UNIVERSITY OF CAPE COAST

FINANCIAL MARKET DEVELOPMENT, DEMOCRACY AND ECONOMIC GROWTH IN GHANA

GRACE KORANTENG

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FINANCIAL MARKET DEVELOPMENT, DEMOCRACY AND ECONOMIC GROWTH IN GHANA

BY

GRACE KORANTENG

Dissertation submitted to the Department of Finance of the School of Business, College of Humanities and Legal Studies, University of Cape Coast in partial fulfillment of the requirements for the award of Master of Business Administration degree in Finance.

JUNE 2022

DECLARATION

Candidate's Declaration

I hereby declare that this dissertation is the result of my own original research and that no part of it has been presented for another degree in this university or elsewhere.

Candidate's Signature ---------- Date ----------

Name: Grace Koranteng

Supervisor's Declaration

I hereby declare that the preparation and presentation of the dissertation were supervised in accordance with the guidelines on supervision of dissertation laid down by the University of Cape Coast.

Supervisor's Signature ---------- Date ----------

Name: Dr. Samuel Kwaku Agyei

ABSTRACT

There is a raging debate in literature regarding financial market development, democracy and economic growth nexus. In the Ghanaian context, only the relationship between financial market and development and economic growth has been investigated without considering the possible influence of democracy in the process. The objectives of the study were in three folds: to examine the long and short run effect of financial market development on economic growth; the long and short run effect of democracy on economic growth; and the moderating role of democracy on the financial market development and economic growth nexus in Ghana. Annual data from 1960 to 2019 was employed and the autoregressive distributed lag model and the ordinary least sqaure regression were used as the analytical tools. The study controlled for gross recurrent expenditure, capital, and labour. The study found that financial market development does not affect economic growth in the short run but has positive effect on economic growth in the long run. Also, democracy had a significant positive relationship on economic growth in both the short run and the long run. There was found the evidence that democracy moderates the relationship between financial market development and economic growth. The study among other things recommended that the government of Ghana should seek to continuously improve the democratic stance of Ghana so as to affect the financial market and to set the foundation for productivity and economic activities to thrive.

KEY WORDS

Capital

Democracy

Economic growth

Financial market development

Labour

Recurrent expenditure

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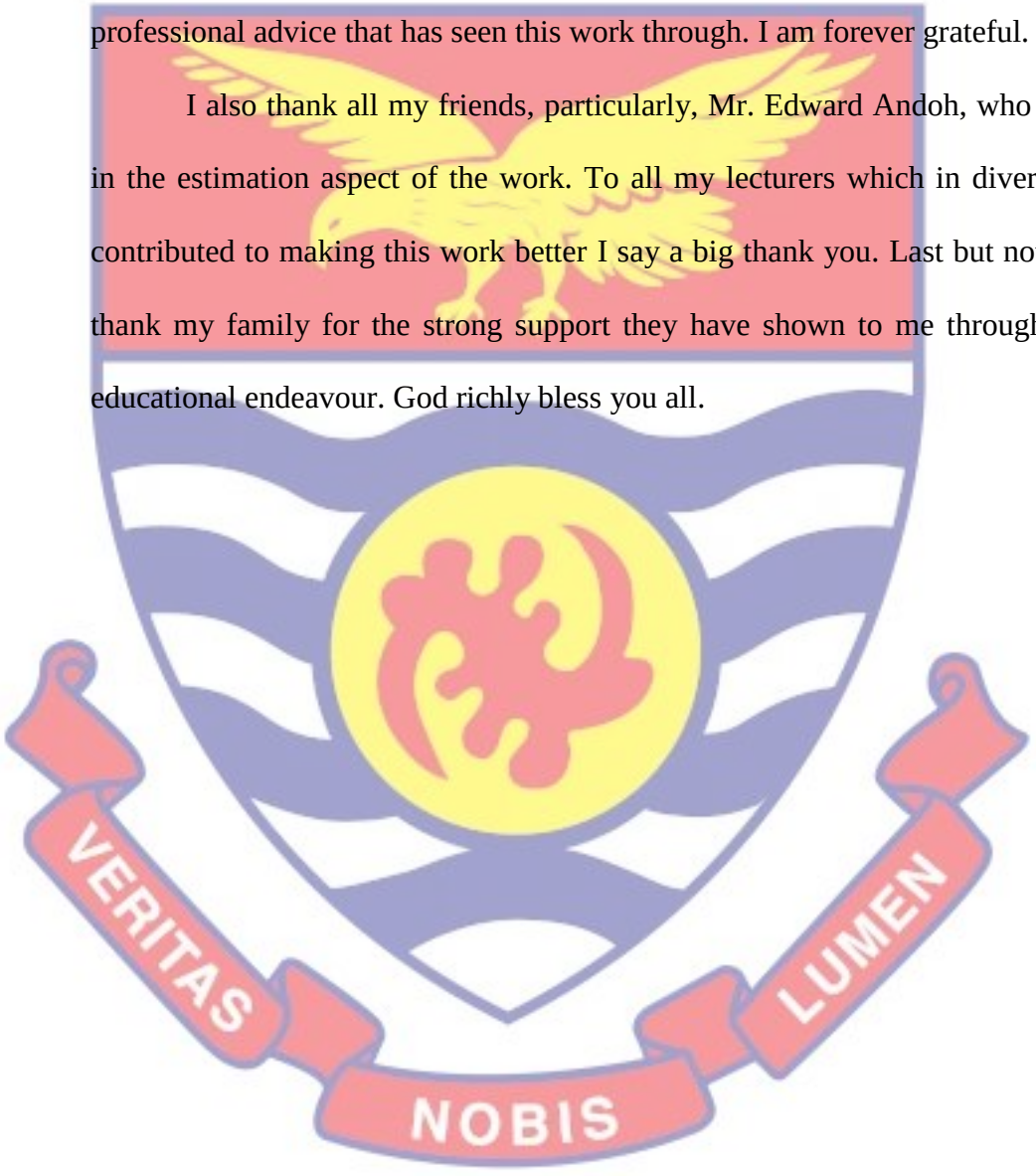

DEDICATION

To my family

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LIST OF ACRONYMS

ARDL	Autoregressive Distributed Lag
CUSUM	Cumulative Sum
ECT	Error Correction Term
EG	Economic Growth
FMD	Financial Market Development
GE	Gross Expenditure
GFCF	Gross Fixed Capital Formation
LAB	Labour
VAR	Vector Autoregressive

CHAPTER ONE

INTRODUCTION

Economic growth is one of the key macroeconomic indicators that measures the prosperity of the citizens of an economy, and which also help to project the future direction of the economy. An an emerging economy, Ghana growth path has been defined by host of macroeconomic variables (inflation, interest rate, exchange rate, capital formation) as suggested by literature. There are other important variables (such as democracy) whose effect on economic growth have not received much attention in literature. Also, the recent financial sector clean-up in Ghana has redirected attention on the impact of financial sector development on economic growth. This study focused on two unique variables – financial market development and democracy, to assess their influence on the growth of Ghana's economy.

Background of the Study

A major pointer of economic growth used in many studies has been the Gross Domestic Product. This indicator from a supply-side is the sum of value-added in a product's value change within an economy. From a demand-side perspective, it represents the summation of all goods and services consumed by individuals, firms and government within an economy. A sustained increase in this indicator represents economic growth. Hence, Dziwornu and Awunyo-Vitor (2013) defines economic growth is the rate of change in the national output from one economic period to another. In some jurisdictions, the per capita growth of GDP which takes effect of the size of a country's population has also used either

side by side with the real GDP or used alternatively to show the performance of an economy relative to its growth.

Ghana's economic growth can be analysed in two facets: post-independence but prior to financial sector reforms (1960-1982) and post-financial sector reforms (1983-present). Unlike in Asamoah (2008) where the economy was analysed into financial sector reforms after independence (1957-2000) which were separated into pre-liberalization period (1957-1982) and post-liberalization period on the basis of exchange rate regimes, the effective assignment of the exchange rates and structural changes (Asamoah, 2008).

Prior to 1983, financial system was dominated by state-owned banks (Asamoah, 2008) which had monopolized the entire banking system. Ghana was implementing a fixed exchange rate regime with the view of maintaining a stable inflation (Asamoah, 2008) but the period saw a devaluation of the Ghana Cedi in 1967, 1971 and 1978, 30% average growth rate of money; and 100% inflation rate by 1981 (Asamoah, 2008). It can be seen from most literature that Ghana began considering structural adjustment programmes in the 1980s as part of the Economic Recovery Programme (ERP) which began in 1983.

