of corporate boards

The board of directors forms an in-house tool of governance for the firm for it is the middle bloc that performs the coordination function between the owners and the managers of the firm (Aguilera, 2005; Stiles & Taylor, 2001). The board of directors is therefore another crucial component in ensuring robust firm corporate governance due to its direct connections with shareholders and managers whose interests are ordained to clash. The efficacy of corporate boards is always called into question in instances of massive corporate corruption and collapses. Such eventualities point to an inefficient resource allocation that obstructs the general levels of projected income for the country.

Several authors such as Finegold *et al.* (2007), John & Senbet (1998), Kiel & Nicholson (2003) and Van den Berghe & Levrau (2004) assert that research on efficacy of corporate boards has relied on the traditional corporate governance theories of agency, resource dependence and stewardship for the most part. Despite the naïveté in some of the assumptions from these theories, Letza *et al.* (2004) defends that primarily, they are based on the shareholder view with an overarching goal, together with the board of directors, to maximise shareholder value and guard the interests of the owners. It is then appropriate as suggested by Adams *et al.* (2010),

Forbes & Milliken (1999), Kroll *et al.* (2008) and Minichilli *et al.* (2012) that board efficacy is only satisfactory in accordance with its level of monitoring and strategic advisory duties. Those two responsibilities of the board of directors are assumed by Duchin *et al.* (2010), Forbes & Milliken (1999) and John & Senbet (1998) to advance firm financial performance in a bid to attend to shareholder interests. It can therefore be inferred that the proficiency of board of directors as a firm governance tool increases firm productivity and revenue and hence contributing to the overall national income levels.

Board efficacy goes with cogent board of directors characteristics that are categorised by De Andres *et al.* (2005) in the form of board composition, size and structure. With regards the size of the board, researchers are divided as to what constitutes an apt number of directors for the board size of a company. Monks and Minow (1995) are of the view that a board size is important to board efficacy while De Andres *et al.* (2005) who support the critical corporate governance ratings perspectives of a large board of directors for bringing a poor quality corporate governance at firm level, recommend smaller board of directors for purposes of enhanced cohesion, increased participation and for better firm performance. The works of Finegold *et al.* (2007), Huse *et al.* (2009), Kiel & Nicholson (2003), Lipton & Lorsch (1992), Newell & Wilson (2002) and Pathan & Faff (2013) are very specific and give a suitable range of board of directors of between five and nine members to support the positive relation between board size and board efficacy which enables better firm performance. Jensen (1993) also endorses smaller boards as they reduce issues of free riding directors, save on communication and coordination costs unlike in larger boards, which CEOs find easier to control and influence. This then means that larger boards easily manipulated by managers causing the prominence of managerialism, corruption and cronyism in the allocation of owners' funds for investment. The result is the inevitable expropriation of owner resources which chokes the general economic progress.

The board's structure exerts an impact on the effectiveness with which the board of directors executes its roles in order to enhance firm performance. The way in which a board's structure is composed bears on the level of board's independence which is pivotal in putting the firm's existence and owners' interests first. Demb and Neubauer (1992) debate that the ubiquitous two-tier boards of Western Europe are notionally more independent than the one-tier boards of Anglo America. This is because two-tier boards offer a more wide-ranging governance of the

firm which also suits economies in transition that might want to try out the western governance and market mechanisms (Judge *et al.*, 2003).

Another firm governance element of CEO duality also embodies the board's structure whereby the company's chief executive doubles as board chairman leading to the creation of an overriding identity for the company. This occurrence has both good and bad upshots on the level of efficacy of corporate boards. On the upside, Anderson & Anthony (1986), Donaldson (1990), Finkelstein & D'Aveni (1994) and Stewart (1991) defend this phenomenon as it speeds up decision-making processes, the execution of operations and a united firm leadership to the outside world. Dahya *et al.* (1996) and Rechner & Dalton (1991) complement that CEO duality makes board meddling negligible in the running of the company which should result in better firm performance, in consistency with the stewardship theory. In contrast to this perception, Argenti (1976), Bainbridge (1993), Black (1992), Blackburn (1994), Cox (1993), Dobrzynski (1991), Kesner & Johnson (1990), Levy (1993b), Lorsch & MacIver (1989), Rechner & Dalton (1991), Rock (1991), Stiles & Taylor (1993) and Yasser *et al.* (2017) contend that separating the CEO duties from those of board chairman counterbalances firm management and consequently ensures board efficacy. This seems to chime in with the advice of both Jensen (1993, 1986), Jensen & Meckling (1976) and Tuggle *et al.* (2010) who contend that assigning both roles to a single individual compromises a firm's interests as a trade-off for the pursuit of individual selfish economic interests. In line with the agency issues, Rechner and Dalton (1991) companies with separated chairman and CEO roles report better return on investment, return on equity and profit margin in comparison with firms of a dual structure. This can be understood that CEO duality foments shareholder expropriation that hinders investment and income growth. Finkelstein and D'Aveni (1994) establish that CEO duality is related to CEO entrenchment which weakens the efficacy of corporate boards. Besides, Coles *et al.* (2001) and Rechner & Dalton (1991) discuss that CEO duality negatively impacts a company's financial performance and has a likelihood of causing firm bankruptcy (Daily and Dalton, 1994).

Board composition can be segmented into diversity, director profile, outside directorship for director independence. On the subject of director profile, the level of industry-specific experience, skills have been highlighted by Conger *et al.* (1998), Forbes & Milliken (1999) as well as Van den Berghe & Levrau (2004) as polishing the efficacy of corporate boards. This indicates that when called to make advisory and strategic decisions that direct the firm, shareholders have confidence that their resources do not go to waste but are rather used to

generate more income for them. Fich (2005) and Kroll *et al.* (2008) embrace this conclusion that companies reap better results in purchasing other companies should the directors possess firm-specific know-how, and thereby making financial markets rally in reaction to such news (Defond *et al.*, 2005).

Agency outlook campaigns for the board to be composed of independent directors, in a bid to put the survival of the firm first. Rueda-Sabater (2000) finds board composition crucial in attracting foreign direct investment in a country. Research from Bainbridge (1993), Black (1992), Blackburn (1994), Cox (1993), Judge *et al.* (2003), Lorsch & MacIver (1989), Mizruchi (1983), Rock (1991), Yasser *et al.* (2017) and Zahra & Pearce (1989) is unequivocal in the support of non-executive directors outnumbering the insiders in order for the firm performance not to suffer, as they ascertain board efficacy. John and Senbet (1998) find a correlation between board independence and its composition, with the board becoming more independent as more non-executive directors or outside directors correspondingly increase. Among the benefits to the company of the existence of non-executive directors on the board, Fama & Jensen (1983) and Judge *et al.* (2003) point out that conflict of interest is avoided thereby leading to a more objective monitoring and appraisal of executive directors (insiders). This then weeds out favouritism in apportionment of capital and decision-making and thus rendering the efficacy of corporate boards whose results should be reflected in the improvement of a company's financial performance. It has also been argued that non-executive directors existence could reduce the cost of borrowing (Anderson *et al.*, 2004) and even increase the company's credit ratings (Ashbaugh-Skaife *et al.*, 2006a), which denotes a robust firm-level corporate governance that should correlate to the soundness of a country's banking sector. In other words, commercial banks' and other private lending institutions' fears are allayed with non-executive directors boosting their confidence into the goings-on of the firm. This then avails more loans for firm investment, which boost firm productivity and income generally for the entire country. The presence of more non-executive directors has been found to be positively correlated with firm profitability (Ezzamel and Watson (1993), a higher return on equity (Baysinger and Butler, 1985).

The diversity of the board may not only be reflected in the variety of firm director education levels, skills, industry-specific experience, but also with more women board representation in promoting board efficacy. Studies by Carter *et al.* (2003) and Robinson & Dechant (1997) reveal positive correlation between female board representation and company performance as

women advance firm value. This feminist perspective anchors its argument in the fact that women are hard-workers and exhibit superior communication ability than males thereby enhancing problem-solving and decision-making. Women also seem better organised prior to board meetings (Eagly and Carli, 2003), and increase board meeting turnout (Adams and Ferreira, 2009), all of which improves board efficacy. A board of directors with women has been linked to higher company financial performance (Daily & Dalton, 2003; Joecks *et al.*, 2013; Smith *et al.*, 2006). The authors seem to suggest that since women on boards pay more attention to detail therefore improve the board's monitoring capacity and hence offering a more objective assessment of firm managers and executives to ensure efficient capital allocation. The ensuing effect is great savings on the firm's part and more fruitful investment decisions which boosts firm profitability and then adding to the overall income levels of the country.

3.3.1.3 Protection of minority shareholders

Steady corporate governance at firm-level requires the protection of minority shareholders from being expropriated by controlling company managers and executives. Legal systems must be designed and implemented to guarantee non-majority owners' property rights. This section complements the corporate governance characterisation by La Porta *et al.* (2000a, 2000b) and Mitton (2002) as tools aimed at safeguarding the confiscation of minority owners' property by the insiders. Dharwadkar *et al.* (2000:651) terms the expropriation of outsiders by insiders with its associated issues as the "principal-principal" problems of corporate governance, exemplified by concentrated firm ownership structures, weak governance and inferior institutional quality with little listing of companies, if any (Claessens *et al.*, 2000; Faccio *et al.*, 2001; Johnson *et al.*, 2000b; La Porta *et al.*, 1997; Mitton, 2002).

La Porta *et al.* (2000a) maintain that the protection of investors from expropriation also enables firms to acquire more funds (loans) for investment and on better terms, which Reese and Weisbach (2002) claim is significantly difficult for comparable companies operating in an environment of weak minority protection. This suggests a connection between the protection of minority shareholders and the soundness of a country's banking sector. In this way, creditors who may also be the minority shareholders take shelter in the extant investor protection in a country. The financing of firm investment through the equities markets is also enhanced by a country's institutional environment. This is backed by Hart (1995) who argues that firm managers may not be loyal to all investors, especially to minority shareholders who need

guarantees from strict laws of investor protection and their enforcement. The protection of minority shareholders has been attributed to the cross-listing of non-American companies into the US stock exchange (Coffee, 1999b; Karolyi, 2001; Reese & Weisbach, 2002; Stulz, 1999). It is therefore safe to conclude that the regulation of securities exchange further enforces minority shareholders protection, where prospective shareholders consider the purchase of companies' stakes from the equity markets after confirming the reliability of the legal machinery in a particular investment climate. The legal guarantees strengthen firm-level corporate governance hence incentivizing more investment and the development of a country's financial markets which have links to the economic growth of a country.

The expropriation of minority firm owners and creditors by insiders is broad and may be manifested in a number of forms. According to La Porta *et al.* (2000a, 1999a) and Shleifer & Vishny (1997) at times the controlling shareholders and managers may shamelessly steal firm profits or instead engage in activities of investor dilution, transfer pricing and asset stripping though legit, causes financial loss to the firm owners. In some instances, expropriation could be evidenced by self-centred financial dealings such as issuance of personal loans or equity, the diversion of business opportunities away from the firm, paying executives over the odds, executive bonuses, or awarding employment to unqualified relatives of executives. Bonuses and further self-enrichment by management echoes the agency theory discussed by Jensen and Meckling (1976) in which insiders cheat the shareholders of the firms. This then robs minority owners of due returns on their investment and reduces their incomes. When expropriation influences the allocation of capital to management's cronies and not to projects with the highest returns, there is less productivity on the firms' part which will be reflected in the low economic growth of a country.

In situations where the protection of minority shareholders is weak due to non-existent or ambiguous investor protection laws, companies may organise themselves to protect minority shareholders through corporate disclosure and transparency regimes or a more satisfactory ownership structure thereby assuring investors (La Porta *et al.*, 1999a) of a return on their investment. However, it should be borne in mind that if minority investors still view the overall country's legal system as unhelpful in holding insiders accountable, they may shy away from taking part in the economy lest they get expropriated, emphasising the gravity of the country's institutional environment in furthering investment confidence and economic growth.

This study argues that internal (firm-level) corporate governance factors of company disclosure and transparency practices, efficacy of corporate boards, protection of minority shareholders and lastly, board of director liability have an influence on a country's economic growth. It is therefore posited that:

H_0^1 : *Corporate governance has a positive and significant effect on economic growth*

H_a^1 : *Corporate governance has a negative and insignificant effect on economic growth*

3.3.2 The institutional environment

North (1990) defines institutions as both the formal and informal humanly developed limitations that guide economic, social and political interactions. As stated by Tshuma (1999), institutions consist of codes of behaviour, treaties, behavioural standards, law statutes and common law, contracts and property rights. Yildirim and Gokalp (2016) contend that the institutional environment determines the overall economic performances of countries as institutions foster trust and buoy cooperation among contracting partners. This therefore reduces the levels of uncertainty and hence cuts on costs of transactions which translate into a more productive usage of resources to spur economic growth.

It is easier for the implementation of corporate governance rules and practices at firm level in a robust institutional environment. Valeriani and Peluso (2011) avow that a combination of corporate governance and institutional environment working in tandem propel economic growth levels for a country. Corporate entities working in an unreliable institutional or legal environment have ineffective governance mechanisms as the extant weak legal protection and enforcement impedes continuous investment which affects firm productivity and hence low profitability. This section debates the institutional environment factors of investor protection, the efficiency of the legal framework, judicial independence and property rights as to how they direct corporate governance and consequently influence economic growth.

3.3.2.1 Investor protection

Shleifer and Wolfenzon (2002) classify investor protection as the whole legal framework consisting of pertinent laws and regulations, together with their enforcement which allows outside investors a feeling of protection. According to Sundarasan *et al.* (2017), investor

protection serves as collateral for those dithering investors, as it enhances investors' faith should they take the big leap to part with their hard-earned investment funds. Therefore, investors prefer an impregnable investment climate in which their rights, earnings and their investments are protected, and this creates increased production, profits which add to a country's overall economic performance, *ceteris paribus*.

The level of investor protection is responsible for significant differences in the financial systems among countries as outside investors are wary of potential expropriation by controlling shareholders or managers (Mahoney, 2003; Shleifer & Wolfenzon, 2002). This revelation concurs with prior research by Kumar *et al.* (1999) that a comprehensive investor cover for outsiders is linked with larger listing of firms and as per Agrawal (2013) and La Porta *et al.* (2000b), a higher pay out of dividends. Scholars such as Fulghieri & Suominen (2012), La Porta *et al.* (2008, 1998, 1997), Mclean *et al.* (2012) and Wurgler (2000) who document close associations between better investor protection and actual investment instances, which is due to more capital being allocated on the back of investor confidence in the levels of protection against their funds' ill use. Outside investors could approach the courts to sue the insiders of syphoning monetary rewards accruing from their investment (Shleifer and Wolfenzon, 2002). This therefore points to investor's faith in the existing legal system as a shield against profit-diversion or any other form of self-dealing by insiders, which will stimulate investment channelled through various sectors by companies, thereby adding to the overall individual country's GDP.

The level of investor protection has an impact on the nature of growth and advancement of a country's financial markets. La Porta *et al.* (1997, 1998, 2000, 2002) and OECD (2015) establish that countries with robust investor protection also have larger equity and debt markets. With better protection of investors by the law, outside investors (shareholders and creditors) are inclined to pay more for financial properties such as equity and debt. This comes from their recognition that, with strong legal protection, more firms' incomes will reach them in form of interests or dividends, unlike in a situation of exploitation by the firm's controlling entrepreneurs. With the minimisation of expropriation, the investor protection law increases the price that securities fetch in the marketplace (La Porta *et al.*, 2002), but also lowers the cost of financing (La Porta *et al.* 1998). The existence and enforcement of securities laws has a direct impact on credit markets development particularly in environments characterised by compulsory disclosure tendencies (La Porta *et al.*, 2006). Agrawal (2013) discovers that the

blue sky laws (a slangy phrase used to refer to securities sales laws in the United States) empower investors to demand firm managers to cede surplus cash that could otherwise be syphoned by insiders. And again due to these investor protection laws, shareholders are able to assemble much bigger finances from securities markets (La Porta *et al.*, 1998, 2002) thereby expanding financial markets, with much more freedom as investors are unconcerned with managers slipping away with funds after shares issuance and can seek reimbursement from deceitful companies even after a long time past their initial public offers (Agrawal, 2013; Reed & Washburn, 1921). Consecutively, firms employ this capital to invest in plant, property, and equipment and this makes their size grow. Hence, this raises their market value as endorsed by the works of La Porta *et al.* (2008, 1998, 1997), Fulghieri & Suominen (2012) and Shleifer & Wolfenzon (2002). This discovery reflects the market's positive expectation of the ensuing dividend increases that emanate from improved investor protection.

It is conceivable that firms in the same country have differing standards of investor protection, as ascertained by Black & Gilson (1998), Easterbrook & Fischel (1991) and Klapper & Love (2004). This can be as a result of a number of investor protection provisions for a country giving liberty to companies to conform, decline with motivation or adopt other regulations that may not be present in the existing statutes. At times firms can adopt corporate governance mechanisms to replace or enhance investor protection laws. As pointed out by Klapper and Love (2004), firms could expand investor protection rights through, inter alia, increased disclosure, choosing well-functioning and self-governing boards, enforcing punitive measures that preclude management, and controlling shareholders from expropriation of minority shareholders. However, the general extent of firm-level governance is strongly associated with country-level measures of investor protection, albeit the existence of well-governed firms in countries with infirm investor protection laws and poorly governed firms in countries with robust investor protection laws. There are grander rewards from corporate control through the expropriation of outsiders by insiders in countries offering less investor protection (Doidge *et al.* 2004; Nenova, 2003).

Explicit and tough laws of investor protection relate to a high level of effective resource allocation (Beck *et al.*, 2000) and this eliminates any corruption by insiders thereby leaving capital to only those projects with the highest net present value. This spells firm financial growth that Larrain *et al.* (2017) advance will be highlighted by improvements in firm

profitability (ROA) which directly and positively affects the channels of productivity (Burkart *et al.*, 2014).

The importance of investor protection regulations cannot be understated in effecting corporate governance at firm level. In particular, investor protection is responsible for the calibre of companies' disclosure practices which denote transparency levels, a key determinant in attracting investment for an economy. Several studies have established high correlations between high standards of financial reporting especially of the stated company incomes, with an effective system of laws (investor protection). Examples of such research includes; Ball *et al.* (2003), Bushman *et al.* (2004), Daske *et al.* (2008), Francis & Wang (2008), Nabar & Boonlert-U-Thai (2007), Soderstrom & Sun (2007) and Sunder (1997).

3.3.2.2 Efficiency of legal framework

Levine (1999, 1997) insist that the most robust way to measure the efficiency of legal framework is the degree of contract enforcement, while King and Levin (1993b), La Porta *et al.* (1998), supplement that notion with the level of creditor rights protection offered in an environment in case of firm bankruptcy or restructuring. However, through its yearly Global Competitiveness Report (GCR) from the World Economic Forum (WFE, 2017) efficiency of legal framework is the capacity to settle private disagreements as well as the power of the private sector to contest the constitutionality of the extant laws. In this way, a fully functional legal system becomes a necessary condition for the setting up of businesses and their prosperity. Companies will not hesitate to get into investment partnerships with various stakeholders on the back of a strong faith in the prevailing laws to enforce contracts that are entered into voluntarily. And this competency by the legal systems, according to Barro (1991), Posner (1997) and Scully (1988), is responsible for the overall country's economic prosperity, as various parties can confidently raise a country's wealth. An economic environment devoid of such adequacy of the courts systems to enforce the necessary property and contractual rights is likely to bring in place a chaotic and unsafe investor climate, that Intriligator (1994) and McGrory (1995) contend thrives on family and mafia-like alliances, threats, actual violence, and many other such self-protection means which are unsuitable for the modern type of economy, but instead as Gurvich (2016) finds, grows a much lesser productive shadow economy. Again such a state of economy with eroded rights of property stemming from an inefficient legal system renders investments uninviting but rather much more attractive to

expropriation (Acemoglu and Johnson, 2005). This would definitely limit a great deal of investment and outside investors would not invest in corporate undertakings which promise little profitability and arrest the contributions to a country's economic performance.

Posner (1998) anatomises an efficient legal framework as one of qualified, well-remunerated, proficient and principled judges and lawyers who direct laws meant to advance business activity. There is also protection of the judges from meddling by the law-making and executive bodies of government. The judgments of an effective court system are reliably implemented by enforcement agencies that are also ethical, professional and well-salaried. Again, there has to be a sufficient number of judges to adjudicate legal suits brought forward without delays, basing on a set of laws and procedures, for instance values of accounting, departments of requisite statistics, and public archives of land titles and safety interests. All these mechanisms should form a body of procedures followed in the resolution of legal clashes and equitably in terms of cost to the litigants.

Additionally, Mercurio and Madena (1997) declare that with an almost non-existent legal framework, the increases in the riskiness of doing business heightens the costs associated with financial exchanges/ transactions (for negotiating, assessing and guarding of property rights, and observing and implementing contracts), and hence hampering the growth and development process (Acemoglu *et al.*, 2001; Haidar, 2009; Keefer, 2007; Tshuma, 1999; Wiesner, 1998). And an efficient legal framework enables the possibility of financing through the equities markets (La Porta *et al.*, 2000, 1998, 1997) because investors have faith in a dependable legal system, which raises capital accumulation and spur investment levels in the country.

3.3.2.3 Judicial independence

Having an independent judiciary is important in keeping mainly the state body of government from exercising inherent control tendencies. Private economic players feel much more at ease in a space of judicial independence knowing that judges impartially adjudicate issues of dishonoured contractual obligations without undue influence from either the state, legislative or powerful individuals. Therefore judicial independence bears a heavy influence on the level of investment, production levels, distribution of benefits and ultimately, the overall economic performance of a particular environment. In their examination of the connection between economic growth and judicial independence, Feld and Voigt (2003) advance that judicial

independence brings about the impartiality of the courts. This should then trigger more wealth-enlarging transactions taking place.

Investigations by Dove (2015) and Feld & Voigt (2003) on the judicial independence-economic growth nexus adduce that the judiciary needs to be impartial thereby enabling an unprejudiced law enforcement, which in turn generates prospects for long-run planning and investment all of which have a strong and positive impact on economic growth. Feld and Voigt (2003) proffer the importance of judicial neutrality in the decisions implemented even if they are to the disadvantage of any arm of government. It is further argued that from their judgment, judges need not bear any repercussions in the form of discontinuation from work, deductions in payment or reducing their powers in any way.

Melton (2014) posits that judicial independence and its attributes should cause institutions to be growth-augmenting through providing the necessary counterbalancing influences that Hayek (1960) and La Porta *et al.* (2004) argue are important to an economically unrestricted environment, which has its roots in a common law heritage. Djankov *et al.* (2003), Glaeser & Shleifer (2002) and Voigt & Gutmann (2013) share the view that a common law environment is characterised by independent judges who eschew the disproportionate political interference in an economy, thereby safeguarding private property rights. This contrasts with the practices in the civil law space in which Mahoney (2001) paints a picture of a high-handed and unrestricted state that reduces judges to a mere peripheral role without power to uphold the law. La Porta *et al.* (2004) argue that a common law environment is embodied by restrained state property ownership, and secured property rights which are predictors of economic growth. This also means that apart from buoying the degree of investment, there should be a more effective resource allocation for investors will not eschew investment opportunities for fear of expropriation.

Research on the independence and accountability of the judiciary by Besley & Payne (2003) as well as Landes & Posner (1975) underscores the importance of secured property rights mostly when one of the petitioners is the government, or a state-favoured party in the private sector. As Weingast (1995) reminds the state has both the power to safeguard and to unjustifiably seize private property. Essentially, an unprejudiced judiciary demonstrates to the state and binds it to protect property rights. With judicial independence, the courts are empowered to reject expropriation by the state at the expense of the private individuals which

reaffirms the security of the courts systems in upholding rule of law, and this will positively increase the level of corporate investment, greater incomes and the higher general economic growth.

3.3.2.4 Property rights

Ziegler (2000) insists that corporate governance guidelines spell out rights and responsibilities of individual owners, managers, employees, and all other stakeholders, depending on the society and period, thus accounting for the variations in interpretation and meaning of property. Mercurio and Madena (1997) refer to property rights as civil institutions that define an asset's value by determining its exchangeability, and fostered through contracting. Priest & Klein (1984) and Rubin (1977) offer the view that a preserved and enforceable property rights system is a major precondition to economic growth. This is endorsed by Acemoglu *et al.* (2005, 2001), Besley & Ghatak (2010), Everest-Phillips (2008), Knack & Keefer (1995), Mauro (1995) and Svensson (1998) that for growth to occur, there should be investment and yet, investors eschew participation should they catch a whiff of state or private expropriation. This suggests that well defined and reliable legal systems are an important component in providing a trustable legal cover where property owners feel safe, to enable the facilitation of commercial transactions and investment in order to grow high income levels for individuals and companies.

Angeles' (2011) study is among a glut of works that support safeguarded property rights as a major ingredient to a country's growth and development. Beck *et al.* (2003) and Pistor (2000) hold out that the degree of property rights security is dependent on a country's legal inheritance together with its endowments. This has the implication that countries established in a common law historical environment probably uphold more of private property ownership rights unlike those the civil law customs. But the conduits through which property rights enable efficiency of resource allocation, investment and hence growth are spelled out by Besley and Ghatak (2010) thus; Firstly, tightly and legally defined property rights incentivize investment and nudge further investment hence leading to more revenue and profitability. Therefore, this flow entails the existence of protection against expropriation by investing individuals and firms. Secondly, there will be ease of movement of assets among parties with the ability to use them more efficiently through secured transactions. Thirdly, costs of protecting property will decrease with the prevailing secured property rights thereby availing more resources for

investment, as also promoted by Furubotn & Pejovich (1972) and Khan & Sokoloff (2001). And fourthly, property collateralises loans for investment and transactions.

The property rights-economic growth link is facilitated by transaction costs. Borrmann *et al.* (2006) and Opper (2008) define transaction costs as the costs of procuring, maintaining and transferring property. It is further argued that for such costs to reduce there should be clearly defined property rights assuring investors of their property ownership. Furubotn & Pejovich (1972), Parkin (2008) and Stroup (2003) caution that in countries without clear-cut property rights, individuals or firms will use their resources not for production or innovation, but to guard their remaining property. This then will cause an upsurge in the transaction costs of business activities, thereby nibbling on the existing resources that should be used for further growth and increased income.

Studies in finance have probed the relationship among the availability of finance, property rights and economic growth. As stated by Demirguc-Kunt and Maksimovic (1998), companies utilise more of outside finance in countries marked with secured property rights and that business people tend to plough back less profits or none at all in case they recognise the diffidence of property rights, irrespective of finance availability. This finding is complemented by Johnson *et al.* (2002) who show that loan availability forms part of the equation for realising economic growth for a country, but not a guarantee on its own as a variable with the absence of secured property rights. This denotes a trusted system of courts to implement the negotiated contracts among transacting parties which restores faith in those irresolute investors fearful that their realised profits will not be protected by law. Rajan and Zingales (1998b) in fact argue that the growth effects of secured property rights contribute to larger firm financing access.

There also exist studies that attest to the two-way directionality in the property rights-economic growth relationship. Some of these include Chong & Calderón (2000b), Glaeser *et al.*, (2004), La Porta *et al.* (1999) and Mijiyawa (2009). A much persuasive explanation for economic growth to raise the security of property rights is perhaps that with increased income, corporate entities successfully lobby influential law makers into obtaining the legal protection of their income-generating property and transactions.

The study surmises that the institutional environmental factors of investor protection, efficiency of legal framework, judicial independence and property rights determine corporate governance and, ergo economic growth. It is hence hypothesized that:

H_0^2 : *The institutional environment has a positive and significant effect on economic growth*

H_a^2 : *The institutional environment has a negative and insignificant effect on economic growth*

3.3.3 Financial development

The financial sector is primarily responsible for the mobilisation of resources from savers to the entrepreneurial projects with the highest rate of return thus playing a major role in the generation of a country's income. And so the financial sector should experience financial development through the enhanced use of equity markets for firm financing, increases in the level of loans given out by banks and other private financial institutions, as well as improvements in laws of securities trading, among others.

However, as stated by Gupta *et al.* (2010), economists acknowledge the immense contribution of financial development to a country's economic growth, channelled through the capacity of companies to access outside finance. This shows the importance of corporate governance in a fully functional financial sector, regardless of the type of corporate governance system. In a market-based system of governance, financial markets are expected to be key drivers of economic growth, in which firms raise funds for investment thereby raising the level of employment, productivity and general income. The functionality of equities markets though can only be fulfilled by robust securities laws that reign in the behaviour of listed firms, thereby contributing to investor protection that enables investment-gathering for growth. Conversely, in the European model that is personified by a huge influence of banks who issue loans to the firms, signals to firm level corporate governance practices and observation of relevant codes for sustained banks' trust in the firms that borrow money for investment, which increases the general employment and income levels of a country.

A sizeable body of evidence shows that financial development brings about economic growth for a country (Demirgüç-Kunt & Levine, 2008; Gurley & Shaw, 1955; Goldsmith, 1969; Levine, 2005, 2002; Schumpeter, 1911; Shaw, 1973; Winkler, 1998). Beck *et al.* (2000)

contend that financial development facilitates capital accumulation through the enhancement of savings which are then invested more productively thereby making effective the entire resource allocation. But financial development does not work in silos in bringing about economic growth by quietly collecting funds from savings and allocating them to productive projects. It is important to heed the findings of Barth *et al.* (2012, 2006) that if corporate governance is ineffective in exerting its influence on the financial system components, then funds will flow to the few politically related and connected individuals. Managerialism, cronyism and fraud will flourish all of which interfere with resource allocation responsible for enhancing economic growth. Čihák *et al.* (2013) show that market imperfections will grow further and raise the cost of obtaining and processing information for prospective investors. Additionally, transaction costs will increase and obstruct the flow of resources and ultimately curtail economic growth.

This section discusses the influence of financial development factors of equity market financing, soundness of the banking sector and the regulation of securities exchange on how they behave in relation to corporate governance towards effecting economic growth for a country.

3.3.3.1 Soundness of banking sector

According to the WFE (2017), banking development or the soundness of the banking sector relates to the degree of transparency and trustworthiness attributes of the banking sector in a country. This sector should be able to provide loans. However, Levine (1998) and Levine & Zervos (1998), concur that the soundness of the banking sector is the bank credit or value of loans given out by commercial banks as well as other deposit-receiving banks to the private sector expressed as a ratio of GDP. Other studies on banking describe the soundness of the banking sector from a different angle although a big number of them concur on the issuance of loans by banks as an important element. Koivu (2002) delineates the soundness of the banking sector as the difference between lending and deposit rate, while Petkovski and Kjosevski (2014) quantify banking sector development as bank credit to the private sector, interest rates, and ratio of quasi money. The overriding variable of bank soundness is bank lending and its overall monetary value, which is the essence of banks as vital economic players in contributing to a country's GDP. The banking sector development was empirically established by Levine &

Zervos (1998) to have a positive and significant correlation to economic growth rates, even after adjustment for other variables in the growth equation.

A country's central bank is charged with the regulation of commercial banks and to determine the repo rate that influences the level of private borrowing by commercial banks. This boosts private sector investment which translates into an increased country's economic growth. This has been endorsed by Bagehot (1873), Heffernan (2005), Levine (1998), Park (2012) and Schumpeter (1934, 1912) who all show that banks play a big role in detecting creditworthy companies, gathering, distributing funds and expediting transactions in order to finance investments with the highest rate of return. This therefore emphasises the involvement of the banking sector in finance and investment activities that boost the general income levels of a country. Demirguc-Kunt and Maksimovic (1996) confirm that companies domiciled in countries with a developed banking system advance at a faster rate than their projected individual firm characteristics.

Viewed in another light, the level of bank lending signifies the level of firm-level corporate governance, particularly the banks' trust in the levels of company accounting, transparency and disclosure practices. Fama (1985) and Stiglitz & Weiss (1988) advocate that banks require inside information on a borrowing company in order to allow the efficient observation of firm operations. As enunciated by Francis *et al.* (2015), even if bank monitoring of companies increases the cost of bank debt, it settles the agency issues among management and outside investors. Banks set up in countries of inept legal systems instead act as law enforcers by demanding adequate transparency and disclosure practices from borrowing companies and to pay back the borrowed funds (Chakraborty & Ray, 2006; Levine, 2002; Zingales & Rajan, 2003). Moreover, Stiglitz and Weiss (1988) argue that the level of bank lending provides crucial signals to the financial markets about the general company creditworthiness. Companies therefore are able to raise capital through initial public offers or bond issuing so as to enable further corporate investment, which increases profitability and hence contributes to the overall country's economic performance.

The influence of a functional institutional environment cannot be underestimated in nurturing banking development particularly with regards to the preservation of creditor rights. La Porta *et al.* (1997) and Park (2012) demonstrate that an institutional environment of meticulous contractual enforcement and creditor safeguard supports a better functioning debt and equity

markets. And the variations among countries of the levels of creditor rights protection and enforcement are attributable to the legal heritage of a country (La Porta *et al.*, 1998), which accounts for more than half of country variations in the banking sector development (Levine, 1998). It thus necessitates the conclusion that countries with legal systems that prioritise banks in receiving the net present value of their claims against companies witness much higher banking development unlike those countries whose laws do not emphasize strong creditor rights.

Bank lending levels are also a function of many macroeconomic fundamentals such as the general levels of a country's savings and inflation. Studies by Gerlach *et al.* (2005) and Heffernan (2005) points to the influence of high inflation in increasing the cost of bank debt and also that lower levels of national savings affect the total amount of bank deposits, all of which interrupt bank lending. In that way, companies will shun investment, thereby negatively impacting general income levels of a country.

3.3.3.2 Regulation of securities exchanges

Bushman & Smith (2003) and Wallenstein & Milbourne (2004) propound that countries characterised by advanced financial markets heavily invest in formulating and enforcing securities laws, mainly asking for widespread accounting and disclosure regulations which listed companies must abide by. It is then safe to conclude that corporate governance standards are enforced on to firms via the regulations of corporate securities exchanges, a key indicator of financial development. Wallenstein and Milbourne (2004) amplify the fact that capital markets regulations go as far as formulating of disclosure laws and calling for the establishment of commissions responsible to check, investigate, observe and compel firm compliance to such rules. The resulting transparency brings about symmetry of information and as per the findings of Bergman & Nicolaievsky (2007), Black & Kraakman (1996), Glaeser & Shleifer (2001, 2002), Hay *et al.* (1996), Hay & Shleifer (1998), better resource allocation, particularly with potential investors who will be attracted to sink their money in such upstanding companies. Consequently, firms' income levels should experience an upward push thereby raising the general income levels of the country. This is explained further by Brennan & Tamarowski (2000), Botosan (2000), Diamond & Verrecchia (1991), Kyle (1984), La Porta *et al.* (2006) and Leuz & Verrecchia (2000) that securities laws of disclosure curtail on investors' risk of financial loss which attracts and grows capital markets further. And as pointed out by Bushman

& Smith (2003) and Demigurc-Kunt & Levine (1996b), much more liquid capital markets enrich a country's finances through increased corporate investment.

It is deemed mandatory to stick to transparency and disclosure laws of the capital markets lest investors become anxious (Grossman, 1981; Grossman & Hart, 1980; Milgrom & Roberts, 1986). The dictates of securities laws for disclosure of information such as the firm's profitability, ownership structure enable prospective investors to ascertain the real value of companies before they can invest in them. It therefore means that investors can seek recompense through the securities laws from the securities issuers and their agents in case of any contractual or reputational violation. Additionally, Bergman & Nicolaievsky (2007), Black & Kraakman (1996), Glaeser & Shleifer (2002, 2001), Hay *et al.* (1996), Hay & Shleifer (1998) and La Porta *et al.* (2006) maintain that the laws of capital markets should spell out punishment for any company disobedience, under or overstating of information which reduces both information verification procedures as well as costs of dispute resolution and contracting. In that way, securities laws act as an investor safety net hence, attracting more investments into the capital markets and this spurs more country's growth. Balic (2004) is of the view that the lack of transparency arising from insufficient firm disclosure practices demanded by securities laws, explains investor lack of enthusiasm to invest in some markets than others. This also relates to a higher cost of capital or firm of shares trading at much lower prices in less transparent markets unlike in developed markets which uphold securities laws.

Securities laws' worth should be assessed on the stipulation of timeliness of information disclosure so as to obtain the true value of a firm (Balic, 2004; Wallenstein & Milbourne, 2004). This affords investors the opportunity to make informed decisions with much reduced risk of loss of their funds. What is more is that securities laws tackle anxieties that come with conflict of interest between shareholders and management, for instance insiders unfairly using information that is not privy to other stakeholders. This ensures that firm level operations of particularly publicly traded companies are under the microscope of law to ensure that companies align with expected standards of corporate governance.

3.3.3.3 Financing through equity markets

When companies are able to finance their entrepreneurial ventures through equities from local or foreign sources, they get the opportunity to improve their corporate governance standards.

Prior to parting with their money, investors need to be assured of firm transparency, board's accountability and effectiveness as well as the degree of protection from expropriation. The funds raised from equities boost firm investment and hence increased firm profitability, thereby garnering a domino effect with the increase in the overall country's economic growth. According to Caporale *et al.* (2004), Cooray (2010), Enisan & Olufisayo (2009), Francis *et al.* (2015) and Greenwood & Smith (1997), the benefits of financing through equity markets include savings mobilisation and an improvement in the distribution of capital, which are deemed by Bencivenga *et al.* (1996) and Levine (1991) as vital pathways for the enhancement of economic growth.

Even when the amount of capital garnered from a country's equity markets is minimal, the simple existence of financing through equity markets facilitates corporate governance by giving company owners an exit route. This is validated by Rousseau and Wachtel (2000) who contend that the promise to profit from an initial public offer leaves venture capital investors the choice to walk away, invites stock market investment and buoys entrepreneurship. This suggests that it is not only companies participating in the stock markets to raise capital that will benefit, but other firms too within the economy get engaged in more investment and to streamline their corporate governance. A combination of these factors and standards have an impact on the general country's economic performance. Additionally, Enisan & Olufisayo (2009) supplement that the stock market affords both individuals and companies avenues of risk management and portfolio diversification through share ownership of listed firms.

The leeway offered by financing through equity markets further fosters corporate governance particularly at firm level for it necessitates the appropriate openness and efficiency of information exchange. Studies by Diamond (1984), Greenwood & Jovanovic (1990), Morck *et al.* (2000), Paul (1992), Rousseau & Wachtel (2000) and Williamson (1986) affirm that the stock market advances the streaming of information from the management to the shareholders which results in more accurate firm valuations. Consequently, venture capital investors minimise the cost of their investment into companies, due to reduced transaction costs as informed by Bencivenga *et al.* (1995) and Cooray (2010), thereby leaving more resources for investment particularly on ventures with the highest yield and hence translating into increased income. Other central characters of such perspectives include; Boyd & Prescott (1986), Goldsmith (1969), Greenwood & Jovanovic (1990), King & Levine (1993b), McKinnon (1973) and Shaw (1973).

Financing through equity markets can also point toward the corporate governance environment employed in the administration of firms. As stated by Lee (2012) and Marini (2005), customarily financing through capital markets is a classic feature of the Anglo-Saxon or principle-agent model of corporate governance, in which shareholder agenda dictates firm governance actions. Therefore stock markets support a diffused ownership structure of this corporate governance system allowing shareholders to buy and sell firm equity trouble-free. This entails robust investor protection laws as declared by Cernat (2004), Luo (2007) and Zingales & Rajan (2003) that strengthen reliability in firm disclosure and transparency practices (Luo, 2007) of archetypal common law origins. Therefore, capital markets can be used to drive corporate control by which investors acquire stakes in listed firms. This enhances capital injection that is critical for improved revenue and profitability. Indeed, Alfaro *et al.* (2009, 2004) view that being able to finance through equity markets brings immense benefits through foreign direct investment for the country by investing in factors of production unlike in countries with limited possibilities to finance through equities.

Stock market financing has an influence on bank lending (soundness of banking sector) as Beck & Levine (2004) and Francis *et al.* (2015) report. More bank credit to the private sector with more share issuance and stock market development are critical ingredients to this process. This then means that capital markets sustain the banking system (Boyd & Smith, 1998; Francis *et al.*, 2015) and are not substitutes as claimed by Diamond (1984), Luintel *et al.* (2001) and Stiglitz (1985) who argue that banks could be in a much better place to deal with managerialism, a concept discussed in the agency theory by Jensen and Meckling (1976). This underscores both the importance of equity financing and bank lending to the financial development of a country that even though stock markets can be an alternative source of firm financing to bank lending, both variables form an effective unit, with banks executing underwriting duties when equities are issued.

Financial development, particularly measured through stock market growth, boosts a country's economy. Cross-sectional regression studies done by Atje & Jovanovic (1993) and Harris (1997) reveal long-run effects of stock markets on to a country's EG. By using solely time-series regressions from data of five industrialised countries, Luintel *et al.* (2001) find stock markets to be a major variable in the growth equation, yet Caporale *et al.* (2004) who used the methods of Toda and Yamamoto (1995) demonstrate that financing through strongly developed

equities markets raises a country's economic growth. Marques *et al.* (2013) confirm that financing through equity markets Granger causes economic growth. Principally, more research such as from Beck & Levine (2002), Bekaert *et al.* (2001), Levine & Zervos (1998), Mckinnon (1973), Obstfeld (1994), Rousseau & Wachtel (2000) and Yartey & Adjasi (2007) concurs with empirical evidence on the positive and strong association between equity markets financing and economic growth. It should be noted that several studies exist that dispute the contribution of stock markets in adding to a country's economic growth. Corbett & Jenkinson (1996), Boubakari & Jin (2010), Fry (1997) and Mayer (1988) dismiss stock market contribution to economic growth as insignificant, while the volatility in financial markets is blamed by Singh (1997) as disrupting macroeconomic stability which neutralises the contribution to economic growth. Devereux and Smith (1994) refer to the increased risk-sharing from many investors buying up stakes in firms to reduce economic growth. Dual causality was proven by Capasso (2008), Hondroyiannis *et al.* (2005), Ndako (2010) and Tsouma (2009).

This study is premised on the understanding that financial development proxies of sound banking, regulation of securities exchange and financing through equity markets shape corporate governance, thereby causing a collective influence on economic growth. It is therefore conjectured that:

H_0^3 : *Financial development has a positive and significant effect on economic growth*

H_a^3 : *Financial development has a negative and insignificant effect on economic growth*

3.3.4 Macroeconomic fundamentals

It is of utmost importance for firm governance to be aware of the weight exerted by macroeconomic fundamentals that prevail outside the sphere of the firm, that determine the direction of business and the overall economy of a country. The WFE (2017) attributes the recent European economic turbulence to macroeconomic instabilities which damaged the Eurozone economy. This then conveys that an imbalance in the macroeconomic factors spells doom for business and the entire economy, and therefore making macroeconomic solidity a precondition for an uninterrupted growth of a country's economic growth. To all intents and purposes, companies will be incapacitated if they have to operate in an economic environment of hyperinflation or very high interest rates, variables that are external to firm-level governance,

among others. Therefore, this section is meant to expound on the influence of macroeconomic fundamentals factors of gross national savings, government debt levels, inflation and foreign direct investment in affecting corporate governance towards a country's economic growth.

3.3.4.1 Gross national savings

According to the IMF (2017), Gross national savings is conveyed as the ratio of aggregate gross national savings to GDP in current local currency. In its calculation, gross national savings matches up to the gross disposable income minus final consumption spending, while adjusting for pension funds. A country's aggregate savings rate is also a central determiner of its aggregate investment level which directs partially the levels of economic growth. Mason (1988) sets forth that while holding all other things equal, a country of a high savings rate will also have a high level of factor productivity which translates into high incomes for the employed factors of production, and hence high income per head. This is as a result of the extra resources that are made available from a country's savings leading to additional investment in specifically viable existing opportunities. In an inquiry to establish the reasons for China's record-breaking savings, Kuijs (2005) points to the three key components of total internal savings from the state, as well as family and enterprise savings. However the empirical work of Loayza *et al.* (2000) explains that gross national savings are affected by a country's fiscal policy and economic growth (which indicates causality from growth to savings).

Private companies operating in a macroeconomic environment of poor savings capacity suffer the lethargic flow or unavailability of resources and funds necessary to allow company investment which hamstrings general income growth. Therefore, gross national savings as a macroeconomic component is a precursor to corporate governance bearing long run effects towards a country's economic growth.

3.3.4.2 Government debt levels

Government debt level for a country comprises of all debt obligations such as currency and deposits, special drawing rights, pensions, debt securities, loans, standardised assurance arrangements, insurance and all types of unsettled accounts (IMF, 2017). A country's government debt levels is made up of all its debt burdens in form of unpaid interest and or principal to the creditors at a point in time. It has been found that a country's government debt levels impinges on its level of economic growth. Research from Telesa & Mussolini (2014)

and Elmendorf & Mankiw (1999) documents that government debt levels eat up a slice of people's savings in order to service debt. Reduced gross national savings will be reflected in the low levels of investment which has been found to negatively affect economic growth. Descriptive statistics are used by Reinhart and Rogoff (2010) to show that government debt levels exceeding 90% of GDP quickly decelerates economic growth. The same results are also upheld by Baum *et al.* (2013), Cecchetti *et al.* (2011), Checherita & Rother (2010), Padoan *et al.* (2012) and Woo & Kumar (2015) in a series of analyses of an assortment of emerging markets, in the advanced as well as in the Eurozone countries.

Overall, an increase or high levels in government debt levels negatively affects a country's economic growth, which can be interpreted as the existence of a negative correlation between government debt levels and economic growth. This is backed by more research by Aizenman *et al.* (2007), Checherita-Westphal & Rother (2012), Poirson *et al.* (2004), Rangarajan & Srivastava (2005) and Saint-Paul (1992). However, the way in which government debt levels affect economic growth hinges on numerous issues and circumstances. The Inter-American Development Bank (2006) and IMF (2012) proclaim that the government debt levels-economic growth nexus is not an unsophisticated one but one personified by cross-country variations determined over time, the quality of a country's institutional environment, rationale and method for accumulation of debt, debt structure and other public sector aspects. This can be interpreted as that a country's debt level being a function of a number of variables and circumstances within the economy. Reverse causality from growth to debt has also been found by the works of Kempa & Khan (2017), Reinhart *et al.* (2012) and Woo & Kumar (2015). Interestingly, research by Diamond (1965), Modigliani (1961) and Saint-Paul (1992) establishes that government debt levels always lead to economic growth.

Government debt levels have a relationship with government expenditure and firm investment. Increased government borrowing raises government debt levels, as government looks to increase its investment and participation in the economy which may bring about a crowding out effect towards private investment (Bal & Rath, 2014; Baum *et al.*, 2013; Brunnermeier *et al.*, 2012; Égert, 2015; Gwartney *et al.*, 1998; Mueller, 2004; Reinhart & Rogoff, 2010), and consequently would then negate government endeavours to boost economic growth (Chen *et al.*, 2017). Specifically, government debt levels exacerbate government deficits which increases instances of investor capital flight in favour of bonds for countries regarded as low default risk (Brunnermeier *et al.*, 2012; Cochrane, 2011). The deduction is that firms in such

an environment will be wary of operating inefficiently due to possible fiscal crises arising from government's inability to provide basic goods and services for firm investment. Also, it has been found that an increase in government borrowing raises interest rates (Bal & Rath, 2014); Brunnermeier *et al.*, 2012; Laubach, 2009; Tanzi & Chalk, 2000) which scare off private firms' investment and hence constraining growth in overall incomes. Therefore, the increased government debt levels do not bode well for companies in case increased government investment pushes out private firms from investment. This means government debt levels limits the free flow of firm-level corporate governance as firms see no use to expand their operations when they exist in an economy plagued in high government debt levels. Private firm contribution to economic growth will then be lessened as with the negative effect in economic growth due to the increase in government debt levels.

3.3.4.3 Inflation

Inflation is the persistent increase in the general price levels within an economy, and is very disruptive of a country's economic growth. Therefore, Barro (1996) and Vinayagathan (2013) urge price stability by the central bank so as to have an appropriate rate of economic growth for a country. By implication, firm operations are hampered by the lack of predictability in pricing, which increases the cost of firm production. In a nutshell, inflation takes away the profits of the investors or firm shareholders. Moreover, such high price instabilities negatively affect aggregate demand for firm production, thereby reducing firm contribution to the general country growth in income, and finally pushing them out of business. Studies by Pollin and Zhu (2006) assert that high inflation obstructs efficient resource allocation as it is the responsibility of price changes to send indicators for major economic decisions.

High inflation raises the cost of debt and eats away a portion of savings all of which negatively impact on the general levels of bank lending in an economy (Gerlach *et al.*, 2005; Heffernan, 2005). This consequently discourages firm investment as companies find it almost impossible to act in an environment of macroeconomic instability. However, generally the inflation-economic growth nexus has been regarded as tenuous (Friedman, 1973) and provocative (Hossain and Chowdhury, 1996) in nature. This is due to the ambiguity on the level of inflation deemed weak, unpleasant, causative and pro-growth. Studies such as Cameron *et al.* (1996), Dorrance (1963) and Sidrauski (1967) find that inflation has no bearing at all on economic growth. A positive correlation between inflation and economic growth is documented by Malik

& Chowdhury (2001), Paul *et al.* (1997), Shi (1999) and Tobin (1965). This suggests that lower inflationary levels nudge firms to increase their investment in order to profit from rising prices at which point the aggregate demand remains inelastic and hence increased profitability and general income levels. Inflation has also been found by Andres & Hernando (1997), Barro (1996), De Gregorio (1992), Friedman (1956), Gylfason (1991, 1998), Saeed (2007) and Stockman (1981) to negatively impact on economic growth. And lastly, some studies show the inflation-economic growth relationship as nonlinear or absent beneath a particular level though that the economy gets affected when above it. Such studies include those by Aydin *et al.* (2016), Bick (2010), Bruno & Easterly (1998), Burdekin *et al.* (2004), Drukker *et al.* (2005) Fischer (1993), Ghosh & Phillips (1998), Khan & Ssnhadji (2001), Kremer *et al.* (2009), Nautz (2009), Sarel (1996) and Vinayagathan (2013). Here, the point of contention lies at above or below what specific threshold level is inflation deemed poisonous or healthy to economic growth, but generally, the impression is that high inflation reduces firm participation in the economy thereby curtailing the rate of a country's economic growth.