It can be read from Figure 1 that the economy began recovering after 1983 and had remained relatively stable over the period to 2018. Significant happenings in the Ghanaian economy during the liberalisation period include the liberalisation of the foreign exchange market by 1986, and competitiveness of the economy which resulted in the steady inflation rate between 1984 and 1991, hitting a low of 18% in 1991 declined further in 1992 and then declined to 30% in 1997 after

accelerating to 59.5% in 1995 (Asamoah, 2008). Therefore, the improvement in the economy which can be seen from Figure 1 can be deduced to have coincided with the period Ghana adopted liberalisation policies in 1983 and the period when political structures had been relatively stable during Flt. Lt. J. J. Rawlings' regime who ushered in a revolution with radical restructurings and recoveries at all levels ("Political History," n. d.).

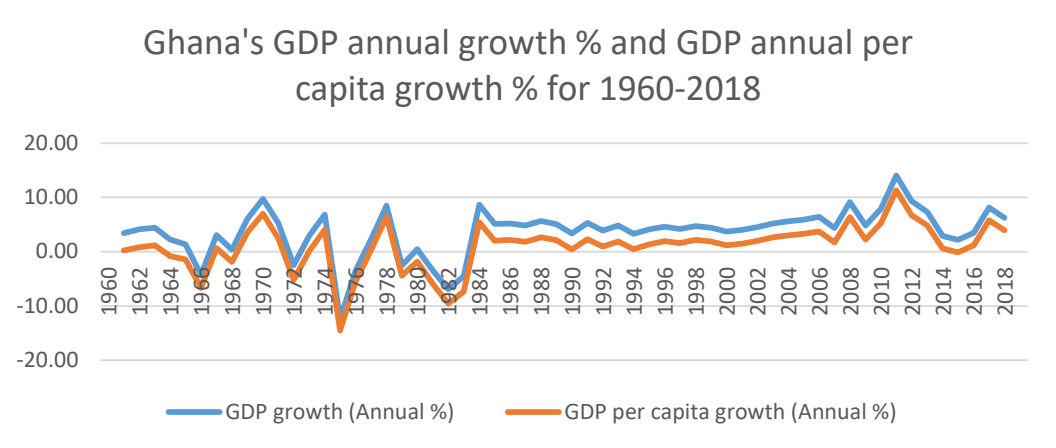

Figure 1: Ghana's Real GDP growth & Real GDP per capita growth (1960-2018)

Source: Author's Construct (2021)

The Financial Sector Adjustment Program (FINSAP) which was launched in 1987 to clean up the mess in the financial sector (Asamoah, 2008) had a policy that saw the financial deepening of the economy. It allowed for free entry into the formal financial sector and led to the establishment of non-bank financial institutions (Asamoah, 2008) like the Ghana Stock Exchange in 1989, and other financial markets like insurance companies, Social Security and National Insurance Trust, discount houses, Home Finance Company, venture capital company, unit trust and leasing company (Asamoah, 2008).

Immediately after the overthrow of Dr. Hilla Limann, the PNDC under the auspices of J. J. Rawlings set up a National Commission for Democracy (NCD) which was charged with formulating a programme (Asamoah, 2008) so as to realise the full effect of true democracy ("Political History", n. d.). The programme provided for the establishment of local government institutions. As a result, in 1990, Ghana through a referendum chose a multi-party system of government (Asamoah, 2008); a significant feature of democratic governance. Today, the 1992 Constitution of Ghana which is currently being used in the Fourth Republic after four successive coups encompasses previous constitutions of 1957, 1969 and 1979.

As indicated in Sakyi and Adams (2012), the growth rate of real GDP for the period 1961–83 was not only characterised by high volatility but that its average was only 0.9 percent, compared to an average of 3.03 and 5.0 percent for the periods 1961–2008 and 1984–2008, respectively. This average growth performance for these periods is not surprising as real GDP growth for the years 1966, 1972, 1975–76, 1979 and 1981–83 were negative, whilst that for the period 1984–2018 has remained positive throughout (Sakyi & Adams, 2012). According to Sakyi and Adams (2012), the reason for this observation is that while the abysmal growth performance for the period prior to 1983 was mainly characterised by political instability and inappropriate macroeconomic policies, the years after 1983 have been characterised by economic and political liberalisation policies (Sakyi, 2011).

In 2008, the GSE recorded a performance of 154.7 percent and was adjudged the best performing stock market in the world, despite the global economic meltdown (Dziwornu & Awunyo-Vitor, 2013). It was again adjudged the most innovative African Stock (Dziwornu & Awunyo-Vitor, 2013). These laurels chalked by the GSE suggests that it may have also contributed significantly to the Ghanaian economy in these periods.

It appears from the above analysis with the support of Figure 1 that the economic growth of Ghana (particularly the stabilised growth after 1983) is so because of its consistent democratic government coupled with the financial sector reforms implemented in the late 1980s. This is no different from Yang (2011) which saw from the review that existing literature (e.g. King & Levine, 1993; Levine & Zervos, 1998) has stressed the role of political and legal institutions in promoting financial development, which is widely viewed as crucial for economic growth.

Through democracies, by promoting political participation and competition, limit the power of the state to control and repress the financial system, reduce the chance for both predatory and opportunistic behavior, and thus generate a more competitive and more efficient banking system (Haber, 2007) and that institutions that respect the rule of law, protect property rights as well as contract enforcement, and put effective constraints on rulers are shown to be associated with higher levels of financial development. This result in improvement in the growth prospect of an economy as suggested by the classical theory of growth. Contrary to the empirical study that gave a direct relationship

between democracy and financial development, Yang's (2011) study arrive at the findings that while democracy promotes financial development because of its institutional features such as political competition and checks and balances, this relationship disappears in regressions controlling for country-specific factors. Yang (2011) again finds that democracy is not positively related to stock market development in any way, hence, on average democracy does not enhance financial development although in some countries' democracies may successfully bring higher levels of finance.

In the World Bank Group, January 2019 report on Macroeconomics, Trade and Investment Global Practices, Geiger, Trenczek and Wacker (2019) asserted that an analysis of Ghana's most recent growth is of importance for reasons that: growth in Africa is not understood well, Ghana's growth performance within the region is outstanding compared to both low and high-income countries within sub-Saharan Africa, there is pervasiveness of extreme poverty within sub-Saharan Africa countries hence comprehending the drivers of this performance is crucial.

The report saw from a demand-side that GDP had increased due to investment and public consumption. They revealed that while real consumption of households in Ghana remained high and relatively constant since 1990, consumption of the government and, especially, investment increased remarkably. On the supply side, the supply-leading hypothesis suggests that variables such as financial sector development and labor accumulation played a large role historically, but the recent growth was fostered by capital accumulation and productivity (Geiger, Trenczek & Wacker, 2019).

Geiger et al (2019) showed that human capital accumulation (in terms of labor and education) has always had a positive effect on growth in Ghana (at least since 1970) and essentially was the only factor positively contributing to growth until 1990. Thereafter, the pattern of growth in Ghana (which also accelerated from the late 1980s, remarkably changed in that productivity and increased capital accumulation started to positively contribute to growth (Geiger, Trenczek & Wacker, 2019).

The World Bank policy paper showed that between 1970 and 2014, there has been a massive structural change evidenced by a shift of labour from the agricultural sector into the service sector (particularly into the wholesale and retail trade, hotels and restaurants). This drift followed several structural reforms undertaken between 1993 and 2005 (World Bank Group, 2018). The growth contributed by the service sector (seen in Figure 3) was not as a result of high productivity level of labour in the service sector (as it can be seen from Figure 4 that productivity of labour in the service sector is seen to be declining over time) but a result of the size of labour force in the service sector due to the drift from agricultural sector (see Figure 2). As a result, the pattern of agricultural share in the GDP composition over the period has since seen a decline in favour of the service sector. Figure 2 depicts this trend.

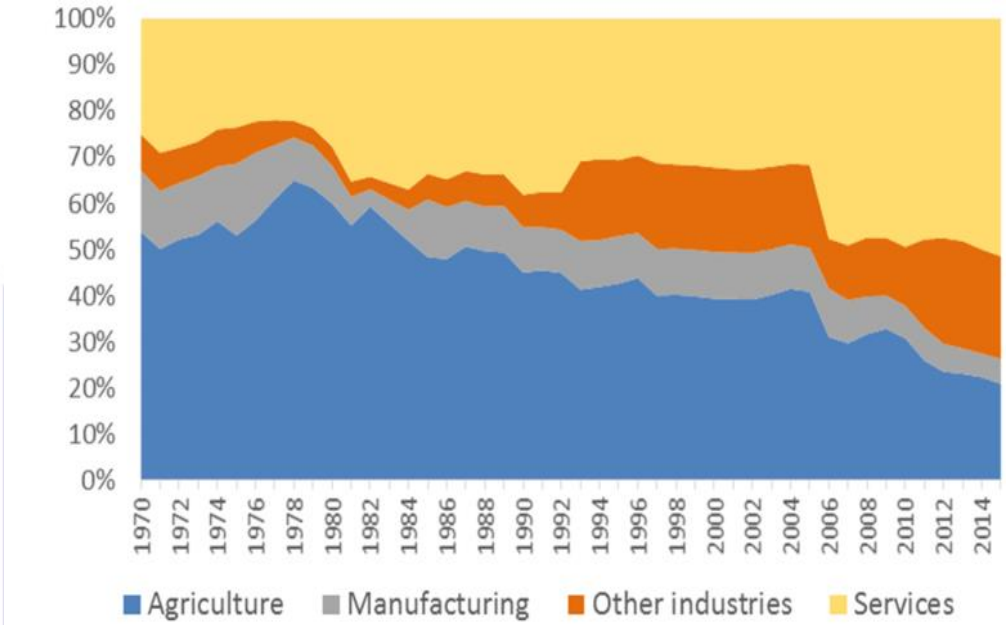

Figure 2: Sectoral Composition of Value Added

Source: Geiger, Trenczek and Wacker (2019); World Bank Group Policy Research Paper

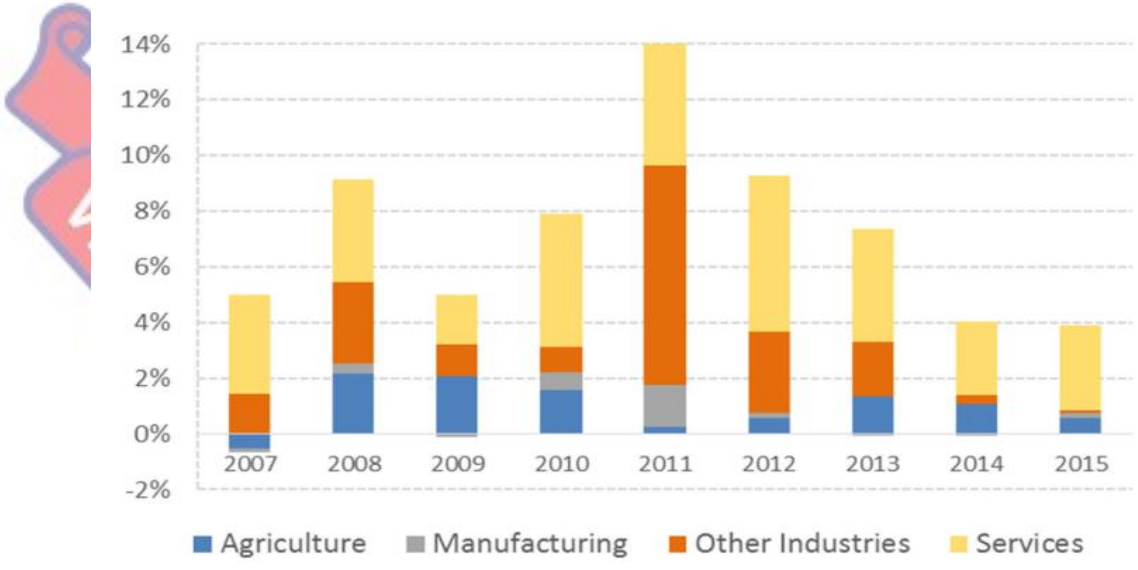

Figure 3: Sectoral Contribution to Value Added growth

Source: Geiger, Trenczek and Wacker (2019); World Bank Group Policy Research Paper

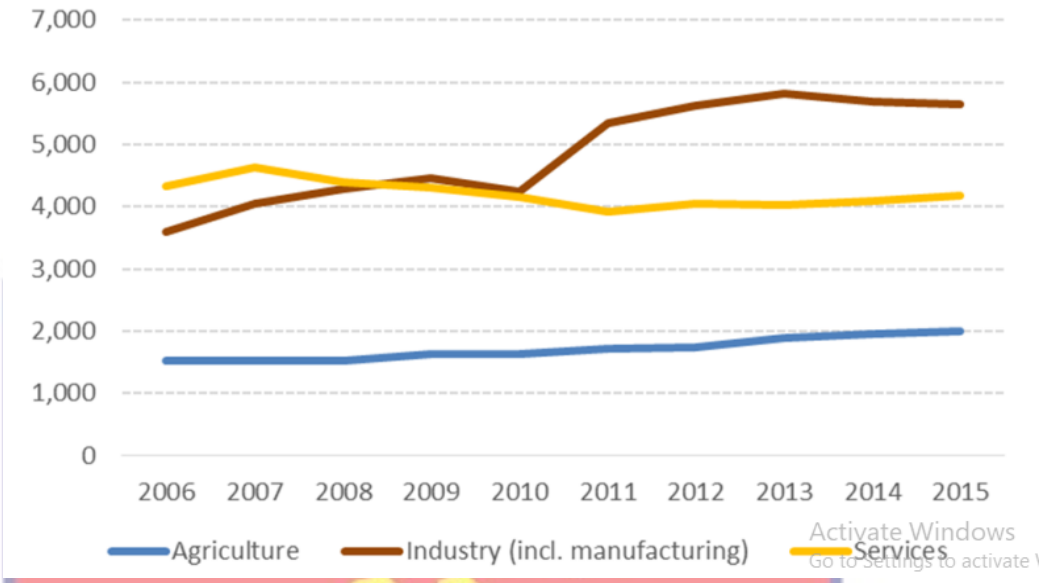

Figure 4: Value Added per Employee

Source: Geiger, Trenczek and Wacker (2019)

Furthermore, a number of reports including World Bank reports have associated the initial boom during 2005 2015, peaking in 11.3 percent growth in 2011, mainly to increased prices of Ghana's main commodity exports, notably gold and cocoa, and the initiation of commercial oil production in 2011, together with a loose (and possibly election-driven) fiscal policy stance. The bust thereafter saw growth declining four consecutive years, down to 1.6 percent in 2015, and reflected a combination of declining commodity prices, energy rationing (partly due to reduced hydropower output in face of drought conditions), and a large fiscal crisis in 2013 (Geiger, Trenczek, & Wacker, 2019).

In summary, although it appears that the Ghanaian economy has seen massive economic growth (after implementing periods of democratic structures, several structural reforms leading to massive development of the Ghanaian financial markets) which World Bank Group (2018) points specifically to the

growth of Ghana between 2005 –2015 (which averaged 4.5%) to be significantly beyond the mean of non-high-income, Sub-Saharan African countries (2.0 percent) and other low-income countries (2.6 percent) and slightly above other Lower – Middle – Income Countries (4.4 percent), none of the reports sought to relate the economic growth to the financial market development nor democracy (Geiger, Trenczek & Wacker, 2019). This present study sought to fill this gap.

Statement of the Problem

There is inconclusive evidence on how market development affects economic growth. Some researchers have argued that there is an irrelevant connection between financial market development and economic development. There is no consistent conclusion on the actual relationship that exists between the stock market and economic growth (Geiger, Trenczek & Wacker, 2019).

Some researchers (Jaunky, 2013; Valdez, 2017) find a negative correlation, others (Reid, 2009; Copeland, 2018) find a positive relationship and some others (Keith, 2013; Marc, 2019) believe the relationship is irrelevant and even the extent to which the relationship is positive or negative is inconclusive because of some varied views and varied proxies used by these researchers. But the results are weighted in favor of those who view it as positive relations in terms of the number of outcomes. Singh (1997), a proponent for the negative relationship, believes that the volatile nature of stock markets in many developing countries leads to market failure. That is, financial markets as they develop and become creative can cause rollbacks on economic growth that have been achieved in the economy. The development of the capital market can be attributed to many

influential factors some of which are economic (Singh, 1997). As there are numerous interdependencies between these factors, so it is difficult to establish and isolate the causal relationship between the economic growth and the capital market development (Brasoveanu, Dragotta, Catarama & Semecsa, 2008).