3.3.4.4 Foreign direct investment

Choong *et al.* (2010), De Mello (1999) and Madura (2006) describe foreign direct investment as that opportunity when multinational corporations take advantage of business opportunities abroad through investment in real assets. Such big firms get involved in joint ventures, licensing, franchising, creating new subsidiaries abroad and buying into foreign firms (substantial equity stakes), among others, in an expansion of their operations to reap increased returns from their large investments. As follows with companies involved in sizeable transnational business dealings, corporate governance is impacted upon by investors' interests that determine the flow of funds in the newly acquired ventures as foreign direct investment inflows increase a country's capital stock, which then affects the general country income levels.

Apart from the capital accumulation that is felt in the recipient country, research by Aitken *et al.* (1997), de Mello (1997), Fosfuri *et al.* (2001) and Wang & Blomstrom (1992) concurs on another contribution of foreign direct investment into the productivity equation. This is confirmed in the knowledge transmission that takes different management routines and firm structural arrangements for investment by the foreign investors into the recipient country. Therefore this benefits a country's firm-level corporate governance mechanisms as a result of foreign investment imparting knowledge and facilitating skills transfer so as to ensure

adherence to global corporate governance standards. Indeed Blomstrom *et al.* (1994a) argue that local companies find themselves copying the new skills, technologies and governance standards of those multinational firms operating in the country a lot earlier than expected so as to remain competitive. Consequently, with more firms aligning to proper corporate governance expectations, more investment starts to flow towards such firms thereby boosting their revenues through foreign direct investment and hence bringing an upsurge in the overall country income levels.

The inflows of foreign direct investment to the reporting country are also greatly influenced by a smoothly-run financial sector. Particularly, with regards to the stock exchanges, ambiguous securities laws as well as banks of unsound governance make it almost impossible for foreign investors to buy stakes in local firms through the recipient country's stock exchange markets and this obstructs foreign direct investment inflows. This is espoused by Alfaro *et al.* (2010, 2004), Durham (2004) and Hermes & Lensink (2003) that financial development precedes the inflows of foreign direct investment into the reporting economy, with the development of both the banking sector and stock markets referred to as vital conduits for foreign direct investment inflows. The authors galvanise their findings in arguing that foreign direct investment inflows bring about technology distribution into the recipient economy and that investments made via financial markets decrease the innate risk of investment by internal companies wanting to copy the new technologies of the foreign companies. This translates into more investment by both local and foreign firms operating in a more efficient financial sector so as to raise the general income levels of the reporting country. This is amplified by Alfaro *et al.* (2010) that more financially developed countries report increased foreign direct investment inflows thereby generating extra income country growth unlike economies that are less financially developed.

The institutional environmental factors of a host country have an immense influence on the inflow of foreign direct investment, as validated by de Mello (1999). Hewko (2002) on the other hand is of the view that the inflow of foreign direct investment recalibrates a country's extant institutional and legal quality through the introduction of new practices and knowledge that require more robust adaptation by both the government and local administrations. This intimates the level of a country's investor protection, in observing investors' property rights as supported by an efficient legal system of robust laws and their enforcement. In this way, more inflows of foreign direct investment will be actualised and hence causing an increase in the overall incomes into the host country.

More research from Barro & Sala-i-Martin (1997, 1995) and Grossman & Helpman (1995, 1991) concedes that foreign direct investment contributes to the transformation and enhancement of a country's economy, even though there are studies that disavow the contribution of foreign direct investment in increasing a host country's income growth. To start with, Irandoust (2001) finds no such evidence, while Gorg & Greenaway (2004) and Moran (1998) argue that more foreign direct investment inflows bring a negative effect on economic growth. Azman-Saini *et al.* (2010) and World Bank (2001) allude to a host country's absorptive capacity, defined by Cohen and Levinthal (1990) as firms' capability to acknowledge the value of new information and use it for their commercial benefit, as a major contributing variable to explain the benign or contradictory foreign direct investment-economic growth nexus.

This study postulates that macroeconomic fundamental factors of gross national savings, government debt levels, inflation rate and foreign direct investments affect corporate governance, thereby causing a collective influence on economic growth. It is therefore hypothesised that:

H_0^4 : *Macroeconomic fundamentals have a positive and significant effect on economic growth*

H_a^4 : *Macroeconomic fundamentals have a negative and insignificant effect on economic growth*

3.4 CONCLUSION

This chapter explained the intertwined relationships among the variables of the conceptual framework of corporate governance and its determinants in impacting the economic growth of a country. The relationships among the variables detailed in this chapter resonate with those posited in the research questions in Chapter One, and therefore culminate in the developing of hypotheses to be tested using the econometric model specifications present in the ensuing chapter. The following chapter provides an exhaustive discussion of the research philosophies, methodology and methods used.

CHAPTER FOUR

RESEARCH METHODOLOGY

4.1 INTRODUCTION

This section seeks to explain the research logic, methodology and methods used in this study. It shows the philosophical perspective, research design and strategy in the collection and analysis of data in a bid to answer the research questions developed in Chapter One. The study uses panel data analysis practices and processes. Empirical connections were investigated and estimated through specific models and lastly, the sources of secondary data to be used as well as the population for this study.

4.2 RESEARCH PARADIGM

Research paradigm is the pathway that the study intends to take, backed by one's interpretation and understanding of the requirements to carry out the research. According to Kivunja and Kuyini (2017), the paradigm notion has Greek origins, with Kuhn (1962) cited to have used the word to refer to a logical pattern of thinking. But in the pedagogic investigations, research paradigm designates the researcher's reality perspective (Daymon & Holloway, 2011; Mackenzie & Knipe, 2006), which characteristically exhibits the researcher's beliefs (Lather, 1986), experiences and skills (Daymon and Holloway, 2011), that eventually dictate how research is to be conducted (Denzin & Lincoln, 2000; Guba & Lincoln, 1994). This then means that the researcher's background dictates their logical positioning in the topic of the study, how to study it, its results interpretation all of which carry critical implications.

In the same breath, there lies a varied array of contributions on the topic of corporate governance by a varied nature pool of studies from an assortment of disciplines with disparate interpretations and analyses of the concept of corporate governance. This study though, takes up a context-based approach regarding the topic of corporate governance in establishing links to economic growth, specifically between the OECD and the Sharia law models.

4.2.1 Positivist approach to the study

This investigation adopted a positivist approach to determine comparisons of the effects of corporate governance to economic growth between countries in the West and those in the Sharia world. This positivist paradigm is said to have been initially suggested by French philosopher Comte (1856) to refer to a scientific approach of research, involving carrying out tests, careful thought and reasoning in order to gain knowledge about human interactions. Kivunja and Kuyini (2017) supplement that this research perception is most particularly suitable when dealing with quantifiable objects, and an applicable option in determining cause and impact interactions. Therefore, such a model is undergirded by setting and testing of hypotheses, carefully worked-out equations and calculations, making derivations and inferences from the results that seek to answer the research questions. This particular paradigm therefore points to the use of quantitative methodology and methods that analyse the empirical data collected and aide in interpretation of the corporate governance relationships, determine causation and impact towards economic growth among the countries in the Western and those in the Sharia environment.

The research paradigm is categorised into three philosophical parts; epistemology, ontology and methodology, but these elements are to be described as pertains to the positivist research paradigm below, chosen for this study.

4.2.1.1 Epistemology

This term also emanates from a Greek word *episteme*, which refers to knowledge. Schwandt (1997) explains epistemology as the study of the kind of knowledge and its validation. It relates to the real foundations (type, or form or manner) of the knowledge and how the researcher understands it and transfers it to the world (Kivunja and Kuyini, 2017). Knowledge, according to Slavin (1984) is underpinned by four bases for which researchers may choose from depending on the research paradigm taken. These include instinctive, authoritative, rational and empirical knowledge.

Smith (2017) remarks that empiricism, particularly is experimental-natured and involves performance of repeated observations to reach conclusions. Since this investigation took up a positivist paradigm, there are only two foundations; of rationalism and empiricism that go with it. This is because to determine the effect of corporate governance towards economic growth

between the countries in the west and those in the Sharia is based on collected data that is sense-making, devoid of opinion but only based on reasonable, evident and unbiased facts. In order to establish the corporate governance relationships and their effects towards economic growth, a number of mathematical experiments need to be carried out observed over a long period of time.

4.2.1.2 Ontology

Scotland (2012) regards ontology as a subdivision of philosophy that determines whether pertains to the assumptions made about a study to distinguish between idealism and realism, which assumptions are essential in deriving sense from the assembled data, coming from ideas put forward to position oneself about the problem of the study and how it can be attended to (Kivunja and Kuyini, 2017). This branch of research paradigm points to an examination of a researcher's grounded beliefs about the study's problem, how they see it (whether it is the actual reality out there or not) and intend to approach it in order to give a solution. For this study, this stands for the stated hypotheses as the assumptions made about the interactions of the corporate governance variables to determine presence of effects towards economic growth between OECD and Sharia law countries. Also causation from these empirical examinations among the study's variables is checked and this shows the objective nature of the study that is aligned with a positivist research paradigm.

4.2.1.3 Research methodology

Methodology is an element of a research paradigm that is influenced by epistemological and ontological standpoints. It is the procedures utilised in acquiring knowledge (Patel, 2015), the research layout, techniques, styles (Keeves, 1997) which should be done while taking into account the thoughts overriding the procedures, guidelines and values of a field of study (Jackson, 2010). The methodology enunciates the research reasoning as well as the path of the methodical processes charted in carrying out research including hypotheses assumed, restrictions bumped into and how they were moderated. The research instruments used in the data collection and data analysis processes are all engrossed in this section. (Kivunja and Kuyini, 2017). This study applies quantitative and statistical techniques in measuring empirically the data so as to determine the nature of the relationships between corporate governance variables and economic growth in the OECD and those used in the Sharia law countries.

4.3 RESEARCH DESIGN AND METHODS

This is an outline of how the research is carried out explicitly detailing how the participants in the study are selected and collecting of data (Welman, 2006). Saunders *et al.*, (2009) maintain that it can either be empirical with emphasis on testing hypothesis or theory or validation or non-experimental thus stressing the importance of bringing out meanings using either content analysis or the generation of theory. This investigation follows the principles of empirical research in order to establish causality and effect relationship contained in quantitative approach. Smith (2017) asserts that quantitative research strategies use data that is conveyed quantifiably or categorised by a mathematical value.

4.4 DATA ANALYSIS

This section contains an introduction to econometric or panel data analysis that was used in this study, its benefits and also the various econometric model specification tests performed in order to determine the relationships between corporate governance variables and economic growth for both the OECD and Sharia law countries.

4.4.1 Econometric analysis

This is a longitudinal data analysis that utilises both cross-sectional and time-series measurements of data. Intriligator *et al.* (1996) categorise econometrics as methods used to quantify and experimentally check definite relationships among economic variables so as to offer observed content to economic thought, while Verbeek (2012) describes panel data as a set consisting of a series of recurring observations of the same specific units through a range of periods. In essence, it is the suitable method of analysing the data for this study and also to model, given a clear justification for the behaviour of specific units and their varying behaviour spread over different periods of time. Hsiao (2014) espouses the use of panel data analysis for reasons ranging from the advantage of its ability to model intricate human behaviour than a cross-section one, its high accuracy of parameters, capacity to include effects of undetected or neglected variables. This method also works best when data to be used is available.

4.4.1.1 Benefits of using econometric analysis

These include the ability of enometrics to deal with omitted variable bias, heterogeneity, minimisation of collinearity issues, aspects of changes in variables over time, among others.

a) Consideration for individual heterogeneity

This refers to the variegated nature of countries, companies or individuals under study. It should be noted that cross-sectional and time-series studies do not control for these differences, unlike panel data, and this risks getting biased results (Hsiao, 2014; Verbeek, 2012).

b) More informative data, more variability, less collinearity among variables

Unlike panel data, issues of multicollinearity are commonplace particularly with time-series which tempers determination of what explanatory variable has influence in the regression. The inclusion of a cross-section facet provides much more informative data and variability thereby producing more trustworthy estimates (Hsiao, 2014).

c) Better placed to deal with change dynamics

When investigating variables that change over a long duration of time, cross-sections are unsuitable as they do not include changes but only report for a point in time, yet panel data studies go further to even reveal the pace of change, and this alerts policy makers (Hsiao, 2014; Maddala, 2005; Nerlove, 2005). This means that panel data is able to analyse and report repeated observations on a variable over time.

d) More efficiency in identifying and measuring effects of parameters

Panel data sets are much bigger in comparison to pure cross-sections or time-series and this offers more probability of accuracy when estimating the outcomes as they are dual faceted (Hsiao, 2014; Verbeek, 2012). Also, panel data has got much more rigour, which ensures robustness of the measurements through tests such as for endogeneity, omitted variable bias, among others which offer better explanations in dynamism of variables. A corporate governance measure at a specific time may be due to left out variables from the model, in order to have a particular influence on the level of economic growth for a certain country. Verbeek (2012) emphasises the use of fixed or random effects as some of the techniques to pinpoint the exact identification of the variables responsible in the models.

c) Enables to construct and test complex behavioural models

It makes it possible to model complex interactive patterns in forming hypotheses and test with panels with technical efficiency, as unlike in purely cross-sectional or time-series investigation, there are not many limitations in a distributed lag model (Baltagi *et al.*, 1995; Hsiao, 2014; Koop & Steel, 2001).

e) Controls the impact of omitted variables

Estimations are bound to be biased in case there are some omitted variables associated with those variables that are included in the regression model. Hsiao (2014) recommends the critical importance of controlling for omitted variables as the real impact and results among variables is impossible to estimate, decipher and even to forecast in a scenario where variables with huge explanatory power were omitted. Panel data is capable of factoring in the effects of unobserved heterogeneity among variables.

f) Reduces bias from aggregation through use of micro units

The use of aggregate data to analyse always assumes having representative units, and therefore to simply use aggregate data to forecast the future aggregate results leads to misleading and inaccurate policy undertaking. Panel data enables the utilisation of both time-series and cross-sectional individual units of both uniform and heterogeneous nature to predict the aggregated figures in order to arrive at more precise conclusions (Hsiao, 2014; Pesaran, 2003).

g) Simplifies computation and statistical inference

This emanates from the availability of data used for econometric analysis particularly, in instances where time-series data is non-stationary which renders least squares estimations abnormally distributed, but the independence of cross-sectional units allows for use of central limit theorem (Binder *et al.*, 2005; Hsiao, 2014). Also, in dynamic tobit models where effects have to be measured from variables that are not reported or are unobserved, panel data analysis enables the focus on only those variables whose values are previously recorded or are available (Hsiao, 2014).

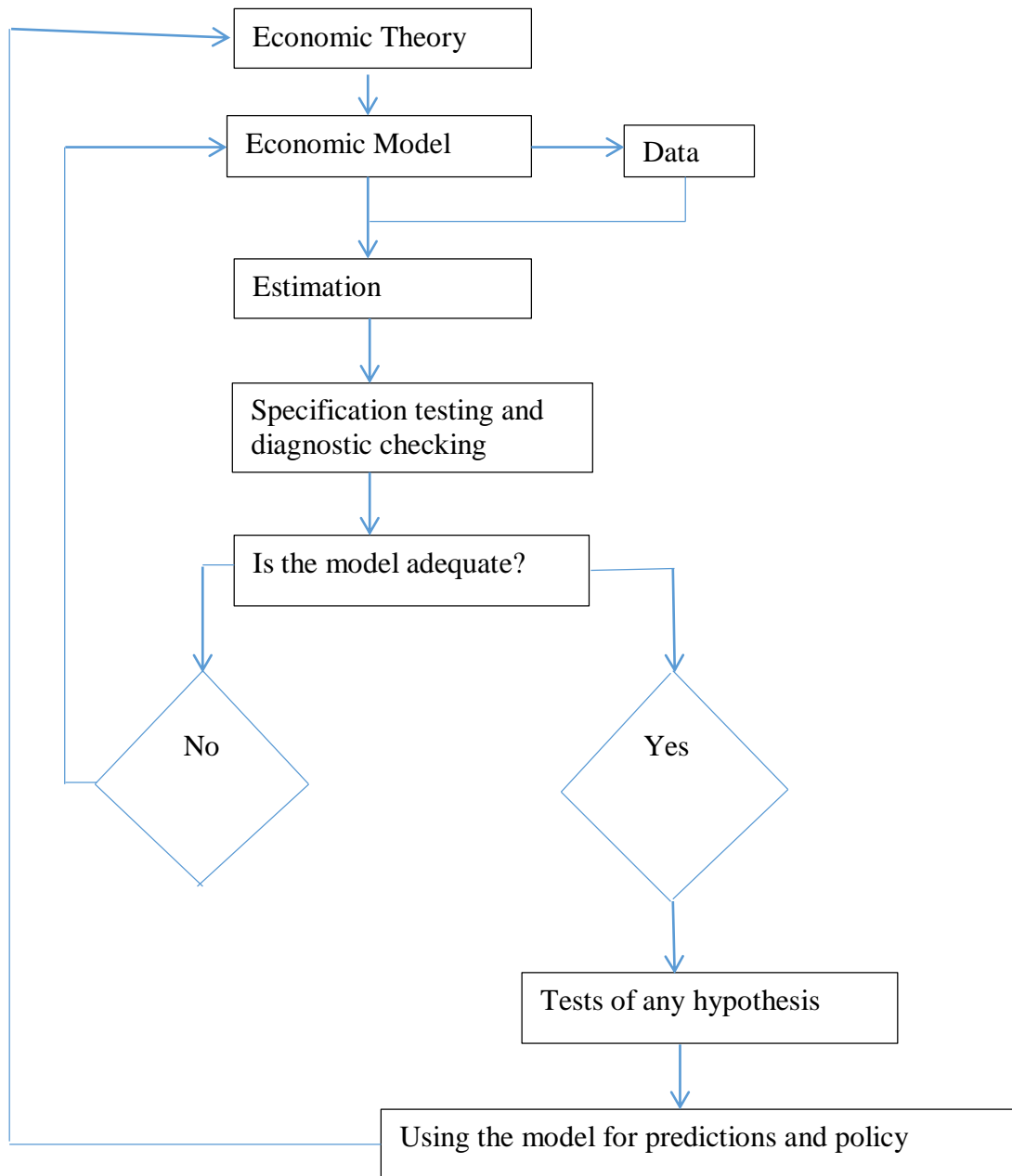


Figure 4. 1 A diagrammatic representation of steps undertaken in econometric analysis

Source: Adapted from Maddala (2007: 9)

Figure 4.1 above shows an illustrative summary of steps to be taken in econometric analysis. As recommended by Maddala (2007), the links among econometric model, data, approximation, model description, concepts and testing to be followed so as to reach a new model that answers the posed research questions.

It is important to note that each of the various models is laid out once to exhibit a possible relationship of the effect of corporate governance on economic growth with accompanying

endogeneity. Koop (2013) classifies endogeneity as when one or more independent variables have a bearing on the observed outcome of the dependent variable. Further attention is drawn to biased, inconsistent and misleading results of OLS estimation that is carried out with the existence of endogeneity. Therefore, the effect on economic growth resulting from corporate governance variables is looked at more specifically in unison with a number of other explanatory variables in the regression models. These are; corporate governance, institutional environment, macroeconomic fundamentals and financial development.

4.4.2 Variable compositions and their abbreviations used in the subsequent models

Financial Development (FD)

- Sound banking sector (SB)
- Regulation of securities exchanges (RS)
- Financing through equity markets (FM)

Macroeconomic Fundamentals (MF)

- Gross national savings (NS)
- Government debt levels (DL)
- Inflation rate (IF)
- Foreign direct investment (FDI)

Institutional Environment (IE)

- Investor protection (IP)
- Efficiency of legal framework (EL)
- Judicial Independence (JI)
- Property rights (PR)

Corporate Governance (CG)

- Companies disclosure practices (DP)
- Efficacy of corporate boards (EB)
- Protection of minority shareholders (PM)

4.4.3 Model specifications and diagnostics used in the econometric analysis

This longitudinal study utilises diagnostic checks such as Pooled Effects Model (PEM), Fixed Effects (FEM), Random Effects (REM) as well as the Panel Vector Autoregression models (PVAR) in determining the corporate governance-economic growth nexus among the countries in the west and those of the Sharia regions.

4.4.3.1 Pooled Effects Model

Verbeek (2012) categorises the Pooled Effects Model (PEM) as one that samples all cross section and time series data and estimates Ordinary Least Squares (OLS) without taking into consideration the cross section detail differentials. Termed as the Common Constant Method (CCM) by Asteriou and Hall (2016), this pooled model is based on the notion that the observations describe the outcome with no cross sectional unit of undetected effect having a bearing on the observed outcome. The pooled effects model adopts homogeneousness while discounting the specific unit differentials that could have an effect on the outcome.

Studenmund (2011) gives the following error term assumptions of the PEM:

- the error term is additive and it is impossible to multiply or divide it into any of the regressors
- it has a mean of zero through the presence of constant term in the regression (there is an inflexible part of the regressor that cannot be explained by any of the regressors)
- exogeneity of all regressors in the equation
- no serial correlation among the error terms of different time periods
- constant variance of the error term distributions
- normality (bell-shaped structure) of error term distributions, which is an important application in hypothesis testing as well as in the T- and F-statistic tests.

To determine the nature of the relationships between corporate governance variables and economic growth in both selected OECD and Sharia law countries, this model intends to measure the effect of economic growth measured by the GDP indicator for the country and time of interest.

$$GDP_{it} = \beta_0 + \beta_{CG}X_{it}^{CG} + \beta_{IE}X_{it}^{IE} + \beta_{MF}X_{it}^{MF} + \beta_{FD}X_{it}^{FD} + u_{it}$$

Where; GDP_{it} = the dependent variable that measures economic growth for country i at time t ; $i = 1, 2, 3, \dots, N$; $t = 1, 2, 3, \dots, T$; β_0 = the change in the regressand due to a change in one regressor while holding the other factors/ variables constant (the slope); β_{CG} = the coefficient that corresponds to the variable X_{it}^{CG} ; X_{it}^{CG} = a corporate governance measure affecting GDP_{it} inclusive of all effects (variables) in a certain country i at time t . $X_{it}^{CG} = F(DT, EB, PM)$; β_{IE} = the corresponding coefficient to the variable X_{it}^{IE} ; X_{it}^{IE} = the institutional environmental factors that have a bearing on GDP_{it} for country i at time t . $X_{it}^{IE} = F(IP, EL, JI, PR)$; β_{MF} = corresponding coefficient to the variable X_{it}^{MF} ; X_{it}^{MF} = macroeconomic fundamentals affecting GDP_{it} for country i at time t . $X_{it}^{MF} = F(NS, DL, IF, FDI)$; β_{FD} = corresponding coefficient to the variable X_{it}^{FD} ; X_{it}^{FD} = financial development factors influencing GDP_{it} for country i at time t . $X_{it}^{FD} = F(SB, RS, FE)$; u_{it} = error term representing other factors in the regression that affect GDP_{it} in the i^{th} country at time t .

4.4.3.2 Fixed Effects Model

Kittel and Winner (2005) suggest that the PEM is mostly suitable for short-term periods of analysis but that when research questions call for longer term effects then statistical issues intrinsic in time aspects will crop up thereby overburdening the analysis. They recommend the use of the Fixed Effects Model (FEM) when studying for longer term periods as most results are only seen in the long run. This is particularly important because the FEM approximates effects of time invariant variables basing on the view that the effects across individual units over time are fixed (Hsiao, 2014; Stock & Watson, 2012). This model uses the Least Squares Dummy Variable (LSDV) regression throughout the estimation, testing with the F-test.

Entity-specific intercepts are included in this model in order to control for omitted variables in the panel data when unobserved variables vary across countries yet they remain constant over time, unlike in the pooled effect, through the inclusion of a dummy variable α_i (Stock and Watson, 2012). Prior to examining the validity of this test, as supported by Asteriou and Hall (2016), an F-test was used to check whether there was need to use the FEM *vis-à-vis* the REM.

Stock and Watson (2012) assert that the error term under the FEM assumes a conditional mean of zero for all the time periods under study for a particular entity, which eliminates omitted variable bias.

This model is also helpful in answering research questions two, three and four.

$$GDP_{it} = \beta_{CG}X_{it}^{CG} + \beta_{IE}X_{it}^{IE} + \beta_{MF}X_{it}^{MF} + \beta_{FD}X_{it}^{FD} + u_{it} + \alpha_i$$

Where; GDP_{it} = the dependent variable that measures economic growth for country i at time t ; α_i = dummy variable that takes into account the entity-specific (of each country) unobserved variable effects which are fixed over time; $i = 1, 2, 3, \dots, N$; $t = 1, 2, 3, \dots, T$; β_{CG} = the coefficient that corresponds to the variable X_{it}^{CG} ; X_{it}^{CG} = corporate governance variables affecting GDP_{it} for country i at time t . $X_{it}^{CG} = F(DT, EB, PM)$; β_{IE} = corresponding coefficient to the variable X_{it}^{IE} ; X_{it}^{IE} = institutional environmental factors affecting GDP_{it} for country i at time t . $X_{it}^{IE} = F(IP, EL, JI, PR)$; β_{MF} = corresponding coefficient to the variable X_{it}^{MF} ; X_{it}^{MF} = macroeconomic fundamental effects to the GDP_{it} for country i at time t . $X_{it}^{MF} = F(NS, DL, IF, FDI)$; β_{FD} = corresponding coefficient to the variable X_{it}^{FD} ; X_{it}^{FD} = financial development factors influencing GDP_{it} for country i at time t . $X_{it}^{FD} = F(SB, RS, FE)$; u_{it} = the classical error term, α_i = the unobserved impact of time-invariant omitted variables that are not included in the regression but affect GDP_{it} in the i^{th} country.

4.4.3.3 Random Effects Model

The Random Effects Model (REM) is a regression analysis model based on the assumption that all the variables affecting the dependent variable which do not feature as regressors take up a random error term (Maddala, 2007). It is a well-organized estimator of slope coefficients than the FEM and does not exclude the unobserved heterogeneity making it superior (Kennedy, 2008). It is the substitute to the Fixed Effects Model, relying on the existence of the intercept for each cross-sectional unit being obtained from a distribution centred around a mean intercept. This model uses the OLS estimation (Menegaki, 2011) and is aimed at testing the

strength of FEM basing on the assumption that unobserved heterogeneity is unconnected with the regressors, and that these variables are autonomously and similarly distributed across individuals (Studenmund, 2011). In other words, the REM considers those cross-section constants as random, and not as fixed (variability of constants).

The REM assumes homoscedasticity (equal variances within the error term), as this model innately has a separable effect deemed random (Menegaki, 2011; Pindyck & Rubinfeld, 1998). That is to say, the model regressors do not have any correlation to the heterogeneous nature of the error term. Also, the error term is normally distributed and has a mean of zero, and the random variables are statistically independent (Pindyck and Rubinfeld, 1998).

This model is also helpful in answering research questions two, three and four.

$$GDP_{it} = \beta_{CG}X_{it}^{CG} + \beta_{IE}X_{it}^{IE} + \beta_{MF}X_{it}^{MF} + \beta_{FD}X_{it}^{FD} + u_{it} + \alpha + v_i$$

Where; GDP_{it} = the dependent variable that measures economic growth for country i at time t; $i = 1, 2, 3, \dots, N$; $t = 1, 2, 3, \dots, T$; β_{CG} = the coefficient that corresponds to the variable X_{it}^{CG} ; X_{it}^{CG} = corporate governance variables affecting GDP_{it} for country i at time t. $X_{it}^{CG} = F(DP, EB, PM)$; β_{IE} = corresponding coefficient to the variable X_{it}^{IE} ; X_{it}^{IE} = institutional environmental factors affecting GDP_{it} for country i at time t. $X_{it}^{IE} = F(IP, EL, JI, PR)$; β_{MF} = corresponding coefficient to the variable X_{it}^{MF} ; X_{it}^{MF} = macroeconomic fundamental effects to the GDP_{it} for country i at time t. $X_{it}^{MF} = F(NS, DL, IF, FDI)$; β_{FD} = corresponding coefficient to the variable X_{it}^{FD} ; X_{it}^{FD} = financial development factors influencing GDP_{it} for country i at time t. $X_{it}^{FD} = F(SB, RS, FM)$; u_{it} = the classical error term; ; $\alpha + v_i$ = consideration for randomness of the constant variables for the i^{th} country.

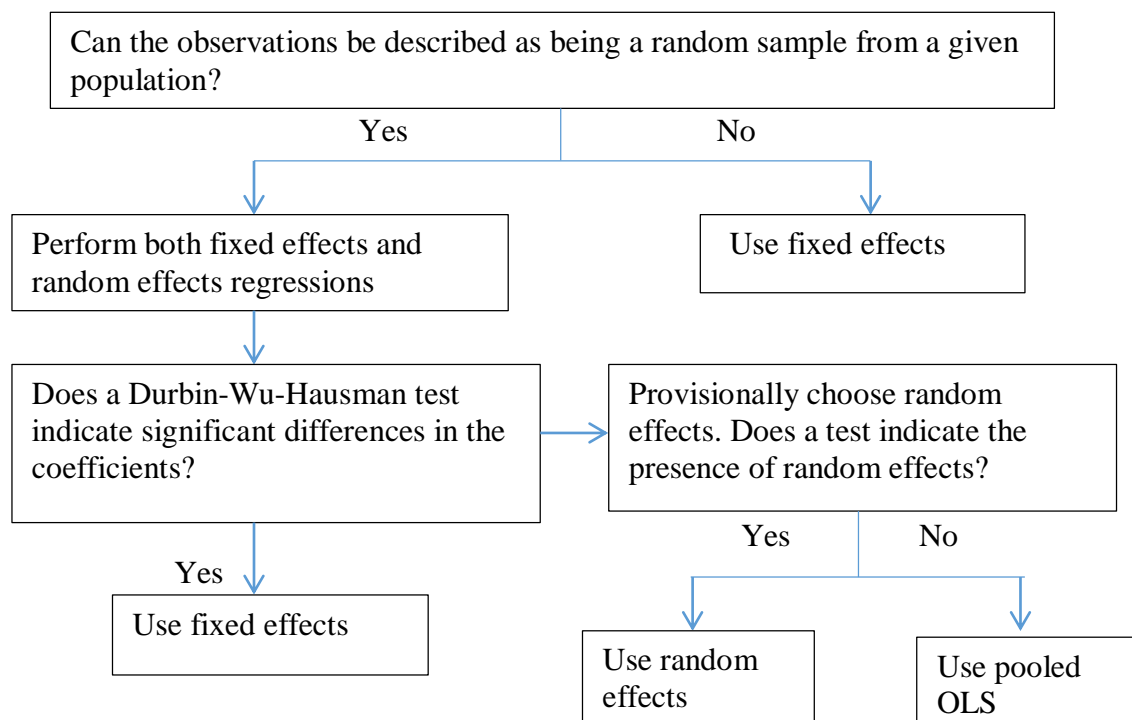


Figure 4. 2 A summary of the decision-making process for fitting a model with panel data

Source: Dougherty (2011: 527)

4.4.3.4 Panel Vector Autoregression Model

Multiple regression gives a clarification of the influence of an explanatory variable on to the dependent variable at a given point in time, without factoring in effects of an explanatory variable on to the dependent variable having to take time to be noticeable. It is therefore necessary to include the Panel Vector Autoregression Model (PVAR), which was originated by Sims (1980), because as well, the effect may arise from the dependent variable. Koop (2013) and Stock & Watson (2012) spell out that the value of the dependent variable at a point in time should rely on the value of the explanatory variable at a given point in time, though it can also depend on the previous value(s) of the explanatory variables. Observations are made over time using lagged values for determined time periods of both the regressand and the various regressors in order to determine the trends and relationships over time.

The error term of the PVAR assumes endogeneity which makes each regression to have the same number of regressors (Asteriou & Hall, 2016; Sims, 1980). Additionally, the errors in this model are serially correlated (Holtz-Eakin *et al.*, 1988; Pindyck & Rubinfeld, 1998).

Therefore, in this section, there is need to establish the varied nature of the; relationships between corporate governance variables and economic growth in the selected OECD and Sharia law countries. This will be estimated thus;

$$GDP_{it} = \beta_0 + \sum_{p=1}^P \beta_p GDP_{it-p} + \sum_{y=1}^Y \beta_y^{CG} X_{it-y}^{CG} + \sum_{z=1}^Z \beta_z^{IE} X_{it-z}^{IE} + \sum_{n=1}^N \beta_n^{MF} X_{it-n}^{MF} + \sum_{q=1}^Q \beta_q^{FD} X_{it-q}^{FD} + u_{it}$$

Where; GDP_{it} = the dependent variable that measures economic growth resulting from regressed lagged values on the right hand side of the regression , for country i at time t; ; $i = 1, 2, 3, \dots, N$; $t = 1, 2, 3, \dots, T$; P = the number of lags of the dependent variable GDP_{it} ; β_p = the coefficient that corresponds to the value lagged variable in that period of interest for GDP_{it-p} ; GDP_{it-p} = the value of economic growth for country i at time t, depending on the lagged value of interest; Y = the number of lag periods for the variable of corporate governance; β_y^{CG} = the coefficient that corresponds to X_{it-y}^{CG} ; X_{it-y}^{CG} = the lagged value of corporate governance for country i at time t, depending on the lagged period of interest; Z = the number of lag periods for the variable of institutional environment; β_z^{IE} = the coefficient that corresponds to X_{it-z}^{IE} ; X_{it-z}^{IE} = the value of institutional environmental factor for country i at time t, depending on the lag period of interest; N = the number of lag periods for the variable of macroeconomic fundamentals; β_n^{MF} = the coefficient that corresponds to X_{it-n}^{MF} ; X_{it-n}^{MF} = the value of macroeconomic fundamentals measure/ effect for country i at time t, depending on the lag period of interest; Q = the number of lag periods for the variable of financial development; β_q^{FD} = the coefficient that corresponds to X_{it-q}^{FD} ; X_{it-q}^{FD} = the value of financial development index or measure for country i at time t, depending on the lag period of interest; u_{it} = error term.

4.4.3.5 Granger Causality Test Model

Developed by Granger (1969), the Granger Causality Model (GCM) falls under the PVAR using an F-statistic to test the null hypotheses. In essence, if a variable Q Granger- causes W, then Q becomes a valuable forecaster of W, with all other variables in the regression line (Stock

and Watson, 2012). There is further need to determine in this section, if economic growth is granger-caused by any or all of the variables of corporate governance, macroeconomic fundamentals, institutional environment and financial development within and between the selected OECD and Sharia law countries. According to this model, in order to establish causality, previous values or lagged values of GDP_{it} were regressed as well as the lagged values of the above-mentioned independent variables to reveal significant explanatory variable power in the regression.

Ashley *et al.* (1980) alert scholars and researchers to the existence of the endogeneity assumption in the model caused by the lagging of variables. From this, to ensure stability in results, the disturbances (error term) are serially uncorrelated as detailed by (Durbin, 1970; Granger, 1969; Maddala & Rao, 1973).

Causality informs policymakers what factors or mechanisms of corporate governance solely or together with other explanatory variables in the regression of macroeconomic fundamentals, institutional environment and financial development bring about economic growth. This then aids in enabling the roll out of programmes that stress the growth of that specific corporate governance mechanism or other variables responsible. This panel Granger Causality model encompasses a distributed lag as well as dynamic causal effects showing the time path of regressors to test using the F- statistic whether any of the included variables has predictive content for GDP_{it} .

$$GDP_{it} = \sum_{j=1}^J \alpha_j GDP_{it-j} + \sum_{y=1}^Y \beta_{y+1}^{CG} X_{it-y}^{CG} + \sum_{z=1}^Z \beta_{z+1}^{IE} X_{it-z}^{IE} + \sum_{n=1}^N \beta_{n+1}^{MF} X_{it-n}^{MF} + \sum_{q=1}^Q \beta_{q+1}^{FD} X_{it-q}^{FD} + \varepsilon_{it}$$

Where; GDP_{it} = the dependent variable that measures economic growth resulting from regressed lagged values of both the dependent and independent variables on the right hand side of the regression, for country i at time t ; ; $i = 1, 2, 3, \dots, N$; $t = 1, 2, 3, \dots, T$; α_j = corresponding coefficient for the lagged value or the period before j , for the dependent variable GDP_{it-j} ; J = the number of lag periods for the dependent variable of economic growth; Y = the number of lag periods for the variable of corporate governance;

β_{y+1}^{CG} = the coefficient that corresponds to X_{it-y}^{CG} measuring the effect from the previous period; X_{it-y}^{CG} = the lagged value of corporate governance for country i at time t, for the lagged period of interest; Z = the number of lag periods for the variable of institutional environment; β_{z+1}^{IE} = the coefficient that corresponds to X_{it-z}^{IE} measuring the effect from the previous period; X_{it-z}^{IE} = the value of institutional environmental factor for country i at time t, for the lag period of interest; N = the number of lag periods for the variable of macroeconomic fundamentals; β_{n+1}^{MF} = the coefficient that corresponds to X_{it-n}^{MF} measuring the effect from the previous period; X_{it-n}^{MF} = the value of macroeconomic fundamentals measure/ effect for country i at time t, for the lag period of interest; Q = the number of lag periods for the variable of financial development; β_{q+1}^{FD} = the coefficient that corresponds to X_{it-q}^{FD} measuring the effect from the previous period; X_{it-q}^{FD} = the value of financial development index or measure for country i at time t, for the lag period of interest; ε_{it} = error term.

The Granger Causality Model above is meant to test whether economic growth is caused by any of or all the four explanatory variable factors of corporate governance, institutional environment, macroeconomic fundamentals and financial development. However, there is need to test whether there is any bi-directionality in this relationship. Therefore, the models below were constructed:

$$CG_{it} = \sum_{y=1}^Y \alpha_y CG_{it-y} + \sum_{j=1}^J \beta_{j+1}^{GDP} X_{it-j}^{GDP} + \sum_{z=1}^Z \beta_{z+1}^{IE} X_{it-z}^{IE} + \sum_{n=1}^N \beta_{n+1}^{MF} X_{it-n}^{MF} + \sum_{q=1}^Q \beta_{q+1}^{FD} X_{it-q}^{FD} + \varepsilon_{it}$$

$$IE_{it} = \sum_{z=1}^Z \alpha_z IE_{it-z} + \sum_{y=1}^Y \beta_{y+1}^{CG} X_{it-y}^{CG} + \sum_{j=1}^J \beta_{j+1}^{GDP} X_{it-j}^{GDP} + \sum_{n=1}^N \beta_{n+1}^{MF} X_{it-n}^{MF} + \sum_{q=1}^Q \beta_{q+1}^{FD} X_{it-q}^{FD} + \varepsilon_{it}$$

$$MF_{it} = \sum_{n=1}^N \alpha_n MF_{it-n} + \sum_{y=1}^Y \beta_{y+1}^{CG} X_{it-y}^{CG} + \sum_{z=1}^Z \beta_{z+1}^{IE} X_{it-z}^{IE} + \sum_{j=1}^J \beta_{j+1}^{GDP} X_{it-j}^{GDP} + \sum_{q=1}^Q \beta_{q+1}^{FD} X_{it-q}^{FD} + \varepsilon_{it}$$

$$FD_{it} = \sum_{q=1}^Q \alpha_q FD_{it-q} + \sum_{y=1}^Y \beta_{y+1}^{CG} X_{it-y}^{CG} + \sum_{z=1}^Z \beta_{z+1}^{IE} X_{it-z}^{IE} + \sum_{n=1}^N \beta_{n+1}^{MF} X_{it-n}^{MF} + \sum_{j=1}^J \beta_{j+1}^{GDP} X_{it-j}^{GDP} + \varepsilon_{it}$$

4.4.4 Aggregated indicators

Section 4.4.2 introduced panel data analysis methods used in this research together with the relevant models in their disaggregated form in a bid to establish the relationships of economic growth with individual corporate governance compositions together with other individual explanatory variables. In this section, the collective power of each explanatory variable is sought to check how a variable in the totality of its compositions affects economic growth, in a deeper diagnosis of the relationships with other explanatory variables in the various regression models. Kaufmann *et al.* (2010) describe an aggregate indicator as a composition of many individual underlying indicators that are amalgamated to form a composite index in order to quantify a branch or category of governance. These arise from the World Governance Indicators (WGI) as subjective interpretations of governance that principally are weighted averages of single preceding indicators from a number of sources. The compilation process of an overall indicator is done carefully factoring in the relevant individual base unobserved heterogeneity, and hence making allusions to the impossible perfection when computing an aggregate indicator. That said though, the power of an aggregate indicator offers a better and a much more instructive, refined, and comprehensive pointer representing a number of sources. This gives an overall stalwartness in the resulting statistical measurements.

4.4.4.1 Pooled Effects Model specification with aggregation

Below is a display of the PEM to establish the relationships between corporate governance variables and economic growth in both selected OECD and Sharia law countries using aggregated data

$$GDP_{it} = \beta_0 + \beta_{aggCG} X_{it}^{aggCG} + \beta_{aggIE} X_{it}^{aggIE} + \beta_{aggMF} X_{it}^{aggMF} + \beta_{aggFD} X_{it}^{aggFD} + u_{it}$$

Where; X_{it}^{aggCG} = aggregated corporate governance indicator; X_{it}^{aggIE} = the aggregated institutional environmental index; X_{it}^{aggMF} = aggregated macroeconomic fundamentals index; X_{it}^{aggFD} = aggregated financial development index.

4.4.4.2 Fixed Effects Model specification with aggregation

This segment shows the FEM used to examine the nature of the relationships between corporate governance variables and economic growth in both selected OECD and Sharia law countries, using aggregated data.

$$GDP_{it} = \beta_{aggCG} X_{it}^{aggCG} + \beta_{aggIE} X_{it}^{aggIE} + \beta_{aggMF} X_{it}^{aggMF} + \beta_{aggFD} X_{it}^{aggFD} + u_{it} + a_i$$

Where; X_{it}^{aggCG} = aggregated corporate governance index; X_{it}^{aggIE} = aggregated institutional environmental indicator; X_{it}^{aggMF} = aggregated macroeconomic fundamental indicator; X_{it}^{aggFD} = aggregated financial development indicator.

4.4.4.3 Random Effects Model specification with aggregation

$$GDP_{it} = \beta_{aggCG} X_{it}^{aggCG} + \beta_{aggIE} X_{it}^{aggIE} + \beta_{aggMF} X_{it}^{aggMF} + \beta_{aggFD} X_{it}^{aggFD} + u_{it} + \alpha + v_i$$

Where; X_{it}^{aggCG} = aggregated corporate governance index; X_{it}^{aggIE} = aggregated institutional environmental indicator; X_{it}^{aggMF} = aggregated macroeconomic fundamental indicator; X_{it}^{aggFD} = aggregated financial development indicator.

4.4.4.4 Panel vector Autoregression Model specification with aggregation

The segment below investigates the relationships between corporate governance variables and economic growth in selected OECD and Sharia law countries using aggregated data.

$$GDP_{it} = \beta_0 + \sum_{p=1}^P \beta_p GDP_{it-p} + \sum_{y=1}^Y \beta_y^{aggCG} X_{it-y}^{aggCG} + \sum_{z=1}^Z \beta_z^{aggIE} X_{it-z}^{aggIE} \\ + \sum_{n=1}^N \beta_n^{aggMF} X_{it-n}^{aggMF} + \sum_{q=1}^Q \beta_q^{aggFD} X_{it-q}^{aggFD} + u_{it}$$

Where; GDP_{it-p} = the value of GDP for the previous period before t for country i; P = the number of lag periods for the dependent variable GDP; X_{it-y}^{aggCG} = the aggregated value of corporate governance for country i at time t from all the Y lag periods; X_{it-z}^{aggIE} = the aggregated value of institutional environmental factors for country i at time t from all the Z lag periods; X_{it-n}^{aggMF} = the aggregated value of macroeconomic fundamentals for country i at time t from the N lag periods; X_{it-q}^{aggFD} = the aggregated value of financial development for country i at time from the Q lag periods; u_{it} = error term.

4.4.4.5 Panel Granger Causality Model specification with aggregation

This section probes the Granger causality relationship and direction between economic growth and corporate governance variables. This is to diagnose whether those variables which are aggregated values from all lagged values have any predictive content for GDP_{it} . It is also a distributed aggregated lag model.

$$GDP_{it} = \sum_{j=1}^J \alpha_j GDP_{it-p} + \sum_{y=1}^Y \beta_{y+1}^{aggCG} X_{it-y}^{aggCG} + \sum_{z=1}^Z \beta_{z+1}^{aggIE} X_{it-z}^{aggIE} \\ + \sum_{n=1}^N \beta_{n+1}^{aggMF} X_{it-n}^{aggMF} + \sum_{q=1}^Q \beta_{q+1}^{aggFD} X_{it-q}^{aggFD} + \varepsilon_{it}$$

Where; GDP_{it-p} = the value of GDP for the previous period before t for country i; J = the number of lag periods for the dependent variable GDP; X_{it-y}^{aggCG} = the aggregated value of

corporate governance for country i from all the Y lag periods; X_{it-z}^{aggIE} = the aggregated value of institutional environmental factors for country i from all the Z lag periods; X_{it-n}^{aggMF} = the aggregated value of macroeconomic fundamentals for country i from the N lag periods; X_{it-q}^{aggFD} = the aggregated value of financial development for country i from the Q lag periods; ε_{it} = error term.

To test whether there is any dual causality in this corporate governance, institutional environment, macroeconomic fundamentals, financial development and economic growth nexus, the models below were constructed with the use of aggregated indices;

$$CG_{it} = \sum_{y=1}^Y \alpha_{aggy} CG_{it-y}^{agg} + \sum_{j=1}^J \beta_{j+1}^{GDP} X_{it-j}^{GDP} + \sum_{z=1}^Z \beta_{z+1}^{aggIE} X_{it-z}^{aggIE} \\ + \sum_{n=1}^N \beta_{n+1}^{aggMF} X_{it-n}^{aggMF} + \sum_{q=1}^Q \beta_{q+1}^{aggFD} X_{it-q}^{aggFD} + \varepsilon_{it}$$

$$IE_{it} = \sum_{z=1}^Z \alpha_{aggz} IE_{it-z}^{agg} + \sum_{y=1}^Y \beta_{y+1}^{aggCG} X_{it-y}^{aggCG} + \sum_{j=1}^J \beta_{j+1}^{GDP} X_{it-j}^{GDP} \\ + \sum_{n=1}^N \beta_{n+1}^{aggMF} X_{it-n}^{aggMF} + \sum_{q=1}^Q \beta_{q+1}^{aggFD} X_{it-q}^{aggFD} + \varepsilon_{it}$$

$$MF_{it} = \sum_{n=1}^N \alpha_{aggn} MF_{it-n}^{agg} + \sum_{y=1}^Y \beta_{y+1}^{aggCG} X_{it-y}^{aggCG} + \sum_{z=1}^Z \beta_{z+1}^{aggIE} X_{it-z}^{aggIE} \\ + \sum_{j=1}^J \beta_{j+1}^{GDP} X_{it-j}^{GDP} + \sum_{q=1}^Q \beta_{q+1}^{aggFD} X_{it-q}^{aggFD} + \varepsilon_{it}$$

$$FD_{it} = \sum_{q=1}^Q \alpha_{aggq} FD_{it-q}^{agg} + \sum_{y=1}^Y \beta_{y+1}^{aggCG} X_{it-y}^{aggCG} + \sum_{z=1}^Z \beta_{z+1}^{aggIE} X_{it-z}^{aggIE} \\ + \sum_{n=1}^N \beta_{n+1}^{aggMF} X_{it-n}^{aggMF} + \sum_{j=1}^J \beta_{j+1}^{GDP} X_{it-j}^{GDP} + \varepsilon_{it}$$

4.4.5 Robust inference

This relates to the need for the sturdiness of statistical models, experiments and processes in line with particular conditions that the statistical study intends to reveal. This is because a lot of models are anchored on perfect circumstances which may not exist in the real world when using real world data (Taylor, 2017). For instance, the FEM are premised on the (α) intercept to fetch the relationship of the undetectable in various time periods. However, it does not annul errors and suggests that estimators are inadequate. Thus, confusing conclusions should be avoided with no substitute suppositions.

The techniques below are utilised when selecting and estimating the models in order to ensure incontestable conclusions from the diagnostic tests and results.

4.4.5.1 The Durbin-Wu-Hausman specification test

This test is useful in circumstances when one or more of the explanatory variables are likely prone to errors in measurement. This test finds out whether the regression coefficients of the Fixed Effects Model differ statistically from those of the Random Effects Model. If they differ, then the Fixed Effects Model is desirable, despite it taking more degrees of freedom (Dougherty, 2011). Pindyck and Rubinfeld (1998) add that this test is based on the assumption that the OLS parameter estimator is reliable (in large samples) and efficient, yet unreliable if the alternative hypothesis is true.

4.4.6 Pre-estimation tests

There was need to conduct pre-estimation tests to determine the suitable lag order and for unit roots, particularly for the vector autoregression models in the analysis.

4.4.6.1 Appropriate lag order selection

This study used a lag length of one year, for both datasets of OECD and Sharia, which means that a time period of one period or previous year ago. This meant that the coefficients quantified the effects of the independent variables on to the dependent variable after a delay of one year. This in sync with the recommendations of Wooldridge (2016) that annual data befits the use of lag order one or two. Also, Dougherty (2011) and Kennedy (2008) advise that major regression applications usually embrace this convention arguing that it is unnecessary to define lagged variables separately. Another approach that can be used to determine the number of lags is,

Akaike Information Criteria (AIC) or the Bayes Information Criteria (BIC)/ Schwartz Information Criteria (SIC) both of which harshly punish the adding of variables on the right-hand side (because this reduces the number of degrees of freedom). These methods are more preferred to the F-statistic approach suggested by Stock and Watson (2012) which constructs a model that is very large. Both OECD and Sharia datasets showed the Modified Bayesian Information Criteria (MBIC) as the appropriate with the smallest estimate, aside from the MAIC and MQIC criteria.