Democracy as a political system of governance may have an influence on the way certain policy decisions affect economic growth. There is also inconclusive research on the relationship between democracy and economic growth (Jaunky, 2013). Arguments that relate regimes to growth focus on property rights, pressures for immediate consumption, and the autonomy of dictators. While everyone seems to agree that secure property rights foster growth, it is controversial whether democracies or dictatorships better secure these rights (Przeworski & Limongi, 1993).

According to Jaunky (2013), economic growth is found to cause democracy in the short-run, while bidirectionality is uncovered in the long-run. In addition, the long-run coefficients are estimated through the panel fully modified ordinary least squares and dynamic ordinary least squares methods. Democracy has a positive impact on GDP and vice versa. These results lend support to the virtuous cycle hypothesis.

As noted by (Sakyi & Adams, 2012) Ghana is one of the most politically stable countries in the sub-Saharan African region and will, therefore, be a good country to conduct the research given that their democratic practice has been relatively stable and the economic growth has had an increasing trend. The gaps identified in literature which this study sought to fills are that; firstly, while the

relationship between financial market development and economic growth is well documented, there is nevertheless scacity of literature in respect of the direction of the short run and the long run relationship between the two variables. Secondly, the relationship between political regimes (that is, democractic regimes and non-democratic regimes) and economic growth lacks empirical support in literature. Giving the importance of stable democracies for business and investment expansions, this study assessed the relationship between democracy and growth of Ghana's economy. Thirdly, there is no evidence in literature as to whether democracy help to explain the relationship between financial market development and economic growth. Owing to this dearth of literature, this study examined the moderating role of democracy on the relationship between financial market development and economic growth in Ghana.

Purpose of the Study

The purpose of this study is to examine the moderating role of democracy in the relationship between financial market development and economic growth in Ghana.

Research Objectives

The research would be guided by the following research objectives to:

1. examine the short and long run relationship between financial market development and economic growth in Ghana
2. examine the short and long run relationship between democracy and economic growth in Ghana

3. examine the moderating role of democracy in the relationship between financial market development and economic growth in Ghana.

Research Hypotheses

H1: Financial market development positively influences economic growth in the short and long run in Ghana.

H2: Democracy positively influences economic growth in the short and long run in Ghana.

H3: Democracy positively moderates the relationship between financial market development and economic growth in Ghana.

Significance of the Study

This study appears to delve into a new research area as we can find works on each of the independent variables (financial market development or democracy) and the dependent variable (economic growth) but not both independent variables and economic growth. It is expected of this study to fill the gap in this research area. The findings will help researchers and other stakeholders know whether there is a link. If there is a link, it would help stakeholders (particularly, the government) to implement procedures that would manage this linkage so as to optimise the growth of the economy.

Delimitation of the Study

The study focuses on financial market development [ment, democracy and economic growth in Ghana. It seeks to know the association between the financial market, democracy and economic growth within the Ghanaian space. As a result,

data on the variables will include those of only Ghana. The dependent variable which is of importance to this study remains economic growth which is proxied by real GDP per capita.

Definition of Terms

This section provides the various operational definitions of variables used within the context of this study.

Economic growth – is measured as the log of real gross domestic product (GDP) per capita, thus real gross domestic product/total population.

Financial market development - is defined as the ratio of private credit of deposit money banks to GDP.

Democracy – is measured using d*ummy variable; 1- Democracy, 0- Autocracy.*

Control Variables

- ***Gross physical capital formulation*** – natural log of ratio of gross physical capital formation to GDP.
- ***Government spending*** – natural log of the ratio of final recurrent consumption expenditure of general government to GDP.
- ***Labour*** – natural log of labour force participation rate as a percentage of total population

Organisation of the Study

This study is made up of five chapters. Chapter one provides the introduction, background to the study, problem statement, purpose of the study, research objectives, research hypotheses, significance of the study, delimitation

and limitation of the study, the definition of terms and the organization of the study. Chapter two provides a review of theoretical frameworks underpinning the study, a review of the empirical literature on the relationship between financial market development, democracy and economic growth as well as the deductive gap from prior literature.

Chapter three presents the research methods. This chapter captured the research design, model specification, data type and source, measurement and justification of variables and tools and procedure for data analysis. Chapter four presents and discusses the results of the study. The chapter also discusses the findings of the study relative to the empirical literature and its implications for Ghana. Chapter five provides the summary, conclusions, and recommendations of the study. The chapter provides a summary of the major findings of the study; the conclusions reached and relevant recommendations made based on the findings, as well as suggestions for future studies.

CHAPTER TWO

LITERATURE REVIEW

Introduction

Chapter two of this study dealt with the review of literature in respect of the relationship between financial market development, economic growth and democracy as a meodrating variable. In this chapter, the theoretical basis for the study has been presented; the conceptual discussions on the thematic areas of the study have been presented as well; and the empirical review of the relationship among the key variables of the study were also highlighted.

Theoretical Review

This study was underpinned by the classical theory of economic growth and the supply-leading hypothesis.

The Classical Theory of Economic Growth

The classical economists observe that markets generally regulate themselves, when they are free from coercion. Adam Smith referred to this as a metaphorical (Smith, 1776) "invisible hand", which moves markets toward their natural equilibrium, when buyers are able to choose between various suppliers, and companies which do not successfully compete are allowed to fail (Smith, 1776). The works of Smith warned repeatedly of the dangers of monopoly, and stressed the importance of competition (Smith, 1776). This provides important basis for establishing the link between financial market development (liberalsiation), democracy (muti-party system of governance), and growth.

Adam Smith linked the increase in wealth of people with the improvement of the output of the factors of production (land, labor and capital), which is reflected in the growth of labor productivity and an increase in the size of functioning capital (Lavrov & Kapoguzov, 2016). Great attention was attached to population growth, to the increase in the share of workers in the sphere of material production, to investment and geographical discoveries, which contributed to extensive growth (Lavrov & Kapoguzov, 2016).

Smith believed that population growth is endogenous and depends on the available means of subsistence. Investment was also recognized as endogenous and depended on hardworking and savings of the capitalists, and by savings meant the sum of reserves used not for personal consumption, but for industrial purposes. The output growth from land was linked to geographical discoveries and technological improvements in existing land fertility (Lavrov & Kapoguzov, 2016).

The main driving force behind increased productivity by Smith was the division of labor and improvement of technology (Reid, 2009). Smith saw competition at the heart of economic sector and the national economy as a whole, and believed that the economy can grow rapidly thanks to technological advances, part of which is the division of labor (Reid, 2009). Smith considered competition as a factor of bringing the system to equilibrium, despite the fact that the results of the process of balancing systems are preferred and positive for society (Reid, 2009). Based on above view, there is a connected between enhancing competition through developing the financial market to include manay financial institutions to

break monopolization of the financial secotor, the allowance of many political parties to engage in the political drive, and the economic growth.

This study employed the classical theory of growth to assess the relationship between financial sector development, democracy and economic growth. According to the theory, growth is a function of endogenous factors and this study in line with empirical studies assumed that financial sector development and democracies are part of such endogenous variables that drive growth of economies.

Supply Leading Hypothesis

The supply-leading hypothesis was pioneered by Schumpeter (1911) and it has been supported by contemporary researchers such as Caldean and Liu (2003). The supply-leading hypothesis was based on the assumption that financial sector development is an important variable that drives economic growth. Based on the tenet of the supply-leading hypothesis, the supply of financial services increases in response to growth in the financial market. This invariably leads to the growth of the real sector of the economy. Thus, path through which financial market development promotes economic growth is explained in the supply-leading hypothesis.

According to Adeyeye, Fapetub, Alukob and Migiro (2015), the central argument underlying supply-leading hypothesis is that financial deepening is a determining cause of economic growth. It posits that optimal allocation of resources is an outcome of financial sector development (Hurlin & Venet, 2008). The supply-leading hypothesis suggests that causality flows from finance to

economic growth with no feedback response from economic growth. A well-developed financial sector is therefore a pre-condition for economic growth. This study applied the supply-leading hypothesis to examine the relationship between financial market development and economic growth in Ghana.