4.4.6.2 Levin-Lin-Chu unit root test

According to Levin *et al.* (2002) and Wooldridge (2016) stationarity (the absence of unit roots) is an important property among panels prior to estimation in order to guarantee the validity of the regression results. And Levin *et al.* (2002) defend that this test is suitable for both balanced and unbalanced panels with large or low N and T. This test uses the fitted Augmented Dickey-Fuller (ADF) regression for a particular panel of each input explanatory variable. Additionally, this unit root test utilised the Bartlett Kernel average of 8 lags as chosen by the LLC for both the Sharia law and OECD datasets.

4.4.7 Post-estimation tests

These include tests for multicollinearity, heteroskedasticity, autocorrelation, cross-sectional dependence, eigenvalue stability condition and they are discussed thus;

4.4.7.1 Pesaran's Cross-sectional dependence test

When dealing with various countries in a panel data set, it is important to consider testing for shocks that may occur in one country thereby affecting the other countries. Pesaran's (2004) test is ideal for both balanced and unbalanced datasets. This test revealed the existence of cross-sectional dependence for both the aggregated and disaggregated OECD data due to a significant $p = 0.000$, hence the rejection of the null hypothesis and accepting of the alternative hypothesis as confirmation. However, the Sharia law dataset reported no evidence of cross-sectional dependence as the same test showed a $p > 0.000$ for both aggregated and disaggregated data, thereby accepting the null hypothesis and rejecting the alternative hypothesis.

4.4.7.2 Modified Wald test for heteroskedasticity

This relates to the error term, in which the variance of the conditional distribution of the variables in it, given x_i are not constant (Stock and Watson, 2012), in other words unequal variances (Pindyck and Rubinfeld, 1998). It should be noted that multiple regression analysis uses the OLS estimators and goes on to remain neutral and asymptotically normal based on the homoscedasticity which is inappropriate if errors are heteroskedastic. Though other heteroskedasticity tests include; Goldfeld-Quandt and White tests as suggested by (Dougherty, 2011; Pindyck & Rubinfeld, 1998), this research utilised the Modified Wald test for group heteroskedasticity that operates with Chi-square in a fixed effect regression model, when both aggregated and disaggregated data for the Sharia law panels showed cross-sectional independence. The result of the $p=0.0000$ validated the existence of heteroskedasticity in the Sharia law panels, thus accepting the alternative hypothesis of unequal variance.

4.4.7.3 Wooldridge test for autocorrelation

Autocorrelation or serial correlation relates with the connectedness of a time series variable and its lagged value (Stock and Watson, 2012). When analysing time series data, autocorrelation crops up as a problem which renders the use of the OLS procedure invalid. Should the regression errors be autocorrelated, then the heteroskedasticity-robust-standard errors will bring inaccurate results (Ramanathan, 1995). With heteroskedasticity in the data together with autocorrelation, then the heteroskedasticity-autocorrelation-consistent standard errors are a much appropriate test that is used as recommended by Stock and Watson (2012). Although Ramanathan (1995) promotes the use of the Lagrange Multiplier test to identify and treat autocorrelation, this study used the Wooldridge (2002) test for both the OECD and Sharia law data sets.

4.4.7.4 Eigen stability condition

After estimation of the VAR, there is need to determine the crucial notion of covariance stationarity. Hamilton (1994) and Lutkepohl (2005) caution on the importance of maintaining a stable VAR in order to confirm reliability of such estimates as the Forecast Error Variance Decomposition (FEVD). Therefore, when the modulus of each eigenvalue for a matrix is solidly less than one, then VAR is presumed stable. For this study, the aggregated dataset for OECD showed one eigenvalue greater than one and outside the unit circle while that of the aggregated Sharia law satisfied the stability conditions.

4.4.7.5 Panel Vector Forecast Error Variance Decomposition

Shahbaz (2012) supports the use of this PVAR Forecast Error Variance Decomposition (FEVD) method as a test of the strength of the causal associations amongst the variables. This tactic shows the extent of the projected error variance for a series explained by innovations from each of the explanatory variable across different time periods outside the selected time period. Pesaran and Shin (1998) augment to the contribution of the FEVD method for it indicates proportionate contribution in one variable as a result of novel stemming (or impulses) in other variables and the method does not respond with ordering of variables as this is regulated by the VAR. A further quality of FEVD is that it can approximate shock effects that happen at the same time using the VAR (Engle & Granger, 1987; Ibrahim, 2005). This test was used to quantify the effect of innovations in the aggregated independent variables of aggregated corporate governance, aggregated financial development, aggregated macroeconomic fundamentals and aggregated institutional environment on economic growth of both sets of countries.

4.4 POPULATION, SAMPLE SIZE AND SAMPLING METHODS

This econometric study examined populations in the calibre of both countries applying the Western or conventional corporate governance and those countries that follow the Islamic perspective of corporate governance. A total of 27 countries make up the sample, whereby 14 countries were selected from the OECD region and the other 13 from the Sharia countries.

The study used the criteria in selecting the 13 Sharia law countries from the Pew Research Center (PRC) (2017), which shows the world Muslim population by country. As well as that of Otto (2010) in which among all Islamic majority countries in the world, the selected countries have 55% or more of the inhabitants to be of the Muslim religion. The 14 countries that apply the conventional system of corporate governance belong to the OECD members and were randomly used basing on data availability on the variable proxies.

4.5.1 Data

The study utilised a range of data indicators for the time period starting in the year 2002 to 2018. Economic growth (GDP) data for the chosen countries of both OECD and Sharia law in the sample was obtained from their respective country annual GDP figures adapted to billions

of international dollars using purchasing power parity rates. These were sourced from the World Bank's (2018) World Development Indicators, a collection of cross-country comparable data on development. According to this database of indicators, an international dollar is of the equivalent purchasing power over GDP as the U.S. dollar in the United States. The same databank defines GDP as the totality of gross value added by all local producers in the economy plus any product taxes and minus any subsidies excluded in the value of the products. Its calculation disregards deductions for depreciation of manufactured assets or for exhaustion of natural resources.

The proxies measuring the indicators of corporate governance, institutional environment, macroeconomic fundamentals and financial development were gathered from the annual Global Competitiveness Reports (GCR) present on the database of the World Economic Forum (WFE, 2017), website and were used for comparisons amongst the selected OECD and Sharia law countries. Consistent with these annual reports from WFE, corporate governance routines at firm-level are estimated by company disclosure practices, efficacy of corporate boards and protection of minority shareholders. Efficacy of corporate boards is a critical firm governance element that gauges the efficiency of the firms' board of directors in each country to root out corruption, a test of the degree of accountability and acts as a shield to investors' capital mismanagement (1= poor or very ineffective; 7= best or very effective). Another important unit of firm corporate governance, the competitiveness reports from WFE include companies disclosure practices though termed as the strength of auditing and reporting standards (1= poor disclosure routines; 7= best or a highest degree of disclosure). The WFE (2017) report upholds the inclusion of this measure of firm governance to counter many incidents of corporate shame to foster transparency needed to ensure fraud prevention, mismanagement and preserve investor and consumer confidence. Still under the umbrella of firm governance, the WFE includes the protection of minority shareholders' interests to test the degree to which minority firm owners and creditors are shielded from expropriation by insiders (1= very weak protection; 7= very strong protection).

On financial development, the study determines countries' competitiveness via the indicators of soundness of banks, regulation of securities exchanges and financing through equity markets as measured by WFE (2017), all with a scale of 1 to 7. An analysis of studies from Levin (1998), Levin & Zervos (1998) as well as Petkovski & Kjosevski (2014) about the soundness of banks reveals bank lending as the overarching descriptive theme for this proxy. Gauging a

country's soundness of its banking sector, a scale score of 1= poorly developed, while 7= very developed or proficient. As another key measure of financial development, advanced capital markets are indicative also of a robust level of regulation and enforcement. The measurement of regulation of securities exchanges of scale score 1= low or ineffective, yet 7= best or very effective. Financing through equity markets relates to the ease with which firms in an economy are able to access capital to finance their operations via equity markets. A score of 1= very difficult, while 7= best or very easy.

The institutional environment comprises of the proxies of efficiency of legal framework (in settling disputes and challenging regulations), judicial independence and property rights, which are measured on a scale of 1 to 7 and investor protection on a scale of 0 to 10, all by WFE (2017). Starting with judicial independence, the level of investment in a country also hinges heavily on the impartiality of courts to decide private economic disputes which also acts as a safety device against fraudulence and loss. A score of 1= low, yet 7= best or high. For property rights, Besely and Ghatak (2010) maintain that the observance of property rights incentivises and collateralises investment as well as the facilitation of exchangeability of assets among business parties. A scale of 1= poor or lowly secured; 7= best or highly secured. The efficiency of legal framework in settling disputes particularly by courts deemed by private economic players to pass fair judgements that are implemented by reliable and ethical enforcement agencies also advances business activity. A score of 1= inefficient; 7= best or very efficient. The efficiency of legal framework in challenging regulations with a score of 1= inefficient; 7= very efficient. Lastly with regards investor protection, Sundarasan *et al.* (2017) reason that investor faith in the existing legal framework in a country indicates strong investor cover to many dithering investors thus prompting further general investment levels. From the WFE, a score of 0= extremely low or weak, whereas 10= very strong.

Macroeconomic fundamentals are assessed by the proxies of gross national savings, government debt levels, inflation rate and foreign direct investment. According to WFE (2017) both gross national savings and government debt levels are each denoted as a percentage of the GDP of a country. A country's general savings levels have a bearing on the overall investment in an economy. On the contrary, a country's debt levels impinge on its GDP, and this is indorsed by Telesa and Mussolini (2014) that debt levels chew up a chunk of the savings during debt servicing. The inflation rate measures the level of price stability in an economy and the WFE characterises it as an annual percentage rate. And lastly, foreign direct investment impacts on

a country's overall capital stock via inflows from outside the country through multinational corporate entities. The WFE (2017) gauges a country's inflow of foreign direct investment on a scale of 1= very low, while 7= best or very high.

It is therefore appropriate to determine that this research profited from an across-the-board database of worldwide indicators which were collected and calculated with universally accepted techniques. This then facilitated the comparability of proxies for the variables used among countries, hence aiding in the examination of the nature of the relationship between corporate governance variables and economic growth among the selected countries of OECD and Sharia law in this study.

This investigation was however hamstrung by the unavailability of data on the indicators from the above-mentioned databases, and this explains the relatively limited time period of consideration for the study, despite calls by Valeriani and Peluso (2011) to test with a long period of time which helps in validation of the study's results. The lack of data for a number of countries for both sets also constrained the sample size, and this is again echoed by Doidge *et al.* (2007) as one of the challenges in comparative studies. The study nonetheless employed short-run befitting models in tune with the relatively shorter time span used.

4.6 CONCLUSION

This chapter identified the study's ideologies on which this investigation is anchored, with a positivist research paradigm steering the proceedings due to the computable nature of the research questions which largely seek to test hypotheses among variables. A rationalist and empiricist epistemology, an objective ontology as well as quantitative and statistical methodological techniques are presented, which justify the empirical research design and methods of this study. Econometrics or panel data operationalizes the data analysis stage and the greater part of the chapter is dedicated to detailed explanations of model specifications and diagnostic tests of the models so as to account for validity and rigour. This was designed to answer the research questions posed in Chapter One. Statistical computer software, STATA was employed to analyse and evaluate the stated models. The following chapter provides the data that was collected and analysed in a bid to establish the nature of the relationships between corporate governance variables and economic growth of the selected OECD and Sharia law countries.

CHAPTER FIVE

FINDINGS: THE NATURE OF THE RELATIONSHIPS BETWEEN CORPORATE GOVERNANCE VARIABLES AND ECONOMIC GROWTH

5.1 INTRODUCTION

This chapter describes the existing interrelationships among the variables of corporate governance, financial development, macroeconomic fundamentals, institutional environment and economic growth among the selected OECD and Sharia law countries. This paves the way for the development of an integrated corporate governance framework for the countries domiciled in the Sharia regions, subsequent from the marked differences in the nature of the interaction of the variables. Chapter five details the findings from data analysis of econometric methods utilised in the examination of the nature of the interaction of the variables affecting economic growth for both Sharia law and OECD countries. This research is based on the conviction that the results from the data analysis provides and extends insight into the performance of the variables affecting economic growth for each set of countries. This addition and extension allows policy makers and practitioners to formulate the right course of action particularly, those in the Sharia law regions, and control of effective factors that stimulate economic growth.

Section 5.2 tabulates the descriptive statistics of the variables used for both the Sharia law and OECD countries. Section 5.3 examines the disaggregated and aggregated econometric results for pooled, fixed and random effects models and their model selection techniques and tests, as well as the short-run and causality analysis methods of the vector autoregressions for the OECD countries. Section 5.4 analyses the patterns for the Sharia law countries.

5.2 SUMMARY OF DESCRIPTIVE STATISTICS

The section offers descriptive statistics that summarise the financial development, institutional environment and macroeconomic fundamental factors that promote corporate governance and economic growth. For this study, the annual Global Competitiveness Reports by the WFE identified the indicators from the WFE website, while economic growth was measured in GDP absolute figures in billions of international dollars from the World Bank database of development comparable indicators. Corporate governance customs at firm-level are estimated by company disclosure practices, efficacy of corporate boards and protection of minority shareholders. Financial development is measured by the indicators of sound banking sector, regulation of securities exchanges and financing through equity markets. The institutional environmental factors are proxied by investor protection, efficiency of legal framework (in settling disputes and challenging regulations), judicial independence and property rights. Macroeconomic fundamentals are assessed by the proxies of gross national savings, government debt levels, inflation rate and foreign direct investment.

The following descriptive statistics displayed in Tables 5-1 to 5-4 are derived from 13 Sharia Law countries, which are a total of 221 annual observations of corporate governance and economic growth, for an analysis period of 17 years (2002 – 2018). Economic growth is the regressand while corporate governance is the major explanatory variable. Other regressors used to determine the relationships are financial development, institutional environment and the macroeconomic fundamentals, whose descriptive statistics are presented in the ensuing sections.

Table 5. 1 Descriptive statistics for corporate governance indicators in the selected Sharia law countries

	N	Mean	Std. Dev.	Minimum	Maximum
GDP	221	103.683	58.377	1	207
Efficacy of corporate boards	221	4.398	0.546	3.130	5.591
Protection of minority shareholders	221	4.312	0.606	3.035	5.743
Companies disclosure practices	221	4.084	0.881	1	5.037

5.2.1 Sharia law region economic growth characteristics

Table 5.1 features annual GDP absolute figures adapted to billions of international dollars using purchasing power parity rates. From the GDP results in Table 5.1 above, the average economic growth score for the Sharia Law countries that make up the sample is \$103.683, which can be interpreted to mean that countries in the Sharia law environment sampled for this study report an average economic growth of \$103.683 billions. This study reports the minimum economic growth value of \$1 billion and the maximum of \$207 billions. With the standard deviation estimate of 58.377 among these countries from a mean score of 103.683, showing a big range in the economic growth rate figures among these countries, coupled with very high discrepancies in the levels of economic growth. This therefore reveals the existence of both extreme low and high figures of economic growth among these selected Sharia law countries.

5.2.2 Corporate governance indicators

In their discussion of the agency theory, Jensen and Meckling (1976) document that corporate governance is positively linked with firm value. This is substantiated by research from Renders *et al.* (2010) who confirm that effective corporate governance lessens managerial self-dealing and wasteful expenditure due to enhanced supervision and quality decisions being made, hence better firm market valuation and operating performance. This then translates into freeing up of more resources into investment to projects with the highest net present value, and this boosts company financial performance. It is therefore right to conclude that corporate governance is a determinant of economic growth via individual company financial performance. This is because effective firm-level corporate governance precedes enhanced company financial performance, as endorsed by Baysinger & Hoskinson (1990), Dharwadkar *et al.* (2000) and John & Senbet (1998). In fact, improved monitoring of firm management guarantees that agents produce the highest possible returns to the owners of firms.

The ensuing sub-sections discuss descriptive statistics of corporate governance as measured by companies disclosure practices, efficacy of corporate boards and protection of minority shareholders.

5.2.2.1 Efficacy of corporate boards

The study reported that firms in these selected Sharia law countries average a mean score of 4.398 for the efficacy of corporate boards. With a proxy score of 1 to 7, in which values nearing

7 indicate board competence and effectiveness, this study established that company boards of directors in these countries are relatively strong in the execution of their statutory duties. Again the low standard deviation of 0.546 is underscored by a minimum score of 3.130 and a maximum of 5.591 that shows low variability in the general levels of board efficacy, with a general view that most firms among the selected Sharia law countries have working and effective boards of directors. It is the efficacy of corporate boards that is responsible for expunging corruption within the company in a bid to allow efficient allocation of resources in order to reach the firm's projected revenues. In this way, as supported by Duchin *et al.* (2010), Forbes & Milliken (1999) and John & Senbet (1998), board effectiveness is achieved by its thorough monitoring and strategic advisory responsibilities which then advance firm financial performance. It can therefore be deduced that among other factors, board efficacy of firms is responsible for those Sharia law countries that registered the higher values of economic growth *vis-à-vis* their counterparts in the same region.

5.2.2.2 Protection of minority shareholders

This research reveals a mean score of 4.312 as the degree to which firms in the selected Arab countries protect their minority shareholders from expropriation by insiders. It also reports the standard deviation among these countries of 0.606 and a minimum of 3.035 as well as a maximum figure of 5.743. This reflects the low variability in the average levels of minority investor protection among these Sharia law countries. It should be noted that the protection of minority shareholders is measured on a scale of 1 to 7 with higher values pointing to greater investor protection of minority shareholders. Therefore, it can be adjudged that firms in the selected Sharia law countries provide fairly good protection of minority shareholders, which should be responsible for countries that reported higher economic growth figures. This again is in agreement with Islamic finance and governance principles seen in Minhat and Dzolkarnaini (2019), which prohibit uncertainties in business as they render parties susceptible to expropriation and unprotected with no legal recourse to claim reimbursement of incomes lost. La Porta *et al.* (2000a) and Weisbach (2002) discover that the protection of minority shareholders from expropriation among other benefits, enables firms to obtain bigger and better (terms of) loans which are ploughed into further investment opportunities, hence contributing a boost to a country's economic growth.

5.2.2.3 Companies disclosure practices

Accurate company-specific information being appropriately made available to all company stakeholders extends the company's reputation and casts the firm's management and accountability in favourable light. Obid and Naysary (2016) contend that the practices of disclosure and transparency are key tenets in the Sharia corporate governance system. This research found that the selected Sharia Law countries report a mean score of 4.084. With a proxy scale of 1 to 7, where values nearing 7 indicating high companies disclosure practices of firms in a country, it can be concluded that firms in the selected Sharia law countries moderately comply with companies disclosure practices. The relatively stable performance of this indicator relates to the prohibition of uncertainties (*gharar*) and a ban on the existence of information asymmetry among counterparties in a business dealing in the Sharia law region. The standard deviation of 0.881 highlights that there are low differentials in the levels of companies disclosure practices among firms in the Sharia law region. That said, the minimum score of 1 and a maximum of 5.037 exhibits a huge range of values for firms disclosure practices in the Sharia law region, pointing to great variations in the disclosure practices of firms among the countries in the Sharia law region. This may be explained by the variations in interpretations of the Sharia among different Islamic law authorities as mentioned by Minhat and Dzolkarnaini (2019). It may be inferred that the Sharia law countries are characterised by an inferior corporate governance of generally lacking firm disclosure practices.

In short, this section showed descriptive statistics of corporate governance, with suppressed results among the indicators of corporate governance among the selected Sharia law countries. Generally, firms in this region have shown a casual implementation of these corporate governance tools with regards the scale of measurement of these proxies. The level of corporate governance at firm-level in these selected countries is at a bare minimum and therefore has a slight influence on the economic growth of these countries. The subsequent section provides the descriptive statistics of financial development that the study views as another explanatory variable of economic growth, aside from corporate governance.

5.2.3 Financial development indicators

Financial development has been confirmed by many studies such as Beck *et al.* (2000), Demirgüç-Kunt & Levine (2008), Gupta *et al.* (2010) and Winkler (1998) as contributing

towards a country's economic growth via capital accumulation from savings to investment. However, it is with the collaboration of the components of corporate governance that these economic growth effects are realised, as defended by Barth *et al.* (2012, 2006) which then ensures effective resource allocation needed for growth. The proxies of sound banking sector, regulation of securities exchanges and financing through equity markets measure financial development as shown in Table 5.2 with their descriptive statistics.

Table 5. 2 Descriptive statistics for financial development indicators in the selected Sharia law countries

	N	Mean	Std. Dev.	Minimum	Maximum
GDP	221	103.683	58.377	1	207
Soundness of banking sector	221	4.981	0.744	2.948	6.461
Regulation of securities exchanges	221	4.236	0.855	2.006	5.789
Financing through equity markets	221	4.080	0.826	2.086	6.071

5.2.3.1 Soundness of banking sector

This research calculated a mean score of 4.981 as the degree of soundness of the banking sector in the selected Sharia law countries. Also, this proxy scores a standard deviation of 0.744, with 2.948 and 6.461 as the minimum and maximum figures captured. This manifests the low variability in the soundness of banking within these Sharia law countries, as bank soundness is measured on a scale of 1 to 7, where scores tending to 7 indicate competency of the banking sector. It can be concluded that a mean score of 4.981 is a high value that demonstrates that generally the banking sector in the selected countries is quite proficient. This high banking sector development has been empirically confirmed by Levine and Zervos (1998) to have a positive and significant relationship with a country's economic growth. Therefore, among other factors, bank soundness in this region should explain the countries with higher economic growth values in comparison with the rest of the countries in the sample.

These findings indicate that corporate governance in the Sharia law countries exists in an environment of good financial development. Therefore, one gathers that the existence of a decent and sound banking sector among these Sharia law countries facilitates the implementation of corporate governance practices.

5.2.3.2 Regulation of securities exchanges

Security exchange regulations and their enforcement quell investor uncertainties when considering investing into companies via the stock exchange listings. These securities protocols are meant to ensure firm alignment with strict corporate governance practices, particularly those of disclosure and transparency, accounting, ownership arrangements, punishments for disobedience, *etcetera*. This research reported the mean score of 4.236 for Sharia law countries sampled. Considering that the scale for regulation of securities exchanges ranges from 1 to 7, with figures tending to 7 exhibiting advancement in capital markets stipulations, it can be interpreted that Sharia law countries offer fairly robust capital markets regulations in a bid to provide investor cover. Also, a standard deviation of 0.855 translates into there being negligible differences in securities exchanges regulations among the selected Sharia law countries for this study. Bergman and Nicolaievsky (2007) defend firms' adherence to securities exchanges regulations to allow for information symmetry among investors, better resource allocation as well as growing the capital markets via increased corporate investments.

These outcomes are of the proposition that corporate governance exists in a background of fairly good financial development. It can be construed therefore that the Sharia law region is typical of decent securities exchanges regulations that enable the application of corporate governance.

5.2.3.3 Financial through equity markets

A company being able to finance its investments via the equity markets entails the streamlining of its internal corporate governance practices thereby obtaining finance cheaply. The study reports that financing through equity markets in the Sharia law region has a mean score of 4.080. This estimate is based on the proxy's scale of 1 to 7, with figures tending towards 7 pointing to the easy access of finance by firms via equity markets. It is therefore interpreted that financing through capital markets in the Sharia law region is generally just at a bare minimum. The lowly-placed performance of this indicator resonates with the Islamic financial laws that outlaw profiteering from purely financial instruments, devoid of intrinsic commodities, as affirmed in Minhat and Dzolkarnaini (2019). Therefore, the prohibition of speculation activities (*maysir*) should help explain the lethargic performance of these selected Sharia law countries as far as securities markets are concerned. The standard deviation of 0.826 is indicative of the insignificant differentials in the levels that the countries in this region are

able to finance investment through equity markets. It should be noted that the financing through equity markets underpins a diffused ownership structure system of corporate governance in which shareholders buy and sell firm equity trouble-free. Thus capital markets are a conduit for corporate control, necessitating solid corporate governance routines to counter agency issues that emanate from firm owners delegating powers to firm managers.

These confirmations show that corporate governance in the Sharia Law countries prevails in a milieu of generally limited use of equity markets by firms in accessing finance.

Thus descriptive statistics for the Sharia Law regions shown in this section point toward the existence of corporate governance and economic growth side by side with the average scale financial development among the selected countries. The following section presents the descriptive statistics of the institutional environmental factors as another explanatory variable.

5.2.4 Institutional environment indicators

Corporate governance rules and regulations are well-intentioned in their formulation but risk becoming ineffective in a weak institutional environment of inadequate and ambiguous laws offering investor cover. This means that the implementation of corporate governance structures and regulations is enabled by a powerful institutional environment. Valeriani and Peluso (2011) assert that a combination of corporate governance and the institutional environment together give impetus to the economic growth levels for a country. Thus it is the institutional environment that determines the necessary corporate governance tools, systems, and routines favourable for economic growth. The next subsections itemise the descriptive statistics for the estimated institutional environment.

Table 5. 3 Descriptive statistics for institutional environment indicators in the selected Sharia law countries

	N	Mean	Std. Dev.	Minimum	Maximum
GDP	221	103.683	58.377	1	207
Investor protection	221	5.712	1.232	3	8.700
Efficiency of legal framework (settling disputes)	221	3.934	0.821	0	4.844
Efficiency of legal framework (challenging regulations)	221	3.953	0.810	0	4.852
Judicial independence	221	3.944	0.805	2.230	5.578
Property rights	221	4.200	0.733	2.297	5.600

5.2.4.1 Investor protection

Investor protection is a precondition for increased company investment into ventures because financiers need an insurance cover for self-dealing insiders. Thus, the existence of strong investor protection in a country facilitates the development of firm-level corporate governance. This study reports the investor protection mean score of 5.712 for countries in the Sharia law region. Considering the proxy's scale of measurement of 0 to 10, where values tending to 10 signify strong investor protection, it can be inferred that the countries taken for this study from the Sharia law region do not have strong investor protection. The standard deviation score of 1.232 suggests high discrepancies in the level of investor cover provided by all these Sharia law countries studied. Additionally, considering that the study reported a mean score of 5.7, this then speaks to large variations in the degree to which these Arab countries individually provide investor protection. Benign investor protection regulations are responsible for the low corporate governance practices particularly that of disclosure and transparency, which then renders investment in such companies unattractive, as echoed by Francis & Wang (2008), La Porta *et al.* (1998) and Nabar & Boonlert-U-Thai (2007).

5.2.4.2 Efficiency of legal framework (settling disputes)

Private organisations will freely conduct business in an environment with a satisfactory legal framework that should seamlessly enforce contracts, observe property and creditor rights. This is essential in case contracting parties to business dealings need to call upon a reliable system of courts to adjudicate in their affairs, should disagreements occur. This then signifies an efficient legal framework that promotes sound corporate governance at firm level needed to spur general economic growth in the country. This study reports a mean score of 3.934 as the average showing the extent to which countries selected in the Sharia law region offer efficiency of the existing laws in settling private disputes. With a proxy scale of 1 to 7, where values tending to 7 reflecting an efficient legal system in settling disputes, it can be surmised that these countries are at a bare minimum in offering efficient dispute resolution among wrangling private entities. A standard deviation of 0.821 points to low disparities in the extent to which there is efficient dispute resolution among warring private businesses. The dispute resolution efficiency being at a bare minimum renders the establishment of certain businesses by some investors as risky. Thus such inadequacies in the court systems barely support the establishment and prosperity of those businesses as informed by Barro (1991) and Posner (1997) which engenders a productively inferior and unsafe shadow economy (Gurvich (2016)).

5.2.4.3 Efficiency of legal framework (challenging regulations)

Private businesses feel protected when there is freedom to contest the constitutionality of the already existing laws and this speaks to ethical, impartial and justice-driven legal systems of a country. This is espoused by Posner (1998) who submits that efficiency of legal systems needs to be comprised of professional, well-paid and honourable workforce as well as workers free of interference from other arms of government. Posner (1998) advocates for the full application and enforcement of the legal prescripts. This study reports a mean score of 3.953 for the selected Sharia law countries as a showing of the level of efficiency by private businesses to challenge already existing laws. With a scale of 1 to 7, values leaning towards 7 interpreted as very efficient, it can be construed that private businesses in these Sharia law countries are barely able to contest the legality of the prevailing laws in which they operate. Also, the study reports the standard deviation score of 0.810, which portrays low variability in the levels of ability of private businesses among these selected Sharia law countries to challenge the legality of existing laws.

5.2.4.4 Judicial independence

There is need for the judiciary to have the freedom to apply, enforce and execute court decisions with no undue influence from the state, legislature or any power-wielding private organisations and individuals. Feld and Voigt (2003) advise that judges should not be on the receiving end of any backlashes whatsoever, arising from their impartial law interpretations in order to safeguard economic stability. This protects the existing laws and guarantees private property rights, shareholders' rights, and all corporate governance rules and regulations. This research reported a mean score of 3.944 for the levels of judicial independence among the selected Sharia law countries. From the proxy scale's measurement of 1 to 7, where values approaching 7 symbolising greater judicial independence, it can be agreed that the levels of judicial independence among the selected Sharia law countries are at a bare minimum and still lacking. The standard deviation score of 0.805 spells minimal differences in the degree of judicial independence among the selected Sharia law countries. This offers the interpretation that corporate governance in the Sharia law region prevails in an environment of inadequate legal institutions to preserve the laws that encourage corporate investment, a requirement in raising economic growth.

5.2.4.5 Property rights

A country's robust legal infrastructure is also supported by secured property rights, which should unambiguously spell out the rights of shareholders, creditors and all ownership types when transactions take place. Property is important as it collateralises corporate investment and helps secure loans needed to boost firm productivity and the economic growth of a country. The study reported a mean score of 4.200 as the average levels of property rights security among the selected countries in the Sharia law region. Considering the proxy's scale of 1 to 7, with values nearing 7 symbolising very secure property rights, it can be inferred that the Sharia law region offers a fair protection of property rights. A standard deviation score of 0.733 signifies low discrepancies in the levels of property rights protection offered among these selected Sharia law countries. This is therefore proof that corporate governance in the Sharia law region exists in an environment of fairly working legal institutions.

The following section details the descriptive statistics for macroeconomic fundamentals presumed to be another explanatory variable that determines corporate governance in order to influence economic growth.

5.2.5 Macroeconomic fundamental indicators

Firm governance needs to be cognizant of the macroeconomic variables that even though are external to the firm, determine its existence. This section explains the descriptive statistics for the macroeconomic fundamental factors of gross national savings, government debt levels, inflation rates and foreign direct investment.

Table 5. 4 Descriptive statistics for macroeconomic fundamental indicators in the selected Sharia law countries

	N	Mean	Std. Dev.	Minimum	Maximum
GDP	221	103.683	58.377	1	207
Gross national savings	221	29.956	13.522	9.432	67.500
Government debt levels	221	37.718	23.781	0	105.800
Inflation rate	221	5.556	3.803	-1.800	20.792
Foreign direct investment	221	4.600	0.622	3.0342	5.923

5.2.5.1 Gross national savings

A country's general savings have an impact on the levels of economic growth through the financial sector as savings are directed to investment into viable projects with the highest return. However, without sound corporate governance, realising economic growth can only remain an illusion, as corruption and managerialism instead flourish, thus divesting the benefits of savings. The study reported a mean score of 29.956 and a standard deviation of 13.522 for gross national savings among the selected countries in the Sharia law region. The standard deviation of 13.522 has an implication of very high differentials of gross national savings among the selected countries in the Sharia law region, which is manifested by a minimum value of 9.432 and a maximum value of 67.500. These figures demonstrate that corporate governance in the Sharia law region is set in an unstable macroeconomic domain, as the spasmodic performance in gross national savings in the Sharia law countries renders their economic growth irregular.

5.2.5.2 Government debt levels

Government borrowing can lead to fiscal crises which endanger firm corporate governance, as firms are unable to function in an environment of inadequate public goods and services. And so it is crucial for government debt levels to be maintained within sustainable levels in order to keep firms from running away from investing in the economy. The research found a mean score of 37.718 and a standard deviation of 23.781 for the government debt levels among the selected countries within the Sharia law region. The standard deviation score of 23.781 is indicative of very high variations of government debt levels within the Sharia law region. This is evinced by a minimum value of 0 and a maximum of 105.800. It can therefore be inferred that corporate governance in the Sharia law region prevails in an unstable macroeconomic environment, which does not augur well for the general levels of economic growth among the selected Sharia law countries.

5.2.5.3 Inflation rate

Unceasing general price increases render corporate governance ineffective in as far as efficient resource allocation is concerned and this is because price changes of this magnitude redirect signals for major economic decisions. This research calculated the mean inflation score of 5.556 and the standard deviation of 3.803 for the selected Sharia law countries. The standard deviation score reflects small variations of inflation among the selected countries in the Sharia

law region, and this is visible from the minimum value of -1.800 and a maximum value of 20.792 among these countries. These results are a testament to the existence of corporate governance in the Sharia law region in an environment of macroeconomic unpredictability, whereby the high price instabilities discourage firm investment that is crucial to contribute to the economic growth of these countries.

5.2.5.4 Foreign direct investment

Foreign companies hugely investing into local companies not only directly boost the recipient country's economic growth, but as well leads to the re-shaping of the existing local firm governance standards as local firms look to attract more invest into their operations. This is promoted by Blomstrom *et al.* (1994a) who suggest that local firms find themselves recalibrating their governance structures in a bid to stay competitive and suitable for willing investors, hence making foreign direct investment a crucial determinant of firm-level corporate governance. This research found the mean score of 4.600 for foreign direct investment among the selected Arab countries. Judging from the proxy scale of 1 to 7, where values tending towards 7 are a sign of high foreign direct investment, it is understood that firms domiciled in the Sharia law region receive a considerable amount of foreign direct investment. Also, a standard deviation score of 0.622 exhibits very minimal differences in the amounts of foreign direct investment that firms receive among the countries based in the Sharia law region. This then implies that corporate governance in the Sharia law countries prevails in an environment of stable macroeconomics. Furthermore, it means that there would be much more inflows of foreign direct investment into companies in the Sharia law countries but that due to the instabilities discovered in government debt levels above, investors seem to fear to operate in a less enabled economic environment by the national governments concerned.

In summary, the macroeconomic descriptive statistics reveal that corporate governance in the Sharia law countries is set in a territory of macroeconomic volatility. The next descriptive statistics displayed in Tables 5.5 to 5.8 are derived from 14 OECD countries, which are a total of 238 annual observations of corporate governance and economic growth, for an analysis period of 17 years (2002 – 2018). Economic growth is the regressand while corporate governance is the major explanatory variable. Other regressors used to determine the relationships are financial development, institutional environment and the macroeconomic fundamentals, whose descriptive statistics are presented in the succeeding sections.

Table 5. 5 Descriptive statistics for corporate governance indicators in the selected OECD countries

	N	Mean	Std. Dev.	Minimum	Maximum
GDP	238	100.848	62.435	1	212
Efficacy of corporate boards	238	5.616	0.287	4.962	6.337
Protection of minority shareholders	238	5.393	0.417	4.358	6.371
Companies disclosure practices	238	4.201	0.841	1	5.124

5.2.6 OECD region economic growth characteristics

Table 5.5 features annual GDP absolute figures adapted to billions of international dollars using purchasing power parity rates. From Table 5.5, it can be seen that the selected OECD countries obtained a mean score of \$100.848 billions as their average economic growth. The standard deviation of 62.435 intimates the existence of high volatility in the values reported for economic growth of the selected countries in the OECD region. This is evidenced by a minimum economic growth figure of \$1 billion and a maximum of \$212 billions. This therefore shows that there are outliers in the reported figures of economic growth for the selected OECD countries.

5.2.7 Corporate governance indicators

As with the displays of corporate governance descriptive statistics for the Sharia law countries, this section itemises the proxies of efficacy of corporate boards, protection of minority shareholders and companies disclosure practices for the selected OECD countries in the following sub-sections.

5.2.7.1 Efficacy of corporate boards

The study reported a mean score of 5.616 for the companies degree of efficacy of boards of directors among the selected OECD countries. With a proxy scale of 1 to 7, where values nearing 7 signify very effective corporate boards, it can be assumed that on average, corporate boards in the selected OECD countries are very effective and have a firm grip on the company management and therefore guarantee firm efficient resource allocation. The standard deviation score of 0.287 implies very low variations in the level of corporate boards effectiveness among the selected OECD countries. This is scaffolded by a minimum value of 4.962 and a maximum

value of 6.337. Therefore, it is understood that the selected OECD countries are characterised by healthy corporate governance, based on very efficient corporate boards.

5.2.7.2 Protection of minority shareholders

A mean score of 5.393 for the extent to which minority shareholders are protected is reported by the study for the selected OECD countries. Going by the proxy scale of 1 to 7, with values tending to 7 indicating strong protection of minority shareholders, it is reasoned that on average, the selected OECD countries offer strong protection of minority shareholders. The standard deviation score of 0.417 is indicative of low variations in the strength of protection of minority shareholders among the selected OECD countries. Thus it is logical to infer that the selected OECD countries are characterised by sound corporate governance typified by strong protection of minority shareholders.

5.2.7.3 Companies disclosure practices

The research recorded a mean score of 4.201 as the average level of disclosure practices by firms among the selected OECD countries. A proxy scale of 1 to 7, where values tending to 7 show high disclosure practices by firms, it is reckoned that firms in the selected OECD countries exercise moderately high disclosure tendencies. The standard deviation score of 0.841 implies that there are low inconsistencies in the extent to which firms in the selected OECD countries adhere to disclosure routines. But the minimum value of 1 and a maximum of 5.124 speak to high variations in the reported companies disclosure practices among firms in the OECD region. This could be due to the variations in the country-to-country disclosure stipulations.

Accordingly, the corporate governance descriptive statistics for the selected OECD countries showed generally sound corporate governance practices. The subsequent section details the descriptive statistics of the financial development indicators.

Table 5. 6 Descriptive statistics for financial development indicators in the selected OECD countries

	N	Mean	Std. Dev.	Minimum	Maximum
GDP	238	100.848	62.435	1	212
Soundness of banking sector	238	5.972	0.694	3.577	6.896
Regulation of securities exchanges	238	5.554	0.379	4.315	6.276
Financing through equity markets	238	4.947	0.520	3.613	6.389

5.2.8 Financial development indicators

The following sub-sections display the proxies of the soundness of banking sector, regulation of securities exchanges and financing through equity markets for the selected OECD countries.

5.2.8.1 Soundness of banking sector

This proxy recorded a mean score of 5.972 as the average level of banking sector development among the selected OECD countries. Using the yardstick of 1 to 7, where values approaching 7 denote a very developed banking sector, it is therefore deduced that the selected OECD countries are of a very sound and reliable banking sector. The standard deviation score of 0.694 signifies that there are minimal differentials in the levels of the banking sector soundness among the selected OECD countries.

These findings allow the conclusion that corporate governance in the OECD countries is a highly developed financial sector. For that reason, the existence of a very sound banking sector among these OECD countries facilitates the implementation of corporate governance practices.

5.2.8.2 Regulation of securities exchanges

This investigation recorded a mean score of 5.554 as the average for degree of the regulation of securities exchanges among the selected OECD countries. Going by the indicator guidelines of 1 to 7, in which values approaching 7 represent well regulated securities, it is inferred that capital markets in the OECD are well-regulated and so they offer a protected investor atmosphere. The standard deviation of 0.379 is symbolic of very low variations in the levels of securities exchange regulations among the selected OECD countries, which is reinforced by a minimum value of 4.315 and a maximum value of 6.276.

These outcomes lead to the submission that corporate governance flourishes in a background of high financial development. It can be interpreted therefore that the OECD region is characterised by well-regulated securities exchanges that enable the implementation of corporate governance.

5.2.8.3 Financing through equity markets

The study reported a mean score of 4.947 as the average extent to which firms in the selected OECD region are able to finance their investments and operations via equity markets. The proxy scale of 1 to 7 is used, in which figures tending towards 7 point to the easy access of finance by firms via equity markets. It is therefore interpreted that firms in the OECD region find it easy to finance their operations through capital markets. The standard deviation of 0.520 is expressive of the insignificant differentials in the levels among which the firms in the OECD region are able to finance through equity markets. These observations suggest that corporate governance in the OECD region exists in an environment that is financially developed, typified by firms' easy access of finance via equity markets.

In summary, the descriptive statistics for the OECD region in this section point toward the existence of corporate governance and economic growth in a well-developed financial sector. The section that follows provides the descriptive statistics of the institutional environmental factors, as another explanatory variable.

Table 5. 7 Descriptive statistics for institutional environment indicators in the selected OECD countries

	N	Mean	Std. Dev.	Minimum	Maximum
GDP	238	100.848	62.435	1	212
Investor protection	238	6.291	1.618	3.000	9.700
Efficiency of legal framework (settling disputes)	238	3.986	0.872	0.000	4.905
Efficiency of legal framework (challenging regulations)	238	4.01	0.844	0.000	4.913
Judicial independence	238	6.037	0.488	4.757	6.818
Property rights	238	5.963	0.314	4.977	6.606

5.2.9 Institutional environment indicators

The sub-sections that follow are a presentation of the proxies of investor protection, efficiency of legal framework (settling disputes and challenging regulations), judicial independence and property rights for the selected OECD countries.

5.2.9.1 Investor protection

This research reported a mean score of 6.291 as the average strength of the level of investor protection offered among the selected countries of the OECD. With a proxy scale of 0 to 10, where values nearing 10 interpreted as very strong investor protection offered, it can be concluded that the OECD region offers some degree of investor protection though still not robust enough. The standard deviation score of 1.618 reflects the high differentials in the levels of investor protection offered within the selected OECD countries. This is supported by the high range value of 6.7, to exemplify the unevenness in the range of investor protection scale.

These outcomes lead to the conclusion that corporate governance flourishes and prospers in a background of low institutional quality. It can be interpreted therefore that the selected countries in the OECD region are characterised by a weaker investor protection that obstructs the implementation of corporate governance.

5.2.9.2 Efficiency of legal framework (settling disputes)

A mean score of 3.986 represents the average level of efficiency of legal framework in settling disputes among the selected OECD countries. Gauging from a measurement scale of 1 to 7, where values tending towards 7 reflect efficiency of the legal framework in settling private disputes, it offers the impression that legal framework in the OECD region is somewhat laid-back in attending to private disputes which renders it still incompetent. The standard deviation score of 0.872 points to the low variations in the levels of courts efficiency in settling private disputes among the selected OECD countries. However, a minimum value of 0.000 and a maximum of 4.905 contradicts the earlier conclusions of an even spread in efficiency to underscore the huge variations in the OECD region.

These results lead to the conclusion that corporate governance prospers in a background of low institutional quality. It can be interpreted therefore that the selected countries in the OECD

region are characterised by a less efficient legal framework in settling disputes, which impedes the implementation of corporate governance.

5.2.9.3 Efficiency of legal framework (challenging regulations)

The report recorded a mean score of 4.01 as the average level of efficiency rating in which private entities are able to challenge the legality of the laws systems where they do business. A proxy gauge of 1 to 7, where values approaching 7 mean high efficiency, enables the conclusion that private firms in the selected OECD countries hardly challenge the existing legal framework in which they operate. The standard deviation score of 0.844 suggests that there are not many differences in the ability of companies within the selected OECD countries to challenge the prevailing legal framework. The minimum value of 0.000 and a maximum of 4.913 however, speak to large discrepancies in the levels of ability of firms to challenge existing laws.

These findings lead to the submission that corporate governance exists in an environment of low institutional quality. It can be interpreted therefore that the selected countries in the OECD region are characterised by a less efficient legal framework in which firms hardly challenge the existing laws, which obstructs the implementation of corporate governance.

5.2.9.4 Judicial independence

This research revealed a mean score of 6.037 as the average level of judicial independence among the selected OECD countries. Judging from the proxy scale of 1 to 7, where values tending towards 7 interpreted to be of high judicial independence, it can be concluded that the selected OECD countries are of very high judicial independence. A standard deviation score of 0.488 exhibits low variations in the levels of judicial independence among the selected OECD countries. This is backed by the minimum value of 4.757 and a maximum of 6.818.

These results lead to the submission that corporate governance exists in a background of very powerful institutions. It can be interpreted therefore that the selected countries in the OECD region are characterised by a very high judicial independence that facilitates the implementation of corporate governance.

5.2.9.5 Property rights

A mean score of 5.963 was reported as the average level of property rights security among the selected OECD countries. Using a proxy scale of 1 to 7, in which values tending towards 7 are viewed as very secure property rights, it is understood that there is a presence of very secure property rights among the selected OECD countries. A standard deviation score of 0.314 signifies very low variations in the levels of property rights security among the selected OECD countries. This is encouraged by a minimum value of 4.977 and a maximum of 6.606. This bares proof therefore that corporate governance in the selected OECD countries exists in an environment of robust institutional framework. Very secure property rights thus influence the application of corporate governance.

The next section details the descriptive statistics for macroeconomic fundamentals recognised to be another explanatory variable that determines corporate governance in order to influence economic growth.

Table 5. 8 Descriptive statistics for macroeconomic fundamental indicators in the selected OECD countries

	N	Mean	Std. Dev.	Minimum	Maximum
GDP	238	100.848	62.435	1	212
Gross national savings	238	23.212	6.820	8.480	41.355
Government debt levels	238	58.534	25.712	6.100	107.351
Inflation rate	238	1.699	1.028	-1.140	4.493
Foreign direct investment	238	5.058	0.298	4.218	5.878

5.2.10 Macroeconomic fundamental indicators

The sub-sections that follow present the proxies of gross national savings, government debt levels, inflation rate and foreign direct investment for the selected OECD countries.

5.2.10.1 Gross national savings

The research reported a mean score of 23.212 and a standard deviation of 6.820 for the gross national savings among the selected countries in the OECD region. The standard deviation of 6.820 is representative of huge variations in the average levels of gross national savings in the OECD region. This is supported by a minimum value of 8.480 and a maximum value of 41.355

for this indicator. This is an attestation that corporate governance among the selected OECD countries exists in an environment of unstable macroeconomics.

5.2.10.2 Government debt levels

The study showed a recorded a mean score of 58.534 and a standard deviation score of 25.712 for the government debt levels among the selected countries of the OECD region. The standard deviation demonstrates high variations in the levels of government debt, as manifested by the minimum value of 6.100 and a maximum value of 107.351 for levels of government debt among the selected OECD countries. This then suggests that corporate governance among the selected OECD countries is set in an environment of macroeconomic instability.

5.2.10.3 Inflation rate

The study found a mean score of 1.699 and a standard deviation score of 1.028 for the selected OECD countries. Also, it reported a minimum value of -1.140 and a maximum value of 4.493, all of which convey the existence of very high and very low rates of inflation among the selected OECD countries. These results suggest that corporate governance in the selected OECD countries exists in an environment of macroeconomic instabilities.

5.2.10.4 Foreign direct investment

The study reported a mean score of 5.058 as the average level of foreign direct investment received by the selected countries in the OECD region. With a proxy scale of 1 to 7, where values tending towards 7 are interpreted as high foreign direct investment received, it can be concluded that the selected countries of the OECD region receive a high amount of foreign direct investment. The standard deviation of 0.2978 exhibits the very few variations in the amount of foreign direct investment received among the selected OECD countries. This is fortified by the reported minimum value of 4.218 and a maximum of 5.878. These results are proof therefore that corporate governance in the selected OECD countries exists in an environment of macroeconomic stability. The high levels of the general foreign direct investment received among these OECD countries direct the application of corporate governance.

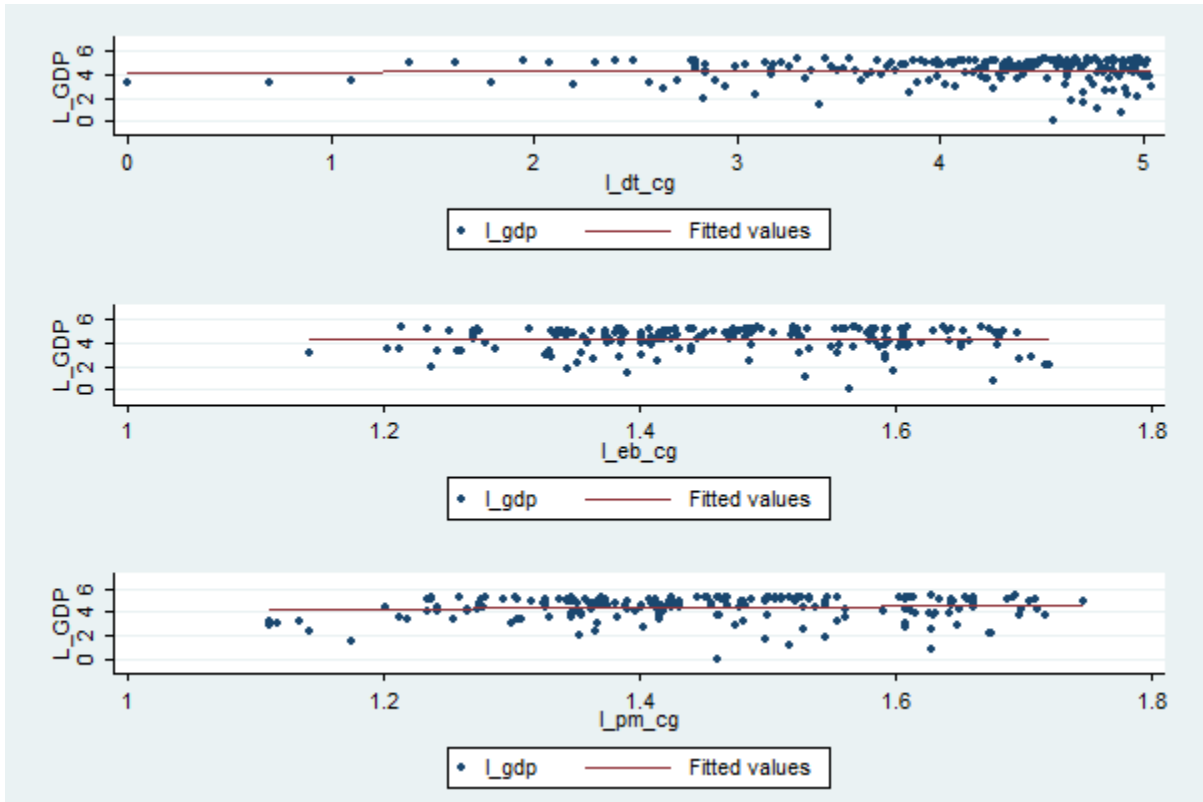


Figure 5. 1 Scatter plot for corporate governance and economic growth for the selected Sharia law countries

Figure 5.1 above is a composite set of scatter plots for the corporate governance indicators of company disclosure practices (dt), efficacy of corporate boards (eb) and protection of minority shareholders (pm) for the selected Sharia law countries. It can be seen that the scatter plot for the efficacy of corporate boards displays scattered points along the horizontal line of best fit. It also shows that the dependent variable of economic growth (GDP) has an inelastic relationship with changes in the variable of efficacy of corporate boards. This non-linear relationship between economic growth and efficacy of corporate boards depicts that even though the selected Sharia law countries are characterised by a moderate application of board efficacy, as shown by the descriptive statistics above, its contribution to the economic growth of this region is still weak. In contrast, the scatter plots for both company disclosure practices as well as protection of minority shareholders illustrate a weak positive relationship with economic growth. This characterises this relationship that as company disclosure practices and protection of minority shareholders are enhanced, there is a boost in the region’s economic growth.

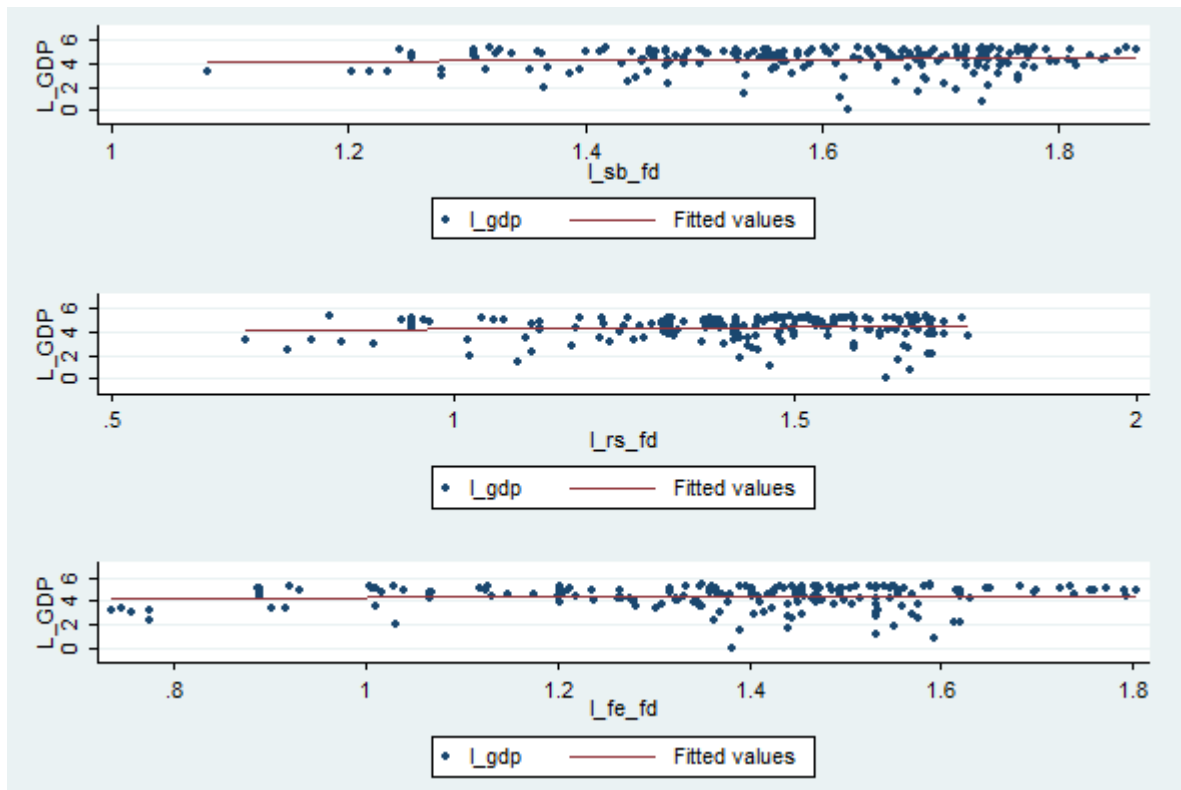


Figure 5. 2 Scatter plot for financial development and economic growth for the selected Sharia law countries

The illustration in Figure 5.2 above represents scatter plots for the financial development indicators of soundness of banking sector (sb), regulation of securities exchanges (rb) and financing through the equity markets (fe). It is seen that the three financial development indicators have a weak positive relationship with the dependent variable of economic growth (GDP). This means that the region's economic growth escalates with increases in the values of banking sector soundness, improvements in the regulation of securities exchanges and more financing obtained via equity markets, for each indicator observed. It should, however, be noticed that the increases in these regressor variables are disproportionate to that in the economic growth.

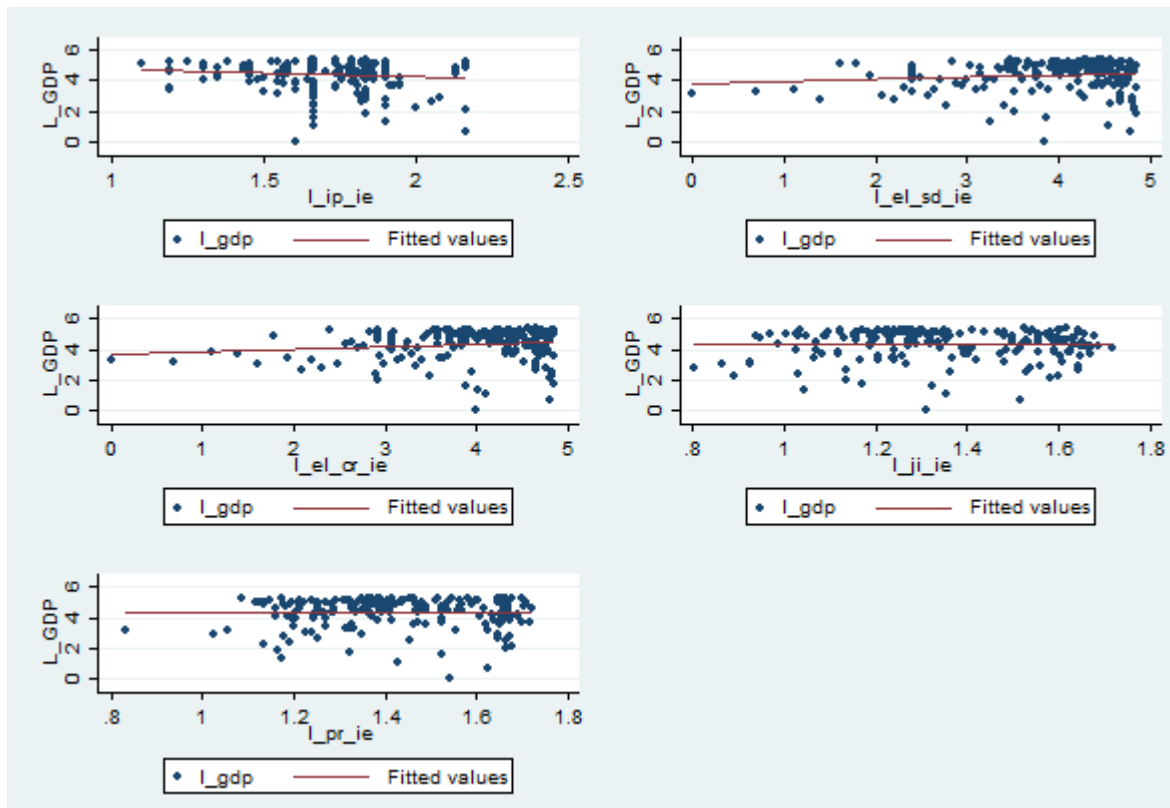


Figure 5.3 Scatter plot for institutional environment and economic growth for the selected Sharia law countries

The diagram above shows Figure 5.3, which is composed of scatter plots for the institutional environmental factors of investor protection (ip), efficiency of legal framework in settling disputes (el_sd), efficiency of legal framework in challenging regulations (el_cr), judicial independence (ji) and property rights (pr) with the dependent variable of economic growth (GDP). It can be seen that the proxies of judicial independence and property rights have a non-linear relationship with the dependent variable of economic growth. The improvements in both property rights and the independence of the judiciary have no effect on the economic growth of the selected Sharia law countries. In contrast, there is a positive relationship between the efficiency of legal framework (in both levels of settling disputes and challenging regulations) and economic growth, albeit disproportionately. This weak positive relationship means that improvements in the efficiency of the legal framework goes hand-in-hand with increased economic growth among the selected Sharia law countries. However minute the positive effect is, these discoveries are consistent with the research by Barro (1991), Posner (1997) and Scully (1988) that improvements in the efficiency of legal framework are associated with high economic growth levels. The scatter plot for investor protection and GDP though shows the existence of a weak negative relationship. Here, improvements in the levels of investor

protection strength are linked with a less than proportionate decrease in the economic growth levels among the selected Sharia law countries.

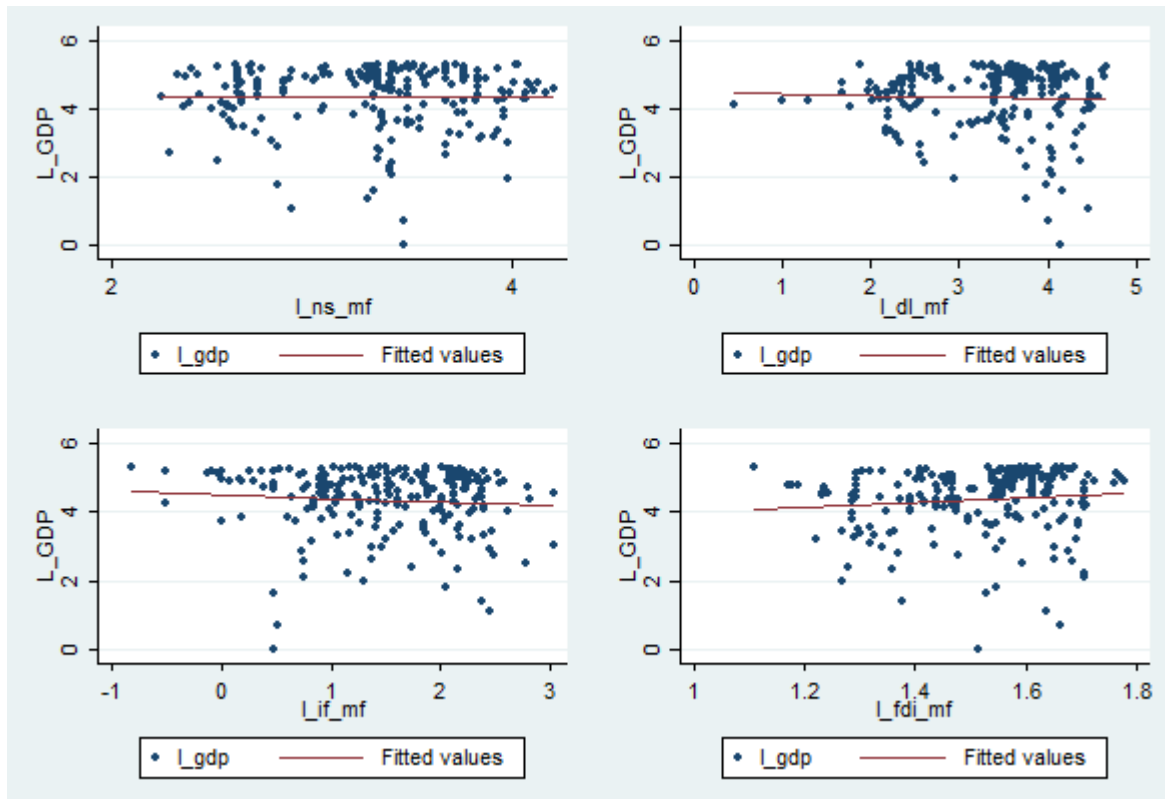


Figure 5. 4 Scatter plot for macroeconomic fundamental indicators and economic growth for the selected Sharia law countries

Figure 5.4 above demonstrates scatter plots for the macroeconomic fundamental variables and economic growth for the selected Sharia law countries. These macroeconomic indicators are; gross national savings (ns), government debt levels (dl), inflation (if) and foreign direct investment (fdi). The scatter plot for gross national savings and economic growth illustrates a non-linear relationship, where the economic growth is inelastic to increases in the levels of gross national savings among the selected Sharia law countries. The scatter diagram for inflation and economic growth reveals a weak negative relationship. This thereby translates as that an increase in inflation among the selected Sharia law countries is followed by a less than proportionate decrease in the levels of economic growth. These particular facts are supported by a number of studies which publish the existence of a negative relationship between inflation and economic growth. These include; Andres & Hernando (1997), Barro (1996), De Gregorio (1992), Friedman (1956), Gylfason (1998, 1991), Saeed (2007) and Stockman (1981). Similarly, the scatter plot for government debt levels and economic growth exhibits a weak

negative relationship. A decrease in the government debt levels if followed by a less than proportionate increase in economic growth, as backed by research from Aizenman *et al.* (2007), Checherita-Westphal & Rother (2012), Poirson *et al.* (2004), Rangarajan & Srivastava (2005) and Saint-Paul (1992). The scatter plot for foreign direct investment and economic growth reveals a weak positive relationship. This can be construed as with increases in the levels of foreign direct investment into the selected Sharia law countries, there is a less than proportionate increase in the levels of economic growth. This resonates with the findings of Almfraji and Almsafir (2014) who after review of literature find a positive relationship between foreign direct investment and economic growth.

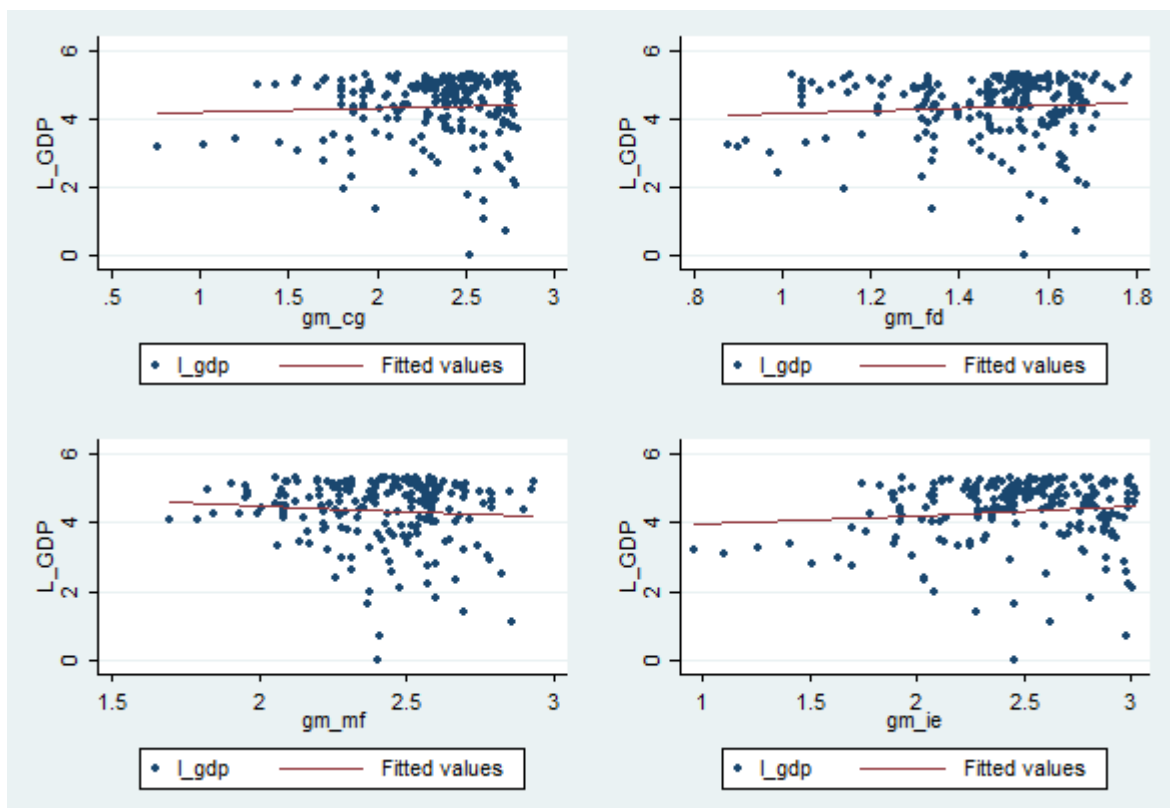


Figure 5. 5 Scatter plot for aggregated indicators of corporate governance, financial development, institutional environment, macroeconomic fundamentals against economic growth for selected Sharia law countries

It can be seen in Figure 5.5 above that the scatter plot for aggregated indicators of corporate governance and economic growth displays a slightly upward sloping line of best fit. This shows a weak positive relationship between the aggregated corporate governance and economic growth. By implication, the combined improvements in the companies disclosure practices, efficacy of corporate boards and protection of minority shareholders among the selected Sharia law countries increases the economic growth of the region. This is in agreement with the

studies of Acemoglu *et al.* (2001) and Diallo (2017) who document positive correlation between corporate governance and economic growth. The scatter plot for the aggregated financial development proxies and economic growth shows a moderately upward sloping line of best fit. This translates into a weak positive correlation between the consolidated improvements in the soundness of banking sector, regulation of securities exchanges as well as financing through equity markets *vis-à-vis* economic growth. These findings are encouraged by similar results from Beck *et al.* (2000), Demirgüç-Kunt & Levine (2008), Gupta *et al.* (2010), Winkler (1998), among others that publish positive correlation between financial development and economic growth. As well the scatter plot for aggregated institutional environmental indicators and economic growth shows a marginally upward sloping line of best fit. This suggests that there is a weak positive correlation between the aggregated institutional environmental factors and economic growth. The enhancements in the institutions of the selected Sharia law countries are followed by less than proportionate increase in the general levels of economic growth. These discoveries are consistent with research by Yildirim and Gokalp (2016) who established that strong institutions are associated with greater economic growth for a country. The last scatter graph in Figure 5-5 shows a faintly downward sloping line. This is a manifestation of a weak negative correlation between the aggregated macroeconomic fundamental variables and economic growth. It therefore means that corrections in the amalgamated macroeconomic variables lessen the general economic growth levels among the selected Sharia law countries.

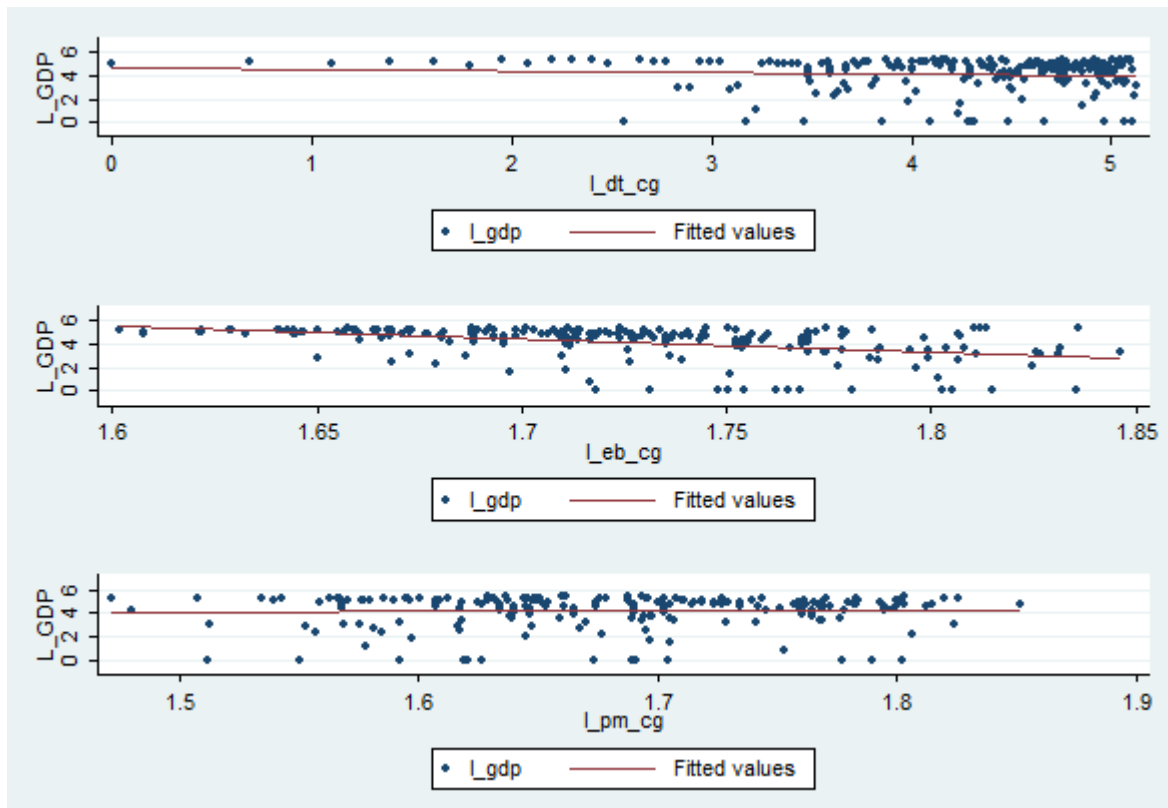


Figure 5. 6 Scatter plot for corporate governance and economic growth for the selected OECD countries

Figure 5.6 above presents the scatter diagrams for the disaggregated corporate governance indicators and economic growth for the selected OECD countries. The scatter plot for companies disclosure practices and economic growth displays a marginally downward slope of the line of best fit. This evinces the weak negative correlation between corporate governance and economic growth. And so this allows the conclusion that advancements in the companies disclosure practices is followed by decreased economic growth levels among the selected OECD countries. The scatter plot for the efficacy of corporate boards and economic growth shows a downward sloping line of best fit, with points scattered close to the line. This explains that there is a strong negative correlation between efficacy of corporate boards and economic growth. Here, the more effective the corporate boards become there is a more than a proportionate decrease in the economic growth. This could be interpreted as that there is need for firms in the OECD region to devise measure of board effectiveness that will contribute to improved firm financial performance in order to add to the overall regional economic growth. The scatter plot for protection of minority shareholders and economic growth displays an inelastic relationship. This non-linear relationship is observed whereby the increases in the

strength of protection provided to minority shareholders bears no response in the dependent variable of economic growth for these selected OECD countries.

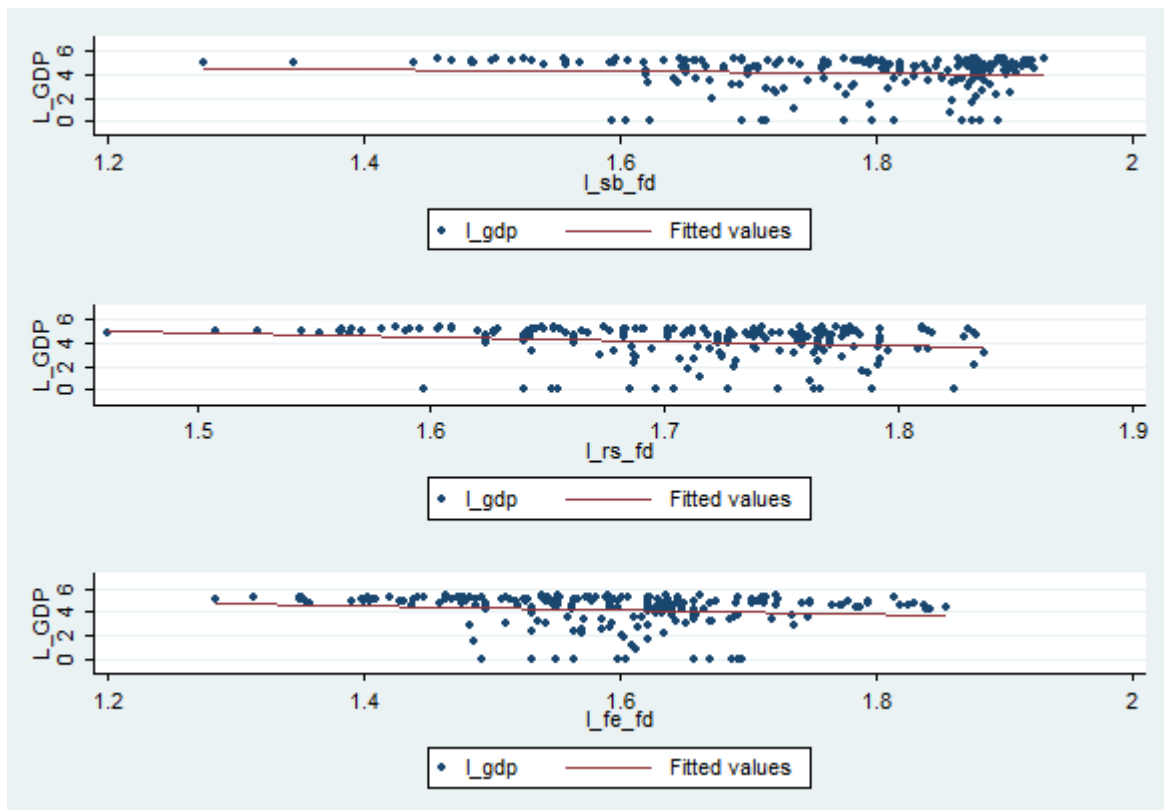


Figure 5. 7 Scatter plot for financial development indicators and economic growth for the selected OECD countries

The scatter plots for the financial development proxies of soundness of banking sector, regulation of securities exchanges and financing through equity markets, each against the dependent variable of economic growth are shown in Figure 5.7 above. All the three scatter plots in the diagram display a slightly downward sloping line of best fit, with many points crowded along the line. This therefore suggests a weak negative correlation between soundness of the banking sector, regulation of securities exchanges, financing through equity markets and the economic growth for the selected OECD countries. It is therefore expressed that advancements in the soundness of the banking sector, regulation of securities exchanges and financing through equity markets are accompanied with less than proportionate reductions in the economic growth levels among the selected OECD countries.

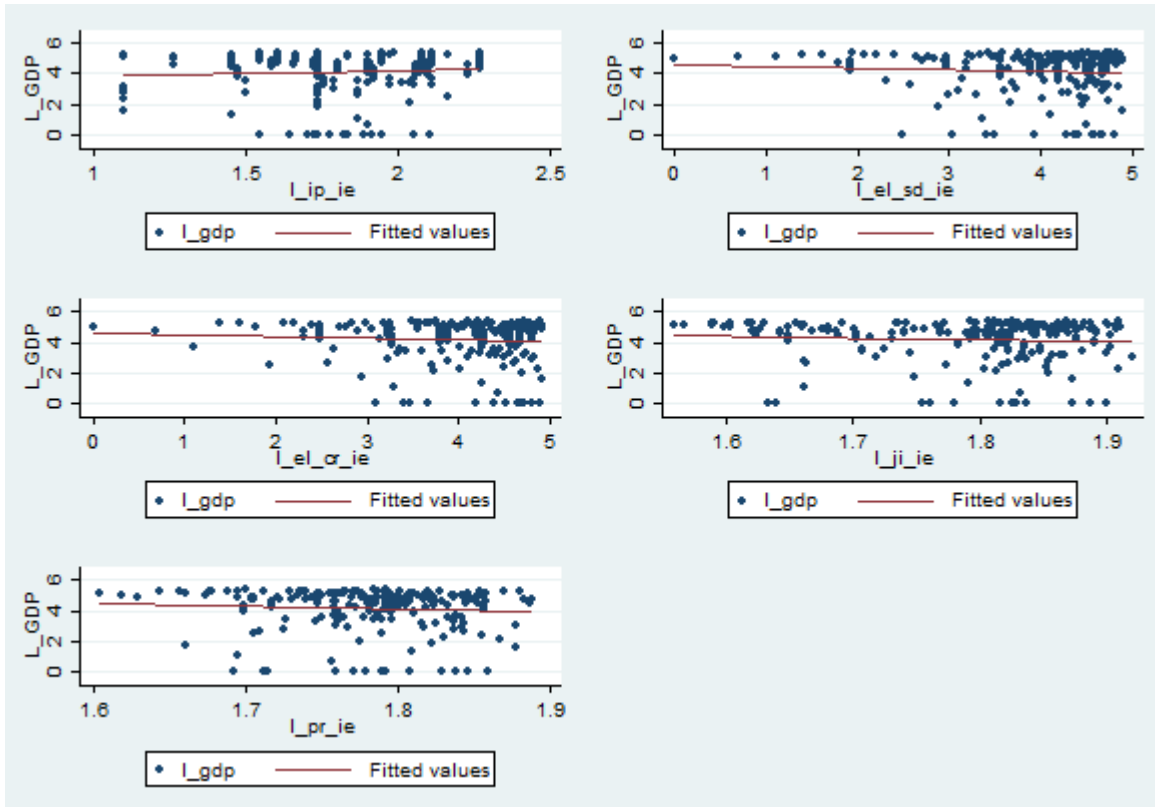


Figure 5. 8 Scatter plot for the institutional environmental factors and economic growth for the selected OECD countries

The above diagram is an illustration of the relationships between economic growth and the institutional environmental factors for the selected OECD countries. The scatter diagram for investor protection and economic growth shows a moderately upward sloping line of best fit, signifying the existence of a weak positive correlation between investor protection and economic growth for the selected OECD countries. As investor protection strengthens, the level of economic growth also increases, albeit disproportionately. These results are ratified by Haidar (2009) who confirms that countries with stronger investor cover are inclined to grow faster economically *vis-à-vis* countries of weak investor protection. The scatter plots for the two proxies of efficiency of legal framework (settling disputes and challenging regulations) against economic growth exhibit slightly downward sloping lines of best fit. In this instance, this is indicative of a weak negative correlation between the efficiency of legal framework and economic growth. The more the legal frameworks in these selected OECD countries advance, the economic growth decreases in smaller measure. The scatter plot for judicial independence and economic growth also shows a weak negative correlation, which gives the interpretation that more judicial independence is followed by reductions in the OECD economic growth

levels. This is echoed with the weak negative relationship shown by the scatter plot for property rights and economic growth.

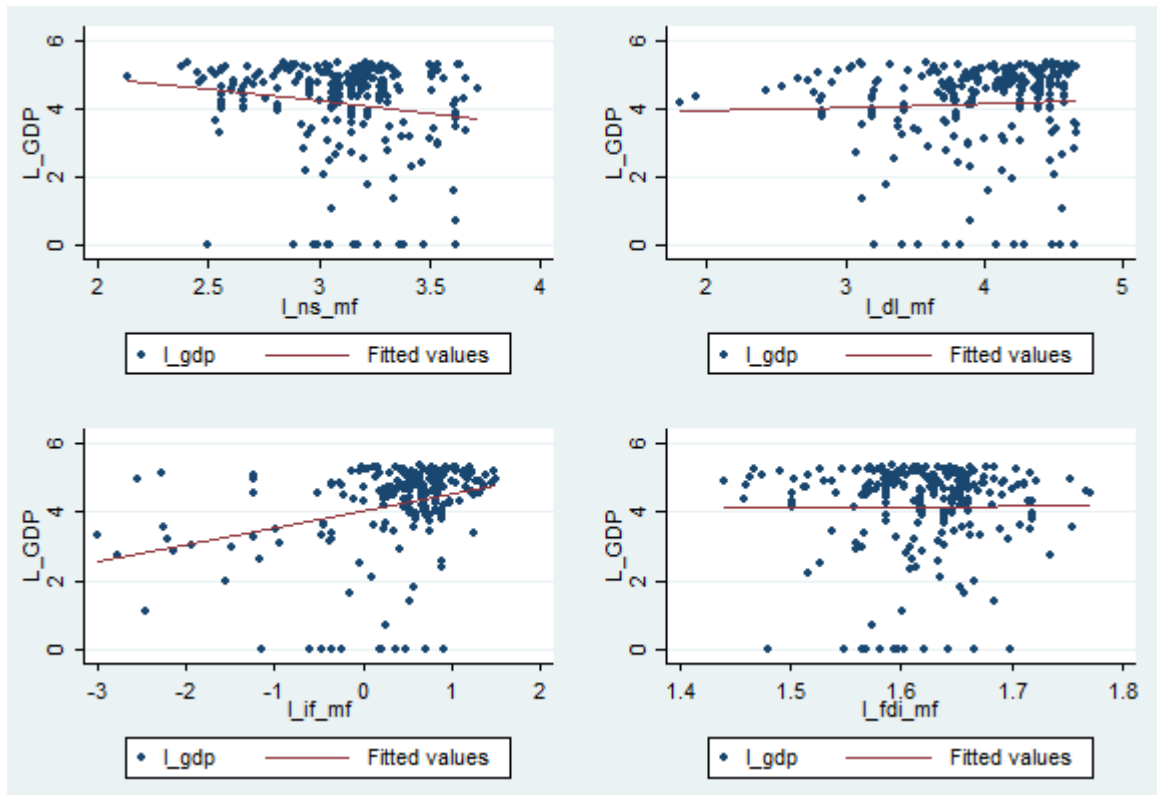


Figure 5.9 Scatter plot for macroeconomic fundamental variables and economic growth for the selected OECD countries

Figure 5.9 above is a display of the relationships among the macroeconomic fundamental variables and economic growth. The scatter plot for gross national savings and economic growth shows a downward sloping line of best fit. This intimates a negative correlation between gross national savings and economic growth for the selected OECD countries. The scatter plot for government debt levels and economic growth shows a slightly upward trending line of best fit. This is emblematic of a weak positive correlation between government debt levels and economic growth. The most probable explanation for this relationship could be that increased government borrowing results in further investment that is associated with a less than proportionate increase in the economic growth. The scatter plot for inflation rate and economic growth shows strongly upward trending line of best fit with points amassed around the line, particularly with positive inflation figures. This signifies a strong positive correlation between inflation rate and economic growth. Increases in the inflation rates among the selected OECD countries are followed by a proportionate increase in the economic growth. A more probable

explanation for this relation could be that firms in these economies produce more output into the market so as to profit from relatively increasing general price levels. This is consistent with the findings of Malik & Chowdhury (2001), Paul *et al.* (1997), Shi (1999) and Tobin (1965) who argue that there is a positive relationship between inflation and economic growth. The scatter plot for foreign direct investment and economic growth shows the existence of a non-linear relationship, where increases in the foreign direct investment is met with an inelastic response in the levels of economic growth for the selected OECD countries.

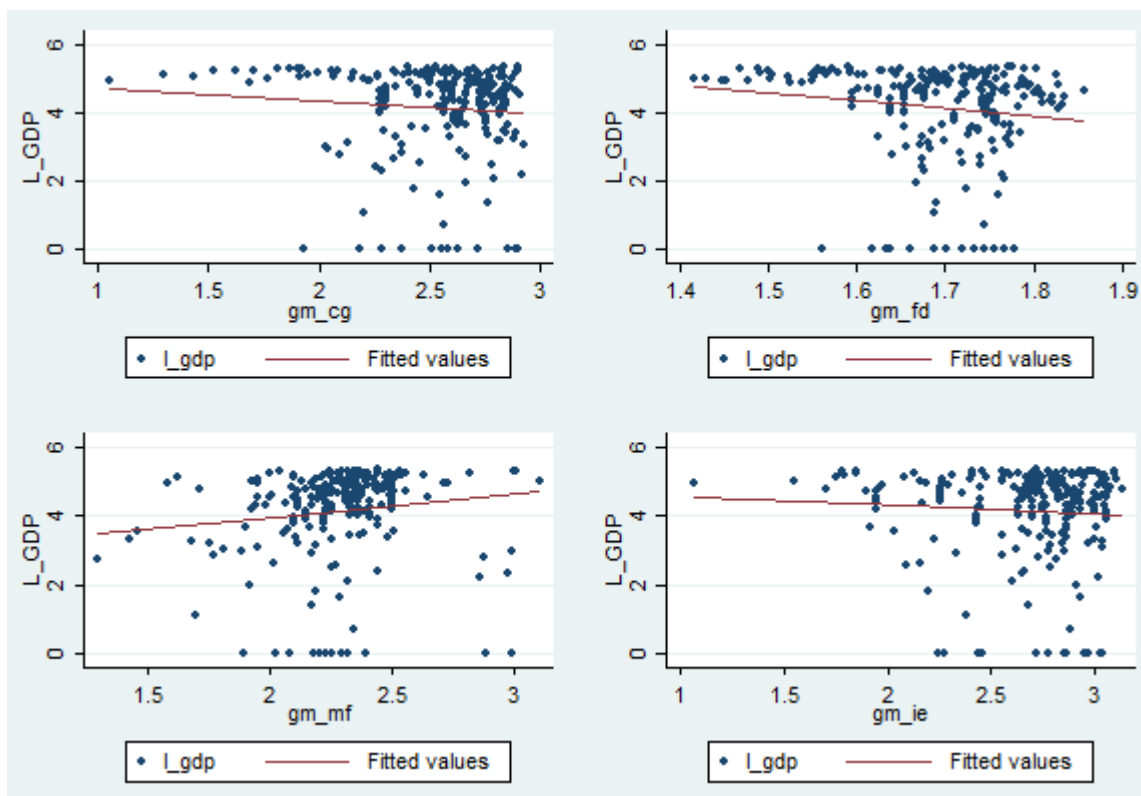


Figure 5.10 Scatter plot for aggregated corporate governance, financial development, institutional environment and macroeconomic fundamental factors against economic growth for the selected OECD countries

It can be seen in Figure 5.10 directly above that the scatter plot for aggregated indicators of corporate governance and economic growth displays a slightly downward sloping line of best fit. This shows a weak negative correlation between the aggregated corporate governance and economic growth. This implies that the collective improvements in the companies disclosure practices, efficacy of corporate boards and protection of minority shareholders among the selected OECD countries are matched with less than proportionate decreases in the economic growth of the region. The scatter plot for the aggregated financial development proxies and economic growth shows a downward sloping line of best fit. This translates into a negative

correlation between the consolidated improvements in the soundness of banking sector, regulation of securities exchanges and financing through equity markets in relation to the economic growth levels among the selected OECD countries. With regards the relationship between aggregated macroeconomic fundamental factors and economic growth, the scatter plot in Figure 5.10 vividly shows an upward sloping line. This is a straightforward manifestation of a positive correlation between the aggregated macroeconomic fundamental variables and economic growth. Evidence from the graph suggests that favourable corrections in the aggregated macroeconomics variables are associated with increased economic growth. And lastly, the scatter plot for aggregated institutional environmental indicators and economic growth shows a marginally downward sloping line of best fit. This hints at the existence of a weak negative correlation between the aggregated institutional environmental factors and economic growth. The developments in the institutions of the selected OECD countries are followed by less than proportionate decrease in the general levels of economic growth.

5.2.11 Development of corporate governance overtime

5.2.11.1 Panel summary statistics for the corporate governance variables and economic growth

This section details the panel summary statistics for corporate governance, financial development, institutional environment, macroeconomic fundamentals and economic growth for both the OECD and Sharia law countries.

Table 5. 9 Panel data summary descriptive statistics for disaggregated corporate governance for the selected Sharia law countries

Variable		Mean	Std. Dev.	Minimum	Maximum	Observation
Economic growth	Overall	4.363	0.930	0	5.333	N = 221
	Between		0.331	3.954	4.778	n = 13
	Within		0.873	-0.172	5.717	T = 17
Companies disclosure practices	Overall	4.084	0.881	0	5.037	N = 221
	Between		0.823	2.469	4.962	n = 13
	Within		0.383	1.615	5.465	T = 17
Efficacy of corporate boards	Overall	1.474	0.124	1.141	1.721	N = 221
	Between		0.118	1.268	1.681	n = 13
	Within		0.051	1.292	1.620	T = 17
Protection of minority shareholders	Overall	1.452	0.145	1.110	1.748	N = 221
	Between		0.129	1.239	1.660	n = 13
	Within		0.065	1.241	1.663	T = 17

The results show that the overall economic growth score among the selected Sharia law countries for the period has a mean of 4.363. It can be seen that there is a low variation in the overall economic growth as evidenced by a standard deviation of 0.930 in relation to the overall mean. This low variation in the overall economic growth translates into the existence of minute discrepancies in the levels of economic growth over time between individual specific countries, as supported by the low standard deviation of 0.331 for the between countries. This research however also, revealed a big gap in the overall economic growth levels, with a minimum of 0 and a maximum of 5.333. It can thus be concluded that a big chunk of these variations emanates from the within individual specific countries over the period, as exhibited by a minimum of -0.172 and a maximum of 5.717. This is again backed by higher within variation of 0.873 *vis-à-vis* the lower between variation of 0.331.

With respect to corporate governance, the study revealed negligible differences in the overall mean score of the corporate governance indicators of efficacy of corporate boards and protection of minority shareholders, although the indicator of companies disclosure practices is the outlier among the three. The research discovered that the between variations for all the corporate governance indicators is higher than that of the within variations, which may be interpreted that differences in corporate governance practices among countries come from the distant overall mean score of companies disclosure practices. This can then be understood that the countries in the Sharia law region did not apply changes in their companies disclosure practices in the period under study. These discoveries are consistent with those of Musa (2002)

that characterise Sharia regions to be of dismally low transparency and information disclosure levels. Therefore, the levels of companies disclosure practices do not experience significant changes among the Sharia law countries or that it is merely few countries that have effectuated changes in the companies disclosure practices.

Table 5. 10 Panel data summary descriptive statistics for financial development indicators for the selected Sharia law countries

Variable		Mean	Std. Dev.	Minimum	Maximum	Observation
Economic growth	Overall	4.363	0.930	0	5.333	N = 221
	Between		0.331	3.954	4.778	n = 13
	Within		0.873	-0.172	5.717	T = 17
Aggregate corporate governance	Overall	2.336	0.362	0.758	2.804	N = 221
	Between		0.343	1.686	2.748	n = 13
	Within		0.149	1.408	2.860	T = 17
Soundness of banking sector	Overall	1.594	0.156	1.081	1.866	N = 221
	Between		0.145	1.302	1.773	n = 13
	Within		0.070	1.366	1.794	T = 17
Regulation of securities exchanges	Overall	1.421	0.222	0.696	1.756	N = 221
	Between		0.217	0.931	1.699	n = 13
	Within		0.073	1.186	1.705	T = 17
Financing through local equity markets	Overall	1.383	0.221	0.735	1.803	N = 221
	Between		0.209	0.885	1.619	n = 13
	Within		0.0916	1.199	1.715	T = 17

Financial development is presumed to lead to economic growth via its impact on corporate governance. Table 5.10 above shows that the overall mean score for the financial development indicators of soundness of banking sector, regulation of securities exchanges and financing through local equity markets are approximated at 1.594, 1.421 and 1.383 respectively. This indicates minimal differences in these proxies save for higher difference in the soundness of banking sector, which explains variations in the financial development among the Sharia law countries. Also, the study reveals that the between discrepancies of the financial development indicators is higher than that of the within variations. A further suggestion that again, financial development in the Sharia law region differs depending on the country, particularly due to significant contribution of weak securities exchange regulations that lead to low financing through equity markets. This is backed by the larger between estimations of 0.217 and 0.209 for regulation of securities exchanges and financing through local equity markets respectively, as compared to lower between variation for soundness of banking sector. These marginal upgrades in the laws of securities exchanges that lead to low equity market financing account

for changes in country-specific differences in financial development, which is cause for alarm as financial development is a precursor for economic growth.

Table 5. 11 Panel data summary descriptive statistics for institutional environmental factors for the selected Sharia law countries

Variable		Mean	Std. Dev.	Minimum	Maximum	Observation
Economic growth	Overall	4.363	0.930	0	5.332	N = 221
	Between		0.331	3.954	4.778	n = 13
	Within		0.873	-0.172	5.717	T = 17
Aggregate corporate governance	Overall	2.334	0.362	0.758	2.804	N = 221
	Between		0.343	1.686	2.748	n = 13
	Within		0.149	1.408	2.860	T = 17
Investor protection	Overall	1.719	0.223	1.099	2.163	N = 221
	Between		0.207	1.345	2.134	n = 13
	Within		0.100	1.338	1.965	T = 17
Efficiency of legal framework (settling disputes)	Overall	3.937	0.821	0	4.844	N = 221
	Between		0.721	2.179	4.778	n = 13
	Within		0.438	1.358	5.601	T = 17
Efficiency of legal framework (challenging regulations)	Overall	3.953	0.810	0	4.852	N = 221
	Between		0.682	2.656	4.780	n = 13
	Within		0.474	1.297	5.442	T = 17
Judicial independence	Overall	1.351	0.207	0.802	1.719	N = 221
	Between		0.191	1.060	1.643	n = 13
	Within		0.094	1.075	1.608	T = 17
Property rights	Overall	1.420	0.176	0.831	1.723	N = 221
	Between		0.167	1.201	1.667	n = 13
	Within		0.071	1.047	1.630	T = 17

The institutional environment in which firms carry out business determines the effectiveness of corporate governance in impacting a country's economic growth. Table 5.11 presents the overall mean scores for the institutional environmental factors of investor protection, efficiency of legal framework (settling disputes), efficiency of legal framework (challenging regulations), judicial independence and property rights that recorded estimates as 1.719, 3.937, 3.953, 1.351 and 1.420 correspondingly. These mean scores revealed high variations among the institutional environmental factors for the selected Sharia law countries over time. Additionally, table 5.11 emphasises that the between variations are significantly higher than the within variations. The implication here is that there has not been implementation of noteworthy changes in the

institutional framework within the Sharia law countries overtime, rather it is the time-honoured differentials for each country in the institutional and legal systems. This evidence coresponds with Alvarez *et al.* (2018), Dollar & Kraay (2003) and Yildirim and Gokalp (2016) who all document country differences in institutions and legal systems. The findings form the table mean that the appreciated institutional environmental differences among the selected Sharia law countries emanate primarily from the time-invariant country-specific characteristics, with the major contributor for the between countries being efficiency of legal framework (settling disputes) that reported a standard deviation score of 0.721, followed by efficiency of legal framework (challenging disputes) with 0.682. This therefore calls upon authorities within the Sharia law region to address the efficiency of legal framework in order to buoy investor confidence which will stimulate investment and hence further economic growth.

Table 5. 12 Panel data summary descriptive statistics for macroeconomic fundamental indicators for the selected Sharia law countries

Variable		Mean	Std. Dev.	Minimum	Maximum	Observation
Economic growth	Overall	4.363	0.930	0	5.333	N = 221
	Between		0.331	3.954	4.778	n = 13
	Within		0.873	-0.172	5.717	T = 17
Gross national savings	Overall	3.292	0.478	2.244	4.212	N = 221
	Between		0.457	2.620	3.944	n = 13
	Within		0.186	2.496	3.720	T = 17
Government debt levels	Overall	3.383	0.789	0.451	4.661	N = 221
	Between		0.759	2.148	4.488	n = 13
	Within		0.292	1.514	4.542	T-bar = 16.923
Inflation rate	Overall	1.490	0.739	0-.814	3.035	N = 218
	Between		0.609	0.369	2.344	n = 13
	Within		0.449	-0.261	2.794	T = 16. 769
Foreign direct investment	Overall	1.516	0.140	1.110	1.779	N = 221
	Between		0.135	1.282	1.706	n = 13
	Within		0.053	1.337	1.692	T = 17

Findings from Table 5.12 revealed high differentials in the overall economic growth for the selected Sharia law countries, as manifested by a minimum of 0 and a maximum of 5.333. There are negligible overall variations in the gross national savings and government debt levels, as well as the overall variations in inflation rate and foreign domestic investment. Therefore the variation in the macroeconomic indicators in the Sharia law countries results from differentials between inflation rate, foreign direct investment and gross national savings, government debt levels. And these variations between these two blocks of macroeconomic

indicators arise from differences between countries. This therefore prompts the conclusion that there have not been substantial changes in gross national savings and government debt levels between the Sharia law countries for the period of study, in relation to inflation and foreign direct investment.

Table 5. 13 Panel data summary descriptive statistics for disaggregated corporate governance for the selected OECD countries

Variable		Mean	Std. Dev.	Minimum	Maximum	Observation
Economic growth	Overall	4.166	1.321	0	5.357	N = 238
	Between		0.255	3.741	4.406	n = 14
	Within		1.297	-0.239	5.746	T = 17
Companies disclosure practices	Overall	4.201	0.841	0	5.124	N = 238
	Between		0.640	2.879	4.967	n = 14
	Within		0.571	1.322	6.118	T = 17
Efficacy of corporate boards	Overall	1.724	0.051	1.602	1.846	N = 238
	Between		0.031	1.679	1.770	n = 14
	Within		0.041	1.638	1.847	T = 17
Protection of minority shareholders	Overall	1.682	0.078	1.472	1.852	N = 238
	Between		0.067	1.567	1.795	n = 14
	Within		0.043	1.517	1.846	T = 17

Table 5.13 is a presentation of the descriptive summary statistics of economic growth and corporate governance proxies of companies disclosure practices, efficacy of corporate boards and protection of minority shareholders, for the selected OECD countries. The results showed high variations in the overall economic growth levels, as characterised by a standard deviation of 1.321. As regards corporate governance, the study reported minimal differentials in the overall mean scores of both efficacy of corporate boards and protection of minority shareholders. However, companies disclosure practices exhibited major variations in the overall mean score as compared to the other two indicators. This then can be construed that the selected OECD countries did not apply major changes in their companies disclosure practices overall. Upon further scrutiny, it was discovered that high overall variations in the companies disclosure practices in the region came from between countries. It is thus the country factors that explain the overall variations in companies disclosure practices. These findings are supported by those of Doidge *et al.* (2007) that country attributes such as the level of economic and financial development, investor safeguard by the existing law systems, among others are vital components in explaining variances in transparency and corporate governance.