Conceptual Review

The Concept of Financial Markets

Finncial markets have been defined to include the arrangement that facilitate the purchase and sale of securities that are financial in nature (Copeland, 2018). In the midst of rising demand for variety of goods and services, firms have realize the need to widen their capacity to meet demand requirements. However, firms would require finance to expand their capacity and usually they fall on the various forms of short and long term sources to acquire funds (Valdez, 2017). These funds are acquired in the financial markets. To this extent, the financial market include financial institutions such as the banks, savings and loans companies (Valdez, 2017), and credit unions. It also include all the various forms of secuties that are traded in the financial market.

According to Keith (2013), the degree to which a country's financial market is developed depends on key factors such as the number of financial institutions and the volumes of investment in financial securities. Marc (2019) has also added that financial markets that are less developed are defined by many financial institutions, notably banks, relative to those thare are more developed where mostly financial securities such as bonds and shares are traded. To this extend, financial markets of are different categorizations including the capital

market where long term securities such as bonds, debentures and shares are traded (Marc, 2019), and the money market where short term securities such as commercial papers, certificate of deposit, Treasury bills, and repos among others are traded.

There are important roles played by financial markets in the financial system and key among these roles is the function financial markets play in terms of determining prices of financial securities (Pagano, 2015). The players in the financial market, demanders and suppliers of securities interplay to determine the fair price at which a particular security must be traded. The financial market also maeks it possible for the mobilization of funds to the productive sector of the economy (King & Levine, 2017).

Firms who have shortage of funds can access funds in the financial market by selling securities such as bonds and shares to raise funds for stimulating their production activities. Easterly (2018) has further argqued that financial markets ensure higher opportunity for providing liquidity to investors. Thus, investors who invest in financial assets have available markets where they can go to sell those assets for fair value when they need cash. Other functions performed by the financial market include the sharing of risks, providing easy access to funds (Park, 2019), making the access to funds easier, providing information of value to financial market players, and helping to share and spread risk thereby minimizing them (Getler & Rose, 2018).

Financial Market Development

Financial market is a component of the general economy which oversees the healthy flow of funds among the various entities and individuals. Financial market development therefore considers the extend to which the financial market in an economy (Greenwood & Smith, 2017) adequately and efficiently performs the various functions reckon on it. According to Greenwood and Smith (2017), financial market development is mainly concerned with the ability of financial markets to channel funds from surplus spending units to deficit spending units in a manner that lower risk in the intermediation process while meeting or exceeding the expectations of all parties.

According to Chan and Tsay (2018), financial market development must be defined in terms of the main objective which it seeks to attain. That is, financial market development aims at enhancing or strengthening the financial market in such a way that financial markets will act efficiently as a middle party that serve the interest of both providers of funds and suppliers of funds. Furthermore, Maddison (2016) argued that a developed financial market should have both depth and breadth such that the activities of the financial market is not defined only by the role played by financial institutions in terms of accepting and lending funds but also facilitate the creation of variety of financial assets to meet the growing needs of all parties in the financial system. In the study of Gorg and Kersting (2016), it has been reported that financial markets that is well developed does well by fostering two-way direct foreign investment and providing headge against exchange rate risk which stimulates economic growth.

Economic Growth in Ghana

Economic growth is a tern that explains the rate at which an economy's national output change from one period to another period, ususally monthly, quarterly, or yearly. It is used to measure the growth path of the economy (Rachdi & Saidi, 2014) to determine whether the growth of the economy is stunted or progressive. One key means of measuring the growth of an economy is the use of the changes in a nation's Gross Domestic Product (GDP) as a percentage of previous period's values (Adusei, 2013). Economic growth can also be measured in terms of the percentage changes in a country's per capita income (Adusei, 2013).

The growth levels in an economy is influenced by a host of several factors especially economic forces such as inflation, interest rate, money supply, personal, business, and government spending among others (Ofori-Appiah & Danquah, 2016). At the same time, economic growth also determines the futre growth path and prosperity which can be delivered to the citizens of an economy. Apart from the already mentioned macroeconomic factors that influence economic growth, there are also variables that are non-economic that influence the rate of growth of the economy.

Some of these factors include sentiments, rule of law, governance systems of an economy, confidence of investors, and peace and stability among others (Ishtiaq, Majeed & Sohail, 2016). Democracy has also been found elsewhere, especially in the Europe and America as key drivers of economic growth (Acemoglu, Naidu, Restrepo & Robinsonas, 2014), and this study examined the

case of Ghana. The economic growth of Ghana can be observed from the trend of real GDP growth from 1960 to 2019 as depicted by Figure 5.

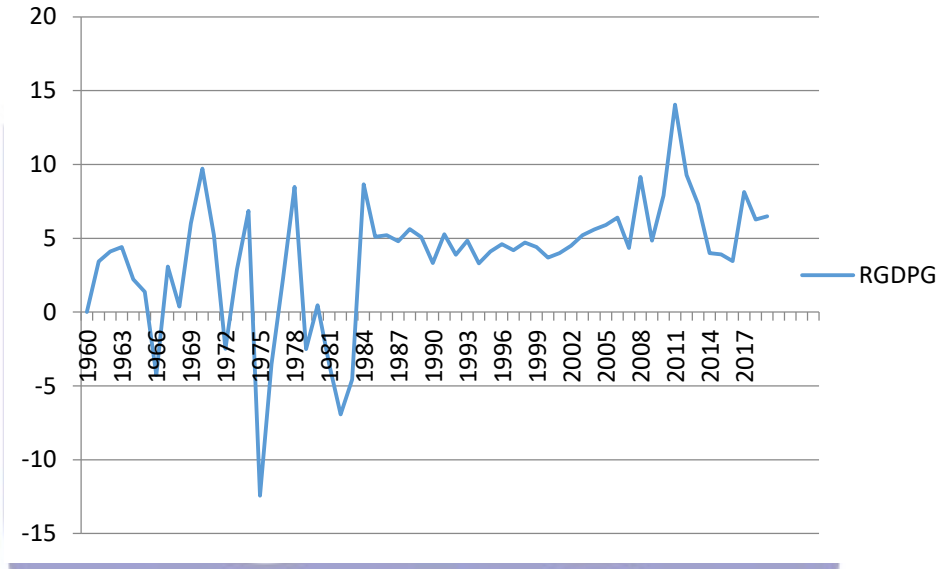

Figure 5: Real GDP growth of Ghana (1960-2019)

Source: Bank of Ghana (2020)

From Figure 5, it is not far fetched that the growth rate trenad of Ghana has not being smooth throughout. The growth rate begun in 1961 with a rate of growth of 3.43 percent and reached a peak of 4.41 percent in 1963. By 1966, the growth rate had decreased to -4.3 percent with an outtern to positive growths raching peak in 1967 with growth of 3.1 percent and another peak in 1970 with growth rate of 9.7 percent. Ghana reached lower and negative growth consistently in each of the years 1972 (-2.5%), 1975 (-12.4%), 1981 (-3.5%), and in 1983 (-4.6%).

The growth of the economy recovered from negative growth path into positive since 1984 and consistently, Ghana had continued to enjoy positive growth rates with the highest growth rate recorded in 2011 with rate of 14.05

percent. The average growth rate of the economy prior to 1992, a period of unstable democratic governance, was 1.99 percent compared to the average growth rate of 5.66 percent between 1992 and 2019 (Fynn, 2019)

Democracy in Ghana

Democracy as a political system of governance may have an influence on the way certain policy decisions affect economic growth. Based on the survey of Center for Democratic Development (CDD) Ghana conducted in 2003, there is a finding that democractic system of governance is the most preferred. That is, 82 percent of Ghanaians preferred democratic governance compared to 18 percent that favoured other forms of governance. There is also evidence of majority of Ghanaians (up to 72%) who believe that the current system of governance in Ghana is founded on the principles of democracy (CDD-Ghana, 2003) and 55 percent of Ghanaians have expressed satisfaction for Ghana's democractic system.

Since the fourth republic where the the system of democratic governance was adopted in 1992, there has been eight consecutive democratic election used as a means of transiting political power from one political party to another. There are myriads of research that point towards the fact that democracy propels growth (Ishtiaq, Majeed & Sohail, 2016; Rachdi & Saidi, 2014; Knutsen, 2012). There has equally been report by the World Bank (2015) which revealed that Ghana's growth path can be enhanced only when the system of democratic governance is soundly articulated and enriched in its improved form in the current dispensation of governance.

There are also investors who consider democracy among other factors as key determinants in constructing their investment portfolio (Barnes, 2018). Thus, democracy infleucne which country receives more foreign directs investments. In other words, stablised economy through democratic governance enhances growth in investment into the economy from both domestic and foreign investors; this increase productivity and capital stock which in the end increase the growth path of the economy (Fynn, 2019).

Empirical Review

The relationship between financial market development and economic growth, and that of democracy and economic growth (Adusei, 2013) had been further established by host of studies as dicussed below.

Financial Market Development and Economic Growth

In Ghana, Adusei (2013) investigated the nexus between financial market development and economic growth by employing the fully modified ordinary least square, error correction, and generalized method of moment models. The study of Adusei (2013) further employed data on time series data from 1971 to 2010 on variables such as financial market development (measured by percentage of domestic credit to GDP, private sector credit to GDP, and broad money supply to GDP) and economic growth was also measured in terms of the real GDP growth rate (Adusei, 2013). The study however found that financial market development negatively influence economic growth in Ghana (Adusei, 2013) and

in conclusion cautioned agaisnt the advancement of financial liberalization in the country.

Based on the conclusion drawn in the study of Adusei (2013), it can be argued that financial market development where many financial institutions are allowed to participate in the financial market unnecessarily increase unhealthy competition and unconventional practices that stunt the financial sector and thereby negatively affecting growth. Another justification for the results obtained in the study of Adusei (2013) is owned to evidence of poor banking and lending practices coupled with weak regulatory and monitoring processes as evidenced in the study of Amartey (2017).

Furthermore, the study of Puatwoe and Piabuo (2017) examined the effect of financial development on the growth of Cameroon economy by employing time series data. Financial development was investigated using three broad indicators such as domestic credit to private sector, deposit to GDP ratio, and the broad money (Puatwoe & Piabuo, 2017). The study further employed the autoregressive distributed lag model to establish the short and long run (Puatwoe & Piabuo, 2017) relationship. The result of the study was that in the short run, there was a negative relationship between financial development and economic growth but the direction of the relationship between the two variables in the long run was positive (Puatwoe & Piabuo, 2017).

It can be found that the results in the study of Adusei (2013) and Puatwoe and Piabuo (2017) agreed to negative relationship between financial development and economic growth. The implication is that the economies of the two countries

at the time of the studies had not established robust financial development which could propel growth. It is however refreshing that the study of Puatwoe and Piabuo (2017) revealed that the relationship between financial development and economic growth is positive in the long run. The positive relationship between financial market development and economic growth (Puatwoe & Piabuo, 2017) is ideally expected and the study of Mandifie (2015) had confirmed that financial market development contribute to grow the financial sector, investment, and productivity which ultimately enhance the growth of the economy.

There is also another study that was conducted by Ahmed and Malik (2009) on the link between financial market development and economic growth among 35 developing economies by employing data from 1970 to 2003. The main evidence produced from this study was that financial market development positively affect economic growth (Ahmed & Malik, 2009) through the role played by financial markets in efficiently allocating resources. Thus, the role of financial markets in allocating resoureces to the sectors of the economy led (Ahmed & Malik, 2009) to growth more than its role as accumulator of capital. There is therefore agreement between the studies of Ahmed and Malik (2009), Mandifie (2015), and Puatwoe and Piabuo (2017) who have all reported that financial market development positively influence economic growth. Based on the evidence of literature, and holding other factors constant, this study hypothesized that financial market development directly enhance economic growth.

Democracy and Economic Growth

There has been interesting revelation on the relationship between democracy and economic with evidence from around the world (Rachdi & Saidi 2014). For example, the study of Rachdi and Saidi (2014) examined how democracy impact economic by obtaining evidence from 17 Middle East and North American (MENA) economies (Rachdi & Saidi 2014) . Data for this study was obtained from 1983 to 2012 and the study objective was analysed using the fixed effect, random effect, and the generalized method of moments models (Rachdi & Saidi 2014). Democracy was proxied with institutionalized democracy score, institutionalized autocracy score, competitiveness of executive recruitment, openness of executive recruitment, and executive constraints (Rachdi & Saidi, 2014).

The evidence obtained in Rachdi and Saidi (2014) revealed that democracy had significant negative influence on the growth of the MENA economies. The result obtained in this study was attriabuted to weak institutional structures in the democractic dispensation of the MENA counrtries. Another reason cited for the negative relationship between democracy and economic growth (Rachdi & Saidi 2014) was due to the influence of corruption, regidities, bureaucracies, and non-competitive executive recruitment that are significant elements of democracy. Thus, in the presence of these variables, democracy does not become as good and efficient as it could be; and therefore growth of economies do suffer adversely.

There is another evidence obtained from the study of Ishtiaq, Majeed and Sohail (2016). This study was conducted on the reasoning that economic growth does not only depend on the traditional factors of production (Ishtiaq, Majeed & Sohail, 2016) but also on the nature of political regime that is practiced by economies. Specifically, Ishtiaq, Majeed and Sohail (2016) analysed the effect on economic growth during democratic and autocractic regimes of governance by employing data on a set of economies from the year 1974 to 2013. The results of this study revealed that democracy and economic growth (Ishtiaq, Majeed & Sohail, 2016) are negatively related. The study revealed that democracy produce undesirable outcomes in the form of corruption, regidities, and bureaucracies which does not contribute to growth potentials.

However, systems of governance such as autocracies or dictatorship positively drive economic growth and studies such as Knutsen (2010) had supported this view as well. The arguments advanced for the negative relationship between democracy and economic growth (Knutsen, 2010) include the fact that government in democratic regime can be pressurised by interest groups and vote blocks which will lead to policies against majority of populace by protecting the interests of small pressure groups (Rachdi & Saidi, 2014). On the contrary, Wade (2017) had stated that under autocracy politicians and bureaucrats will be free from pressures of interest groups. Another argument against democracy is the presence of veto-players as (Tsebelis, 2012). These veto-players will block the reforms introduced by democratic government in order to protect their potential political loss or defeat (Tsebelis, 2012).

There are however recent studies that have shown that democracy positively influence economic growth. For instance, Halperin, Siegle and Weinstein (2015) found that low-income democracies consistently outpace their autocratic counterparts on a wide range of development indicators (Halperin, Siegle & Weinstein, 2015), including economic growth. The studies by Baum and Lake (2013) and Tavares and Wacziarg (2011) provided more convincing methodological approach to assessing the effect of democracy on economic growth. Based on the studies reviewed, it was established that democracy could have both indirect and direct influence on economic growth.

Financial Market Development, Democracy and Economic Growth

The study of Durmaz (2017) examind the relationship among democracy, economic growth, and development of the financial market through foreign direct investment in emerging economies. The study found that the relationship between financial market development and growth of emerging economies is positive (Durmaz, 2017). The study further revealed that sustainable democracy draws in more direct investment into the financial sector that enhances the development of the financial sector by financial institutions (Durmaz, 2017) being able to provide more credit to firms to enhance production which causes national output to grow.

The study of Raggl (2014) which was focused on the determinants of economic growth and financial market development revealed that financial market development and democracy significantly influence the growth path of emerging economies. Thus, the study of Raggl (2014) argued that democracy serve as basic requirement for investors who enter the financial market. In other

words, the study showed that democracy opens up for growth of justice, rule of law, investor protection, and instills investor confidence in the financial market.

At the core of the aforementioned indicators, investors regard the financial markets with highly democratic principles as less risky to enter. Investors and savers therefore gains confidence in the financial sector believing that their investments are protected under sound democracy. Financial institutions are therefore able to compete effectively and accumulate funds from surplus spending units which can be given out as credit to the private sector for the expansion of their firms which eventually raise gross national output and growth of the economy (Raggl, 2014).

The study of Rachdi and Saidi (2014) extends the debate on financial market development, democracy and economic growth by providing evidence from the middle-east and northern American economies in terms of the how financial market and democracy interplay to influence economic growth. The result of the study of Rachdi and Saidi (2014) revealed that both democracy and financial market development influence economic growth positively. The central argument of the study was that democracy strengthens the basic structures of the economic sectors of the economy, such as the financial sector (Rachdi & Saidi, 2014).