Table 5. 14 Panel data summary descriptive statistics for financial development indicators for the selected OECD countries

Variable		Mean	Std. Dev.	Minimum	Maximum	Observation
Economic growth	Overall	4.166	1.321	0	5.357	N = 238
	Between		0.255	3.741	4.406	n = 14
	Within		1.297	-0.239	5.746	T = 17
Aggregate corporate governance	Overall	2.536	0.312	1.055	2.925	N = 238
	Between		0.240	2.071	2.839	n = 14
	Within		0.208	1.520	3.220	T = 17
Soundness of banking sector	Overall	1.780	0.124	1.275	1.931	N = 238
	Between		0.099	1.607	1.902	n = 14
	Within		0.080	1.448	2.097	T = 17
Regulation of securities exchanges	Overall	1.712	0.070	1.462	1.837	N = 238
	Between		0.056	1.621	1.792	n = 14
	Within		0.044	1.531	1.856	T = 17
Financing through local equity markets	Overall	1.593	0.105	1.285	1.855	N = 238
	Between		0.052	1.488	1.654	n = 14
	Within		0.093	1.362	1.847	T = 17

Empirical results from Table 5.14 show that there are high variations in the overall mean scores among the financial development indicators of soundness of banking sector, regulation of securities exchanges and financing through local equity markets estimated as 1.780, 1.712 and 1.593 respectively. Worth noting though is that the between variations account for only the differentials in soundness of banking sector and regulation of securities exchanges, yet the variations within each country are the force behind variations in financing through local equity markets. It can therefore be interpreted that differences in the financial development in the selected OECD countries are attributed to differences in the country-specific equity markets laws and the level of banking development, coupled with periodic changes in the local equity market financing levels in each country. The selected countries of the OECD region thus did not receive significant changes in their equity market laws as well as in their levels of banking development. These observations of insignificant changes in the financial development among the OECD countries are unsettling in respect to the contribution of financial development to economic growth via corporate governance.

Table 5. 15 Panel data summary descriptive statistics for institutional environmental factors for the selected OECD countries

Variable		Mean	Std. Dev.	Minimum	Maximum	Observation
Economic growth	Overall	4.166	1.321	0	5.357	N = 238
	Between		0.255	3.741	4.406	n = 14
	Within		1.297	-0.239	5.746	T = 17
Aggregate corporate governance	Overall	2.536	0.312	1.055	2.925	N = 238
	Between		0.240	2.071	2.839	n = 14
	Within		0.208	1.520	3.220	T = 17
Investor protection	Overall	1.804	0.271	1.099	2.272	N = 238
	Between		0.269	1.243	2.233	n = 14
	Within		0.078	1.463	2.266	T = 17
Efficiency of legal framework (settling disputes)	Overall	3.986	0.872	0	4.905	N = 238
	Between		0.832	1.771	4.702	n = 14
	Within		0.338	2.215	5.215	T = 17
Efficiency of legal framework (challenging regulations)	Overall	4.007	0.844	0	4.913	N = 238
	Between		0.752	2.255	4.802	n = 14
	Within		0.431	1.644	5.263	T = 17
Judicial independence	Overall	1.794	0.084	1.560	1.920	N = 238
	Between		0.080	1.624	1.889	n = 14
	Within		0.033	1.659	1.886	T = 17
Property rights	Overall	1.784	0.053	1.605	1.888	N = 238
	Between		0.044	1.698	1.857	n = 14
	Within		0.032	1.685	1.893	T = 17

Table 5.15 above displays the institutional environmental indicators of investor protection, efficiency of legal framework (settling disputes), efficiency of legal framework (challenging regulations), judicial independence and property rights. The study reported negligible variations in investor protection, judicial independence and property rights, which revealed an overall mean score of 1.804, 1.794 and 1.784 respectively. Negligible differences are also evidenced in the efficiency of legal framework, in which the level of settling disputes registered 3.986 while challenging regulations recorded 4.007. Further analysis revealed the existence of higher between variations for all the indicators of the institutional environment. This is therefore construed to mean that it is the country-specific characteristics that explain the differentials in the efficiency of legal framework with regards to settling disputes and challenging regulations, unlike investor protection, judicial independence and property rights.

Therefore, this necessitates the conclusion that the selected countries in the OECD region did not implement major changes in their legal framework *vis-à-vis* investor protection, judicial independence and property rights within the institutional environment as a whole.

Table 5. 16 Panel data summary descriptive statistics for macroeconomic fundamental indicators for the selected OECD countries

Variable		Mean	Std. Dev.	Minimum	Maximum	Observation
Economic growth	Overall	4.166	1.321	0	5.357	N = 238
	Between		0.255	3.741	4.406	n = 14
	Within		1.297	-0.239	5.746	T = 17
Gross national savings	Overall	3.100	0.305	2.138	3.722	N = 238
	Between		0.296	2.556	3.620	n = 14
	Within		0.104	2.361	3.390	T = 17
Government debt levels	Overall	3.945	0.546	1.808	4.676	N = 238
	Between		0.529	2.777	4.585	n = 14
	Within		0.192	2.976	4.596	T = 17
Inflation rate	Overall	0.362	0.825	-2.996	1.503	N = 227
	Between		0.385	-0.649	0.857	n = 14
	Within		0.750	-3.218	1.899	T-bar = 16.214
Foreign direct investment	Overall	1.619	0.059	1.439	1.771	N = 238
	Between		0.050	1.500	1.718	n = 14
	Within		0.034	1.500	1.742	T = 17

The OECD summary descriptive statistics for macroeconomic fundamental indicators are displayed in Table 5.16 above. The study demonstrated the prevalence of major variations in the overall mean scores for the macroeconomic fundamental indicators of gross national savings, government debt levels, inflation rate and foreign direct investment, which were estimated as 3.100, 3.945, 0.362 and 1.619. It is important to note that it is the between variations that significantly contribute to these major variations in the macroeconomic fundamentals, whereas, the within variations only explain changes in the rates of inflation. And so the time variances for the rates of inflation per country as well as the country-specific differentials in the gross national savings, government debt levels and foreign direct investment account for variations in the OECD macroeconomics. Thus, it is right to infer that there have not been major changes in the OECD individual countries' macroeconomics in terms of gross national savings, government debt levels and foreign direct investment, coupled with insignificant changes in inflation rates for each country.

5.3 THE NATURE OF THE RELATIONSHIPS BETWEEN CORPORATE GOVERNANCE VARIABLES AND ECONOMIC GROWTH IN SELECTED OECD COUNTRIES

This section clarifies the utilisation of multiple regression techniques to ascertain whether corporate governance as well as its determinants of financial development, institutional environmental factors and macroeconomics affect economic growth among the selected OECD countries. The effect of corporate governance on economic growth together with that of the additional regressors was examined at both disaggregated and aggregated stages. Disaggregated data analysis approach aimed at understanding the effect of a single proxy for an explanatory variable on economic growth. The use of aggregated data analysis in comparison intended to examine the effect of the collective power of each explanatory variable on economic growth. A panel data model was estimated for pooled, fixed and random effects and paralleled against each other so as to assess the magnitude and reliability of the results on the nature of the relationships among variables that affect economic growth.

This study is cognizant of endogeneity issues associated with multiple regression and therefore was prompted to capture the effect of one or more variables presumed to have an effect on the observed outcome. Thus the model specifications aimed at capturing the effect of corporate governance together with the additional explanatory variables of financial development, institutional environment and macroeconomics on economic growth, as detailed in this section. The study utilised the log-log format interpretation of the various regression results as done by Cebula *et al.* (2016).

5.3.1 Determining the nature of the relationships between corporate governance variables and economic growth in selected OECD countries using the Pooled Effects Model

This section provides findings from the Pooled Effects Model (PEM) that uses the Ordinary Least Squares (OLS) estimation to measure the nature of the relationships among variables of corporate governance together with additional explanatory variables of financial development, institutional environmental factors and macroeconomics on economic growth. The OLS is based on the assumptions of similarity of cross sections without detail differentials, exogeneity of all regressors in the equation, constant variance of error term distributions, among others. The OLS test has four explanatory variables in the regression equation that aim to reach the

findings for research question two: What is the nature of the relationships between corporate governance variables and economic growth in the selected OECD countries?

The findings from this OLS model estimates give a chance to compare with those in section 5.4 for the selected Sharia law countries. The PEM examines the effect of corporate governance as represented by companies disclosure practices, efficacy of corporate boards and protection of minority shareholders on economic growth in the selected OECD countries. The model consists also of the additional explanatory variables to check whether their inclusion influences the effect of corporate governance on economic growth. These variables are; institutional environmental factors (investor protection, efficiency of legal framework in settling disputes, efficiency of legal framework in challenging regulations, judicial independence and property rights), macroeconomic fundamental factors (gross national savings, government debt levels, inflation rate and foreign direct investment), financial development (soundness of banking sector, regulation of securities exchanges and financing through equity markets).

Table 5. 17 Pooled OLS estimation for corporate governance, institutional environment, macroeconomic fundamentals, financial development and economic growth in the selected OECD countries

Economic growth	Coef.	Robust Std. Err.	t	P> t	[95% Conf. Interval]	
Companies disclosure practices	0.005	0.223	0.02	0.982	-0.492	0.502
Efficacy of corporate boards	-17.469	3.113	-5.61	0.000	-24.193	-10.745
Protection of minority shareholders	7.251	2.323	3.12	0.008	2.232	12.270
Soundness of banking sector	1.880	0.877	2.14	0.051	-0.014	3.775
Regulation of securities exchanges	-2.702	1.782	-1.52	0.153	-6.551	1.147
Financing through equity markets	-0.970	1.091	-0.89	0.390	-3.325	1.386
Gross national savings	-0.501	0.300	-1.67	0.118	-1.149	0.146
Government debt levels	0.067	0.158	0.42	0.680	-0.275	0.409
Inflation rate	0.065	0.138	0.47	0.646	-0.233	0.362
Foreign direct investment	2.256	1.763	1.28	0.223	-1.554	6.066
Investor protection	-0.496	0.656	-0.76	0.463	-1.914	0.921
Efficiency of legal framework (settling disputes)	0.378	0.258	1.46	0.167	-0.180	0.936
Efficiency of legal framework (challenging regulations)	-0.499	0.201	-2.48	0.028	-0.934	-0.065
Judicial independence	1.168	1.866	0.63	0.542	-2.864	5.201
Property rights	1.095	2.972	0.37	0.718	-5.326	7.516
Cons	19.876	8.142	2.44	0.030	2.287	37.464
OLS Linear regression						
	Number of obs	=	227			
	F(12, 13)	=	.			
	Prob > F	=	.			
	R-squared	=	0.366			
	Root MSE	=	1.044			

(Std. Err. adjusted for 14 clusters in cou_num)

The findings from Table 5.17 emanate from the OLS estimation of the four-variable model with the assumption of homogeneity among the cross-sections to determine the nature of the relationships in the variables of corporate governance as influenced by the institutional environment, macroeconomic factors as well as financial development on the effect of economic growth in selected OECD countries. It should be noted that all proxies to the explanatory variables as well the independent variable were log-transformed, and thus the values seen in Table 5.17 are not absolute. The study considered the level of significance of 5%.

With regards corporate governance, the results showed that improvements in both efficacy of corporate boards and protection of minority shareholders recorded significant effects on economic growth with values of -17.469 and 7.251 correspondingly. A one per cent improvement in the corporate governance indicator of board efficacy resulted in a 17.469% decrease in economic growth for the selected OECD countries at $p < 0.05$, and this is a strong negative inverse relationship. This means that overall improvements in proficiency of the board of directors did not add to the firm financial performance which is expected to increase their contribution to economic growth of the countries featured. The coefficient estimate for protection of minority shareholders conveys an increase of 7.251% in economic growth for the sampled OECD countries also at $p < 0.05$, which spells a strong positive and significant relationship. This is interpreted as the legal guarantees of protection of minority shareholders from expropriation via firm-level governance acting as incentives for investment which causes an overall upsurge in the economic growth among the sampled OECD countries, in agreement with the findings of Xiao (2013) that legal shareholder protection promotes economic growth of countries. The coefficient estimate for companies disclosure practices recorded a 0.005% increase in economic growth. This indicates a weak positive but insignificant relationship between firm disclosure routines and economic growth at $p > 0.05$. These results are supported with those of other studies including Bushman *et al.* (2004) and Rajan & Zingales (1998) that increased firm disclosure is linked with higher economic growth values.

The financial development indicators of soundness of banking sector, regulation of securities exchanges and financing through equities markets are included in the OLS model to check their influence on the effect of corporate governance on economic growth in selected OECD countries. The study found that the regression coefficients of financial development have an insignificant impact on the effect of corporate governance on economic growth. It was

discovered that the coefficients of regulation of securities exchanges and financing through equity markets show a decrease in economic growth among selected OECD countries by 2.702% and 0.970% respectively, all at $p > 0.05$. Accordingly, the study deduces that the negative inverse relationship of the financial development indicators of regulation of securities exchanges and financing through equity markets with economic growth in the OECD region is negligible. The plausible explanation for this occurrence points to limited corporate governance among the sampled OECD countries in which the improvements in financial development are not reflected in the reported economic growth figures. This is consistent with the discoveries of Barth *et al.* (2012, 2006) that ineffective corporate governance elements limit the flow of funds to projects with the highest return. However, Čihák *et al.* (2013) also cite scenarios where financial development does not lead to increased economic growth stemming from augmented transactional costs due to imperfections in financial markets. The coefficient estimate for soundness of banking sector showed an increase in economic growth by 1.880%. This means that there is a positive relationship between soundness of banking sector and economic growth within the selected OECD countries, but at $p = 0.051$, which is still not significant. This evidence on the whole points to the conclusion that financial development does not have a significant relationship with economic growth among the OECD countries.

Turning to the macroeconomic environment in which firms operate, the OLS model measured the influence of the macroeconomic fundamental factors of gross national savings, government debt levels, inflation rate and foreign direct investment and found that their regression coefficients have an insignificant impact on the effect of corporate governance on economic growth. The regression coefficients of government debt levels, inflation rate and foreign direct investment reported a positive but insignificant impact on the effect of corporate governance on economic growth, all at $p > 0.05$. A one per cent increase in government debt levels is seen to bring about 0.067% increase in economic growth, which may be construed to be associated with increased borrowing of both government and firms which spur improvements of both government and overall firm investment in the economy thereby witnessing increased economic growth. A 1% rise in inflation rates among the selected OECD countries accounted for 0.065% increments in economic growth. This points to lower inflationary levels nudging firms to increase their investment in order to profit from rising prices at which point the aggregate demand remains inelastic and hence increased profitability and general income levels. These results are endorsed by those of Malik & Chowdhury (2001), Paul *et al.* (1997), Shi (1999) and Tobin (1965), who establish a positive correlation between inflation and

economic growth. Increased economic growth effects of 2.256% were also recorded as attributable to single percentage increment in foreign direct investment. This pronouncement of a positive relationship between foreign direct investment and economic growth is seconded by the works of Almfraji & Almsafir (2014), Obwona (2001) and Yao (2006). However, the regression coefficient of gross national savings reported a negative and insignificant influence on the effect of corporate governance on economic growth. A 1% increase in gross national savings results in a 0.501% decrease in economic growth. This thus conveys the existence of a negative inverse relationship between gross national savings and economic growth among the OECD countries, due to $p > 0.05$. These results are the antithesis of the submissions of Mason (1988) who documents that a country with higher savings rate will have higher factor productivity levels, *ceteris paribus*. There is clear evidence therefore that all macroeconomic fundamentals in the OECD region have an insignificant relationship with economic growth, bringing about a rejection of the null hypothesis and accepting the alternative hypothesis.

In relation to the institutional environment which also determines firm-level corporate governance, the OLS model estimated the influence of the factors of investor protection, efficiency of legal framework in settling disputes, efficiency of legal framework in challenging regulations, judicial independence and property rights. Apart from the regression coefficient of efficiency of legal framework in challenging regulations, all the institutional environmental factors revealed an insignificant impact on the effect of corporate governance on economic growth. The significant relationship between efficiency of legal framework in challenging regulations and economic growth is negative, at $p = 0.028$. In this way, the research established that a one per cent upgrade in the efficiency of legal framework in challenging regulations resulted in a 0.499% reduction in economic growth. Such a finding is shocking and contrary to previously found research and it could be that investors feared to invest and hence reduced economic growth due to political uncertainties such as protectionist policies touted to drive upcoming elections or referenda among some of the selected OECD countries. It was discovered that judicial independence, property rights and efficiency of legal framework in settling disputes all have a positive but insignificant effect on economic growth, at $p > 0.05$. A realised 1 per cent advancement in judicial independence among the selected OECD countries leads to a 1.168% increase in economic growth. These results are comparable to those of Melton (2014) that judicial independence and all its attributes should be growth-enhancing. An improvement of one per cent in property rights results in a 1.095% increase in economic growth among the sampled OECD countries, as approved by the work of Angeles (2011) that the

safeguard of property rights is a vital constituent to a country's economic growth and development. Also, increased economic growth effects of 0.378% were observed resulting from a one per cent boost in efficiency of legal framework in settling disputes. The study revealed that investor protection has a negative effect on economic growth, which speaks of the existence of an inverse relationship with economic growth. Strengthening of one per cent in the levels of investor protection instead lead to a 0.496% decrement in the economic growth among the sampled countries of the OECD, at $p > 0.05$. This is an obverse finding to that of Haidar (2009) who established that countries with stronger protection of investors report higher economic growth.

The overall pooled OLS coefficient for R^2 is estimated at 0.366, which indicates that 36.6% of the changes in the economic growth of the sampled OECD countries is explained by all the explanatory variables of corporate governance, financial development, macroeconomics and the institutional environment. These factors are insufficient in accounting for economic growth if cross-sectional differentials are not involved. Thus, it requires the application of the fixed effects transformation estimation in order to account for the country-specific differences.

5.3.2 Determining the nature of the relationships between corporate governance variables and economic growth in selected OECD countries using the Fixed Effects Model

This study estimated a Fixed Effects Model (FEM) as a consideration for cross-sectional heterogeneity to determine the nature of the relationships among variables of corporate governance together with additional explanatory variables, with their accompanying proxy measures of financial development, institutional environment and macroeconomics on economic growth. The FEM regression model also has four explanatory variables in the equation that aim to reach the findings for research question two, contemplated in section 5.3. The findings of this PEM model estimates will be compared with those in section 5.4 for the selected Sharia law countries. This model is cognisant of the existence of time-invariant unobserved country-specific characteristics that are connected to the regressors. The unobserved cross-sectional heterogeneity was tested by the fixed effects estimator on the relationships among the explanatory variables to determine the effect on economic growth.

Table 5. 18 Fixed effects model estimation for corporate governance, institutional environment, macroeconomic fundamentals, financial development and economic growth in the selected OECD countries

Economic growth	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
Companies disclosure practices	0.160	0.221	0.72	0.471	-0.276	0.596
Efficacy of corporate boards	-18.492	2.774	-6.67	0.000	-23.963	-13.021
Protection of minority shareholders	3.456	2.632	1.31	0.191	-1.734	8.646
Soundness of banking sector	1.559	1.404	1.11	0.268	-1.210	4.327
Regulation of securities exchanges	-1.614	2.517	-0.64	0.522	-6.577	3.349
Financing through equity markets	-1.250	1.343	-0.93	0.353	-3.899	1.399
Gross national savings	-1.895	0.776	-2.44	0.015	-3.425	-0.365
Government debt levels	-0.815	0.410	-1.99	0.048	-1.624	-0.006
Inflation rate	0.031	0.117	0.26	0.793	-0.199	0.261
Foreign direct investment	5.365	2.452	2.19	0.030	0.530	10.200
Investor protection	-1.359	1.263	-1.08	0.283	-3.849	1.132
Efficiency of legal framework (settling disputes)	0.243	0.308	0.79	0.431	-0.364	0.850
Efficiency of legal framework (challenging regulations)	-0.567	0.229	-2.48	0.014	-1.018	-0.115
Judicial independence	1.846	3.210	0.58	0.566	-4.484	8.177
Property rights	2.215	3.660	0.61	0.546	-5.002	9.431
Cons	28.463	7.593	3.75	0.000	13.489	43.438

Sigma_u	0.823
Sigma_e	1.004
rho	0.402 (fraction of variance due to u_i)

F test that all u_i=0: F(13, 198) = 2.30	Prob > F = 0.007
Fixed-effects (within) regression	Number of obs = 227
Group variable: cou_num	Number of groups = 14

R-sq:	Obs per group:
within = 0.429	min = 11
Between = 0.085	avg = 16.2
Overall = 0.205	max = 17

F(15,198) = 9.91	Prob > F = 0.000
Corr(u_i, Xb) = -0.628	

The findings from Table 5.18 above represent the fixed effects estimation of the four-variable model while observing heterogeneity among the cross-sections. It can be seen that among the corporate governance measures for the selected OECD countries, companies disclosure practices as well as protection of minority shareholders have a positive but insignificant effect on economic growth, all at $p > 0.05$. Economic growth effects of 0.160% were reported due to a one per cent improvement in overall firms' disclosure routines in the region, while 3.456% incremental economic growth effects were realised due to a one per cent increase strengthening in the protection of minority shareholders. This positive relationship between corporate governance and economic growth among the two proxies is inconsistent with the discoveries of the OLS estimation above, in which the relationship with protection of minority shareholders is significant. However, the study revealed that there is a negative inverse and significant relationship between efficacy of corporate boards and economic growth, in agreement with the OLS estimation. It was confirmed that the economic growth of the selected OECD countries reduced by 18.492% due to a one per cent improvement in effectiveness of the firms' boards of directors.

The country-specific financial development effects revealed similar results to those of the OLS estimation as they are insignificant to the economic growth of the selected OECD countries. The coefficients of regulation of securities exchanges and financing through equity markets reported a decrease in economic growth by 1.614% and 1.250% respectively, all at $p > 0.05$. The application of the fixed effects estimator however showed a slight increment in the economic growth even though the effect is still negative due to a 1% increase in the robustness in the regulation of securities exchanges, unlike in the OLS model. The opposite is reported for financing through equity markets which reported further decrement in the economic growth effects when compared with the Pooled OLS estimation. The coefficient of soundness of banking sector showed an increase in the economic growth effects by 1.559%, still at $p > 0.05$. This depicted a slight reduction in the positive relationship with economic growth when compared with the OLS model. The slight differentials in the economic growth effects between the FEM and OLS for the financial development indicators notwithstanding, it should be noticed that financial development's contribution to economic growth among the selected OECD is consistent but immaterial.

The inclusion of macroeconomic country-specific characteristics has sweeping implications that differ from those of the OLS model due to the realised p-values. The study established a

significant relationship between macroeconomic variables of gross national savings, government debt levels, foreign direct investment and the economic growth of the selected OECD countries unlike the Pooled OLS model. A negative inverse relationship was reported between the macroeconomic variables of gross national savings, government debt levels and economic growth. Reduced economic growth effects of 1.895% were discovered due to a one per cent increase in gross national savings, at $p=0.015$. Contrary to the findings of the OLS model, this fixed effects estimator recorded a negative relationship between government debt levels and economic growth. A 0.815% economic growth decrement was recorded due to a one per cent increase in government debt levels, at $p=0.048$. These results are in sync with those of Aizenman *et al.* (2007), Checherita-Westphal & Rother (2012), Poirson *et al.* (2004), Rangarajan & Srivastava (2005) and Saint-Paul (1992) that stamp a negative relationship between government debt levels and economic growth. As found in the OLS model, a positive relationship was also confirmed with the FEM between foreign direct investment and economic growth. The FEM results revealed an even bigger economic growth effect of 5.365%, at $p=0.030$ which is significant. It is only inflation that has an insignificant positive relationship with economic growth, as established in the Pooled OLS model. A single percentage increase in the inflation rate among the OECD countries brought about 0.031% increment in the levels of economic growth, at $p>0.05$.

Among the institutional environmental factors, after the observations of the cross-sectional heterogeneity, efficiency of legal framework in challenging regulations has a negative and significant relationship with economic growth in the selected OECD countries, as was the case with the OLS estimation. Decreased economic growth effects of 0.567% were ascribed to a one per cent improvement in the efficiency of legal framework in challenging disputes, at $p=0.014$. The study found that the rest of the institutional environmental indicators of investor protection, efficiency of legal framework in settling disputes, judicial independence and property rights have insignificant relationships with economic growth in the OECD region. A negative inverse relationship was established between investor protection and economic growth, revealing similitude with the OLS model. Economic growth effects reduction of 1.359% came about due to a one per cent improvement in the investor protection strength, at $p>0.05$. However, this showed further decrease when compared with the coefficient estimate in the OLS model. Positive relationships were discovered between efficiency of legal framework in settling disputes, judicial independence, property rights and economic growth, in consistency with the OLS model. An economic growth effect increment of 0.243% was

realised from a one per cent improvement in the efficiency of legal framework in settling disputes, at $p > 0.05$. This result is upheld by empirical findings of Pie (2001) that economic improvement is linked to non-discriminatory adjudication of commercial court cases that go a long way in safeguarding business transactions. An upgrade of one per cent in the judicial independence among the selected OECD countries brought about a 1.846% increase in economic growth, at $p > 0.05$, which was a bigger increment than the realised coefficient in the OLS model. 2.215% economic growth incremental effects were realised from a one per cent strengthening of property rights, which were much more *vis-à-vis* those of the OLS model.

The overall fixed effects model coefficient for R^2 is estimated at 0.205, which denotes that only 20.50% of the variations in the economic growth of the selected OECD countries is ascribed to the explanatory variables of corporate governance, financial development, macroeconomics and the institutional environment. This fixed effects estimator has a lower R^2 coefficient compared to that of the OLS model. It can thus be surmised that both of these models lack the strength for the included explanatory variables to satisfactorily account for variations in economic growth. There is need to examine the variability of constant effects in the cross-sections so as to check for a better explanation of the relationships with the variables of corporate governance, institutional environment, macroeconomics and financial development aspects.

5.3.3 Determining the nature of the relationships between corporate governance variables and economic growth in selected OECD countries using the Random Effects Model

Random Effects Model (REM) estimation was used in this section to account for cross-sectional unobserved heterogeneity that is unconnected to the explanatory variables, affecting economic growth. This model estimates using the Generalised Least Squares (GLS) method to also attend to autocorrelation issues of the OLS. This examination process also helped to determine the nature of the relationships among variables of corporate governance together with additional explanatory variables, with their accompanying proxy measures of financial development, institutional environment and macroeconomics on economic growth. This model estimation also responded to research question two, three and four referred to in section 5.3. Among the assumptions of the REM include the unobserved heterogeneity is deemed variable

among cross-sections and also unrelated to the included explanatory variables in the four-regressor equation.

Table 5. 19 Random effects model estimation for corporate governance, institutional environment, macroeconomic fundamentals, financial development and economic growth in the selected OECD countries

Economic growth	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
Companies disclosure practices	0.005	0.194	0.03	0.979	-0.376	0.386
Efficacy of corporate boards	-17.469	2.537	-6.89	0.000	-22.441	-12.498
Protection of minority shareholders	7.251	1.959	3.70	0.000	3.411	11.090
Soundness of banking sector	1.880	1.008	1.87	0.062	-0.095	3.855
Regulation of securities exchanges	-2.702	2.235	-1.21	0.227	-7.082	1.678
Financing through equity markets	-0.970	1.015	-0.95	0.340	-2.960	1.021
Gross national savings	-0.501	0.351	-1.43	0.153	-1.189	0.186
Government debt levels	0.067	0.193	0.35	0.729	-0.312	0.445
Inflation rate	0.065	0.113	0.57	0.567	-0.157	0.286
Foreign direct investment	2.256	1.399	1.61	0.107	-0.486	4.998
Investor protection	-0.496	0.539	-0.92	0.357	-1.552	0.560
Efficiency of legal framework (settling disputes)	0.378	0.219	1.72	0.085	-0.052	0.806
Efficiency of legal framework (challenging regulations)	-0.499	0.207	-2.41	0.016	-0.904	-0.094
Judicial independence	1.168	1.840	0.64	0.525	-2.437	4.774
Property rights	1.095	3.083	0.36	0.722	-4.946	7.137
Cons	19.876	6.369	3.12	0.002	7.392	32.359
Sigma_u	0					
Sigma_e	1.004					
rho	0	(fraction of variance due to u_i)				
Random-effects GLS regression			Number of obs		=	227
Group variable: cou_num			Number of groups		=	14
R-squared:			Obs per group:			
Within = 0.395			min = 11			
Between = 0.055			avg = 16.2			
Overall = 0.366			max = 17			
Wald chi2(15)			=	121.570		
Corr(u_i, X)			=	0 (assumed)	Prob > chi2 = 0.000	

Table 5.19 above offers the GLS estimates for the effects of the variables of corporate governance and its determinants of financial development, institutional environment, macroeconomics towards economic growth of the selected OECD countries. It was found that the coefficient estimates for all the proxies of the variables are identical in direction and magnitude to those of the OLS model in table 5.17. Another major finding was that the proxies of efficacy of corporate boards and protection of minority shareholders under corporate governance as well as efficiency of legal framework in challenging regulations under institutional environment are significant to economic growth, as reported in the OLS model in table 5.17, for the selected OECD countries. These similarities in results of both OLS and GLS model estimates are echoed by Wooldridge (2016) to particularly occur when the unobserved heterogeneity among cross-sections is insubstantial. The overall pooled OLS coefficient for R^2 is estimated at 0.366, which indicates that 36.60% is exactly the same as that in Table 5.19.

This study took a step further to reinforce the findings for the nature of the relationships between corporate governance variables and economic growth in the selected OECD countries through the inclusion of aggregated composite measures of corporate governance, financial development, macroeconomic fundamentals and the institutional environment.

5.3.4 Aggregated composite measures for the selected OECD countries

The results of the OLS, LSDV as well as GLS model estimates for the aggregated variables are detailed in the findings below.

5.3.4.1 Determining the nature of the relationships between corporate governance variables and economic growth for the selected OECD countries using aggregated Pooled Effects Model

Table 5. 20 Pooled OLS estimation for aggregated corporate governance, institutional environment, macroeconomic fundamentals, financial development and economic growth in the selected OECD countries

Economic growth	Coef.	Robust Std. Err.	t	P> t	[95% Conf. Interval]	
Aggregated corporate governance	0.161	0.488	0.33	0.747	-0.894	1.216
Aggregated financial development	-2.272	0.964	-2.36	0.035	-4.354	-0.191
Aggregated macroeconomic fundamentals	0.568	0.615	0.92	0.373	-0.762	1.897
Aggregated institutional environment	-0.019	0.330	-0.06	0.954	-0.732	0.693
Cons	6.364	2.322	2.74	0.017	1.347	11.380

Linear regression	Number of obs	=	238
	F(4, 13)	=	7.11
	Prob > F	=	0.003
	R-squared	=	0.032
	Root MSE	=	1.312

(Std. Err. adjusted for 14 clusters in cou_num)

Table 5.20 above shows that the coefficient for R^2 is estimated at 0.032. This is a very low aggregate measure of 3.20% that is insufficient to account for variations in economic growth among the selected OECD countries, by the included aggregated variables of corporate governance, financial development, macroeconomics as well as the institutional environment. However, the study found that the aggregation of financial development indicators have a significant and negative relationship with economic growth. Reduced economic growth effects of 2.272% were realised from a single percentage improvement in the aggregated financial development of the selected OECD countries, at $p=0.035$. The rest of the aggregated regressors in the OLS model were found to have an insignificant impact on economic growth. It was revealed that both aggregated corporate governance and aggregated macroeconomics have a positive but insignificant relationship with economic growth. A 0.161% economic growth increment was registered due to a one per cent enhancement in the aggregated corporate governance measures, while 0.568% economic growth increase was recorded from a one per cent improvement in the aggregated macroeconomic fundamentals. A one per cent improvement in the aggregated institutional environmental factors posted 0.019% reduction in economic growth.

5.3.4.2 Determining the nature of the relationships between corporate governance variables and economic growth for the selected OECD countries using aggregated Fixed Effects Model

Table 5. 21 Fixed effects model estimation for aggregated corporate governance, institutional environment, macroeconomic fundamentals, financial development and economic growth in the selected OECD countries

Economic growth	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
Aggregated corporate governance	-0.101	0.631	-0.16	0.873	-1.344 1.143
Aggregated financial development	-1.097	1.992	-0.55	0.583	-5.023 2.830
Aggregated macroeconomic fundamentals	0.706	0.402	1.75	0.081	-0.087 1.498
Aggregated institutional environment	-0.347	0.663	-0.52	0.602	-1.653 0.960
Cons	5.595	3.113	1.80	0.074	-0.541 11.730

Sigma_u	0.277		F test that all u_i=0: F(13, 220) = 0.51	Prob > F = 0.916
Sigma_e	1.328		Fixed-effects (within) regression	Number of obs = 238
rho	0.042	(fraction of variance due to u_i)	Group variable: cou_num	Number of groups = 14

R-sq:	within = 0.027	Obs per group:	min = 17
	between = 0.121		avg = 17.0
	overall = 0.025		max = 17

corr(u_i, Xb) = -0.363	F (4,220) = 1.52
	Prob > F = 0.198

Table 5.21 above shows that the overall coefficient for R^2 is estimated at 0.025, which is an even lower measure compared to the one of the aggregated OLS estimate in table 5.20. The coefficient for R^2 of 2.50% is insufficient to account for variations in economic growth among the selected OECD countries through aggregated variables of corporate governance, financial development, macroeconomics as well as the institutional environment. This investigation found that all the included aggregated variables in the model have an insignificant relationship with economic growth for the selected OECD countries, after accounting for individual country unobserved heterogeneity. It was confirmed that the aggregated variables of corporate governance, financial development and the institutional environment have a negative inverse relationship with economic growth. Reduced economic growth effects of 0.101% were recorded resulting from a one per cent enhancement in the aggregated corporate governance. This is unlike the highlights of the OLS aggregated model in Table 5.20 where the relationship between aggregated corporate governance and economic growth is positive. With regards to financial development, a one per cent improvement in the aggregated financial development while taking into consideration the country characteristics, is associated with 1.097% decreased economic growth effects. This negative relationship between aggregated financial development and economic growth was also evidenced with the OLS model in Table 5.20. As with the OLS aggregated estimates in Table 5.20, the LSDV estimates revealed a negative relationship between aggregated institutional environment and economic growth. Reduced economic growth effects of 0.347% were posted with a one per cent improvement in the aggregated institutional environment. Aggregated macroeconomic fundamentals were found to have a positive relationship with economic growth, as found with the OLS estimates in Table 5.20. Economic growth effects increases of 0.706% were registered on the back of a one per cent improvement in the aggregated macroeconomic fundamentals.

5.3.4.3 Determining the nature of the relationships between corporate governance variables and economic growth for the selected OECD countries using aggregated Random Effects Model

Table 5. 22 Random effects model estimation for aggregated corporate governance, institutional environment, macroeconomic fundamentals, financial development and economic growth in the selected OECD countries

Economic growth		Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
Aggregated corporate governance		0.161	0.443	0.36	0.716	-0.707	1.029
Aggregated financial development		-2.272	1.464	-1.55	0.121	-5.143	0.598
Aggregated macroeconomic fundamentals		0.568	0.343	1.65	0.098	-0.105	1.240
Aggregated institutional environment		-0.019	0.305	-0.06	0.949	-0.617	0.578
Cons		6.364	2.225	2.86	0.004	2.002	10.725
Sigma_u = 0		Random-effects GLS regression				Number of obs = 238	
Sigma_e = 1.328		Group variable: cou_num				Number of groups = 14	
rho = 0 (fraction of variance due to u_i)							
R-sq:		Obs per group:					
within = 0.024		min =	17	Wald chi2(4) =		7.80	
between = 0.282		avg =	17.0	corr(u_i, X) = 0 (assumed)	Prob > chi2 =	0.099	
overall = 0.032		max =	17				

Random effects estimations for aggregated variables of corporate governance, financial development, macroeconomics and institutional environment against economic growth are shown in table 5.22 above. It is evident that the overall coefficient for R^2 is estimated at 0.032, which is the same as that of the aggregated OLS estimations in table 5.20. Still an overall coefficient for R^2 of 3.20% is inadequate to explain the changes in economic growth among the selected OECD countries, owing to the aggregated variables in the model. The study established that all the included aggregated variables in the model have an insignificant relationship with economic growth for the selected OECD countries. It was however found that the coefficient estimates for all the aggregated variables are identical in direction and magnitude to those of the OLS model estimates in Table 5.20. Again, these like-for-like coefficient estimates point to the similarity in the cross-country characteristics of the selected OECD countries for the aggregated variables included in the model.

The next section presents correlation matrices for the variables of corporate governance, financial development, macroeconomic fundamentals, institutional environment and economic growth. Both disaggregated and aggregated sets of data are showed.

Table 5. 23 Correlation matrix for the determinants of corporate governance and economic growth in the selected OECD countries

VARIABLE	Economic growth	Companies disclosure practices	Efficacy of corporate boards	Protection of minority shareholders
Economic growth	1.000			
Companies disclosure practices	0.046	1.000		
Efficacy of corporate boards	0.494		1.000	
Protection of minority shareholders	0.004	0.653*		1.000
Soundness of banking sector	0.000	0.000	0.586*	
Regulation of securities exchanges	0.042	0.750*	0.000	0.516*
Financing through equity markets	0.518	0.000	0.481*	0.000
Gross national savings	-0.067	0.667*	0.000	0.000
Government debt levels	0.306	0.750*	0.617*	0.571*
Inflation rate	-0.179*	0.000	0.000	0.000
Foreign direct investment	0.006	0.440*	0.476*	0.392*
Investor protection	-0.145*	0.000	0.000	0.000
Efficiency of legal framework (settling disputes)	0.025	0.278*	0.201*	0.071
Efficiency of legal framework (challenging regulations)	-0.163*	0.000	0.002	0.277
Judicial independence	0.012	-0.424*	-0.255*	-0.229*
Property rights	0.045	0.000	0.000	0.000
	0.492	0.048	-0.251*	0.192*
	0.000	0.469	0.000	0.004
	0.010	0.060	0.033	-0.160*
	0.875	0.356	0.611	0.014
	0.065	0.073	0.185*	0.330*
	0.316	0.261	0.004	0.000
	-0.076	0.549*	0.430*	0.533*
	0.241	0.000	0.000	0.000
	-0.075	0.473*	0.299*	0.453*
	0.252	0.000	0.000	0.000
	-0.069	0.668*	0.534*	0.606*
	0.293	0.000	0.000	0.000
	-0.064	0.664*	0.415*	0.499*
	0.327	0.000	0.000	0.000

Note: *denotes 5% level of significance

Table 5. 24 Correlation matrix for the aggregated determinants of corporate governance and economic growth in the selected OECD countries

VARIABLES	Economic growth	Aggregated corporate governance	Aggregated financial development	Aggregated macroeconomic fundamentals	Aggregated institutional environment
Economic growth	1.000				
Aggregated corporate governance	-0.089 0.169	1.000			
Aggregated financial development	-0.142* 0.029	0.723* 0.000	1.000		
Aggregated macroeconomic fundamentals	0.134* 0.040	-0.173* 0.008	-0.195* 0.003	1.000	
Aggregated institutional environment	-0.069 0.286	0.582* 0.000	0.414* 0.000	-0.236* 0.000	1.000

Note: *denotes 5% level of significance

The correlation matrix shown in Table 5.23 exhibits disaggregated variables of corporate governance, financial development, macroeconomic fundamentals as well as the institutional environment paired against economic growth for the selected OECD countries. It can be seen that it is only efficacy of corporate boards among the corporate governance indicators that is significantly correlated with economic growth, at $p=0.000$. Also, the financial development proxies of regulation of securities exchanges and financing through equity markets reported significant correlation with economic growth, at $p=0.006$ and $p=0.025$ correspondingly. Lastly, the macroeconomic fundamental variables of gross national savings and inflation rate registered significant correlation with economic growth, at $p=0.012$ and $p=0.000$ respectively. These revelations conform to the suppositions that corporate governance through its determinants stimulate economic growth. The research however discovered that none of the institutional environmental factors had a significant relationship with economic growth among the selected OECD countries.

Turning to the correlation matrix in Table 5.24 for the aggregated variables, the study found that aggregated corporate governance is not significantly related to economic growth, which can be explained that corporate governance alone is insufficient to stimulate economic growth. Rather, it is both the aggregated financial development and aggregated macroeconomic fundamentals that have a significant relationship with economic growth among the selected OECD countries, at $p=0.286$ and $p=0.040$ respectively. It is also important to note that aggregated financial development was found to be significantly correlated to aggregated corporate governance, at $p=0.000$. This finding concurs with those of Barth *et al.* (2012, 2006) and Gupta *et al.* (2010) that effective corporate governance enables financial development to add to a country's economic growth. The study also established the existence of a significant relationship between aggregated macroeconomic fundamentals and aggregated corporate governance, at $p=0.008$. This highlights the need for competent corporate governance in rightly executing firm-level decision-making for a particular macroeconomic climate that nurtures the economic growth of a country. Aggregated institutional environment also registered a significant relationship with aggregated corporate governance, at $p=0.000$, among the selected OECD countries. This means that implementing corporate governance regulations and routines by corporate entities is achievable in an environment of solid institutions. Valeriani and Peluso (2010) maintain that such a healthy relationship between corporate governance and the institutional environment drives up the economic growth levels of a country.

5.3.5 Model selection

This section gives a tabulation of the results of the pooled effects, fixed effects and random effects model estimates for the disaggregated variables of corporate governance, financial development, macroeconomic fundamentals and the institutional environment.

Table 5. 25 Test comparison of the Pooled, Fixed and Random effects models for corporate governance, financial development, macroeconomics and institutional environment for the selected OECD countries

VARIABLE	Pooled	Fixed	Random
Companies disclosure practices	0.005	0.160	0.005
Efficacy of corporate boards	-17.469	-18.492	-17.469
Protection of minority shareholders	7.251	3.456	7.251
Soundness of banking sector	1.880	1.559	1.880
Regulation of securities exchanges	-2.702	-1.614	-2.703
Financing through equity markets	-0.970	-1.250	-0.970
Gross national savings	-0.502	-1.895*	-0.502
Government debt levels	0.067	-0.815*	0.067
Inflation rate	0.065	0.031	0.065
Foreign direct investment	2.256	5.365*	2.256
Investor protection	-0.496	-1.359	-0.496
Efficiency of legal framework (settling disputes)	0.378	0.243	0.378
Efficiency of legal framework (challenging regulations)	-0.490*	-0.567*	-0.499*
Judicial independence	1.169	1.846	1.169
Property rights	1.095	2.215	1.095
Cons	19.876*	28.463	19.876
Number of observations		227	
R-sq	0.366	0.429	
R-sq Overall		0.205	0.366
R-sq Between		0.085	0.055
R-sq Within		0.040	0.395
Sigma u		0.823	0.000
Sigma e		1.004	1.004
Rho		0.402	0.000
Chi2		10.75	
Hausman (Prob>chi2)		0.770	

Note: *denotes 5% level of significance

The Hausman test results in Table 5.25 above show a coefficient estimate of 0.770, which prompted the acceptance of the null hypothesis, considering 5% level of significance. This rendered the Random Effects estimator as the suitable model for the disaggregated data on the indicators of corporate governance, financial development, macroeconomic fundamentals and institutional environment. In other words, the cross-country unobserved heterogeneity among the selected OECD countries that is unconnected to the indicators of corporate governance, financial development, macroeconomic fundamentals and institutional environment help explain the variations in economic growth. The constant individual country characteristics for the proxies of corporate governance, financial development, macroeconomic fundamentals and institutional environment that vary over time have a major effect on the economic growth of the selected countries of the OECD region. Therefore there is need to pay particular attention to the individual country-specific characteristics in order for the corporate governance framework to stimulate economic growth among the OECD region.

It is evident that based on the chosen model of Random effects estimator, no corporate governance proxy had a significant relationship with economic growth; rather it was the efficiency of legal framework in challenging regulations under the institutional environment that has a significant correlation with economic growth.

The next test comparison below displays the model selection for the aggregated variables.

Table 5. 26 Test comparison of the Pooled, Fixed and Random effects models for the aggregated corporate governance, financial development, macroeconomics and institutional environment for the selected OECD countries

VARIABLES	Pooled	Fixed	Random
Aggregated corporate governance	0.161	-0.101	0.161
Aggregated financial development	-2.272*	-1.097	-2.272
Aggregated macroeconomic fundamentals	0.568	0.706	0.568
Aggregated institutional environment	-0.020	-0.347	-0.020
Constant	6.364*	5.595	6.364
Number of observations	238	238	238
R-sq	0.032	0.027	
R-sq Within		0.027	0.024
R-sq Between		0.121	0.282
R-sq Overall		0.025	0.032
Sigma u		0.277	0.000
Sigma e		1.328	1.328
Rho		0.042	0.000
Chi2		1.47	
Hausman (Prob>chi2)		0.832	

Note: *denotes 5% level of significance

Judging from the findings in Table 5.26 above, the Hausman test coefficient estimate of 0.832 declared the suitability of the use of the Random effects estimator for the aggregated data on corporate governance, financial development, macroeconomic fundamentals and institutional environment. Thus the null hypothesis was accepted, indicating that the impact of corporate governance on economic growth is influenced by unobserved cross-country characteristics that vary over time for aggregated financial development, aggregated macroeconomic fundamentals and aggregated institutional environment, among the selected OECD countries. Under this GLS regression, there was no evidence of any of the aggregated variables having a significant correlation with economic growth.

5.3.6 Short-run and causality analysis of the relationships between corporate governance variables and economic growth for the selected OECD countries

This section presents results of short-run analysis of the manner of the relationships among the variables that affect economic growth. Aggregated analysis of the panel Vector Autoregression (VAR), Granger Causality Model (GCM) as well as the Forecast Error Variance Decomposition (FEVD) tests are used to further investigate the nature of the interaction of the variables that affect economic growth in the selected OECD countries. The multifaceted analysis process followed here strove to record any of the prevailing inter-relationships between aggregated corporate governance as well as its determinants of aggregated financial

development, aggregated macroeconomic fundamentals and aggregated institutional environment. This precluded adopting any preconceived views of the findings which could lead to erroneous policy recommendations.

The correlations established in the previous sections provide a basis for testing the causality and direction of the nature of the interaction of the variables that affect economic growth. This was done to avoid the ill-judged dismissal of the lack of correlations among some of the variables with economic growth, when in fact there is a cause and effect interaction.

5.3.6.1 Determining the nature of the relationships between corporate governance variables and economic growth in selected OECD countries using aggregated Panel Vector Autoregression Model

This section details the panel VAR estimations of the effect of aggregated corporate governance through the determinants of aggregated financial development, aggregated macroeconomic environment and aggregated institutional environment on to the economic growth of the selected OECD countries. The VAR coefficients not only capture the effect of the independent variable towards the dependent variable at a point in time, but the effect resulting from the dependent variable itself too. Some of the assumptions of this model include; none cointegration of all included variables, homoscedasticity of errors, stationarity in panels, no perfect collinearity, among others. This model uses the z-test and is also estimated by OLS.

Table 5. 27 Panel VAR model estimation for aggregated corporate governance, institutional environment, macroeconomic fundamentals, financial development and economic growth in the selected OECD countries

Outcome Variable	Lagged regressors	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	

Economic growth	Economic growth (-1)	0.528	0.096	5.48	0.000	0.339	0.717
	Aggregated corporate governance (-1)	-0.227	1.506	-0.15	0.880	-3.179	2.724
	Aggregated financial development (-1)	-5.228	5.172	-1.01	0.312	-15.365	4.910
	Aggregated macroeconomic fundamentals (-1)	1.970	0.679	2.90	0.004	0.638	3.301
	Aggregated institutional environment (-1)	4.594	1.480	3.10	0.002	1.693	7.495

Aggregated corporate governance	Economic growth (-1)	-0.026	0.008	-3.42	0.001	-0.041	-0.011
	Aggregated corporate governance (-1)	0.616	0.138	4.47	0.000	0.346	0.887
	Aggregated financial development (-1)	0.637	0.549	1.16	0.246	-0.440	1.714
	Aggregated macroeconomic fundamentals (-1)	0.005	0.084	0.06	0.949	-0.159	0.169
	Aggregated institutional environment (-1)	0.058	0.184	0.31	0.753	-0.303	0.418

Aggregated financial development	Economic growth (-1)	-0.006	0.003	-2.10	0.036	-0.011	-0.000
	Aggregated corporate governance (-1)	-0.104	0.048	-2.15	0.032	-0.198	-0.009
	Aggregated financial development (-1)	1.029	0.183	5.62	0.000	0.670	1.388
	Aggregated macroeconomic fundamentals (-1)	0.015	0.028	0.53	0.600	-0.040	0.069
	Aggregated institutional environment (-1)	0.121	0.074	1.63	0.104	-0.025	0.266

Aggregated macro-economic fundamentals	Economic growth (-1)	0.039	0.014	2.86	0.004	0.012	0.065
	Aggregated corporate governance (-1)	-0.215	0.190	-1.13	0.258	-0.589	0.158
	Aggregated financial development (-1)	0.653	0.642	1.02	0.309	-0.605	1.910
	Aggregated macroeconomic fundamentals (-1)	0.310	0.133	2.34	0.020	0.050	0.569
	Aggregated institutional environment (-1)	0.064	0.224	0.28	0.777	-0.376	0.503

Aggregated institutional environment	Economic growth (-1)	-0.010	0.008	-1.35	0.177	-0.026	0.005
	Aggregated corporate governance (-1)	-0.146	0.137	-1.06	0.288	-0.414	0.123
	Aggregated financial development (-1)	0.571	0.426	1.34	0.180	-0.264	1.406
	Aggregated macroeconomic fundamentals (-1)	0.252	0.076	3.34	0.001	0.104	0.400
	Aggregated institutional environment (-1)	1.239	0.228	5.43	0.000	0.792	1.687

GMM Estimation		No. of obs = 196; No. of panels = 14		Ave. no. of T = 14.000			

Table 5.27 exhibits log-transformed Generalised Methods of Movements (GMM) estimations of the effects of aggregated corporate governance, aggregated financial development, aggregated macroeconomic fundamentals and aggregated institutional environment on to the economic growth of the selected OECD countries. To start with, with economic growth as the outcome variable in the model, it can be seen that the first lag of economic growth (-1) has a positive significant effect on the current value of economic growth, with 0.528% improvement, for $p=0.000$. This has an inference that the value of economic growth at a given point in time relies on both its current and previous values. Within the same model, the first lags of both aggregated institutional environment and aggregated macroeconomic fundamentals were found to have positive and significant effect to the economic growth of the selected OECD countries, at $p=0.002$ and $p=0.004$ correspondingly. The study accordingly accepts the null hypotheses that macroeconomic fundamentals and institutional environment both have a positive and significant effects to the economic growth of the selected countries in the OECD region. These discoveries give an inference that improvements in the economic growth in this region points to enhancements in the institutional environment and more stability in the macroeconomic fundamentals. It should be noted that aggregated institutional environment posted the highest value among the explanatory variables that have a significant effect to the economic growth of the selected OECD countries. However, the previous year values of aggregated corporate governance and aggregated financial development recorded negative and insignificant effect on economic growth, both at $p>0.05$. This means that the null hypotheses in this case are rejected prompting instead acceptance of the alternative hypotheses that both corporate governance and financial development have negative and insignificant effects on economic growth of the selected countries in the OECD region.