Put differently, democracy enables functional laws to be enacted that protect investments made in the financial sector. The study also argued that investors in the financial secotr are keen to investing in economies that are highly democratized due to the belief in the the rule of law and justice relative to non-

democratic economies. Thus, democracy contributes to the development of the financial market and as the financial market is developed funds are made available to the various sectors of the economy (Rachdi & Saidi, 2014) to become more functional. With funds released to the various sectors of the economy, productivity increases and national output consequently rise and this improves the growth of the economy. Thus, this study hypothesized that financial market development and economic growth are positively related but democracy moderates the relationship by strengthening the relationship.

Gaps in Literature

The gaps identified in literature which this study sought to fills are that; firstly, while the relationship between financial market development and economic growth is well documented, there is nevertheless scacity of literature in respect of the direction of the short run and the long run relationship between the two variables. Secondly, the relationship between political regimes (that is, democractic regimes and non-democratic regimes) and economic growth lacks empirical support in literature. Giving the importance of stable democracies for business and investment expansions, this study assessed the relationship between democracy and growth of Ghana's economy. Thirdly, there is no evidence in literature as to whether democracy help to explain the relationship between financial market development and economic growth. Owing to this dearth of literature, this study examined the moderating role of democracy on the relationship between financial market development and economic growth in Ghana.

Conceptual Framework

Figure 6 portrays the conceptual framework that explains the relationships among the variables financial market development, democracy and economic growth.

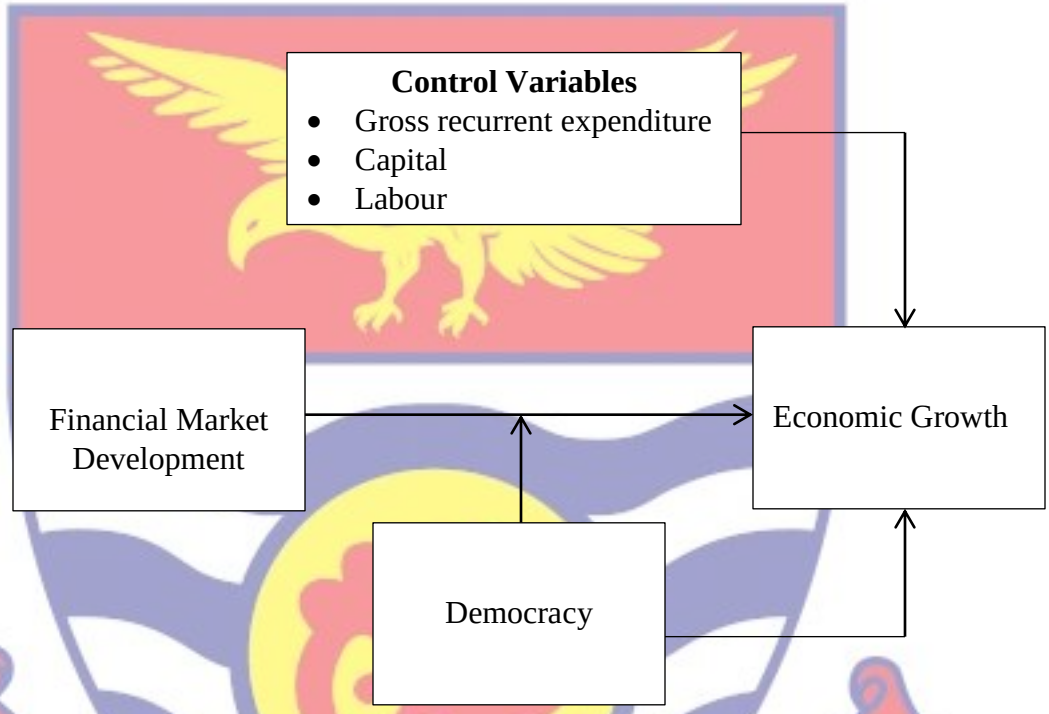

Figure 6: Conceptual Framework

Source: Author's Construct (2021)

The framework depicts the three objectives of the study. The kink between financial market development and economic growth depicts the first objective which sourght to look at the short and long run relationship between the variables. The link between democracy and economic growth depicts the second objective which sought to examine the relationship between democracy and economic growth. The link intervening financial market development and economic growth

depicts the moderating role of democracy in the relationship between financial market development and economic growth.

Chapter Summary

Chapter two of this study dealt with the review of literature in respect of the relationship between financial market development, economic growth and democracy as a meodrating variable. The theoretical basis for the study has been presented; the conceptual discussions on the thematic areas of the study have been presented as well; and the empirical review of the relationship among the key variables of the study were also highlighted.

CHAPTER THREE

RESEARCH METHODS

Introduction

Chapter three of this study presented the research methods employed in providing answers to the objectives of the study. Key issues discussed in this chapter include the research design, Source of data and measurement of variables, model specification, and unit root analysis.

Research Philosophy

The research philosophy which was used in this study is positivism. From the descriptions of Remenyi et al (1998), positivist research is any philosophical approach adopted with the aim of providing a reflection on existing social realities. In their view, the academic context of the research as well as its relationship with the social reality provides the basis upon which research works are to be undertaken. They went further to indicate that research works are to bring about meaning and explore deeper into reasons behind the occurrence of social phenomenon. This philosophy was adopted in the current study because financial market development, democracy and economic growth work as a nexus in the social context of finance. In other words, the behaviour of one affects the other and it is important to explore the extent of such quantitative behavior, hence the adoption of this research philosophy.

Research Design

The explanatory design was used to assess the relationship among financial sector development, democracy and economic growth. Research design apparently is the overall blueprint that the study follows is achieving the objectives. The explanatory design otherwise known as the causal research design provides explanation with respect to the extent to which one or more variables influence another variable (Zikmund, Babin, Carr, & Griffin, 2012). Explanatory design also focuses on offering explanation regarding the degree with which the behaviour of one or more variables can influence the dynamic of another independent variable.

There are some advantages related to the employment of explanatory design. Firstly, it plays important role in helping to ascertain how wide range of independent variables, processes, and antecedents functions to affect and thereby contributing to explaining the underlying behaviour observed in a situation, event or outcome. The choice of the explanatory design also stems from the fact that it enables the same research problem to be investigated as many times and at different times as possible since the context, scope, and variables used in explaining other events are measurable and ascertainable.

More so, the explanatory design is linked up with higher levels of internal validity due to possibility of the systematic selection of variables and subjects for the study (Zikmund, Babin, Carr, & Griffin, 2012). The main disadvantages associated with explanatory study are in respect of the fact that findings that are

obtained may not necessarily be as a result of causal relationship but could stem from other variables that randomly behave unless the study is controlled for.

It can therefore be said that if an experiment that employs explanatory design are not controlled for as appropriately as possible, then appropriate conclusions cannot be drawn. Despite these limitations with the explanatory study, it is considered as ideal for the objective of this study since it allowed for the control of random variables.

Research Approach

The research was quantitative in nature. From the perspective of Creswell (2007), quantitative research approach is any form of study approach that relies on statistical means of analysis and drawing conclusions. In other words, quantitative research adopt the use of numeric determinations in their findings and can be replicated given a specified set of analytical data. This approach was chosen because the study used secondary data in making the analysis.

Sources of Data and Measurement

The data used for this study was entirely secondary and spanned from 1960 to 2019 for variables including economic growth (EG) as dependent variable, financial market development (FMD) and democracy (DEMO) as independent variables, and government expenditure (GE) and gross fixed capital formation (GFCF) as control variables. Economic growth was measured using the real GDP growth rate, financial market development was measured by "financial

resources provided to the private sector by domestic money banks as a share of GDP.

Domestic money banks comprise commercial banks and other financial institutions that accept transferable deposits, such as demand deposits (Rachdi & Saidi, 2014). Democracy was measured using dummy variable where periods before multiparty democracy (that is before 1992) was desingited 0 and periods after multi-party democratics (after 1992) system of governance and elections was represented by 1.

With the control variables, capital was measured as the natural log of the ratio of gross physical capital formation to GDP, government recurrent expenditure was measured as the natural log of the ratio of final consumption recurrent expenditure of general government to GDP, and labour was measured as the natural log of labour force participation rate as a percentage of total population. The data on the variables was obtained from the World Development Indicators (2020).