With aggregated corporate governance as the criterion variable, the study confirmed that the first lag of economic growth has a weak negative but significant effect on aggregated corporate governance, at $p=0.001$. As well, it was established that the first lag of aggregated corporate governance has a strong positive and significant effect to aggregated corporate governance, with a 0.616% improvement in the current value of aggregated corporate governance, at $p=0.000$. On the contrary, this research established that aggregated financial development, aggregated macroeconomic fundamentals and aggregated institutional environment do not have a significant impact on aggregated corporate governance, due to their values of $p>0.05$.

In the model where aggregated financial development was the outcome variable, it was established that lagged aggregated financial development for period one has a very strong positive and significant contribution of 1.029% on to the current value of aggregated financial development, at $p=0.000$. Also, the previous value of economic growth, among the selected OECD countries has a weak negative and significant effect on the current aggregated financial development, at $p=0.036$. It was also revealed that the first lag of aggregated corporate governance has a negative and significant impact on aggregated financial development, at $p=0.032$. In opposition, the values in the previous period for each of aggregated macroeconomic fundamentals and aggregated institutional environment do not have a significant impact of the current value of aggregated financial development, for $p>0.05$.

For aggregated macroeconomic fundamentals, the first lag of aggregated macroeconomic fundamentals was found to have a positive and significant effect on aggregated macroeconomic fundamentals, at $p=0.020$. This was accompanied by a weak positive and significant impact of the first lag of economic growth on to aggregated macroeconomic fundamentals, at $p=0.004$. It should be noted that aggregated corporate governance, aggregated financial development and aggregated institutional environment have no significant effect on aggregated macroeconomic fundamentals due to $p>0.05$.

Lastly, for the aggregated institutional environment, the previous period's value of aggregated institutional environment has a very strong positive and significant impact of 1.239% improvement in the level of aggregated institutional quality for the current period, at $p=0.000$. It is also shown that the first lag of aggregated macroeconomic fundamentals recorded a positive and significant impact on aggregated institutional environment, at $p=0.001$. However, each of the previous period values of economic growth, aggregated corporate governance and aggregated financial development did not register a significant effect on the current value of aggregated institutional environment because their $p>0.05$.

5.3.6.2 Determining the nature of the relationships between corporate governance variables and economic growth in selected OECD countries using aggregated Panel Granger Causality Test Model

The section below presents the Granger Causality Model (GCM) estimations that fall under the VAR in order to gauge the causality and direction of the effects among the relationships of the

aggregated variables with economic growth for the selected OECD countries. The GCM assumes there is no autocorrelation among the variables and also has an element of endogeneity of variables arising from the lagging process.

Table 5. 28 Panel Granger Causality test model estimation for aggregated corporate governance, institutional environment, macroeconomic fundamentals, financial development and economic growth in the selected OECD countries

Equation variable	Excluded variable	chi2	df	P>chi2
Economic growth	Aggregated corporate governance	0.023	1	0.880
	Aggregated financial development	1.022	1	0.312
	Aggregated macroeconomic fundamentals	8.410	1	0.004
	Aggregated institutional environment	9.633	1	0.002
	ALL	16.870	4	0.002

Aggregated corporate governance	Economic growth	11.679	1	0.001
	Aggregated financial development	1.344	1	0.246
	Aggregated macroeconomic fundamentals	0.004	1	0.949
	Aggregated institutional environment	0.099	1	0.753
	ALL	16.146	4	0.003

Aggregated financial development	Economic growth	4.416	1	0.036
	Aggregated corporate governance	4.619	1	0.032
	Aggregated macroeconomic fundamentals	0.276	1	0.600
	Aggregated institutional environment	2.649	1	0.104
	ALL	18.561	4	0.001

Aggregated macroeconomic fundamentals	Economic growth	8.193	1	0.004
	Aggregated corporate governance	1.277	1	0.258
	Aggregated financial development	1.035	1	0.309
	Aggregated institutional environment	0.080	1	0.777
	ALL	10.393	4	0.034

Aggregated institutional environment	Economic growth	1.821	1	0.177
	Aggregated corporate governance	1.130	1	0.288
	Aggregated financial development	1.796	1	0.180
	Aggregated macroeconomic fundamentals	11.132	1	0.001
	ALL	11.782	4	0.019

Table 5.28 exhibits the Granger causal effects of the aggregated corporate governance, aggregated financial development, aggregated macroeconomic fundamentals, aggregated institutional environment and economic growth for the selected OECD countries. Starting with economic growth as the equation variable, it was established that aggregated macroeconomic fundamentals and aggregated institutional environment Granger cause economic growth, with Chi 2 coefficients 8.410, at $p=0.004$ and 9.633, at $p=0.002$ respectively. Therefore the study supposes that before any changes in the economic growth among the selected OECD countries occur, there has to be precedence of changes in both aggregated macroeconomic fundamentals as well as in aggregated institutional environment. The works of Chong & Calderon (2000a), Lee & Kim (2009) and Yildirim & Gokalp (2016) confirm that institutions determine the overall economic performances of countries as institutions foster trust and buoy cooperation among contracting partners. However, both aggregated corporate governance and aggregated financial development were found not to have a significant causal effect. Nonetheless, a combination of all the aggregated explanatory variables in the model has a significant casual effect on the economic growth of the selected OECD countries, at $p=0.002$. In other words, the explanatory variables of aggregated corporate governance, aggregated financial development, aggregated macroeconomic fundamentals and aggregated institutional environment need to experience changes so as to report changes in economic growth.

Aggregated corporate governance as the equation variable, the first lag of economic growth was found to have a significant causal effect on aggregated corporate governance, at $p=0.001$. This can be interpreted that improvements or changes in the economic growth among the selected OECD countries antedate overall changes in aggregated corporate governance. These findings find shelter in those of Glaeser *et al.* (2004) and Lipset (1960) that economic growth predates improved systems of practice, procedures and policies and that the richer the world becomes, the more the demand for greater quality from institutions. Also, causality was established, from economic growth to corporate governance due to increased sophistication in aggregate trade, by other studies including those by Dixit (2003), Greif, (1994), Grindle (2004, 2007), Hausmann *et al.* (2005), Li (2003), Wilson (2016). In comparison with the first model where economic growth is the criterion variable, it can thus be concluded that the research found a unidirectional causal relationship in the corporate governance-economic growth nexus, with causality flowing from economic growth to aggregated corporate governance. It was however found that aggregated financial development, aggregated macroeconomic fundamentals and aggregated institutional environment have no significant causal effect on

aggregated corporate governance among the selected OECD countries. That said, all combined aggregated regressors in this model have a significant causal effect on aggregated corporate governance, at $p=0.003$. Therefore, this induces the reasoning that changes in aggregated corporate governance may only occur after changes in economic growth, aggregated financial development, aggregated macroeconomic fundamentals and aggregated institutional environment.

With regards aggregated financial development, the study found a significant causal effect from economic growth to aggregated financial development, at $p=0.036$. Previous year changes in economic growth predict changes in aggregated financial development for the selected OECD countries. These findings are consonant with Robinson (1952), Romer (1990) and Stem (1989) who show that economic growth opens doors for financial development, for as economic growth increases, the demand for particular financial instruments and systems also goes up. It can thus be inferred that when compared with the model in which economic growth is the equation variable, the study found a unidirectional causal relationship between economic growth and aggregated financial development, with causality flowing from economic growth to aggregated financial development. Also, aggregated corporate governance has a significant causal effect on aggregated financial development, at $p=0.032$. This means that improvements or changes in firm-level governance mechanisms antecede aggregated financial development changes. The study then resolves that there is a one directional causal relationship between aggregated corporate governance and aggregated financial development, with causality flowing from aggregated corporate governance to aggregated financial development. In spite of this, both aggregated macroeconomic fundamentals and aggregated institutional environment do not have a significant causal effect on aggregated financial development. The totality of the aggregated regressors in the model, however, exhibited significant causal effect on aggregated financial development, at $p=0.001$. Therefore, for any changes in aggregated financial development to happen, there must be changes in economic growth, aggregated corporate governance, aggregated macroeconomic fundamentals and aggregated institutional environment.

For aggregated macroeconomic fundamentals, the study found a significant causal effect from economic growth to aggregated macroeconomic fundamentals, at $p=0.004$. This can be construed to mean that changes in the economic growth among the selected OECD countries precede changes in aggregated macroeconomic fundamentals. Judging from these findings, the

study concludes that there is bi-directionality in the macroeconomic fundamentals-economic growth nexus. And this is reinforced by a p-value of 0.004 shared by this dual relationship. It therefore infers that changes in economic growth among the selected OECD countries precede changes in aggregated macroeconomic fundamentals, and vice-versa. On the contrary, the study found that in this model each of, aggregated corporate governance, aggregated financial development and aggregated institutional environment do not have a significant causal effect on the aggregated macroeconomic of the selected OECD countries. A combination of all the aggregated explanatory variables had significant causal effect on aggregated macroeconomic fundamentals, at $p=0.034$.

Lastly, for aggregated institutional environment, it was only aggregated macroeconomic fundamentals that registered a significant causal effect on aggregated institutional environment, at $p=0.001$. The understanding is that changes in aggregated institutional environment are preceded by changes in aggregated macroeconomic conditions. These facts are echoed by Hewko (2002) who contend that improvements in macroeconomic variables such as foreign direct investments stimulate improvements in the quality of a country's legal and institutions as they require better practices and higher competence from them. Thus the study concludes that there is a one directional causal relationship between aggregated institutional environment and aggregated macroeconomic fundamentals, with causality flowing from aggregated macroeconomic fundamentals to aggregated institutional environment. Conversely, the study found that each of economic growth, aggregated corporate governance and aggregated financial development do not have a significant causal effect on aggregated institutional environment. Though, a combination of all aggregated explanatory variables in the model were found to have a significant causal effect on aggregated institutional environment, at $p=0.019$. This translates into the judgement that for aggregated institutional environment to experience changes, changes in economic growth, aggregated corporate governance, aggregated financial development and aggregated macroeconomic fundamentals ought to occur first.

5.3.6.3 Determining the nature of the relationships between corporate governance variables and economic growth in selected OECD countries using aggregated Forecast Error Variance Decomposition

The Forecast Error Variance Decomposition (FEVD) model aids in the explanation of the VAR, by determining what section of change in the dependent variable emanates from a structural shock in the independent variable. Hence, this enables to predict how economic growth reacts to unexpected variations in aggregated corporate governance, aggregated financial development, aggregated macroeconomic fundamentals and aggregated institutional environment. Additionally, the FEVD model assists in the forecasting of the aggregated explanatory variables in the model, for the selected OECD countries, for the next 10 year period starting from 2020. The results from the FEVD model confirm any causality found among the variables and give experimental evidence in the projection and analysis of future trends on the effect of corporate governance and its determinants towards the economic growth of the selected OECD countries.

Table 5. 29 Panel vector forecast error variance decomposition test results for the aggregated determinants of corporate governance and economic growth in the selected OECD countries

Response variable and forecast horizon	Impulse variables			
	Aggregated corporate governance	Aggregated financial development	Aggregated macroeconomic fundamentals	Aggregated institutional environment
Economic growth				
0	0	0	0	0
1	0	0	0	0
2	0.001	0	0.046	0.133
3	0.006	0.006	0.086	0.319
4	0.017	0.032	0.104	0.472
5	0.030	0.076	0.106	0.565
6	0.040	0.127	0.100	0.607
7	0.046	0.175	0.092	0.618
8	0.050	0.213	0.084	0.616
9	0.051	0.241	0.079	0.609
10	0.051	0.261	0.075	0.603

Table 5.29 presents log-transformed estimations of the fluctuations in economic growth among the selected OECD countries due to impulses in aggregated corporate governance, aggregated financial development, aggregated macroeconomic fundamentals and aggregated institutional environment. With aggregated corporate governance, it is clear that there is strong exogeneity with economic growth in the short-run. And although aggregated corporate governance gains some influence starting in year 5 with 3.0% up to 5.0% in year 8 of the forecast error variance in economic growth being explained by aggregated corporate governance, its influence stagnates from year 9 to 10. Thus, overall, aggregated corporate governance is strongly exogenous to economic growth among the selected OECD countries.

Turning to aggregated financial development as the shock variable, the study found that aggregated financial development's influence on economic growth gains relative strength from 3.2% of variations in year 4 to 26.1% variations in year 10 for economic growth coming from innovations in aggregated financial development. However, aggregated financial development is still deemed exogenous to economic growth.

Observing aggregated macroeconomic fundamentals as the impulse variable, it is seen that aggregated macroeconomic fundamentals is strongly endogenous to economic growth among the selected OECD countries. This is evidenced by a 0.046 unit change in economic growth in year 2 to the 0.106 variation in year 5 due to aggregated macroeconomic fundamentals. On the whole, aggregated macroeconomic fundamentals was found to have the strongest influence in predicting economic growth, *vis-à-vis* the rest of the aggregated variables in the model, for the selected OECD countries.

With reference to aggregated institutional environment, there is a steady growth in the influence towards economic growth, from 13.3% forecast error variance explaining economic growth in year 2 to 61.8% variations in economic growth due to a shock in aggregated institutional environment in year 7. All in all, aggregated institutional environment is deemed to be strongly endogenous to economic growth, among the selected OECD countries.

5.4 THE NATURE OF THE RELATIONSHIPS BETWEEN CORPORATE GOVERNANCE VARIABLES AND ECONOMIC GROWTH IN SELECTED SHARIA LAW COUNTRIES

The aim of this section is to answer research question: What is the nature of the relationships between corporate governance variables and economic growth in selected Sharia law countries? Both the disaggregated and aggregated regression models for the corporate governance determinants and their effects on the economic growth of the selected Sharia law countries are detailed.

5.4.1 Determining the nature of the relationships between corporate governance variables and economic growth in selected Sharia law countries using the Pooled Effects Model

This PEM estimated the effect of corporate governance proxies as well as the additional indicators of financial development, macroeconomic fundamentals and the institutional environment towards the economic growth of the selected Sharia law countries.

Table 5. 30 Pooled OLS estimation for corporate governance, institutional environment, macroeconomic fundamentals, financial development and economic growth in the selected Sharia law countries

Economic growth	Coef.	Robust Std. Err.	t	P> t	[95% Conf. Interval]	
Companies disclosure practices	0.111	0.183	0.61	0.553	-0.286	0.509
Efficacy of corporate boards	-2.480	1.165	-2.13	0.055	-5.017	0.057
Protection of minority shareholders	-0.217	0.741	-0.29	0.774	-1.832	1.397
Soundness of banking sector	-0.207	0.953	-0.22	0.831	-2.283	1.868
Regulation of securities exchanges	1.187	1.379	0.86	0.406	-1.818	4.191
Financing through equity markets	0.175	0.735	0.24	0.816	-1.426	1.776
Gross national savings	0.003	0.211	0.00	0.999	-0.460	0.460
Government debt levels	-0.237	0.196	-1.21	0.249	-0.665	0.190
Inflation rate	-0.183	0.121	-1.52	0.156	-0.447	0.080
Foreign direct investment	2.032	1.281	1.59	0.139	-0.760	4.824
Investor protection	-0.482	0.274	-1.76	0.104	-1.080	0.115
Efficiency of legal framework (settling disputes)	0.101	0.207	0.49	0.633	-0.350	0.553
Efficiency of legal framework (challenging regulations)	0.074	0.186	0.40	0.699	-0.332	0.479
Judicial independence	0.055	0.818	0.07	0.947	-1.728	1.838
Property rights	-1.655	0.875	-1.89	0.083	-3.561	0.252
Cons	6.674	1.182	5.64	0.000	4.098	9.250

Linear regression	Number of obs	=	217
	F(11, 12)	=	.
	Prob > F	=	.
	R-squared	=	0.109
	Root MSE	=	.913

(Std. Err. adjusted for 13 clusters in cou_num)

Table 5.30 presents the OLS estimation of the log-transformed four-variable model for all proxies to the explanatory variables as well the independent variable, with the level of significance of 5%.

A close look at the p-values in Table 5.30 shows that no proxy for all the included regressors in the model registered a significant relationship with economic growth. On the subject of corporate governance, the results showed the existence of a negative inverse relationship of both efficacy of corporate boards and protection of minority shareholders with economic growth, yet companies disclosure practices showed a positive relationship with economic growth among the selected Sharia law countries. A 2.48% decrease in economic growth was recorded from a one per cent improvement in the board efficacy, and a 0.217% reduced economic growth effect was registered due to one per cent increase in the protection of minority shareholders, all at $p > 0.05$. On the other hand, a 1% increase in companies disclosure practices elicited a 0.111% increase economic growth effect, at $p > 0.05$. The study as a consequence rejects the null hypothesis, as it has been found that corporate governance does not have a significant effect on economic growth, among the selected Sharia law countries. The implication to policy makers and practitioners is that there is need to revisit the existing corporate governance routines and protocols to have them at a level that has a bearing on to the economic growth of these countries.

The financial development indicators of regulation of securities exchanges and financing through equities markets posted positive relationships with economic growth, while the soundness of banking sector recorded a negative relationship with economic growth among the selected Sharia law countries. Increased economic growth effects of 1.187% and 0.175% were posted by an upgrade of one per cent in each of the regulation of securities exchanges and financing through equities markets, respectively, all at $p > 0.05$. These findings are endorsed by those of Brennan & Tamarowski (2000), Botosan (2000), Diamond & Verrecchia (1991), Kyle (1984), La Porta *et al.* (2006) and Leuz & Verrecchia (2000) that robust financial markets laws alley investor fears of expropriation which hence attract more capital for corporate investment via the equity markets. And Caporale *et al.* (2004) establish that financing through advanced equities markets directly boosts a country's overall economic growth. Reduced economic growth effects of 0.207% were realised due to a one per cent advancement in the soundness of banking sector, at $p > 0.05$. This evidence is the antithesis of Levine & Zervos (1998) who found a positive and significant correlation between bank soundness and economic growth. The study

is led to conclude that financial development has an insignificant effect on economic growth, thus rejecting the null hypothesis and accepting the alternative hypothesis. Again, these results call upon further restructuring in the financial development sector by the Sharia law countries in order to see that financial development has a significant bearing on these countries' economic growth.

Among the proxies of the macroeconomic environment in which firms operate, the OLS model coefficients revealed that gross national savings and foreign direct investment have a positive correlation with economic growth, while government debt levels and inflation rate reported a negative inverse relationship with economic growth, among the selected Sharia law countries. A one per cent increase in gross national savings elicited a 0.003% increment in economic growth, at $p > 0.05$. Such a discovery is in agreement with the findings of Mason (1988) who documents that a country with higher savings rate will have higher factor productivity levels, *ceteris paribus*. Increased economic growth effects of 2.032% were reported arising from a one per cent increment in foreign direct investment, at $p > 0.05$ among the selected Sharia law countries. A reduction of 0.237% in economic growth was reported from a 1% increment in government debt levels, at $p > 0.05$. This negative inverse relationship between government debt levels and economic growth is also echoed in the works of Aizenman *et al.* (2007), Checherita-Westphal & Rother (2012), Poirson *et al.* (2004), Rangarajan & Srivastava (2005) and Saint-Paul (1992). Again, reduced economic growth effects of 0.183% are ascribed to a one per cent increase in the inflation rate, at $p > 0.05$ among the selected Sharia law countries. This negative inverse relationship between inflation and economic growth was also documented by Andres & Hernando (1997), Barro (1996), De Gregorio (1992), Friedman (1956), Gylfason (1998, 1991), Saeed (2007) and Stockman (1981). The study as a result rejects the null hypothesis that macroeconomic fundamentals have a significant effect on the economic growth of the countries in the Sharia law region, hence accepting the alternative hypothesis.

In relation to the institutional environment which also determines firm-level corporate governance, the OLS model estimates showed that efficiency of legal framework in settling disputes, efficiency of legal framework in challenging regulations as well as judicial independence have a positive relationship with economic growth among the selected Sharia law countries. An incremental effect of 0.101% in economic growth was recorded due to a one per cent enhancement in the efficiency of legal framework in settling disputes, at $p > 0.05$. Also, increased economic growth effects of 0.074% were posted by a one per cent improvement in

the efficiency of legal framework in challenging regulations, at $p > 0.05$. Both these findings are backed by Barro (1991), Posner (1997) and Scully (1988) that when a country's court systems are highly esteemed by the private business sector, there will be more investment by numerous participants which will then raise a country's economic growth. A one per cent realised advancement in judicial independence among the selected Sharia law countries led to a 0.055% increase in economic growth, at $p > 0.05$. It was found however that the other institutional environment proxies of investor protection and property rights have a negative inverse relationship with economic growth among the selected Sharia law countries. A one per cent strengthening in the levels of investor protection instead led to a 0.482% decrement in the economic growth, at $p > 0.05$. This positive relationship between investor protection and economic growth contrasts with that found by Haidar (2009). A one per cent increase in the robustness of property rights among the selected Sharia law countries resulted in a 1.655% decrement in economic growth, at $p > 0.05$. This is contrary to the findings of Angeles (2011) that revealed that the safeguard of property rights is a vital constituent to a country's economic growth and development. The study thus concludes that the institutional environment has an insignificant effect on economic growth, therefore rejecting the null hypothesis and accepting the alternative hypothesis. These results call upon for reforms in the institutions among the Sharia law countries in order to see that institutions direct and shield the economies of these countries.

The overall OLS coefficient for R^2 is estimated at 0.109, which indicates that 10.90% of the changes in the economic growth of the selected Sharia law countries is explained by all the included explanatory proxy variables of corporate governance, financial development, macroeconomics and the institutional environment in the model. These factors are thus insufficient in accounting for economic growth, hence necessitating the testing with the fixed effects transformation estimation in order to account for the country-specific differences.

5.4.2 Determining the nature of the relationships between corporate governance variables and economic growth in selected Sharia law countries using the Fixed Effects Model

This Fixed Effects Model (FEM) estimated the effect of corporate governance proxies as well as the additional indicators of financial development, macroeconomic fundamentals and the institutional environment towards the economic growth of the selected Sharia law countries,

with recognition of unobserved heterogeneity. Table 5.31 below is a presentation of log-transformed proxies of the four-variable FEM model, with 5% level of significance.

Table 5. 31 Fixed effects model estimation for corporate governance, institutional environment, macroeconomic fundamentals, financial development and economic growth in the selected Sharia law countries

Economic growth	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
Companies disclosure practices	0.077	0.240	0.32	0.749	-0.396	0.550
Efficacy of corporate boards	-4.229	1.500	-2.82	0.005	-7.188	-1.269
Protection of minority shareholders	2.395	1.723	1.39	0.166	-1.003	5.794
Soundness of banking sector	0.696	1.157	0.60	0.548	-1.587	2.979
Regulation of securities exchanges	-0.750	1.173	-0.64	0.523	-3.064	1.564
Financing through equity markets	0.351	1.086	0.32	0.747	-1.791	2.492
Gross national savings	-0.070	0.390	-0.18	0.859	-0.840	0.701
Government debt levels	-0.267	0.230	-1.16	0.249	-0.720	0.188
Inflation rate	-0.339	0.138	-2.46	0.015	-0.610	-0.067
Foreign direct investment	2.366	1.557	1.52	0.130	-0.707	5.438
Investor protection	-0.774	0.660	-1.17	0.242	-2.075	0.528
Efficiency of legal framework (settling disputes)	-0.049	0.222	-0.22	0.826	-0.488	0.390
Efficiency of legal framework (challenging regulations)	-0.162	0.206	-0.78	0.434	-0.569	0.245
Judicial independence	2.838	0.861	3.30	0.001	1.140	4.537
Property rights	-1.641	1.134	-1.45	0.149	-3.878	0.595
Cons	4.965	3.132	1.59	0.115	-1.214	11.145

Sigma_u 0.679
 Sigma_e 0.858
 rho 0.385 (fraction of variance due to u_i)

F test that all u_i=0: F(12, 189) = 3.23 Prob > F = 0.000
 Fixed-effects (within) regression Number of obs = 217
 Group variable: cou_num Number of groups = 13

R-sq: Obs per group:
 within = 0.168 min = 14
 between = 0.071 avg = 16.7
 overall = 0.023 max = 17

F(15,189) = 2.54
 corr(u_i, Xb) = -0.722 Prob > F = 0.002

It can be seen from Table 5.31 that among the corporate governance indicators for the selected Sharia law countries, it is only efficacy of corporate boards that registered a significant relationship with economic growth, unlike in the OLS model estimation in table 5.30 where no proxy registered a significant correlation with economic growth. Reduced economic growth effects of 4.229% were found to be associated with a one per cent improvement in board efficacy, at $p=0.005$. Those overall improvements in proficiency of the board of directors did not add to the firm financial performance which is expected to increase their contribution to economic growth of the selected Sharia law countries, as it is a negative inverse relationship as found in the OLS estimation in table 5.30. Companies disclosure practices was found to have a positive and insignificant relationship with economic growth just like the OLS estimations in table 5.30. Increased economic growth effects of 0.077% were reported due to a one per cent improvement in overall firms' disclosure routines in the selected Sharia law countries, at $p>0.05$. Also, protection of minority shareholders registered a positive and insignificant relationship with economic growth, unlike the negative inverse relationship found in the OLS estimations in Table 5-30. A 2.395% increase in economic growth was realised due to a one per cent increase or strength in the protection of minority shareholders, at $p>0.05$. Again, the study deducts that there is need to reconsider the existing corporate governance norms and rules in a bid to reformat them towards an influential effect on the economic growth of the Sharia law countries. Thus the study rejects the null hypothesis as corporate governance does not have a significant effect on economic growth.

With respect to financial development, none of the indicators showed a significant relationship with economic growth, as established with the OLS estimations in Table 5.30, among the selected Sharia law countries. Soundness of banking sector as well as financing through equity markets revealed a positive relationship with economic growth. An increment in economic growth of 0.696% was recorded from a one per cent advancement in the soundness of banking sector, at $p>0.05$. This meant that increased bank lending boosted corporate investment in the economies of the selected Sharia law countries, hence reporting higher economic growth. Increased economic growth effects of 0.351% were posted from a one per cent increase in the frequencies with which firms finance through equity markets, at $p>0.05$. However, the coefficient for regulation of securities exchanges showed a negative relationship with economic growth. Reduced economic growth effects of 0.750% were recorded due to a 1% increase in the robustness of the regulation of securities exchanges, at $p>0.05$. The study rejects the null

hypothesis, as financial development shows no evidence of having a significant effect on the economic growth of the Sharia law countries.

The fixed effects estimator for the macroeconomic fundamental variables of the selected Sharia law countries revealed that only inflation rate has a significant relationship with economic growth, unlike in the OLS estimations in Table 5.30 where none of the macroeconomic fundamental variables posted significant correlation with economic growth, among the selected Sharia law countries. Decreased economic growth effects of 0.339% were registered from a one per cent increase in the inflation rate, at $p=0.015$. This is an inverse negative relationship between inflation and economic growth. It can be surmised that increasing inflation nibbled on the countries' savings that act as a buffer for investment in these economies, thus a reduction in economic growth. The proxies of gross national savings, government debt levels and foreign direct investment all reported an insignificant relationship with economic growth. It should be noted that gross national savings and government debt levels recorded an inverse negative relationship with economic growth. A 0.070% reduction in economic growth came about from a one per cent increase in gross national savings, at $p>0.05$. Also, decreased economic growth effects of 0.267% were posted from a one per cent increase in government debt levels among the selected Sharia law countries, at $p>0.05$. That said, the relationship between foreign direct investment and the economic growth was found to be positive. Increased economic growth effects of 2.366% were realised from a one per cent increment in foreign direct investment, at $p>0.05$.

Recognition of the country-specific features in the indicators of institutional environment revealed that only judicial independence has a strong positive and significant relationship with economic growth, among the selected Sharia law countries. It should be noted that none of the institutional environmental factors in the OLS estimations in Table 5-30 registered a significant relationship with economic growth. An economic growth incremental effect of 2.838% was realised from a one per cent upgrade in judicial independence, at $p=0.001$. Conversely, investor protection, efficiency of legal framework in settling disputes, efficiency of legal framework in challenging regulations and property rights all have an inverse negative and insignificant relationship with economic growth. A 0.774% economic growth decrement was recorded from a one per cent increase in the robustness of investor protection, at $p>0.05$. The coefficient for efficiency of legal framework in settling disputes conveys a reduction in economic growth of 0.049%, at $p>0.05$. This is an obverse finding from that of empirical discoveries of Pie (2001)

that economic improvement is linked to non-discriminatory adjudication of commercial court cases that go a long way in safeguarding business transactions. Reduced economic growth effects of 0.162% were posted from a one per cent improvement in the efficiency of legal framework in challenging regulations, at $p>0.05$. This is a reverse discovery in comparison to those by Barro (1991), Posner (1997) and Scully (1988) that when a country's court systems are highly esteemed by the private business sector, there will be more investment by numerous participants which would then raise a country's economic growth. Decreased economic growth effects of 1.641% were reported as a result of a one per cent improvement in the strength of property rights among the selected Sharia law countries, at $p>0.05$. This finding is contradictory to the work of Angeles (2011) who found that the safeguard of property rights is a vital constituent to a country's economic growth and development.

The overall fixed effects model coefficient for R^2 is estimated at 0.023, which denotes that only 2.3% of the variations in the economic growth of the selected Sharia law countries is ascribed to the explanatory variables of corporate governance, financial development, macroeconomics and the institutional environment. Compared to the OLS estimations in table 5-30, the fixed effects estimator has a much lower R^2 coefficient compared to that of the OLS model. It can thus be surmised that both of these models lack the strength from the included explanatory variables to satisfactorily account for variations in economic growth. There is need to examine the variability of constant effects in the cross-sections so as to check for a better explanation of the relationships with the variables of corporate governance, institutional environment, macroeconomics and financial development aspects.

5.4.3 Determining the nature of the relationships between corporate governance variables and economic growth in selected Sharia law countries using the Random Effects Model

Table 5. 32 Random effects model estimation for corporate governance, institutional environment, macroeconomic fundamentals, financial development and economic growth in the selected Sharia law countries

Economic growth	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
Companies disclosure practices	0.111	0.182	0.61	0.540	-0.245	0.468
Efficacy of corporate boards	-2.480	1.188	-2.09	0.037	-4.808	-0.152
Protection of minority shareholders	-0.217	0.994	-0.22	0.827	-2.166	1.731
Soundness of banking sector	-0.207	0.938	-0.22	0.825	-2.046	1.631
Regulation of securities exchanges	1.187	0.828	1.43	0.152	-0.436	2.809
Financing through equity markets	0.175	0.646	0.27	0.786	-1.091	1.441
Gross national savings	0.003	0.224	0.00	0.999	-0.439	0.440
Government debt levels	-0.237	0.138	-1.72	0.086	-0.508	0.034
Inflation rate	-0.183	0.117	-1.57	0.118	-0.413	0.046
Foreign direct investment	2.032	0.928	2.19	0.028	0.214	3.850
Investor protection	-0.482	0.372	-1.30	0.195	-1.211	0.247
Efficiency of legal framework (settling disputes)	0.101	0.188	0.54	0.590	-0.267	0.470
Efficiency of legal framework (challenging regulations)	0.074	0.167	0.44	0.659	-0.254	0.401
Judicial independence	0.055	0.611	0.09	0.928	-1.141	1.252
Property rights	-1.655	1.038	-1.59	0.111	-3.689	0.379
Cons	6.674	1.754	3.80	0.000	3.236	10.112

Sigma_u	0
Sigma_e	0.858
Rho	0 (fraction of variance due to u_i)

Random-effects GLS regression	Number of obs	=	217
Group variable: cou_num	Number of groups	=	13

R-squared:	Obs per group:
Within = 0.080	min = 14
between = 0.345	avg = 16.7
overall = 0.109	max = 17

Wald chi2(15)	=	24.69
corr(u_i, X)	=	0 (assumed)
Prob > chi2	=	0.054

From table 5.32 above, it was found that the GLS coefficient estimates for all the proxies of the variables are identical in direction and magnitude to those of the OLS model in table 5.30. This offers the interpretation that there are similar characteristics in the variables used in the models for the selected Sharia law countries. Also, important to note is that the overall GLS coefficient for R^2 is estimated at 0.109, which indicates that 10.90% is exactly the same as that in table 5.30. The GLS estimations however revealed that efficacy of corporate boards under corporate governance along with foreign direct investment, a measure of financial development, showed significant relationships with economic growth, among the selected Sharia law countries. These discoveries are a little unlike those of the OLS estimations in Table 5.30, where none of the indicators of the included regressors posted a significant relationship with economic growth. The coefficient estimate for efficacy of corporate boards showed the existence of a negative inverse and significant relationship with economic growth. A reduction in economic growth of 2.480% was due to improvements in the effectiveness of the boards of directors, at $p=0.037$, among the selected Sharia law countries. Also, random effects transformations exhibited a positive and significant relationship between foreign direct investment and economic growth. Incremental economic growth effects of 2.032% were found to be associated with a one per cent increase in foreign direct investment, at $p=0.028$. The implication therefore is that authorities charged with overseeing macroeconomic stability ought to focus on maintaining these levels of foreign direct investment for a continued positive and significant effect on economic growth among the Sharia law countries. However, this could be short-lived if the performances of corporate governance and institutions continue to lie in the doldrums, with no positive influential effect on economic growth.

5.4.4 Aggregated composite measures for the selected Sharia law countries

The results of the OLS, LSDV as well as GLS model estimates for the aggregated variables are detailed in the findings below.

5.4.4.1 Determining the nature of the relationships between corporate governance variables and economic growth in selected Sharia law countries using aggregated Pooled Effects Model

Table 5. 33 Pooled OLS estimation for aggregated corporate governance, institutional environment, macroeconomic fundamentals, financial development and economic growth in the selected Sharia law countries

Economic growth	Coef.	Robust Std. Err.	t	P> t	[95% Conf. Interval]	
Aggregated corporate governance	-0.550	0.462	-1.19	0.257	-1.556	0.457
Aggregated financial development	0.804	0.693	1.16	0.269	-0.705	2.313
Aggregated macroeconomic fundamentals	-0.259	0.280	-0.92	0.374	-0.868	0.351
Aggregated institutional environment	0.403	0.260	1.55	0.148	-0.164	0.970
Cons	4.099	0.768	5.34	0.000	2.425	5.773

Linear regression	Number of obs	=	221
	F(4, 12)	=	1.48
	Prob > F	=	0.270
	R-squared	=	0.024
	Root MSE	=	.927

(Std. Err. adjusted for 13 clusters in cou_num)

The overall aggregated OLS Pooled model coefficient for R^2 is estimated at 0.024 in Table 5.33, which is a very low aggregate measure of 2.40% that is unsatisfactory from the included aggregated variables of corporate governance, financial development, macroeconomics as well as the institutional environment in accounting for variations in economic growth among the selected Sharia law countries. The study did not register any of the aggregated regressors in the OLS model to have a significant impact on economic growth. It was discovered that aggregated corporate governance and aggregated macroeconomic fundamentals have a negative relationship with economic growth. A 0.550% reduction in economic growth came about from a one per cent improvement in the aggregated corporate governance, at $p > 0.05$. These results certify those of the disaggregated OLS regression in which none of the corporate governance indicators registered a significant effect on economic growth. Decreased economic growth effects of 0.259% were attributed to a one per cent improvement in the aggregated macroeconomic fundamentals, at $p > 0.05$. These results also underscore the findings in the disaggregated OLS regression where none of the macroeconomic fundamentals registered a significant effect on economic growth. On the other hand, aggregated financial development as well as aggregated institutional environment posted a positive relationship with economic growth. Economic growth incremental effects of 0.804% were ascribed to a one per cent increase in the advancements of aggregated financial development, at $p > 0.05$. This proves consistent as found in the disaggregated OLS regression where none of the financial development indicators posted an incremental effect on economic growth. Lastly, a 0.403% upsurge in economic growth was recorded on the back of a one per cent increase in the sturdiness of the institutional environment, at $p > 0.05$.

5.4.4.2 Determining the nature of the relationships between corporate governance variables and economic growth in selected Sharia law countries using aggregated Fixed Effects Model

Table 5. 34 Fixed effects model estimation for aggregated corporate governance, institutional environment, macroeconomic fundamentals, financial development and economic growth in the selected Sharia law countries

Economic growth		Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
Aggregated corporate governance		-0.547	0.497	-1.10	0.273	-1.526	0.433
Aggregated financial development		3.136	1.223	2.56	0.011	0.724	5.547
Aggregated macroeconomic fundamentals		-0.465	0.410	-1.14	0.257	-1.273	0.342
Aggregated institutional environment		0.246	0.395	0.62	0.535	-0.534	1.025
Cons		1.561	1.741	0.90	0.371	-1.871	4.993
sigma_u	0.535				F test that all u_i=0: F(12, 204) = 2.69		Prob > F = 0.002
sigma_e	0.886				Fixed-effects (within) regression		Number of obs = 221
rho	0.267	(fraction of variance due to u_i)			Group variable: cou_num		Number of groups = 13
R-sq:	Obs per group:						
within	= 0.045	min	=	17			
between	= 0.008	avg	=	17.0			
overall	= 0.011	max	=	17			
corr(u_i, Xb) = -0.724					F(4,204)	=	2.42
					Prob > F	=	0.050

The overall aggregated FEM coefficient for R^2 is estimated at 0.011 in table 5.34, an even lower measure compared to the one of the aggregated OLS estimate in table 5.33. The coefficient for R^2 of 1.10% is inadequate to explain the variations in economic growth among the selected Sharia law countries, from the included aggregated variables of corporate governance, financial development, macroeconomics as well as the institutional environment. The Fixed Effects Estimator (FEE) for the aggregated variables revealed that only aggregated financial development has a significant relationship with economic growth, unlike the OLS aggregated estimates which did not post any significant correlation with economic growth. It was found that aggregated financial development is positively correlated with economic growth, in which 3.136% economic growth incremental effects were posted from a once per cent advancement in aggregated financial development, at $p=0.011$. The rest of the aggregated variables recorded an insignificant relationship with economic growth. Both aggregated corporate governance and aggregated macroeconomic environment registered a negative inverse relationship with economic growth. Decreased economic growth effects of 0.547% as well as 0.4657% were attributed to one per cent improvements in aggregated corporate governance and betterment of the macroeconomic fundamentals, accordingly, all at $p>0.05$. However, positive correlation was present between aggregated institutional environment and economic growth, with 0.246% increment in economic growth emanating from a 1% increase in the robustness of the institutional environment, at $p>0.05$.

5.4.4.3 Determining the nature of the relationships between corporate governance variables and economic growth in selected Sharia law countries using aggregated Random Effects Model

Table 5. 35 Random effects model estimation for aggregated corporate governance, institutional environment, macroeconomic fundamentals, financial development and economic growth in the selected Sharia law countries

Economic growth	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]
Aggregated corporate governance	-0.638	0.462	-1.38	0.167	-1.543 0.267
Aggregated financial development	0.443	0.863	1.67	0.094	-0.248 3.134
Aggregated macroeconomic fundamentals	-0.384	0.349	-1.10	0.271	-1.067 0.300
Aggregated institutional environment	0.349	0.334	1.04	0.296	-0.305 1.003
Cons	3.804	1.097	3.47	0.001	1.654 5.953

sigma_u	.326	Random-effects GLS regression		Number of obs = 221	
sigma_e	.886	Group variable: cou_num		Number of groups = 13	
rho	.119 (fraction of variance due to u_i)				

R-sq:	Obs per group:				
within = 0.035	min =	17	Wald chi2(4) =		6.02
between = 0.024	avg =	17.0	corr(u_i, X) =	0 (assumed)	Prob > chi2 = 0.198
overall = 0.021	max =	17			

The overall aggregated GLS estimation coefficient for R^2 is 0.021 in Table 5.35, which is bigger than that of the aggregated FEM coefficient in table 5.34 yet slightly lower in comparison to the one of the aggregated OLS estimate in table 5.33. The coefficient for R^2 of 2.1.0% is inadequate to explain the variations in economic growth among the selected Sharia law countries, from the included aggregated variables of corporate governance, financial development, macroeconomics as well as the institutional environment. The REE for the aggregated variables showed that no explanatory variable reported a significant relationship with economic growth. It was found that aggregated corporate governance and aggregated macroeconomic fundamentals posted negative inverse relationships with economic growth, in contrast with the scenarios of both aggregated financial development and aggregated institutional environment that reported positive correlations with economic growth. Reduced economic growth effects of 0.638% were found to be associated with a one per cent improvement in the aggregated corporate governance, at $p > 0.05$. Also, a 0.384% decrement in economic growth was found to be associated with a one per cent improvement in the stability of aggregated macroeconomic fundamentals, at $p > 0.05$. On the contrary, increased economic growth effects of 0.443% were elicited from a one per cent advance in the aggregated financial development, at $p > 0.05$. And an increment of 0.349% in economic growth was found to be associated with a one per cent increase in the strength of aggregated institutional environment, at $p > 0.05$. From these results, the study in each case, rejects the null hypothesis that none of corporate governance, financial development, institutional environment and macroeconomic fundamentals have a significant effect on economic growth.

The subsequent section unveils correlation matrices for the variables of corporate governance, financial development, macroeconomic fundamentals, institutional environment and economic growth. Both disaggregated and aggregated sets of data are showed.

Table 5. 36 Correlation matrix for the determinants of corporate governance and economic growth in the selected Sharia law countries

VARIABLE	Economic growth	Companies disclosure practices	Efficacy of corporate boards	Protection of minority shareholders
Economic growth	1.000			
Companies disclosure practices	0.046	1.000		
	0.494			
Efficacy of corporate boards	0.004	0.715*	1.000	
	0.948	0.000		
Protection of minority shareholders	0.082	0.747*	0.768*	1.000
	0.226	0.000	0.000	
Soundness of banking sector	0.056	0.837*	0.630*	0.712*
	0.407	0.000	0.000	0.000
Regulation of securities exchanges	0.084	0.824*	0.783*	0.754*
	0.215	0.000	0.000	0.000
Financing through equity markets	0.054	0.729*	0.594*	0.616*
	0.421	0.000	0.000	0.000
Gross national savings	-0.010	0.123	0.155*	0.109
	0.885	0.067	0.021	0.105
Government debt levels	-0.035	0.128	0.143*	0.125
	0.603	0.057	0.034	0.064
Inflation rate	-0.084	-0.108	-0.324*	-0.316*
	0.219	0.112	0.000	0.000
Foreign direct investment	0.112	0.602*	0.775*	0.739*
	0.096	0.000	0.000	0.000
Investor protection	-0.120	0.417*	0.375*	0.263*
	0.076	0.000	0.000	0.000
Efficiency of legal framework (settling disputes)	0.125	0.659*	0.597*	0.714*
	0.064	0.000	0.000	0.000
Efficiency of legal framework (challenging regulations)	0.155*	0.663*	0.612*	0.671*
	0.022	0.000	0.000	0.000
Judicial independence	0.013	0.683*	0.536*	0.672*
	0.851	0.000	0.000	0.000
Property rights	0.013	0.771*	0.769*	0.773*
	0.849	0.000	0.0000	0.000

Note: * denotes 5% level of significance

Table 5. 37 Correlation matrix for the aggregated determinants of corporate governance and economic growth in the selected Sharia law countries

VARIABLE	Economic growth	Aggregated corporate governance	Aggregated financial development	Aggregated macroeconomic fundamentals	Aggregated institutional environment
Economic growth	1.000				
Aggregated corporate governance	0.049	1.000			
Aggregated financial development	0.472	0.871*	1.000		
Aggregated macroeconomic fundamentals	0.295	0.000	0.200*	1.000	
Aggregated institutional environment	-0.079	0.124	0.003	0.667*	1.000
	0.243	0.065	0.667*	-0.121	
	0.109	0.797*	0.000	0.073	
	0.108	0.000			

Note: * denotes 5% level of significance

Table 5.36 displays the correlation matrix for the disaggregated variables of corporate governance, financial development, macroeconomic fundamentals as well as the institutional environment paired against economic growth for the selected Sharia law countries. As seen in the table, no corporate governance indicator posted significant correlation with economic growth. This suggest that corporate governance alone is inadequate to stimulate economic growth. Again, there is lack of evidence from the proxies of financial development and macroeconomic fundamentals about the existence of significant correlations with economic growth. Notably, the study found efficiency of legal framework in challenging regulations to have a significant relationship with economic growth. Increased economic growth effects of 0.155% were found to be associated with a one per cent improvement in the efficiency of legal framework in challenging regulations, at $p=0.022$. The remaining indicators of the institutional environment did not register significant correlation with economic growth.

The correlation matrix in Table 5.37 for the aggregated variables shows that none of the aggregated variables reported a significant correlation with economic growth, among the selected Sharia law countries. However, aggregated financial development was found to be significantly correlated to aggregated corporate governance, at $p=0.000$. Also, aggregated institutional environment reported significant correlation with aggregated corporate governance, at $p=0.000$.

5.4.5 Model selection

Tabulation of the results of the pooled effects, fixed effects and random effects model estimates for the disaggregated variables of corporate governance, financial development, macroeconomic fundamentals and the institutional environment for the selected Sharia law countries are shown in this section.

Table 5. 38 Test comparison of the Pooled, Fixed and Random effects models for corporate governance, financial development, macroeconomics and institutional environment for the selected Sharia law countries

VARIABLE	Pooled	Fixed	Random
Companies disclosure practices	0.111	0.077	0.111
Efficacy of corporate boards	-2.480	-4.229	-2.480*
Protection of minority shareholders	-0.217	2.395	-0.217
Soundness of banking sector	-0.207	0.696	-0.207
Regulation of securities exchanges	1.187	-0.750	1.187
Financing through equity markets	0.175	0.351	0.175
Gross national savings	0.003	-0.070	0.003
Government debt levels	-0.237	-0.266	-0.237
Inflation rate	-0.183	-0.339*	-0.183
Foreign direct investment	2.032	2.366	2.032*
Investor protection	-0.482	-0.774	-0.482
Efficiency of legal framework (settling disputes)	0.101	-0.049	0.101
Efficiency of legal framework (challenging regulations)	0.074	-0.162	0.074
Judicial independence	0.055	2.838	0.055
Property rights	-1.655	-1.642	-1.655
Cons	6.674	4.965	6.674
Number of observations		217	
R-sq	0.109	0.168	
R-sq Overall		0.023	0.109
R-sq Between		0.071	0.345
R-sq Within		0.168	0.080
Sigma u		0.679	0.000
Sigma e		0.858	0.858
Rho		0.385	0.000
Chi2		130.73	
Hausman (Prob>chi2)		0.000	

Note: *denotes 5% level of significance

The Hausman test results in Table 5.38 above show a coefficient estimate of 0.000, which triggered rejection of the null hypothesis, considering 5% level of significance. Thus the Fixed Effects estimator was deemed as the suitable model for the disaggregated data on the indicators of corporate governance, financial development, macroeconomic fundamentals and institutional environment, among the selected Sharia law countries. That is to say, the unobserved heterogeneity among the selected Sharia law countries is time-constant and arbitrarily connected to the explanatory proxy variables of corporate governance, financial development, macroeconomic fundamentals and institutional environment is critical in accounting for the variations in economic growth. It is the unvarying country-specific characteristics for the proxies of corporate governance, financial development, macroeconomic fundamentals and institutional environment that explain changes in the economic growth of the selected Sharia law countries.

From the chosen Fixed Effects Transformation (FET) model, no indicator of corporate governance reported significant correlation with economic growth. But under the macroeconomic fundamentals, the inflation rate is significantly correlated with economic growth. Also, no proxy among the financial development and institutional environment showed significant correlation with economic growth, from the fixed effects model column in Table 5.38.

The model selection for aggregated variable estimations is presented in the next test comparison below.

Table 5. 39 Test comparison of the Pooled, Fixed and Random effects models for the aggregated corporate governance, financial development, macroeconomics and institutional environment for the selected Sharia law countries

VARIABLE	Pooled	Fixed	Random
Aggregated corporate governance	-0.550	-0.547	-0.638
Aggregated financial development	0.804	3.136*	1.443
Aggregated macroeconomic fundamentals	-0.259	-0.465	-0.384
Aggregated institutional environment	0.403	0.246	0.349
Constant	4.099	1.561	3.804
Number of observations	221	221	221
R-sq	0.024	0.045	
R-sq Within		0.045	0.024
R-sq Between		0.008	0.024
R-sq Overall		0.011	0.021
Sigma u		0.535	0.326
Sigma e		0.886	0.886
Rho		0.267	0.119
Chi2		4.25	
Hausman (Prob>chi2)		0.373	

Note: *denotes 5% level of significance

The Hausman test coefficient estimate of 0.373 from table 5.39 above motivated the choice of using the Random Effects Estimator (REE) for the aggregated data on corporate governance, financial development, macroeconomic fundamentals and institutional environment. Accepting the null hypothesis that REE is appropriate, signals the significant influence of aggregated corporate governance via individual country characteristics that vary over time in affecting the aggregated financial development, aggregated macroeconomic fundamentals and aggregated institutional environment, among the selected Sharia law countries. The GLS estimations did not show any significant correlation among the aggregated variables with economic growth.

5.4.6 Short-run and causality analysis of the relationships between corporate governance variables and economic growth among the selected Sharia law countries

The panel VAR, GCM and FEVD estimations of the effect of aggregated corporate governance through the determinants of aggregated financial development, aggregated macroeconomic environment and aggregated institutional environment on to the economic growth of the selected Sharia law countries are detailed in this section.

5.4.6.1 Determining the nature of the relationships between corporate governance variables and economic growth in selected Sharia law countries using aggregated Panel Vector Autoregression Model

This section details the log-transformed panel VAR estimations of the effect of aggregated corporate governance through the determinants of aggregated financial development, aggregated macroeconomic environment and aggregated institutional environment on to the economic growth of the selected Sharia law countries.

Table 5. 40 Panel VAR model estimation for aggregated corporate governance, institutional environment, macroeconomic fundamentals, financial development and economic growth in the selected Sharia law countries

Outcome Variable	Lagged regressors	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	

Economic growth	Economic growth (-1)	0.780	0.121	6.47	0.000	0.544	1.017
	Aggregated corporate governance (-1)	-2.109	0.809	-2.61	0.009	-3.694	-0.524
	Aggregated financial development (-1)	-1.471	1.991	-0.74	0.460	-5.373	2.430
	Aggregated macroeconomic fundamentals (-1)	-0.841	0.717	-1.17	0.241	-2.246	0.564
	Aggregated institutional environment (-1)	1.727	1.030	1.68	0.093	-0.291	3.746

Aggregated corporate governance							
	Economic growth (-1)	0.024	0.019	1.27	0.204	-0.013	0.061
	Aggregated corporate governance (-1)	0.632	0.163	3.87	0.000	0.312	0.952
	Aggregated financial development (-1)	-0.526	0.406	-1.30	0.195	-1.321	0.270
	Aggregated macroeconomic fundamentals (-1)	-0.017	0.110	-0.15	0.880	-0.232	0.199
	Aggregated institutional environment (-1)	0.236	0.238	0.99	0.321	-0.230	0.702

Aggregated financial development							
	Economic growth (-1)	0.011	0.007	1.49	0.136	-0.003	0.025
	Aggregated corporate governance (-1)	0.046	0.051	0.90	0.368	-0.054	0.146
	Aggregated financial development (-1)	0.618	0.154	4.00	0.000	0.315	0.920
	Aggregated macroeconomic fundamentals (-1)	-0.025	0.048	-0.51	0.609	-0.119	0.070
	Aggregated institutional environment (-1)	0.054	0.072	0.75	0.450	-0.087	0.195

Aggregated macro-economic fundamentals							
	Economic growth (-1)	-0.045	0.023	-1.99	0.047	-0.090	-0.001
	Aggregated corporate governance (-1)	0.035	0.172	0.20	0.839	-0.303	0.373
	Aggregated financial development (-1)	1.983	0.558	3.55	0.000	0.889	3.078
	Aggregated macroeconomic fundamentals (-1)	0.403	0.152	2.65	0.008	0.105	0.701
	Aggregated institutional environment (-1)	-0.481	0.251	-1.92	0.055	-0.973	0.011

Aggregated institutional environment							
	Economic growth (-1)	0.071	0.025	2.85	0.004	0.022	0.121
	Aggregated corporate governance (-1)	-0.199	0.199	-1.00	0.316	-0.589	0.190
	Aggregated financial development (-1)	-0.740	0.470	-1.57	0.116	-1.662	0.182
	Aggregated macroeconomic fundamentals (-1)	-0.126	0.132	-0.96	0.339	-0.385	0.133
	Aggregated institutional environment (-1)	0.633	0.323	1.96	0.050	0.002	1.266

GMM Estimation	No. of obs = 182; No. of panels = 13		Ave. no. of T = 14.000				

Table 5.40 displays the *ceteris-paribus* effects for the short-run coefficients of aggregated corporate governance, aggregated financial development, aggregated macroeconomic fundamentals, aggregated institutional environment on to the economic growth of the selected Sharia law countries in a VAR model. With economic growth as the outcome variable, the previous year value of economic growth was found to have a positive significant effect on the current value of economic growth. The first lag of economic growth contributed 0.780% on the current value of economic growth, at $p=0.000$. The study confirmed that aggregated corporate governance has a strong significant negative impact on economic growth, at $p=0.009$. This therefore infers that authorities ought to recalibrate their corporate governance policies in order to make corporate governance have a significant effect on economic growth, within these Sharia law countries. Still within the same model, it was established that aggregated financial development, aggregated macroeconomic fundamentals as well as aggregated institutional environment do not have a significant impact on the economic growth of the selected Sharia law countries, with all their $p>0.05$.

As far as the next model is concerned, where aggregated corporate governance is the outcome variable, it was found that the first lag of aggregated corporate governance was found to have a positive and significant effect on aggregated corporate governance, at $p=0.000$. In contrast, economic growth does not have a significant effect on aggregated corporate governance, as the first lag of economic growth posted $p=0.204$, as the impact on aggregated corporate governance. Also, aggregated financial development, aggregated macroeconomic fundamentals as well as aggregated institutional environment did not record a significant impact on aggregated corporate governance, with their $p>0.05$.

With regards aggregated financial development as the criterion variable, the study found that only the first lag of aggregated financial development has a positive significant effect on aggregated financial development, at $p=0.000$. In this way, the current value of aggregated financial development is also a result of the previous year's value of aggregated financial development. Economic growth does not have a significant impact on aggregated financial development due to $p=0.136$ outcome. Additionally, aggregated macroeconomic fundamentals and aggregated institutional environment do not have a significant effect on aggregated financial development, with their $p>0.05$.

For aggregated macroeconomic fundamentals, the first lag of aggregated macroeconomic fundamentals was found to have a positive and significant effect on aggregated macroeconomic fundamentals, at $p=0.008$. This was followed by a weak negative and significant impact of the first lag of economic growth on to aggregated macroeconomic fundamentals, at $p=0.047$. Apart from that, aggregated financial development also has a significant impact on aggregated macroeconomic fundamentals, at $p=0.000$. On the other hand, both aggregated corporate governance and aggregated institutional environment have no significant effect on aggregated macroeconomic fundamentals due to $p>0.05$.

Finally, for the aggregated institutional environment, the previous period's value of aggregated institutional environment has a strong positive and significant impact of 0.633% improvement in the level of aggregated institutional quality for the current period, at $p=0.050$. It is also shown that the first lag of economic growth has a significant impact on aggregated institutional environment, at $p=0.004$. Conversely, each of the previous period values of aggregated corporate governance, aggregated financial development and aggregated macroeconomic fundamentals did not register a significant effect on the current value of aggregated institutional environment because their $p>0.005$.

5.4.6.2 Determining the nature of the relationships between corporate governance variables and economic growth in selected Sharia law countries using aggregated Panel Granger Causality Test Model

The section below presents the Granger Causality Model (GCM) estimations that fall under the VAR in order to gauge the causality and direction with regards to the nature of the relationships between aggregated corporate governance variables and economic growth for the selected Sharia law countries.

Table 5. 41 Panel Granger Causality test model estimation for aggregated corporate governance, institutional environment, macroeconomic fundamentals, financial development and economic growth in the selected Sharia law countries

Equation variable	Excluded variable	chi2	df	P>chi2
Economic growth	Aggregated corporate governance	6.800	1	0.009
	Aggregated financial development	0.546	1	0.460
	Aggregated macroeconomic fundamentals	1.377	1	0.241
	Aggregated institutional environment	2.814	1	0.093
	ALL	11.391	4	0.023

Aggregated corporate governance	Economic growth	1.613	1	0.204
	Aggregated financial development	1.678	1	0.195
	Aggregated macroeconomic fundamentals	0.023	1	0.880
	Aggregated institutional environment	0.984	1	0.321
	ALL	2.500	4	0.645

Aggregated financial development	Economic growth	2.221	1	0.136
	Aggregated corporate governance	0.811	1	0.368
	Aggregated macroeconomic fundamentals	0.261	1	0.609
	Aggregated institutional environment	0.570	1	0.450
	ALL	8.144	4	0.086

Aggregated macroeconomic fundamentals	Economic growth	3.953	1	0.047
	Aggregated corporate governance	0.041	1	0.839
	Aggregated financial development	12.616	1	0.000
	Aggregated institutional environment	3.674	1	0.055
	ALL	14.780	4	0.005

Aggregated institutional environment	Economic growth	8.123	1	0.004
	Aggregated corporate governance	1.007	1	0.316
	Aggregated financial development	2.476	1	0.116
	Aggregated macroeconomic fundamentals	0.914	1	0.339
	ALL	10.294	4	0.036

Table 5.41 above details the Granger causal effects for aggregated corporate governance, aggregated financial development, aggregated macroeconomic fundamentals, aggregated institutional environment and economic growth for the selected Sharia law countries. For economic growth as the equation variable, the research found a significant causal effect from aggregated corporate governance to economic growth, at $p=0.009$. In other words, changes in aggregated corporate governance antecede changes in economic growth for the selected Sharia law countries. This means that there is a unidirectional causal relationship between economic growth and aggregated corporate governance, with causality flowing from aggregated corporate governance to economic growth. Such a discovery is endorsed by Li (1998), Hasan *et al* (2009), Naughton (1995) and Qian (2000) who maintain that corporate governance is a precondition for economic growth. However, it was found that each of aggregated financial development, aggregated macroeconomic fundamentals as well as aggregated institutional environment do not have a significant causal effect on economic growth, among the selected Sharia law countries. Though, all the combined aggregated explanatory variables in the model were found to have a significant causal effect on economic growth, at $p= 0.023$. This then suggests that prior to the occurrence of changes in economic growth, there must be changes in aggregated corporate governance, aggregated financial development, aggregated macroeconomic fundamentals and aggregated institutional environment initially.

With regards aggregated corporate governance as the equation variable, the research found that none of the included regressors of economic growth, aggregated financial development, aggregated macroeconomic fundamentals and aggregated institutional environment have a significant causal effect on aggregated corporate governance. Again, it was found that a combination of these regressors lumped together have no significant causal effect on aggregated corporate governance, due to their $p>0.05$.

For aggregated financial development, the research found that none of the included regressors of economic growth, aggregated corporate governance, aggregated macroeconomic fundamentals and aggregated institutional environment have a significant causal effect on aggregated financial development. Yet again, it was found that a combination of these regressors lumped together have no significant causal effect on aggregated financial development, due to their $p>0.05$.

Turning to the model where aggregated macroeconomic fundamentals is the equation variable, the first lag of economic growth was found to have a significant causal effect on aggregated macroeconomic fundamentals, at $p=0.047$. This gives the impression that changes in economic growth precede changes in aggregated macroeconomic fundamentals. Thus the study declares the existence of a unidirectional causal relationship between economic growth and aggregated macroeconomic fundamentals, with causality flowing from economic growth to aggregated macroeconomic fundamentals. Also, aggregated financial development has a significant causal effect on aggregated macroeconomic fundamentals, at $p=0.000$. This is understood as, changes in aggregated financial development predate changes in aggregated macroeconomic fundamentals. Accordingly, the study declares a unidirectional causal relationship between aggregated financial development and aggregated macroeconomic fundamentals, wherein causality flows from aggregated financial development to aggregated macroeconomic fundamentals. Such causal relationship is countersigned by the findings of Alfaro *et al.* (2010, 2004), Durham (2004) and Hermes & Lensink (2003) that financial development precedes macroeconomic improvements especially with foreign direct inflows into the reporting economy. There was no significant causal effect from each of aggregated corporate governance and aggregated institutional environment on aggregated macroeconomic fundamentals among the selected Sharia law countries, as their $p>0.05$. However, the combination of economic growth, aggregated corporate governance, aggregated financial development and aggregated institutional environment were found to have a significant causal effect on aggregated macroeconomic fundamentals, at $p=0.005$. For aggregated macroeconomic fundamentals to experience changes, changes in a combination of economic growth, aggregated corporate governance, aggregated financial development and aggregated institutional environment ought to occur first.

In the model where aggregated institutional environment is the equation variable, it was established that economic growth has a significant causal effect on aggregated institutional environment, at $p=0.004$. Changes in economic antecede changes in aggregated institutional environment. Therefore, the study confirms the existence of a unidirectional causal relationship between economic growth and aggregated institutional environment, in which causality moves from economic growth to aggregated institutional environment. These results are upheld by Chong & Calderon (2000a), Lee & Kim (2009) and Lipset (1960) that economic growth comes before better institutions. Contrariwise, none of aggregated corporate governance, aggregated financial development and aggregated institutional development recorded significant causal

effect on aggregated institutional environment, as their $p > 0.05$. Interestingly, a combination of economic growth, aggregated corporate governance, aggregated financial development and aggregated macroeconomic fundamentals in the model has significant causal effect on aggregated institutional environment, at $p = 0.036$. Changes in aggregated institutional environment among the selected Sharia law countries ought to occur after changes in all of economic growth, aggregated corporate governance, aggregated financial development and aggregated macroeconomic fundamentals have taken place.

5.4.6.3 Determining the nature of the relationships between corporate governance variables and economic growth in selected Sharia law countries using aggregated Forecast Error Variance Decomposition Model

This section presents the FEVD model in which shock effects in aggregated corporate governance, aggregated financial development, aggregated macroeconomic fundamentals and aggregated institutional environment help explain variations in the economic growth among the selected Sharia law countries, to help predict the performance for the next 10 years.

Table 5. 42 Panel vector forecast error variance decomposition test results for the aggregated determinants of corporate governance and economic growth in the selected Sharia law countries

Response variable and forecast horizon	Impulse variables			
	Aggregated corporate governance	Aggregated financial development	Aggregated macroeconomic fundamentals	Aggregated institutional environment
Economic growth				
0	0	0	0	0
1	0	0	0	0
2	0.022	0.002	0.019	0.045
3	0.074	0.012	0.035	0.081
4	0.146	0.026	0.043	0.094
5	0.224	0.038	0.044	0.091
6	0.295	0.045	0.043	0.083
7	0.353	0.046	0.041	0.074
8	0.393	0.045	0.038	0.070
9	0.413	0.044	0.037	0.069
10	0.418	0.043	0.036	0.072

Table 5.42 presents log-transformed fluctuations in economic growth among the selected Sharia law countries due to unexpected variations in aggregated corporate governance, aggregated financial development, aggregated macroeconomic fundamentals and aggregated institutional environment. Starting with aggregated corporate governance, it can be seen that aggregated corporate governance is endogenous to economic growth from the short-run through to the long run, with its influence on economic growth growing steadily from year 2 to year 10. Overall, aggregated corporate governance was found to be relatively (weakly) endogeneous towards the economic growth among the selected Sharia law countries with the forecast error variance in economic growth growing from 2.2% in year 2 to 41.8% in year 10.

Turning to aggregated financial development as the innovation, the study found strong exogeneity with economic growth for the selected Sharia law countries. This is because the forecast error variance in economic growth due to aggregated financial development is seen to lethargically grow from 0.2% in year 2, to 1.2% in year 3, to 2.6% in year 4 to the highest shock variation of 4.6% in year 7. Thereafter, the contribution of shocks in aggregated financial development to economic growth hovers around and recedes below that of year 7. Consequently, aggregated financial development is of weak influence to the economic growth among the selected Sharia law countries, both within the short and long-runs.

The impulse variable being aggregated macroeconomic fundamentals, it was concluded that aggregated macroeconomic fundamentals showed strong exogeneity with economic growth. This is manifested by the generally low influence with forecast error variance in economic growth of 1.9% in year 2, 3.5% in year 3 to 4.4% in year 5. Aggregated financial development's influence thereafter dwindles further in each of the remaining years of forecast up to year 10. And so, aggregated financial development largely has a weak influence on the economic growth of the selected Sharia law countries.

Lastly, aggregated institutional environment as the shock variable, the research found that aggregated institutional environment is strongly exogenous to economic growth. This is demonstrated by forecast error variance in economic growth of 4.5% in year 2, 8.1% in year 3 to 9.4% in year 4. Thereafter, the forecast error variance in economic growth due to aggregated institutional environment falls to 9.1% in year 5, to 8.3% in year 6 to 7.4% in year 7 and never recovers to anywhere near the 9% mark up to year 10. Altogether, aggregated institutional

environment has a weak influence on the economic growth among the selected Sharia law countries.

5.5 CONCLUSION

In closing, this chapter detailed the panel data results used to analyse the nature of the relationships between corporate governance variables and economic growth for both Sharia law and OECD countries. This was done for both disaggregated and aggregated data. For OECD countries, at a disaggregated level, Pooled regression results showed that corporate governance indicators of efficacy of corporate boards has a negative significant effect on the economic growth, while protection of minority shareholders was found to have a positive significant effect on economic growth. Concerning institutional environment, efficiency of legal framework in challenging regulations was found to have a negative significant effect on economic growth. With the fixed effects estimations, efficacy of corporate boards also has a negative significant effect on economic growth. Under macroeconomic fundamentals, gross national savings and government debt levels were both found to have a negative significant effect on economic growth. For institutions, efficiency of legal framework in challenging regulations has a negative significant effect on economic growth. The random effects estimator revealed that corporate governance indicators of efficacy of corporate boards have a negative significant effect on economic growth while protection of minority shareholders has a positive significant effect on economic growth. The institutional environment indicator of efficiency of legal framework in challenging regulations revealed a negative significant effect on economic growth. Still on the OECD block, at an aggregated level, financial development has a negative significant effect on economic growth using Pooled model, and corporate governance has an insignificant relationship with economic growth throughout all model results. Using PVAR, the first lag of corporate governance registered an insignificant effect on economic growth, yet previous year values of macroeconomic fundamentals and institutional environment were found to have a positive significant effect on economic growth. Causation results showed again that corporate governance does not Granger cause economic growth, however, a unidirectional causality relationship was established flowing from economic growth to corporate governance. Additionally, all the included aggregated variables of corporate governance, financial development, macroeconomic fundamentals and institutional environment Granger cause economic growth. Further analysis of PVAR methods using FEVD exhibited that corporate governance has a weak influence as a shock variable on economic growth while aggregated

macroeconomic fundamentals as well as aggregated institutional environment were found to be strongly endogenous to economic growth.

With reference to the countries in the Sharia law region, at a disaggregated level, both Fixed and Random effects estimations revealed that efficacy of corporate boards recorded a negative significant effect on economic growth. Tests accounting for unobserved heterogeneity showed that inflation rate and judicial independence both have a negative significant effect on economic growth. The random effects estimator showed the foreign direct investment has a positive significant effect on economic growth. At the aggregated level, corporate governance has an insignificant effect on economic growth, only the fixed effects estimator showed that financial development has a positive significant effect on economic growth. Using the PVAR, the previous year value of corporate governance was found to have a negative significant effect on economic growth and further tests for causality also revealed the corporate governance Granger causes economic growth as well as all the aggregated variables of financial development, macroeconomic fundamentals and institutional environment. The shock estimations revealed that corporate governance is endogenous to economic growth, while institutional environment showed strong endogeneity to economic growth. The succeeding chapter offers a discussion and interpretation of these results by showing the differences in the nature of the relationships among variables affecting economic growth in the selected OECD and Sharia law countries.

CHAPTER SIX

THE INTEGRATED CORPORATE GOVERNANCE FRAMEWORK FOR SHARIA LAW COUNTRIES

6.1 INTRODUCTION

This chapter is a presentation of the findings from the previous chapter and it responds to research question iv: What are the differences in the nature of the the relationships between corporate governance variables and economic growth in selected OECD countries and Sharia law countries? The focus in this chapter is the structure of the interrelations referred to in the conceptual framework in Chapter Three and generates a synopsis of the main findings of the study. In the penultimate, this chapter presents an integrated framework that should enhance the application of corporate governance principles in Sharia law regions so as to stimulate economic growth, hence providing a solution for this research's problem. This integrated corporate governance framework for Sharia law countries constitutes the study's contribution to the epistemology on corporate governance as it prescribes the framework for enhancing economic growth in these countries after analysing the empirical evidence in Chapter Five.

6.2 THE STATE OF CORPORATE GOVERNANCE AND ITS DETERMINANTS ON ECONOMIC GROWTH IN BOTH OECD AND SHARIA LAW COUNTRIES

Derivative from the findings in Chapter Five, the selected OECD countries recorded the highest economic growth figure in comparison to the selected Sharia law countries for the 17 year period of study. However, the countries in the Sharia law region reported a higher mean value of economic growth unlike the OECD countries. The promotion of sustainable economic growth and development is a key issue on the agenda of the OECD as it strives to align member countries in formulating better policies and transnational practices. The countries in the Sharia law block, including those in the Middle East and North African region, realise the value of creating several reforms to increase their economic growth, specifically their governance frameworks in a comprehensive way.

Thus the discussion in this chapter identifies the characteristics and the setting of the framework of corporate governance with the role it contributes to economic growth for both the OECD and Sharia law countries. It is important to note that even though the discussion of the explanatory variables is compartmentalised, these variables do not work in isolation but they instead fortify one another to form a sustainable framework. It therefore entails that an awareness of the state and potential results of the observed corporate governance, financial development, macroeconomic fundamentals and the institutional environment for the selected countries in the period of study, dictates the robustness of the interaction of the variables that determine corporate governance that ultimately influences the economic growth in the Sharia law countries.

6.2.1 Economic growth

Evidence from the descriptive statistics showed that countries in the Sharia law region reported a slightly higher economic growth on average with a slightly even distribution than the OECD countries. However, the OECD countries recorded the highest maximum GDP figure of 212 billion dollars. Further analysis from the panel summary statistics from both the OECD and Sharia law countries exposed that the variations in the levels of economic growth are explained by the discrepancies between the specific countries. There is room to boost the economic growth for both the OECD and the Sharia law countries, by sharpening country-specific strategies within country-frameworks, particularly the corporate governance strategies that trigger economic growth.

6.2.2 Corporate governance

Corporate governance was measured by the indicators of efficacy of corporate boards, companies disclosure practices and protection of minority shareholders and is discussed and interpreted with its interactions to the economic growth of both the OECD and Sharia law countries. Generally, the OECD region exhibited a sound firm-level governance standard when compared to the practices of firms in the Sharia law region.

6.2.2.1 Efficacy of corporate boards

The efficacy of corporate boards as a component of firm-level corporate governance is critical in ensuring efficient company resource allocation which then leads to maximisation of company value. The descriptive results from this study showed that firms in the OECD region

performed stronger than their counterparts in the Sharia law region. This therefore means that the board of directors of companies in the OECD area exhibited effective strategies in eliminating problems of agency that are associated with the separation of ownership and control of the firms, when compared to the Sharia law companies. Again, this is verified by the panel summary statistics that board efficacy is higher in the OECD than in the Sharia law countries. In addition, the poorer performance of boards in the Sharia law region is reflected in the non-linear relationship between board efficacy and economic growth. Thus the changes in board efficacy over time among firms in the Sharia law region did not bear an impact on the regional economic growth.

It should be emphasised that the efficacy of corporate boards in as far as discharging its monitoring and strategic advisory duties is corroborated by Duchin *et al.* (2010), Forbes & Milliken (1999) and John & Senbet (1998) who all endorse that efficacy enhances firm financial performance, which goes a long way in maximising firm value. The improved overall firm financial performance is expected to add to the overall economic growth of the country as a result.

6.2.2.2 Companies disclosure practices

The results from both descriptive and panel summary statistics for companies disclosure practices revealed that again firms in the OECD region observe high disclosure routines unlike their counterparts in the Sharia law countries, with OECD domiciled firms reporting lower variations between countries than those in the Sharia law region. Even though the analysis further identified a negative and positive correlation between firm disclosure and economic growth for the OECD and the Sharia law regions respectively, the fact that both relationships are weak offers inconclusive judgments. Therefore, firms in both regions ought to re-examine their companies disclosure practices to free up of more funds for investment in order to effect the economic growth levels of their countries.

6.2.2.3 Protection of minority shareholders

The OECD region reported much stronger protection of minority shareholders than firms in the Sharia law countries. Very low variations are evident in minority shareholder protection among firms between countries in the OECD region *vis-à-vis* the variations among firms between countries in the Sharia law region. The weak positive correlation and a non-linear

relationships between protection of minority shareholders and economic growth for the Sharia law and OECD regions respectively, render inadequate information on the overall contribution of this measure of firm-level corporate governance to economic growth. To this end, companies in both the OECD and Sharia law region should review their mechanisms of minority shareholder protection that are particularly underpinned by the existing laws and their enforcement within their environment of operation. This then will allay the expropriation fears by prospective minority investors who could then add to the overall economic investment needed to significantly contribute to the economic growth of these countries.

6.2.2.4 Aggregated corporate governance and economic growth

The study established a weak negative correlation between aggregated corporate governance and economic growth for the selected OECD countries whereas the relationship for the Sharia law countries was weak and positive. The implication is joint efforts to improve the corporate governance indicators of companies disclosure practices, efficacy of corporate boards and protection of minority shareholders on the whole brought about insignificant contribution to the economic growth of both the selected OECD and Sharia law countries.

6.2.3 Financial development

This section interprets and discusses the financial development proxies of soundness of banking sector, regulation of securities exchanges and financing through equity markets. On the whole, the results from the analysis confirmed that the selected countries in the OECD region have a better financial sector than those in the Sharia law region.

6.2.3.1 Soundness of banking sector

The OECD region exhibited a much higher level of banking sector development in comparison to those in the Sharia law countries. Furthermore, the level of banking development is much more uniform among the OECD countries than in the Sharia law countries. The unbalanced weak positive and negative correlation between soundness of banking sector and economic growth for the Sharia law and OECD countries correspondingly offers sketchy information on the contribution of the banking sector to the economic growth of these blocks of countries. Therefore, there is need to recalibrate the banking policy strategies by these countries to augment the strong effect on their economic growth levels.

6.2.3.2 Regulation of securities exchanges

Again it was verified that the capital markets in the OECD region are far more regulated unlike the securities in the Sharia law countries. Additionally, the level of security markets governance has a parallel in the selected OECD countries which cannot be said of the regulations of securities exchanges in the selected Sharia law countries. The study established a positive and negative correlation between regulation of securities exchanges and economic growth for the Sharia law countries in Figure 5.2 and OECD countries in Figure 5.7 respectively; however, both relationships are weak and associated with dissimilar reactions, and so the effects were insignificant.

6.2.3.3 Financing through equity markets

Companies in the Sharia law region are barely be able to access finance via equity markets in contrast to similar firms in the OECD region who find it much easier to raise capital for their operations and investments through equity markets. Both the descriptive and panel summary statistics showed that the level of financing through equity markets among firms in the OECD region is on par between countries in this region as opposed to equity financing among firms in the Sharia law region. Further analysis demonstrated disproportionate weak negative and positive correlations between financing through equity markets and economic growth for the OECD and Sharia law regions, respectively. Accordingly, both blocks of countries ought to re-evaluate their stock markets, particularly the laws that govern them that could entice private sector investment through equity markets. This could possibly bring about a significant contribution to economic growth through the stock markets.

6.2.3.4 Aggregated financial development and economic growth

For the selected Sharia law countries, a weak positive correlation between aggregated financial development and economic growth is evident, yet for the OECD, the relationship was negative. This means that consolidated improvements in the soundness of banking sector, regulation of securities exchanges as well as financing through equity markets reduces the levels of economic growth for the OECD, unlike in the Sharia law regions. The logical explanation for this negative aggregated financial development-economic growth relationship in the OECD is that there is a negative relationship between aggregated corporate governance and economic growth as reported earlier among the OECD countries. This is because corporate governance needs to exert its weight fully on to the financial sector in order to reflect and contribute to a

country's economic growth through effective resource allocation. It is little wonder that the weak positive relationship between aggregated corporate governance and economic growth among the Sharia law countries is linked to a weak positive correlation between aggregated financial development and economic growth among the Sharia law countries.

6.2.4 Institutional environment

This was measured by the proxies of investor protection, efficiency of legal framework in settling disputes, efficiency of legal framework in challenging regulations, judicial independence and property rights. Generally, the study established that the selected OECD countries have higher levels of investor protection, judicial independence and property rights when compared to their Sharia law counterparts.

6.2.4.1 Investor protection

The selected countries in the OECD region displayed stronger investor protection regimes unlike the countries in the Sharia law, as per results from both the descriptive and panel summary statistics, with investor protection in the OECD appearing more uniform than that in the Sharia law countries. Further analysis from the scatter plots verified the positive correlation between investor protection and economic growth among the selected OECD countries whereas, for the Sharia law countries, there was a negative correlation. However, the study could not categorically ascertain the contribution of investor protection towards economic growth for both the OECD and Sharia law countries since both relationships were weak. This is demonstrated by Figure 5.8 and Figure 5.3 for OECD and Sharia law countries respectively. It could be that there is need for these selected countries to recalibrate their levels of investor protection to stimulate significant economic growth. The fact that investor protection in the selected OECD countries was reported positive but weak suggests some clues on the direction of the laws necessary to encourage trust among contracting business partners and offer guarantees of investor cover in the existing laws.

6.2.4.2 Efficiency of legal framework in settling disputes

The study's results from both the descriptive and panel summary statistics showed that the efficiency of legal framework in settling disputes in both the selected OECD and Sharia law countries is just at a bare minimum, leading to the conclusion that courts are lackadaisical in settling private disagreements among contracting partners. This therefore indicates that these

regions teem with investor expropriation that discourages private sector investment needed to spur regional economic growth. The weak negative and positive correlations between efficiency of legal framework in settling disputes with economic growth in the OECD region and the Sharia law region respectively, do not help the fact that overall regard in courts systems to uphold private property, creditor and contractual rights lies in the doldrums in both regions.

6.2.4.3 Efficiency of legal framework in challenging regulations

Again here, both the OECD and the Sharia law region exhibited lower efficiency of the legal framework in the processes by which private businesses could contest the constitutionality of existing laws in which they conduct business. This implies very high levels of interference in the workings of the legal framework and its enforcement by other parties of government in both regions, in order to sway major corporate decisions and cases that affect the economy. The weak positive and negative correlations between efficiency of legal framework in challenging disputes and economic growth for the Sharia law region and the OECD region respectively, is parlous as both correlations are insignificant, thus an inefficient legal framework negates the overall contribution to economic growth in these countries. Figures 5.8 and 5.3 clearly show these weak correlations for the OECD and Sharia law countries respectively.

6.2.4.3 Judicial independence

The selected countries from the OECD region demonstrated significantly high levels of judicial independence far ahead of the just bare minimum rating score of the Sharia law region. Still, the OECD region exhibited evenness in the overall levels of judicial independence between the selected countries unlike that of the Sharia law countries, as shown firstly by descriptive statistics in section 5.2.9.4 for the OECD countries and section 5.2.4.4 for the Sharia law countries. Secondly, panel summary statistics back these conclusions as evidenced in Table 5.15 for the OECD countries and Table 5.11 for the Sharia law countries. The weak negative and non-linear correlations between judicial independence and economic growth for the OECD and the Sharia law regions respectively point to the need to reassess the impartiality of courts in both the OECD and Sharia law regions in order to boost their economic growth.

6.2.4.4 Property rights

The selected countries from the OECD region displayed very secure property rights in comparison to the average levels of property rights security in the selected countries of the Sharia law region, with OECD countries reporting symmetry of property rights protection between countries unlike those in the Sharia law region. The non-linear and weak negative correlations between property rights and economic growth for the Sharia law region and the OECD regions respectively, suggest that there is room for both blocks of countries to further strengthen their property rights laws until such a time when they become robust enough to collateralise the required investment levels that will add positively to their economic growth.

6.2.2.5 Aggregated institutional environment and economic growth

For the Sharia law countries, this study established a weak positive correlation between aggregated institutional environment and economic growth, which contrasts with the weak negative correlation found among the OECD countries. The developments in the overall institutional environment for both the OECD and Sharia law countries are insufficient to contribute significantly to their economic growth, which conveys a need to restructure the overall institutional frameworks for both blocks in order to have a strong positive effect on to their economic growth.

6.2.5 Macroeconomic fundamentals

Gross national savings, government debt levels, inflation rate and foreign direct investment measured macroeconomic fundamentals which are discussed below. The Sharia law countries selected for this study reported better gross national savings and lower government debt levels when compared with the OECD countries. Very high inflation rates were recorded in the Sharia law countries than in the OECD countries and, also, the OECD countries confirmed higher levels of foreign direct investment than the Sharia law countries.

6.2.5.1 Gross national savings

The countries in the Sharia law region reported greater national savings than their counterparts in the OECD region, although both blocks had high differentials amongst them, as established by both the descriptive and panel summary statistics. The study found a non-linear relationship between gross national savings and economic growth for the selected Sharia law countries while the relationship for the OECD was negative. As a result, this speaks to the need for

change in macroeconomic policies that will encourage more savings required to stimulate economic growth for both blocks of countries.

6.2.5.2 Government debt levels

The descriptive statistics established that the selected countries in the Sharia law block performed better than those in the OECD region, with Sharia law countries' government debt registering significantly lower average levels as a percentage of their respective economic growth than OECD counterparts. Further analysis of the scatter plots exhibited the existence of a weak positive correlation between government debt levels and economic growth for the selected OECD countries while the correlation for the Sharia law countries was weak and negative.

6.2.5.3 Inflation rate

Both the descriptive and panel summary statistics show that the countries in the Sharia law countries registered very high average inflation levels *vis-à-vis* their OECD counterparts, with the OECD countries displaying more evenness unlike the one in the Sharia law countries. The scatter plot for the OECD block showed strong positive correlation between inflation rate and economic growth while that of the Sharia law displayed a weak negative correlation. It follows therefore that the increases in inflation within the OECD block is just enough to entice firms to produce more output for the market which translates into increased productivity as the demand is unaffected, and this contributes to enhanced economic growth. The Sharia law block conversely, needs to reformulate its macroeconomic policy with regards to the ideal levels of inflation so as to invigorate its levels of economic growth.

6.2.5.4 Foreign direct investment

The countries in the OECD block reported a slightly higher average of foreign direct investment as well as greater homogeneity in comparison to the Sharia law countries, as evidenced by both the descriptive and panel summary statistics. However, the overall higher foreign direct investment average score in the OECD region do not positively contribute to economic growth as confirmed by a non-linear correlation, while the relationship in the Sharia law block is weak and positive. It could be that both blocks of countries need to review their absorptive capacity of their foreign direct investment levels in order to efficiently use the

increased investment injections in their respective economies so as to bring about robust economic growth.

6.2.5.5 Aggregated macroeconomic fundamentals and economic growth

For the selected OECD countries, the study found a positive correlation between aggregated macroeconomic fundamentals and economic growth, while for the selected Sharia law countries, the relationship is weak and negative. Thus this renders the conclusion that favourable corrections in the aggregated macroeconomic fundamental variables contribute to increased economic growth in the OECD region, leaving a need for macroeconomic fundamental restructuring in the selected Sharia law countries so as to positively affect their economic growth levels, as seen among the OECD countries.

6.3 DIFFERENCES IN THE NATURE OF RELATIONSHIPS BETWEEN CORPORATE GOVERNANCE VARIABLES AND ECONOMIC GROWTH IN OECD AND SHARIA LAW COUNTRIES

This section discusses the nature of the interaction of the variables affecting economic growth for both sets of countries using the Pooled Effects Model, Fixed Effects Model as well as the Random Effects Model estimates.

6.3.1 Differences from Pooled Effects Model

Results from the OLS test for the selected OECD countries estimating the effect of corporate governance on economic growth showed that the corporate governance variables of efficacy of corporate boards as well as protection of minority shareholders have a significant effect on economic growth, as shown in section 5.3.1. It was found that the more effective the overall firm board of directors became, there is a more than proportionate reduction in the economic growth in the OECD region, while increased strength in the protection of minority shareholders was associated with increased economic growth. The component of companies disclosure practices was found not to be significant to economic growth. For the Sharia law countries, none of the corporate governance practices showed a significant effect on economic growth, as shown in section 5.4.1. There is need to identify the levels of efficacy of corporate boards and companies disclosure practices so as to positively and significantly enhance the economic growth of the selected OECD countries. And for the selected countries in the Sharia law region, the insignificant effect of all the corporate governance components on economic growth could

be due to the lack of strong corporate governance as shown by the lukewarm performance of these individual corporate governance indicators present in the descriptive statistics in table 5-1 above. Therefore, in order for the three corporate governance indicators to have a stimulating and significant effect on economic growth in the Sharia law region, it is essential to rethink of measures that connect these corporate governance practices to the effective levels.

On financial development, the OLS test estimates for both the selected OECD and Sharia law countries revealed that none of the financial development proxies have a significant impact on economic growth. In other words, improvements in the financial development components of soundness of banking sector, regulation of securities exchanges and financing through equity markets has an immaterial effect on the economic growth of both sets of countries, for the period of study. This inconsequential effect of financial development on to the economic growth of in the OECD countries could be emanating from the earlier evidence of the negative effect of efficacy of corporate boards, signalling deficiency the general firm board of director effectiveness to root out corruption and the carrying out of its fiduciary and advisory roles. This together with insignificant effect of companies disclosure practices all point to ineffective corporate governance that has rendered unimportant the contribution of financial development to economic growth. With the Sharia law countries, the overall insignificant effect of all the corporate governance components is reflected in the insignificance of financial development towards economic growth.

With regards the macroeconomic environment, all the variables of gross national savings, government debt levels, inflation rate and foreign direct investment had no significant effect on the economic growth of the selected OECD and Sharia law countries. It was reported earlier in Chapter Five that both sets of countries generally experienced varying levels of macroeconomic instabilities for all the macroeconomic fundamental indicators, and this could account for the insignificant effect of macroeconomic fundamentals on the economic growth of these countries. It is imperative that companies carry out business in stable macroeconomic conditions to ensure their survival. Imbalances in countries' savings, debt levels and inflation create macroeconomic distortions that exert a negative impact on corporate governance and consequently economic growth. Equally, corporate governance is linked directly to a number of macroeconomic fundamentals particularly the inflow of foreign direct investment into the country. It was observed that for both sets of countries, corporate governance had a paradoxical effect on economic growth and this raised red flags to potential investment via foreign direct

investment, hence arriving at the ineffectual effect of macroeconomic fundamentals on economic growth.

Institutional environment indicator estimates for OLS showed that for the selected OECD countries, only the efficiency of legal framework in challenging regulations has a significant effect on the economic growth in these countries. However, the significant effect on economic growth due to a one per cent improvement in the efficiency of legal framework in challenging regulations is negative, which means that there is a considerable reduction in the economic growth levels. The remaining institutional environment indicators of investor protection, efficiency of legal framework in settling disputes, judicial independence and property rights recorded no significant effect on the economic growth of the selected OECD countries. With regards the selected Sharia law countries, all the institutional environment indicators did not show any significant effect on the economic growth of these countries. These results underscore the inadequacies in the overall levels of institutional environment to guarantee the required investor cover against expropriation. It is crucial that both sets of countries ensure the conduciveness of the overall institutional environment, in all areas of these indicators in order to harness their combined effects, rather than maximising their separate benefits. This synergism among the indicators of institutions is key and thus serves as the needed insurance policy for investors to partake in the economy, and is at the core of a much more effective corporate governance. This is because corporate governance mechanisms at firm level can accurately achieve the desired results by leaning on robust law systems and institutional frameworks within the country, as the points of referral and enforcement.

6.3.2 Differences from Fixed Effects Model

The consideration for unobserved country-specific differences in the corporate governance practices among the selected OECD and Sharia law countries exhibited that among the indicators of corporate governance, only efficacy of corporate boards had a significant effect on economic growth for both sets of countries. That said, improved effectiveness of boards of directors in both regions is linked to reduced economic growth, as the effect is negative. For the OECD countries selected, it was observed that apart from the similar characteristics in corporate governance proxy of efficacy of corporate boards, there are country-specific variations in protection of minority shareholders and companies disclosure practices. Companies disclosure practices and protection of minority shareholders showed an

insignificant relationship with economic growth, for both the OECD and Sharia law selected countries. The results point to the need for a review of these corporate governance practices, to rectify the observed inadequacies in corporate governance mechanisms, in order to have a strong positive and significant effect on the economic growth of both sets of countries.

Fixed effects estimations of financial development indicators for both the selected OECD and Sharia law countries disclosed that soundness of banking sector, regulation of securities exchanges and financing through equity markets have no significant effect on economic growth. Again, it is worth noting that among each set of countries (OECD and Sharia), there are minimal country-specific differentials in financial development. It has been confirmed that the financial sector operates on the background of weak corporate governance in both sets of countries, for the period of study. This then renders the financial sector unable to achieve the goal of contributing significantly towards countries' economic growth. The financial sector is responsible for channeling amassed resources to investment projects with the highest rate of return, in an environment of solid investor protection, as well as strong disclosure tendencies. In this way, there is a secured investment climate necessary for the needed investment levels that could spur countries' economic growth. Therefore, there is need to attend to the insufficiencies in corporate governance practices for the economic growth of both sets of countries to be positively and significantly influenced by the financial sector.

Tests for country-specific unobserved heterogeneity in the macroeconomic fundamental indicators among the selected OECD countries displayed in Table 5.18 show that gross national savings, government debt levels and foreign direct investment have a significant effect on economic growth. It was found that the inflation rate's effect on economic growth is insignificant. This evinces the great variations in the macroeconomic characteristics among the selected OECD countries, looking at the Pooled model results. However, it is only the macroeconomic indicator of foreign direct investment that has a positive effect on economic growth. The effects of both gross national savings and government debt levels on economic growth are negative. The same test on the Sharia law countries in Table 5.13 revealed that only the inflation rate has a significant effect on economic growth, whereas the other macroeconomic fundamental indicators of gross national savings, government debt levels and foreign direct investment have an insignificant effect on economic growth. And notably, increased inflation is associated with substantial reductions in the economic growth among the selected Sharia law countries, even if the effect is significant.

Unobserved country-specific differential test estimates in institutional environment for the OECD region exhibited that only efficiency of legal framework in challenging regulations has a significant effect on economic growth. Notably, with increased ease of business in challenging the legality of prevailing laws takes away from the economic growth, as the effect is negative. The rest of the institutional environment indicators of investor protection, judicial independence, property rights and efficiency of legal framework in settling disputes all reported an insignificant effect on economic growth. It is clear therefore that the selected OECD countries have got similar institutional characteristics as they all emphasise the efficiency of legal framework in challenging regulations, unlike the other indicators. For the selected Sharia law countries, the same heterogeneity test revealed that only judicial independence has a significant effect on economic growth. Conspicuously, the improvements in the impartiality of the judiciary add a great deal to economic growth, as the effect is positive. However, the rest of the institutional environment indicators of investor protection, efficiency of legal framework in settling disputes, efficiency of legal framework in challenging regulations and property rights reported no significant effect to economic growth. Thus these results bring to the fore the variations in the judicial independence among the selected Sharia law countries.

6.3.3 Differences from Random Effects Model

With regards to corporate governance, observation for variability of cross-sectional constants in Table 5.19 showed that the corporate governance indicators of efficacy of corporate boards as well as protection of minority shareholders have a significant effect on the economic growth of the selected OECD countries. However, it is the protection of minority shareholders of these two proxies that has a positive effect on economic growth, as efficacy of corporate boards is negative towards economic growth. The effect of companies disclosure practices is insignificant to the economic growth of these selected OECD countries. As far as the selected Sharia law countries are concerned, this test in Table 5.32 confirmed that only the efficacy of corporate boards has a significant effect on economic growth, and even here the effect is also negative just as it was for the OECD countries. The other two corporate governance proxies of companies disclosure practices and protection of minority shareholders reported an insignificant effect on to the economic growth of the Sharia law countries.

The generalised least squares estimations for both the selected OECD and Sharia law countries concerning financial development established that none of the financial development indicators of soundness of banking sector, regulation of securities exchanges and financing through equity markets have a significant effect on economic growth. This insignificant effect of the financial development proxies showed that the effect of soundness of banking sector to economic growth is positive for the OECD and negative for the Sharia law countries. Regulation of securities exchanges has a negative effect on economic growth for OECD countries while for Sharia law countries, the effect is positive. And lastly, the effect of financing through equity markets on economic growth is negative for OECD countries while for Sharia law countries, it is positive.

Turning to macroeconomic fundamental proxies, the quasi-demeaned estimations for the selected OECD countries posted that none of the macroeconomic fundamental indicators of gross national savings, government debt levels, inflation rate and foreign direct investment have a significant effect to economic growth. For the Sharia law countries, only foreign direct investment showed a significant effect with economic growth. In particular, foreign direct investment has a considerable positive effect on the economic growth of these selected Sharia law countries. The rest of the macroeconomic fundamental proxies of gross national savings, government debt levels and inflation rate have no insignificant effect of economic growth. It was found that gross national savings has a negative effect on economic growth for both the OECD and Sharia law countries. Government debt levels have a positive effect on economic growth for the OECD countries while for the Sharia law countries, the effect is negative. The effect of inflation rate on economic growth is positive for the OECD countries, and negative for the Sharia law countries.

On institutional environment, random effects estimations for the OECD countries exhibited that only efficiency of legal framework in challenging regulations posted a significant effect on economic growth. This significant effect is nonetheless uncommonly negative. The rest of the institutional environment proxies of investor protection, efficiency of legal framework in settling disputes, judicial independence and property rights registered insignificant effects to economic growth among the selected OECD countries. For the Sharia law countries, the same test identified the absence of any significant effect of the institutional environment indicators of investor protection, efficiency of legal framework in settling disputes, judicial independence, efficiency of legal framework in challenging regulations and property rights towards economic growth. The insignificant effects of the institutional environment proxies on economic growth

for both sets of countries are tangled. Investor protection has a negative effect on economic growth for both OECD and Sharia law countries. The effects of both efficiency of legal framework in settling disputes and judicial independence on economic growth are both positive for both sets of countries. However, property rights effects on economic growth are positive for OECD countries and negative for countries in the Sharia law region.

6.4 DIFFERENCES IN THE NATURE OF RELATIONSHIPS BETWEEN CORPORATE GOVERNANCE VARIABLES AND ECONOMIC GROWTH IN OECD AND SHARIA LAW COUNTRIES WITH AGGREGATED MEASURES

This study used aggregated measures of models to highlight the explanatory power of a variable, which is comprised of an amalgamation of indicators so as to check the nature of the interaction of the variables with economic growth for both blocks of countries. And so the discussion in the following subsections details interpretations of the performance of aggregated pooled, aggregated fixed and aggregated random models, for aggregated corporate governance, aggregated financial development, aggregated macroeconomic fundamentals and aggregated institutional environment.

6.4.1 Differences from Aggregated Pooled Effects Model

The OLS estimates of aggregated variables for the selected OECD countries in Table 5.20 showed that only aggregated financial development has a significant effect on economic growth, *ceteris paribus*. The inference is that the totality of the used financial development proxies of soundness of banking sector, regulation of securities of exchanges and financing through equity markets exert an influence on the economic growth of the OECD region. That said, the aggregated financial development effect on economic growth in the OECD was negative. The variables of aggregated corporate governance, aggregated macroeconomic fundamentals and aggregated institutional environment each reported an insignificant effect on economic growth. It is little wonder therefore that the effect of aggregated financial development on economic growth among the OECD countries is negative because the financial sector in the OECD is operating in an unsupportive environment of inadequate aggregated corporate governance, aggregated macroeconomics and aggregated institutional environment, which cannot stimulate a positive and significant effect on economic growth. For the selected countries in the Sharia region, the same test for aggregated variables shown in Table 5.33 confirmed that none of aggregated corporate governance, aggregated financial development,

aggregated macroeconomic fundamentals and aggregated institutional environment has a significant effect on the economic growth of the selected Sharia law countries. These results make for the inquisitiveness of the use of the fixed effects transformation estimations, which check the effect of unobserved heterogeneity.

6.4.2 Differences from Aggregated Fixed Effects Model

For the OECD selected countries, LSDV tests for aggregated variables displayed in Table 5.21 confirmed that none of the aggregated corporate governance, aggregated financial development, aggregated macroeconomic fundamentals and aggregated financial development have a significant effect on economic growth. Thus the study presumes that even with the cognisance of unobserved country-specific characteristics in aggregated corporate governance, aggregated financial development, aggregated macroeconomic fundamentals and aggregated institutional environment, there is no material effect registered on the economic growth of these OECD countries. For the Sharia law selected countries, the same test shown in Table 5.34 found that only aggregated financial development has a significant effect on economic growth. Remarkably, this effect is positive, meaning that the consolidation of the financial development proxies of soundness of banking sector, regulation of securities exchanges and financing through equity markets contributes a positive and significant effect on the economic growth of these Sharia law countries. The remaining factors of aggregated corporate governance, aggregated macroeconomic fundamentals and aggregated institutional environment reported each an insignificant effect on economic growth for these Sharia law countries.

6.4.3 Differences from Aggregated Random Effects Model

Random effects estimations of aggregated variables for the selected OECD countries in Table 5.22 displayed that only aggregated macroeconomic fundamentals have a significant effect on economic growth. The reported significant effect is positive, which gives the conclusion that the combined effect of macroeconomic fundamental proxies of gross national savings, government debt levels, inflation rate and foreign direct investment add substantially to the economic growth of the OECD selected countries. It was found that aggregated corporate governance, aggregated financial development and aggregated institutional environment each have no significant effect on economic growth. For the Sharia law selected countries, the same model test in Table 5.35 revealed that none of aggregated corporate governance, aggregated

financial development, aggregated macroeconomic fundamentals and aggregated institutional environment have a significant effect on economic growth.

6.5 SHORT-RUN AND CAUSALITY ANALYSIS OF THE RELATIONSHIPS BETWEEN CORPORATE GOVERNANCE VARIABLES AND ECONOMIC GROWTH IN BOTH THE SELECTED OECD AND SHARIA LAW COUNTRIES

This section consolidates the aggregated short-run and causality analysis of the nature of the interaction of corporate governance together with its determinants of financial development, macroeconomic fundamentals and institutional environment with economic growth for both sets of countries. Of particular importance is the need to further examine the corporate governance-economic growth relationship as well as its determinants that have posted various insignificant and inconsistent results in the above sections. The short-run analysis featured the aggregated examination of interactions of variables using panel Vector Autoregressions, Granger Causality model as well as the Forecast Error Variance Decomposition.

6.5.1 Differences from Aggregated Panel Vector Autoregression Model

With economic growth as the criterion variable, VAR analysis for both the selected OECD and Sharia law countries established that the first lag of economic growth has a positive significant effect on to the economic growth of both sets of these countries. The effect recorded for the Sharia law countries is markedly 32.05% higher than that of the OECD countries. It can be concluded therefore that the previous year value of economic growth adds to the current value of economic growth for both sets of countries, and that economic growth takes an adjustment period of one year to increase. Further results from this model for the OECD countries in Table 5.27 showed that the first lag of aggregated corporate governance has an insignificant effect on economic growth whereas for Sharia law countries, the test in Table 5.40 showed that the effect was significant but negative. Still, VAR analysis for the OECD selected countries found that the previous one year values of aggregated macroeconomic fundamentals as well as aggregated institutional environment have a positive significant effect on economic growth. It follows then that for the OECD selected countries, aggregated macroeconomic fundamentals and aggregated institutional environment take a maximum of one year to impact positively and significantly to economic growth. And so, aggregated macroeconomic fundamentals and aggregated institutional environment have significant long-run relationships with economic growth among the selected OECD countries. This is contrary to the results for the Sharia law

countries where the effects of both of these variables are insignificant to economic growth. The previous year value of aggregated financial development posted negative and insignificant effect on the economic growth of both the selected OECD and Sharia law countries, with the OECD countries reporting a bigger negative effect than that in the Sharia law countries.

In another VAR model in which aggregated corporate governance was the outcome variable, this research found that for OECD countries, the first lag of economic growth has a negative significant effect on aggregated corporate governance, while for Sharia law countries the effect was positive and insignificant. The first lag of aggregated corporate governance has a positive and significant effect on the current value of aggregated corporate governance, both for the OECD and Sharia law countries, with both sets of countries recording almost the same magnitude of effect. The rest of the previous year values for the variables of aggregated financial development, aggregated macroeconomic fundamentals and aggregated institutional environment posted insignificant effects on aggregated corporate governance for both OECD and Sharia law countries.

For aggregated financial development, the first lag of economic growth was found to have a weak significant effect on aggregated financial development for the OCED selected countries, unlike the positive but insignificant effect registered among the Sharia law countries. The first lag of aggregated corporate governance was found to have a negative significant effect on aggregated financial development for the OECD selected countries in contrast to the positive but insignificant effect found among the Sharia law countries. The previous value of aggregated financial development was found to have a positive significant effect on aggregated financial development for both the OECD and Sharia law countries, with the OECD countries recording a much bigger positive effect. The first lag of aggregated institutional environment was found to have a positive but insignificant effect on aggregated financial development for both sets of countries, while the first lag of aggregated macroeconomic fundamentals recorded an insignificant effect on aggregated financial development for both OECD and Sharia law countries, although the effect is positive and negative for the OECD and Sharia law countries correspondingly.

Aggregated macroeconomic fundamentals as the criterion variable, the VAR results reported that for both the selected OECD and Sharia law countries, the first lag of economic growth has a significant impact on aggregated macroeconomic fundamentals. This discovery points to the

existence of a short-run relationship between economic growth and aggregated macroeconomic fundamentals for both sets of countries, with economic growth taking utmost a year to bring about a material effect on to aggregated macroeconomic fundamentals. However, the significant effect of economic growth to aggregated macroeconomic fundamentals is positive for the OECD and negative for the Sharia law countries, respectively. It was also established that the previous year value of aggregated corporate governance does not have a significant effect on the current value of aggregated macroeconomic fundamentals, for both sets of countries, with the effect for OECD being negative while that for Sharia law countries is positive. The research found that the first lag of aggregated financial development has a strong positive and significant impact on aggregated macroeconomic fundamentals for the Sharia law countries, in contrast to the insignificant though positive effect discovered on the OECD block. The previous year one value of aggregated macroeconomic fundamentals, for both OECD and Sharia law countries was found to have a positive and significant impact on the current value of aggregated macroeconomic fundamentals, with the Sharia law countries recording a bigger effect than their OECD counterparts. The first lag of aggregated institutional environment does not have a significant impact with aggregated macroeconomic fundamentals, for both the selected OED and Sharia law countries.

For aggregated institutional environment, the first lag of economic growth has a significant and insignificant effect on aggregated institutional environment for the selected Sharia law and OECD countries, correspondingly. The study also established that for both sets of countries, aggregated corporate governance has a negative and insignificant impact of aggregated institutional environment. The previous one year value of aggregated financial development was found to be insignificant to the current value of aggregated institutional environment for both the selected OECD and Sharia law countries, with the OECD effect being positive and negative for the Sharia law countries. The first lag of aggregated macroeconomic fundamentals exhibited a positive significant impact of aggregated institutional environment for the OECD countries, unlike the negative and insignificant effect seen on the Sharia law block. Finally, VAR results concurred that for both sets of countries, the previous year value of aggregated institutional environment has a strong positive and significant effect on the current value of aggregated institutional environment, with the OECD countries recording the bigger impact than their Sharia law counterparts.

6.5.2 Differences from Aggregated Panel Granger Causality Model

Findings from the panel VAR Granger Causality test model in Table 5.28 showed that among the selected OECD countries, there is a unidirectional causal relationship that flows from aggregated institutional environment to economic growth. Another revelation among the results of this study for the OECD countries again is the bi-directionality in the macroeconomic fundamentals-economic growth nexus. Additionally, a combination of all the featured factors of aggregated corporate governance, aggregated financial development, aggregated macroeconomic fundamentals and aggregated institutional environment precede economic growth. It was found that for the selected OECD countries, economic growth has a significant causal effect on both aggregated financial development and aggregated corporate governance. A single causal effect was discovered between aggregated financial development and aggregated corporate governance with causality flowing from aggregated corporate governance to aggregated financial development. Also, aggregated macroeconomic fundamentals have a significant causal effect on aggregated institutional environment. In the final analysis, each of the featured aggregated variable is determined by a combination of all aggregated corporate governance, aggregated financial development, aggregated macroeconomic fundamentals, aggregated institutional environment and economic growth, among the OECD region. Thus in order for the selected OECD countries to stimulate their economic growth, there is need to look within and enforce changes in the integrative framework of the factors of aggregated corporate governance, aggregated financial development, aggregated macroeconomic fundamentals and aggregated institutional environment initially.

For the selected Sharia law countries, the same test in Table 5.41 shows that aggregated corporate governance has a significant causal effect on economic growth. Aggregated financial development was found to be a determinant of aggregated macroeconomic fundamentals. And economic growth has a significant causal effect on both aggregated macroeconomic fundamentals and aggregated institutional environment. A combination of all featured factors of aggregated corporate governance, aggregated financial development, aggregated macroeconomic fundamentals and aggregated institutional environment has a significant causal effect on each of aggregated macroeconomic fundamentals and aggregated institutional environment. A combination of all the featured factors of aggregated corporate governance, aggregated financial development, aggregated macroeconomic fundamentals and aggregated institutional environment were found to have a significant causal effect on economic growth. Another atypical discovery is that neither all nor a singular featured factors of aggregated

financial development, aggregated institutional environment, aggregated macroeconomic fundamentals and economic growth precede aggregated corporate governance. These results are alike for aggregated financial development in which neither all nor a single aggregated factor registered any predictability.

6.5.3 Differences from aggregated Forecast Error Variance Decomposition

The FEVD test in Table 5.29 showed that for the OECD selected countries, aggregated corporate governance has a weak influence on economic growth making it an unreliable predictor of economic growth as the response variable. This calls for interventions that need to take place in order to have corporate governance as a significant determinant of economic growth for the next 10-year period. However, for the Sharia law selected countries, the same test in Table 5.42 revealed that aggregated corporate governance was found to be of medium influence to economic growth, thus making it an influential determinant of economic growth among these countries for the next 10-year period.

On aggregated financial development as the shock variable, the study found financial development exogenous to economic growth among the OECD countries while for the Sharia law selected countries, the results showed strong exogeneity. Therefore, for the two sets of countries, aggregated financial development has weak predictive capacity on economic growth in the next 10 years.

Innovations in aggregated macroeconomic fundamentals accounted for a big chunk of the forecast error variance in economic growth, among the selected OECD countries, and in this way macroeconomic fundamentals were found to be strongly endogenous to economic growth, and as very reliable predictors of economic growth. Conversely, among the Sharia law selected countries, aggregated macroeconomic fundamentals posted strong exogeneity to economic growth, and on this account the study deems macroeconomic fundamentals poor predictors of economic growth among the Sharia law countries, within the next 10 years.

Lastly, shocks in aggregated institutional environment recorded strong endogeneity with economic growth among the countries of the OECD, while for the Sharia law countries, aggregated institutional environment was found to be strongly exogenous to economic growth. Consequently, institutional environment serves as a powerful predictor but an insignificant

determinant of economic growth for the next 10 years, for the OECD and Sharia law countries respectively.

6.6 A CORPORATE GOVERNANCE FRAMEWORK FOR ENHANCING ECONOMIC GROWTH IN SHARIA LAW COUNTRIES

Subsequent to the interpretation and deductions from the nature of the interaction of the variables of corporate governance, financial development, macroeconomic fundamentals and institutional environment with economic growth, this study develops an integrated corporate governance framework for enhancing economic growth in the Sharia law countries. This integrated framework is the study's epistemological contribution and answers the last research question: What framework can be developed to enhance the applicability of the corporate governance principles in Sharia law countries? This framework responds to the research problem, which is a culmination of the analysis and discussion of the empirical results from Chapter Five. The framework identifies variables that affect and contribute to the significant enhancement of economic growth via corporate governance, in the Sharia law countries. The framework suggests the causal and directionality of the interconnections among the variables of corporate governance, financial development, macroeconomic fundamentals, institutional environment and economic growth.

6.6.1 An integrated corporate governance framework to enhance economic growth

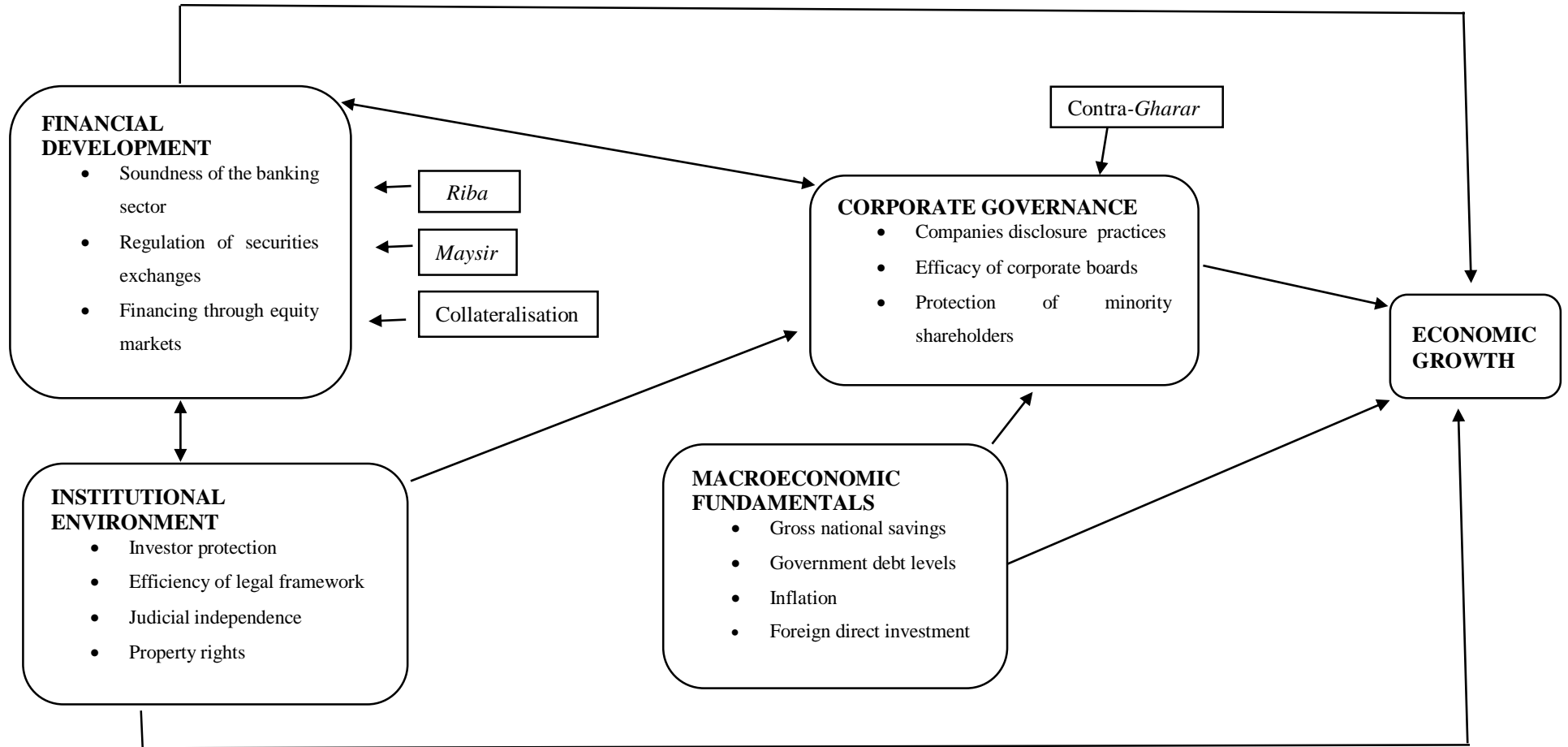
The study conceived this integrated corporate governance framework for enhancing economic growth after a review and analysis of all the tests and model specifications used. This was developed to address the shortcomings cited in the tests used on the Sharia law data set results. It is important to note that this integrated corporate governance framework is a composition of the weaknesses identified and or insignificant relationships observed in descriptive statistics, correlations, Pooled Effects, Fixed Effects and Random Effects models, PVAR, Granger Causality and Forecast Error Variance Decomposition model tests, of both disaggregated and aggregated data, which have been emended. The study corrects distortions from these test results deficiencies which then culminates into the suggested framework of corporate governance that should stimulate the economic growth of Sharia law countries. This is coming from the study's findings that the conventional model of corporate governance is not a fit into the Sharia law countries, according to the various test results. The suggested framework takes

into context the Sharia system, by showing the interrelations of the variables of corporate governance, institutional environment, financial development and macroeconomic fundamentals with a goal to increase the economic growth of the countries in the Sharia system.

It should be noted that these determinants in the framework consist of the following subcomponents:

1. Corporate governance: These are firm-level tools of companies disclosure practices, efficacy of corporate boards and protection of minority shareholders.
 - *Contra-Gharar*: a component of the framework for firm-level corporate governance that is against *gharar* (an Islamic term referring to massive uncertainties and information asymmetry between parties to a business transaction)
2. Financial development is composed of soundness of banking sector, regulation of securities exchanges and financing through equity markets.
 - *Riba*: The charging of interest (which is prohibited in Islamic finance and considered as exploitation of the financially infirm by the rich)
 - *Maysir*: Speculation (also forbidden in Sharia in order to stimulate real effort and assets to be utilised in business)
3. Institutional environment incorporates investor protection, efficiency of legal framework in settling disputes, efficiency of legal framework in challenging regulations, judicial independence and property rights.
4. Macroeconomic fundamentals are a combination of gross national savings, government debt levels, inflation rate and foreign direct investment.

Figure 6. 1 The integrated corporate governance framework for enhancing economic growth in Sharia law countries



Source: Own research (2020)

6.6.2 The effect of corporate governance on economic growth

The integrated framework in Figure 6.1 above submits that firm-level corporate governance in the aggregation of its components of companies' disclosure practices, efficacy of corporate boards and protection of minority shareholders should advance the economic growth of countries in the Sharia law region. This intimates that these corporate governance variables at firm-level need not be considered in isolation lest their implied total effect on economic growth does not materialise. It is important that there is need to do away with the compartmentalised application of individual components of corporate governance by instead implementing all corporate governance mechanisms used in this study so as to ensure that aggregated corporate governance posts an incremental effect on economic growth in these Sharia law countries. In consequence, this study argues that aggregated corporate governance should lead to economic growth after there have been changes in the unit elements of companies disclosure practices, efficacy of corporate boards and protection of minority shareholders. Should there be no changes in these individual elements first, then aggregated corporate governance will not lead to economic growth enhancement, and any increment posted should not be from corporate governance.

The role of corporate governance as backed by Acemoglu *et al.* (2001) and North (1990) is to create an enabling environment that catalyses investment into the economy. In this way, investors maximise their returns on investment as they will have trust in the prevailing firm-level corporate governance mechanisms of companies disclosure practices, efficacy of corporate boards and protection of minority shareholders which will boost overall firm productivity and that of the economy. Companies' disclosure practices of both financial and governance performance of the firms translate into a fair assessment of the firms' statuses, which attract more investment and much more efficient allocation of resources in an economy. This then makes corporate governance via disclosure practices by firms crucial in stimulating economic growth. Particularly, Healy and Palepu (2001) emphasise the importance of companies disclosures in alleviating information asymmetry and agency problems. This then means that the existence of information equilibrium, from either mandatory or voluntary disclosure regimes, among corporate insiders and outsiders enables all the interested parties to fairly assess the firm performance. The study suggests in the framework that increased practices of disclosure by firms are essential and are needed to occur to facilitate corporate

governance to successfully contribute to economic growth among the Sharia law countries. This is because the Sharia law system of governance is insistent on the removal of uncertainties in a transaction (*gharar*) as favoured by Bhatti & Bhatti (2009) and Minhat & Dzolkarnaini (2019), with Bhatti and Bhatti (2009) emphasising disclosure as a key tenet of Sharia governance in accordance with the principal of accountability to first of all Allah, who is the ultimate owner of all resources on earth. This has been reiterated by Lewis (2001) to create an environment of fairness and justice to all in the society in agreement with the Sharia laws. The study is therefore unflagging in suggesting increased levels of companies disclosure practices, as demanded by the Sharia finance prohibitions of *gharar*, that are needed to support corporate governance to stimulate economic growth among the Sharia law countries.

The efficacy of corporate boards as another unit element of corporate governance contributes to economic growth by ensuring that company board of directors satisfactorily discharge their monitoring and strategic advisory duties. In so doing, this disables managerial self-enrichment at the firm's expense, and this frees up more resources for investment. This points to the efficient resource allocation needed to boost the overall economy. The framework suggests that improvements in the efficacy of corporate boards ought to happen in order to raise the economic growth of the Sharia law countries.

With reference to the protection of minority shareholders, the framework advances the increased robustness in the protection of minority shareholders so that corporate governance can spur further economic growth among the countries in the Sharia law. La Porta *et al.* (2000a) announce that the protection of minority shareholders and investors from expropriation of the outsiders by the insiders is influential for it capacitates firms to acquire more funds (loans) for investment and on better terms. This indicates that the increased investor cover of all investors via this corporate governance mechanism increases the level of investment as it relieves fears of expropriation hence attracting further investment and therefore creating more productivity in an economy. The constituent of contra-*gharar*, that calls for much more frequencies in information symmetry and certainty among business counterparties speaks to companies disclosure practices by this framework for the Sharia law countries, and this should resonate with protection of minority shareholders in that outside investors should feel protected with higher levels of information disclosures in the carryings-on of the companies they have a stake in.

Again in the framework, it is suggested that corporate governance needs to be influenced by financial development, institutional environment and macroeconomic fundamentals. The inference then here is that corporate governance should positively and significantly contribute to the economic growth of the Sharia law countries when acted on by these underlying factors. The framework submits that there must be changes in the corporate governance determinants of financial development, institutional environment and macroeconomic fundamentals so that corporate governance can lead to improvements in economic growth of the Sharia law countries.

6.6.3 The effect of financial development on economic growth

The framework developed shows that financial development is a determinant of economic growth of the Sharia law countries. In addition, the framework exhibits that the effect of corporate governance on economic growth is affected by financial development. This means that there should be positive changes in financial development first before witnessing any positive effects in corporate governance and economic growth. The framework in particular proposes that in order to boost financial development of the Sharia law countries, the possibilities of financing business activities via equities and securities markets need to be uplifted by an allowance of speculation activities. The Sharia law environment is known for the prohibition of speculative activities, considered as *maysir*, which inhibits the growth of the financial sector. This prohibition explains the weak relationships of financial development indicators with economic growth in the Sharia law countries. Therefore, there is need to allow for more dealings in speculation activities in order to support financial development. In so doing, further investment funding will be harvested into the economies of these Sharia law countries through the equity markets, thereby enhancing financial development, which will improve corporate governance and economic growth. Also, this has important implications for the macroeconomic fundamentals of these Sharia law countries as it boosts foreign direct investment.

Additionally, the proposed framework calls for the introduction of collateralisation of investment in order to provide the needed investor protection for enhanced investment in the Sharia law economies and overall financial development. This again has significant implications for the institutional environment, as the levels of investor protection showed insignificant correlations with both corporate governance and economic growth. Therefore, by

instituting collateralised investing, investor expropriation fears will be put to rest, thereby creating a much more secured environment. In return, more funds will be generated for business financing which then serves as a boost to financial development needed to grow the economies further. The Sharia law environment is known for its strict demands of profit and risk sharing, and protecting the have-nots so as to guarantee equality of all in the eyes of Allah. However, this portends financial doom for holders of capital for investment as they are stripped of any form of protection against credit risk. This particular submission in the ambit of the framework is backed by studies of Alloway (2011), Bernanke *et al.* (1989), Cerqueiro *et al.* (2016), Chaney *et al.* (2012) and Gan (2007) that collateral enforces the defaulting debtor to pay and as well serves an important tool in contracting. Particularly, Cerqueiro *et al.* (2016) emphasise that the introduction of collateral is critical to loan availability. This means that bank lending will be much more sound hence stimulating financial development. Accordingly, the framework advances the need to embrace collateralised investment in order to enlarge the capital base of these economies and attract more investment capital to boost the growth of these economies. Collateralised financing intimates a boost also to financial development, institutional environment and to the macroeconomic fundamentals of the Sharia law economies. This is because bank lending will increase as banks will have the necessary protection in case of loan defaulting which secures the environment as healthy for investment. For the institutions, it translates into much more rigorous contracting in business dealings and secured property rights of individuals with sums of money set aside for investment and hence protecting their property and the benefits arising from their use. The use of the collateral develops the accumulated national savings that will flow on the back of the provided protection against default risk, to finance projects with the possible highest return. It entails then that with collateralised investment, the effects will trickle even to corporate governance that plays a coordinating function by ensuring a functional allocation of the secured funds, which then should stimulate the overall economic growth of the Sharia law economies.

The framework advocates for the permission of *riba* (interest charge) taking into account the risk shouldered by the providers of capital in order to boost the financial sector of these Sharia law countries. This should aid in making financial development have a positive and significant effect on economic growth. By prohibiting the charging of *riba*, the Sharia system demoralises any risk-taking that needs to be rewarded, thereby hamstringing the general investment appetite and actual investment required to stimulate the economy. In this way, this obstructs the development of the financial sector for as a bare minimum, investing in any project requires an

expected return or reward for bearing the associated risk. It means that by disregarding the systematic risk principle explicated by Ross *et al.* (2016), that is characteristic of every economy, including those of the Sharia law countries, the Sharia system and environment render the effort to venture into business unrewarding for the risk involved and also unrealistic, as it makes even the valuation of investment projects difficult without at least incorporating the project cost of capital, which is a bare minimum. Allowing the charge of *riba* would be a declaration and an incentive to attract many more capital investors at both national and international levels, whose investment funds would further facilitate an increase in the growth of these Sharia law economies.

6.6.4 The effect of institutional environment on economic growth

The framework submits that the institutional environment should be enhanced further in order to contribute positively and significantly towards the economic growth of the Sharia law countries. Additionally, the framework indicates that when this is done, then the institutional environment will affect corporate governance positively. For corporate governance to be influenced by the institutional environment, it necessitates improvements in all the unit elements of the institutional environment so as to create an aggregate effect on both corporate governance and economic growth. This is an indication to the countries in the Sharia law region to consider changes in their institutional environment prior to realising a forward push in economic growth and to corporate governance.

6.6.5 The effect of macroeconomic fundamentals on economic growth

The integrated framework proposes the installation of macroeconomic stability among the macroeconomic fundamental elements in order for the macroeconomic factors to stimulate economic growth in the Sharia law countries. In this way, a stable macroeconomic environment will also influence corporate governance. Suitably, if corporate governance is to have a significant incremental effect on economic growth, there is need to ensure a safe and steady macroeconomic environment.

6.7 CONCLUSION

This chapter offered a discussion and interpretation of the findings. This was done by interpreting the results from the Pooled, Fixed and Random effects model specifications for

both disaggregated and aggregated data so as to answer the research questions that sought to establish the nature of the relationships between corporate governance variables and economic growth. Additionally, a discussion of the short-run and causality relationship analysis was done from the panel VAR, Granger Causality and FEVD models. The chapter ended with the construction and discussion of an integrated corporate governance framework for Sharia law countries. The framework articulates the underlying factors for both corporate governance and economic growth. The integrated corporate governance framework for Sharia law countries propounds that a rigorous institutional environment, a sound financial sector and secured macroeconomic fundamentals are prerequisites prior to realising enhanced corporate governance and economic growth.

CHAPTER SEVEN

CONCLUSIONS AND RECOMMENDATIONS

7.1 INTRODUCTION

This chapter highlights the study's conclusions and recommendations as derived from the analysis and discussion chapters above. The study demonstrates that the conclusions and recommendations in this chapter adequately respond to the main research questions. This chapter also outlines the study's contribution to new horizons of knowledge and the implications of the framework for Sharia law countries. In the penultimate, this chapter identifies and clarifies avenues for possible future research pertaining to the nature of the relationships between corporate governance variables and economic growth in Sharia law countries.

7.2 CONCLUSIONS FROM EMPIRICAL FINDINGS

From the descriptive statistics, the evidence is that corporate governance in the Sharia law countries is applied on a laid-back scale which is verified from the average scores of corporate governance indicators, unlike the better general performance of the corporate governance variable indicators from the OECD countries. Concerning the first research question on the differences in the corporate governance systems between OECD and Sharia law countries, this study substantiated that the OECD region is typified by two corporate governance systems namely: Anglo-Saxon model in which the shareholder assumes prominence and the continental European model which is the stakeholder view of corporate governance. Corporate governance in the Sharia law countries is supported by a stakeholder type of system but this is deeply rooted in the teachings of the Holy Quran in order to uphold the principles and norms of the Islamic religion.

The analysis from the pooled effects estimation for the Sharia law countries showing how the variables of corporate governance, financial development, macroeconomic fundamentals and institutional environment interact with economic growth revealed that none of the indicators of corporate governance, financial development, macroeconomic fundamentals and institutional environment have a significant effect on economic growth. Even the aggregated measures of these variables showed insignificant effects on economic growth. Consequently, for each of

the corporate governance variables used in this study, the conclusion drawn from the decision criteria is the rejection of the null hypotheses and acceptance of the alternative hypotheses. The study makes the informed inference that inefficiency in each of the factors of institutions, financial sector as well as the observed macroeconomic instabilities support the lack of a significant relationship between corporate governance and economic growth.

Considering the cross-country specific differences, the study established that the corporate governance indicator of efficacy of corporate boards has a negative significant effect on the economic growth of the selected Sharia law countries, while the other indicators recorded an insignificant effect. This suggests that there is need to check the determinants of corporate governance in order to ensure that corporate governance has a positive and significant impact on economic growth. Financial development country-specific differential observations showed that none of the financial development indicators have a significant effect on economic growth of the economies in the Sharia law region, attributable to weak corporate governance already observed. With macroeconomics, only the inflation rate recorded a significant though negative effect. The Sharia law region in this period of study showed that macroeconomic instabilities affected its economic growth as the rest of the indicators reported insignificant economic growth effects. With regards institutional environment, only judicial independence showed significant and positive effect to economic growth. The other indicators of institutions reported insignificant economic growth effects. The only aggregated variables test that recorded a positive significant effect on the economic growth was aggregated financial development, unlike the other aggregated variables. In this instance, the study finds consistent support with the null hypothesis that financial development has a positive and significant effect on economic growth, among the Sharia law countries. It is apparent with cross-country specifics, financial development is tasked with an overwhelming duty to raise the economic growth of these countries. For corporate governance, institutional environment and macroeconomic fundamentals, the findings feed into the alternative hypotheses with their insignificant effects to economic growth. The logical conclusion is that country differences in corporate governance, macroeconomic fundamentals and institutional environment explain variations in the nature of the relationships between corporate governance variables and economic growth or rather the existence or lack of significance in the relationships of these corporate governance variables with economic growth.

Using the random effects estimator to check the nature of the relationships between corporate governance variables and economic growth in the Sharia law region, it was found that efficacy of corporate boards has a negative significant economic growth effect as reported in the FEE, for corporate governance. No indicator of financial development showed a significant effect on economic growth. The only macroeconomic indicator to have a positive significant effect on economic growth was foreign direct investment while the other proxies showed no significant effect among the Sharia law countries. And for the institutional environment, none of the proxies registered a significant effect on the economic growth. With aggregation, the REE conclusively illustrates that none of the aggregated factors have a significant effect on economic growth. From this, the study follows the decision criteria to reject the null hypotheses and to instead accept the alternative ones for each of the corporate governance variables. Thus the study logically concludes that it is the variable constants that vary randomly to explain the significance of the relationships between corporate governance variables and economic growth among the selected Sharia law countries.

This study also examined the short-run and causality relationships among aggregated variables that affect economic growth in the Sharia law region. The results from the tests helped to forecast economic growth in the long-run. It was confirmed that an aggregation of corporate governance tools of efficacy of corporate boards, companies disclosure practices and protection of minority shareholders that need to constantly be present take utmost one year to have a significant effect on economic growth on the Sharia law countries and they cause a palpable shrinking in economic growth. Thus there is need to determine the influencers of corporate governance in the Sharia law countries in order to stimulate economic growth. Additionally, the occurrence of changes in the levels of corporate governance will have an effect on the economic growth of these Sharia law countries as a unit impulse in corporate governance is endogenous to economic growth in the next 10 years.

Empirical findings from the short-run analysis of the variables of aggregated corporate governance, aggregated financial development, aggregated macroeconomic fundamentals and aggregated institutional environment with economic growth among the Sharia law countries established and confirmed the following results:

- i. Aggregated corporate governance that is composed of companies disclosure practices, efficacy of corporate boards and protection of minority shareholders all have a negative significant effect on economic growth in the short-run.

- ii. Economic growth has a negative significant effect on aggregated macroeconomic fundamentals that consists of gross national savings, government debt levels, inflation rate and foreign direct invest in the short-run.
- iii. Aggregated financial development that incorporates soundness of banking sector, regulation of securities exchanges and financing through equity markets, has a positive significant effect on aggregated macroeconomic fundamentals.
- iv. Economic growth has a positive significant effect on aggregated institutional environment that is made up of investor protection, efficiency of legal framework in settling disputes, efficiency of legal framework in challenging disputes, judicial independence and property rights, in the short-run.

Proceeding to the causality and direction analysis of the results, the study's conclusions of the relationships between aggregated corporate governance variables and economic growth among Sharia Law countries were as follows:

- i. Aggregated corporate governance that is made up of companies disclosure practices, efficacy of corporate boards and protection of minority shareholders all have a strong and positive impact on economic growth.
- ii. Aggregated corporate governance, aggregated financial development, aggregated macroeconomic fundamentals and aggregated institutional environment all cause a positive and strong significant contribution to economic growth.
- iii. Economic growth has a strong and positive significant impact on aggregated macroeconomic fundamentals that consist of gross national savings, government debt levels, inflation rate and foreign direct investment.
- iv. Aggregated financial development that involves soundness of banking sector, regulation of securities of exchanges and financing through equity markets all in totality cause a strong and positive significant influence on macroeconomic fundamentals.
- v. Aggregated corporate governance, aggregated financial development, aggregated institutional environment and economic growth all cause a positive and strong significant contribution to aggregated macroeconomic fundamentals.
- vi. Economic growth has a strong and positive significant impact on aggregated institutional environment that comprises of investor protection, efficiency of legal framework in settling disputes, efficiency of legal framework in challenging regulations, judicial independence and property rights.

- vii. Aggregated corporate governance, aggregated financial development, aggregated macroeconomic fundamentals and economic growth all cause a positive and strong significant contribution to aggregated institutional environment.

In closing, and derived from the results of the causality test, the study concludes that aggregated corporate governance has no determinants but rather that aggregated corporate governance in itself is a determinant of economic growth among the Sharia law countries. Evidence from the FEVD showed that a unit shock in firm-level aggregated corporate governance will impact on the economic growth of the Sharia law countries by about 0.418 units by the 10th year, projecting from year 2020. The other aggregated variables were found to be exogenous to economic growth among the Sharia law countries. Following these conclusions, the study then submits recommendations and areas for future research.

7.3 POLICY IMPLICATIONS

As always corporate bodies, regulatory authorities, national governments, regional and transnational entities are faced with the formulation of strategic policies and decisions regarding corporate governance and economic growth of countries and regions. This is because as previously cited that transnational organisations such as the World Bank (2016) and the OECD (2015, 2004, 1999) urge effecting corporate governance regulations and policies for countries in order to buoy their economic growth. Thus the study's results and analysis have the following implications to policy, particularly to the Sharia law countries.

The study urges the makers of policy to take up a more context-sensitive formulation of corporate governance routines and regulations fit for the Sharia law region in order to promote more economic growth. This is because the implementation of corporate governance at firm level needs to take into account companies disclosure practices, efficacy of corporate boards and protection of minority shareholders. But most importantly, the policy formulation needs to emphasise more frequent disclosures in order to ward off massive uncertainties to encourage more business deals among contracting parties. This enables the provision of information equilibrium needed for key business decision-making to release more capital into these economies for further economic growth to be realised.

Policy makers in the Sharia law regions ought to refer to the study's corporate governance framework so as to witness a boost in economic growth, by predominantly reshaping their financial sector to accommodate the charging of interest by all loan-giving financial institutions, allowing the collateralisation of loans and being more favourable to speculative activities. In so doing, the knock- on effect of these inclusions into the Sharia law countries' financial sector will boost their banking, better performance of securities and equities. The total effect is that local firms will have access to a bigger capital base for investment thereby bringing an upsurge in their economic growth.

Countries in the Sharia law ought to provide an enabling environment of credible institutions with capable legal enforcement in order to hold intact the corporate governance routines and regulations formulated. This should entail the upholding of tools such as judicial independence, property rights, investor protection as well as efficiency of legal framework in challenging regulations and settling disputes. The presence of all these mechanisms engenders the matching corporate governance guidelines needed to support these countries' economic growth to greater levels.

Macroeconomic stability also needs to occur through fundamentals such as inflation, foreign direct investment, gross national savings and government debt levels as these stimulate the right mix of corporate governance required for economic growth.

All told, policy makers should utilise the study's integrated framework for corporate governance for Sharia law countries in a bid to improve their economic growth. This framework constitutes corporate governance variables with specific mechanisms showing the interrelatedness and assumptions among the variables in order to achieve better economic growth.

7.4 STUDY'S CONTRIBUTIONS

This investigation provided a conceptual framework identifying the factors associated with the relationships between corporate governance variables and economic growth specifically for the countries in the Sharia law region. Considering the existence of many contextual and conceptual differences, as highlighted in Chapters one and two, in corporate governance between Sharia law economies and the OECD economies, the findings from this study can be

generalised to the Sharia law region. As pointed out in Chapter one that Sharia law countries belong to the emerging and developing economies comprising of countries from the Middle East and Northern Africa as well as some in the Sub-Saharan Africa with a much lower economic growth performance *vis-à-vis* that of the countries from the advanced economies of the OECD region. It has been recommended that the OECD format of corporate governance should be the guideline for all other countries the world over in a bid to enhance their economic growth, yet the OECD countries exhibit much better economic growth in comparison to their sharia law counterparts. In Paredes' (2004) systems approach to corporate governance transformation, there is a recognition of the differences between corporate governance in advanced and developing economies but with no specific mention of the ingredients needed and or their contribution on economic growth. This study's corporate governance framework therefore provides a pathway that is cognisant of the setting for the countries in the Sharia law region to embrace so as to nurture corporate governance to enhance their economic growth. This provided framework of an integrated nature demarcates the components and relationships required for the development of corporate governance to stimulate further the economic growth in the Sharia law countries.

The study also through its integrated corporate governance framework conscientises practitioners in the Sharia law region about the interrelatedness among corporate governance variables towards economic growth. The framework's integrative nature exhibits the interactions among firm-level corporate governance, institutional environment, financial development, macroeconomic fundamentals and economic growth within the setting of the Sharia law. It can then be advanced that corporate governance may not be applied in silos without making space for other Sharia-improving institutional, macroeconomic and financial factors because they prearrange corporate governance and its effect on the growth of these economies. This study applies to Sharia law regional economic bodies including the Gulf Confederation Council, The League of Arab States, Council of Arab Economic Unity, Greater Arab Free Trade Area, Arab League Educational and Scientific Organisation, Arab Maghreb Union, Arab Cooperation Council, among others. This study gives a basis for the inclusion and explanations of elements contained in the framework together with their assumptions for policy formulation and strategic decision-making.

This study supplements to existing cross-country corporate governance knowledge as it heeds the appeal of previous studies such as one by Paredes (2004) that new corporate governance

arrangements need to be formulated with a consideration for the context of developing economies, to which Sharia law countries belong. And more specifically, this study contributes to literature on corporate governance in the Sharia law regions that are greatly influenced by the Islamic norms and practices. The findings from the study show that the Sharia law countries have been largely dogged by the laid-back and or minor application of corporate governance and the existence of lower economic growth (in comparison with the OECD countries) for years as evidenced by the IMF's (2019) World economic outlook databases together with the global competitiveness survey reports by the WFE from 2006 through to 2018. Fig 6.1 is a demonstration of the suggested integrated corporate governance framework depicting that prior to the occurrence of economic growth, there is need to have in place effective corporate governance practices that are hinged to the institutional environment, financial development as well as macroeconomic fundamentals aimed at improving the Sharia law environment. This framework is a culmination of the emendation of these weak and or insignificant relationships between corporate governance variables and economic growth, among the Sharia law countries.

7.5 STUDY'S LIMMITATIONS

This inquiry was constrained by the unavailability of data on the indicators from the above-mentioned databases utilised. The study could only make use of the existing data which was just about a decade and a few years old to run the regressions while testing the relationships among variables. As well, this lack of data on proxies for a number of countries on both sets also constrained the sample size. In due time, other specifications comprising additional or dissimilar variables could yield far-reaching or more convincing insights. Furthermore, the implementation of substitute data sets and or additional years could be examined.

7.6 RECOMMENDATIONS

The analysis and discussion of the empirical findings compel this study to the conclusion that the conventional model of corporate governance is not a fit model for the Sharia law countries. This is because the various test results for the Sharia law data set confirmed several deficiencies with regards the nature of the relationships between corporate governance variables and economic growth. And this signified that the detected existent shortcomings in the corporate governance variables compromise the effect on the economic growth of these Sharia law countries. That being the case, this study recommends the implementation of an integrated

corporate governance framework that could enhance the economic growth of these Sharia law countries. This framework is crafted from the weak and or insignificant relationships of the corporate governance variables with economic growth for the Sharia law countries, which are rectified. The framework comprises recommendations that take into consideration the Sharia law context as a holistic approach that should stimulate the economic growth of the Sharia law countries. The study recommends the following:

- Firms in the Sharia law countries ought to enhance their internal corporate governance mechanisms in a bid to attract more investment. Particularly, companies need to report increased levels of disclosure practices in agreement with the Sharia finance prohibitions of uncertainties and information asymmetry in business dealings. Further disclosure practices will render the companies as transparent and fertile for investors by aptly revealing company-specific information about the financial performance and governance practices to exhibit fairness to all calibres of investors. Increased frequentness of companies disclosures are needed to shelter investors including the minority shareholders, who are also contributors of capital to boost the economies of these Sharia law countries.
- There is need to fortify the financial sector of the Sharia law countries in order to further grow their economies. Firstly, speculation activities need to be allowed in business which could serve to boost the financing through equities markets, and to bolster the regional banking sector and the streamlining of overall corporate governance and institutions. Secondly, authorities need to allow investors to charge interest for the money that they provided, to cover for risk of loss and attract more investment needed to further grow the Sharia law economies. Thirdly, the financial sector could be revitalised again through the introduction of collateralised investment which boosts financial development, more robustness in the institutional environment and more stability in macroeconomic fundamentals needed to stimulate the economic growth of the Sharia law region.

7.7 FUTURE RESEARCH

The integrated corporate governance framework developed for Sharia law countries offers a direction of research into issues of policy at corporate entity level and as well at various levels of authority within the countries in the Sharia law region. The framework allows for a deeper

analysis of the relationship between corporate governance variables and economic growth by considering further studies in the following:

- i. Further studies may investigate the notion of *riba* (the charging of interest rates) in the Sharia law countries with respect to the composition of the *riba* for the Sharia financial system. A consultation is recommended to conceptualise *riba* that takes into consideration the Sharia environment, whether it is an annual percentage rate or an annual compound yield in order to come up with an acceptable representation of corporate governance for the Sharia system.
- ii. An investigation into the sentiments of the people in the Sharia law environment regarding the issue of *riba*. Granted, the charging of interest is a taboo and unthinkable in the Muslim countries due to their religious following of the Quran teachings. That said, there could be reason to verify the opinions of the individuals set in the Sharia law countries about *riba* in relation to the risk-reward trade-off.
- iii. Another study could focus on the issue of *gharar* (massive uncertainties and information asymmetry in business transactions) which despite the existent prohibitions in the Sharia law environment, the region is still dogged by poor performance in disclosures. A survey on the explanations of prevalent *gharar* would help improve the levels of firm disclosure practices and add to investor protection needed to further stimulate the Sharia law economies.
- iv. There is need to test the drivers of corporate governance and economic growth effects among the countries in the South American continent, countries each of which has a fully unique legal system. Although most South American countries follow the civil law system, they are of Roman Catholic religion and of Latin culture. Such variations in both religious beliefs and systems of laws may influence the relationship between corporate governance variables and economic growth in a different way.
- v. Also, another research journey may take the route of comparing the relationships of corporate governance and economic growth between Sharia law countries and the East Asian countries. It should be noted that many of the countries in East Asia have a historical Chinese influence in their ethics, religion and as well in political system that emanate from the Confucianism system of ancient China which differs from the Sharia traditions.

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Appendix

Table 4.1 List of OECD countries

Australia	Belgium	Canada	France	Finland
Germany	Luxembourg	Netherlands	NewZealand	Norway
Sweden	Switzerland	USA	UK	

Table 4.2 List of Sharia law countries

Algeria	Azerbaijan	Bahrain	Bangladesh	Egypt
Indonesia	Kuwait	Malaysia	Mali	Morocco
Pakistan	Saudi Arabia	Turkey		

Pre-estimation tests

Appropriate lag order selection for the aggregated corporate governance variables and economic growth for the OECD countries

Sample: 2005 - 2017

No. of obs	=	182
No. of panels	=	14
Ave. no. of T	=	13.000

lag	CD	J	J pvalue	MBIC	MAIC	MQIC
1	.9592542	66.72978	.0569297	-193.4705	-33.27022	-98.2131
2	.9925653	21.10136	.6869444	-108.9988	-28.89864	-61.37008

Appropriate lag order selection for the aggregated corporate governance variables and economic growth for the Sharia law countries

Sample: 2005 - 2017

No. of obs	=	169
No. of panels	=	13
Ave. no. of T	=	13.000

lag	CD	J	J pvalue	MBIC	MAIC	MQIC
1	.9895994	63.22524	.0991298	-193.2697	-36.77476	-100.2833
2	.9965763	22.97528	.579007	-105.2722	-27.02472	-58.77902

Levin-Lin-Chu unit root test for economic growth of OECD countries

Ho: Panels contain unit roots	Number of panels =	14
Ha: Panels are stationary	Number of periods =	17
AR parameter: Common	Asymptotics: N/T ->	0
Panel means: Included		
Time trend: Included	Cross-sectional means removed	
ADF regressions: 1.36 lags average (chosen by AIC)		
LR variance: Bartlett kernel, 8.00 lags average (chosen by LLC)		
	Statistic	p-value
Unadjusted t	-10.2773	
Adjusted t*	-4.5583	0.0000

Levin-Lin-Chu unit root test for aggregated corporate governance of OECD countries

Ho: Panels contain unit roots	Number of panels =	14
Ha: Panels are stationary	Number of periods =	17
AR parameter: Common	Asymptotics: N/T ->	0
Panel means: Included		
Time trend: Included	Cross-sectional means removed	
ADF regressions: 1.50 lags average (chosen by AIC)		
LR variance: Bartlett kernel, 8.00 lags average (chosen by LLC)		
	Statistic	p-value
Unadjusted t	-9.1969	
Adjusted t*	-2.3835	0.0086

Levin-Lin-Chu unit root test for aggregated financial development of OECD countries

Ho: Panels contain unit roots	Number of panels =	14
Ha: Panels are stationary	Number of periods =	17
AR parameter: Common	Asymptotics: N/T ->	0
Panel means: Included		
Time trend: Included	Cross-sectional means removed	
ADF regressions: 1.36 lags average (chosen by AIC)		
LR variance: Bartlett kernel, 8.00 lags average (chosen by LLC)		
	Statistic	p-value
Unadjusted t	-12.4544	
Adjusted t*	-6.7537	0.0000

Levin-Lin-Chu unit root test for aggregated macroeconomic fundamentals of OECD countries

Ho: Panels contain unit roots	Number of panels =	14
Ha: Panels are stationary	Number of periods =	17
AR parameter: Common	Asymptotics: N/T ->	0
Panel means: Included		
Time trend: Included	Cross-sectional means removed	

ADF regressions: 1.86 lags average (chosen by AIC)
LR variance: Bartlett kernel, 8.00 lags average (chosen by LLC)

	Statistic	p-value
Unadjusted t	-11.4280	
Adjusted t*	-3.6885	0.0001

Levin-Lin-Chu unit root test for aggregated institutional environment of OECD countries

Ho: Panels contain unit roots	Number of panels =	14
Ha: Panels are stationary	Number of periods =	17
AR parameter: Common	Asymptotics: N/T ->	0
Panel means: Included		
Time trend: Included	Cross-sectional means removed	

ADF regressions: 1.21 lags average (chosen by AIC)
LR variance: Bartlett kernel, 8.00 lags average (chosen by LLC)

	Statistic	p-value
Unadjusted t	-9.5097	
Adjusted t*	-2.9778	0.0015

Levin-Lin-Chu unit root test for economic growth of Sharia law countries

Ho: Panels contain unit roots	Number of panels =	13
Ha: Panels are stationary	Number of periods =	17
AR parameter: Common	Asymptotics: N/T ->	0
Panel means: Included		
Time trend: Included	Cross-sectional means removed	

ADF regressions: 1.00 lags average (chosen by AIC)
LR variance: Bartlett kernel, 8.00 lags average (chosen by LLC)

	Statistic	p-value
Unadjusted t	-7.0292	
Adjusted t*	0.6328	0.7366

Levin-Lin-Chu unit root test for aggregated corporate governance of Sharia law countries

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Ho: Panels contain unit roots          Number of panels =    13
Ha: Panels are stationary              Number of periods =   17

AR parameter: Common                  Asymptotics: N/T -> 0
Panel means: Included
Time trend: Included                  Cross-sectional means removed

ADF regressions: 2.69 lags average (chosen by AIC)
LR variance:      Bartlett kernel, 8.00 lags average (chosen by LLC)
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	Statistic	p-value
Unadjusted t	-12.1616	
Adjusted t*	-3.3584	0.0004

Levin-Lin-Chu unit root test for aggregated financial development of Sharia law countries

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Ho: Panels contain unit roots          Number of panels =    13
Ha: Panels are stationary              Number of periods =   17

AR parameter: Common                  Asymptotics: N/T -> 0
Panel means: Included
Time trend: Included                  Cross-sectional means removed

ADF regressions: 2.00 lags average (chosen by AIC)
LR variance:      Bartlett kernel, 8.00 lags average (chosen by LLC)
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	Statistic	p-value
Unadjusted t	-11.4270	
Adjusted t*	-4.7290	0.0000

Levin-Lin-Chu unit root test for aggregated macroeconomic fundamentals of Sharia law countries

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Ho: Panels contain unit roots          Number of panels =    13
Ha: Panels are stationary              Number of periods =   17

AR parameter: Common                  Asymptotics: N/T -> 0
Panel means: Included
Time trend: Included                  Cross-sectional means removed

ADF regressions: 0.77 lags average (chosen by AIC)
LR variance:      Bartlett kernel, 8.00 lags average (chosen by LLC)
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	Statistic	p-value
Unadjusted t	-12.5495	
Adjusted t*	-7.3500	0.0000

Levin-Lin-Chu unit root test for aggregated institutional environment of OECD countries

Ho: Panels contain unit roots	Number of panels =	13
Ha: Panels are stationary	Number of periods =	17
AR parameter: Common	Asymptotics: N/T ->	0
Panel means: Included		
Time trend: Included	Cross-sectional means removed	
ADF regressions: 1.38 lags average (chosen by AIC)		
LR variance: Bartlett kernel, 8.00 lags average (chosen by LLC)		
	Statistic	p-value
Unadjusted t	-10.5164	
Adjusted t*	-4.1942	0.0000

Post-estimation tests

Stability condition of the estimated panel VAR

Eigenvalue stability condition for aggregated corporate governance variables and economic growth for the OECD countries

Eigenvalue		
Real	Imaginary	Modulus
1.395951	0	1.395951
.8185167	.1451958	.8312951
.8185167	-.1451958	.8312951
.4694469	0	.4694469
.2203155	0	.2203155

At least one eigenvalue lie outside the unit circle. PVAR does not satisfy stability condition.

Eigenvalue stability condition for aggregated corporate governance variables and economic growth for the Sharia law countries

Eigenvalue		
Real	Imaginary	Modulus
.8543006	-.3351123	.9176762
.8543006	.3351123	.9176762
.6996206	0	.6996206
.3730353	0	.3730353
.2854184	0	.2854184

All the eigenvalues lie inside the unit circle. PVAR satisfies stability condition.