Presentation and Analysis of Data

The data was presented using econometric views (E-views) and Microsoft excel. The objectives of the study were analysed using inferential statistics namely the autoregressive distributed lag (ARDL) model and the Oridnary least square regression (OLS). The use of dummy variable (0 and 1) for measuring democracy and the use of ARDL does not cause any problem since democracy is used only as explanatory variable (Isik, 2019). Objective 1 and 2 were analysed using the ADRL to ascertain the short and long run relationship between financial

market development and economic growth and democracy and economic growth respectively. The study used the OLS to assess the moderating effect on the relationship between financial market development and economic growth.

Model Specification

The general estimable model for objectives 1, 2 and 3 are represented as follows:

Objective 1:

$$\Delta EG_t = \beta_1 + \sum_{i=1}^{a} \beta_2 \Delta EG_{t-i} + \sum_{i=0}^{b} \beta_3 \Delta FMD_{t-i} + \sum_{i=0}^{c} \beta_4 \Delta GE_{t-i} + \sum_{i=0}^{d} \beta_5 \Delta GFCF_{t-i} + \emptyset_1 EG_{t-1} + \emptyset_2 FMD_{t-1} + \emptyset_3 GE_{t-1} + \emptyset_4 GFCF_{t-1} + \mu_t$$

The short run model is the: $\beta_1 + \sum_{i=1}^{a} \beta_2 \Delta EG_{t-i} + \sum_{i=0}^{b} \beta_3 \Delta FMD_{t-i} + \sum_{i=0}^{c} \beta_4 \Delta GE_{t-i} + \sum_{i=0}^{d} \beta_5 \Delta GFCF_{t-i}$

The long run model is the: $\emptyset_1 EG_{t-1} + \emptyset_2 FMD_{t-1} + \emptyset_3 GE_{t-1} + \emptyset_4 GFCF_{t-1}$

Objective 2:

$$\Delta EG_t = \beta_1 + \sum_{i=1}^{a} \beta_2 \Delta EG_{t-i} + \sum_{i=0}^{b} \beta_3 \Delta DEMO_{t-i} + \sum_{i=0}^{c} \beta_4 \Delta GE_{t-i} + \sum_{i=0}^{d} \beta_5 \Delta GFCF_{t-i} + \emptyset_1 EG_{t-1} + \emptyset_2 DEMO_{t-1} + \emptyset_3 GE_{t-1} + \emptyset_4 GFCF_{t-1} + \mu_t$$

The short run model is the: $\beta_1 + \sum_{i=1}^{a} \beta_2 \Delta EG_{t-i} + \sum_{i=0}^{b} \beta_3 \Delta DEMO_{t-i} + \sum_{i=0}^{c} \beta_4 \Delta GE_{t-i} + \sum_{i=0}^{d} \beta_5 \Delta GFCF_{t-i}$

Long run model is the: $\emptyset_1 EG_{t-1} + \emptyset_2 DEMO_{t-1} + \emptyset_3 GE_{t-1} + \emptyset_4 GFCF_{t-1}$

Objective 3:

$$EG_t = \beta_1 + \emptyset_1 FMD_t + \emptyset_2 DEMO_t + \emptyset_3 GE_t + \emptyset_4 GFCF_t + \emptyset_5 (FMD_t * DEMO_t) + \mu_t$$

Where EG = Economic Growth, FMD is financial market development, GE is government expenditure, GFCF is gross fixed capital formation, DEMO is democracy, t is time series, β_1 to β_6 and $\emptyset_1$to $\emptyset_5$ are coefficient of dependent and independent variables, $a \ to \ e$ represents the highest lag length for the variables, μ is error term.

Unit Root Analysis

The study provided the statistical framework for analysis to encourage application of rigorous statistical methods for the study. There are three types of data series: cross-section, times series and panel data. The first step in estimation of any time series data is to test whether the dataset in each variable is stationary. If the data are stationary at their levels they are said to be integrated at order 1 (Rachdi & Saidi, 2014). If levels are not stationary, first differencing makes the data series to be integrated of order (2). Three unit roots tests normally used in practice are: the Augmented Dickey Fuller, the Phillips-Perron test and the Kwiatkowski Test (Rachdi & Saidi, 2014). The ADF and PP tests address the issue that the process generating the data might have higher order of autocorrelation than admitted values d in the test equation (Rachdi & Saidi, 2014).

While the ADF addresses this question by introducing lags of $yt\text{-}_1$ as regressors in the test equation, the PP test makes a-parametric correction to t-test statistics (Rachdi & Saidi, 2014). KPSS is used for testing the hypothesis that an observable time series is stationary around a deterministic trend (Rachdi & Saidi, 2014). A Lagrange multiplier test is used to test the hypothesis that the random walk has zero variance (Rachdi & Saidi, 2014). One can perform all three tests

but one needs to report only significant results. The Augmented Dickey-Fuller test (ADF) was named after Dickey and Fuller (1981) which is parameterized as:

$$\Delta X_t = \alpha + \rho t + \varpi X_{t-1} + \sum_{i=1}^{k} \beta_i \Delta X_{t-1} + \varepsilon_t$$

Where α is the intercept, t is a time trend, ρ is the coefficient of the time trend, X variable of interest, Δ is the first difference operator and ε is a stationary error term. The unit root test is based on the significance of the coefficient of , which is the ϖ. A significant value of the coefficient (ϖ≠0) rejects the null hypothesis of variable X being stationary (no unit root) at appropriate lag length determined by the Akaike information criterion (AIC). The time series properties of the variables in this study was ascertained using the Augmented Dickey-Fuller (ADF) test for unit root for all the variables and report that most of the variables were stationary at first differences while few are level (see the Appendix). All estimations were carried out with an intercept.

Model Diagnostics

The study performed the stationarity test to ensure that at least all the variables are either stationary at level of after first differencing, and that none is stationary after second differencing. The study also checked for the model fit of the ARDL model by checking the size of the R^2 and the adjusted R^2 and the probability value of the F-statistic. The study also checked the status of serial correlation in the residual of the model by checking the size of the Durbin-Watson statistic. If the Durbin-Watson statistic is approximately 2 then the model has no serial correlation. Other diagnostics such as multicollinearity and dynamic

stability of the model were tested. The study used bounds testing and Wald test to confirm the presence of long run association between financial market development and economic growth.

Chapter Summary

Chapter three of this study presented the research methods employed in providing answers to the objectives of the study. Key issues discussed in this chapter include the research design, source of data and measurement of variables, model specification, and unit root analysis.

CHAPTER FOUR

RESULTS AND DISCUSSIONS

Introduction

Chapter four of this study dealt with the analysis, presentation and discussion of results obtained on the relationships between financial market development and democracy on economic growth in Ghana. All the analysis done in this study including all hypothesis were tested as 5% probability level. The study presented both the descriptive and inferential statistics results and other complementary results were shown in the appendix of this study.

Descriptive Statistics

The mean, standard deviation, skewness, minimum and maximum values of the macroeconomic variables were presented in Table 1.

Table 1: Summary of Descriptives

Variable	Mean	Std. Deviation	Skewness	Min	Max
EG	3.70%	0.56	-1.20	-12.4	14.0
FMD	26.40%	0.87	-0.29	9.96	39.29
GE	11.86%	0.38	1.03	5.86	20.88
GFCF	17.38%	0.98	-0.14	3.38	31.78
LAB	37.11%	4.68	-0.06	15.34	74.92
DEMO	0.467	0.50	0.133	0.00	1.00

Source: Field Survey (2021)

The descriptive statistics as shown in Table 1 reflects the mean, standard deviation, skewnness, minimum and maximum values for the various variables

used in the study. From the result it was found that the mean value for economic growth was 3.70% over the sample period; the mean for financial market development was 26.40%; that of gross expenditure was 11.86%; the mean value for gross fixed capital formation was 17.38%; and the mean for labour was 37.11%. The standard deviation for the variables were found to be 0.56 for economic growth, 0.87 for financial market development, 0.38 for gross expenditure, 0.98 for gross fixed capital formation and 0.46 for labour. The standard deviation values for the variables were general of small values implying that the mean values for the variables were reliable. Thus, the mean values were close to the actual values in the data.

Furthermore, the coefficient of skewness for the variables was found to be -1.20 for economic growth, -0.29 for financial market development, 1.03 for gross expenditure, -0.14 for gross fixed capital formation, and -0.06 for labour. Over the sample period, the study found the minimum and miximum values for economic growth to be -12.4% and 14%; that of financial market development was 9.96% and 39.29%; gross expenditure was 5,86% and 20.88%; gross fixed capital formation was 3.38% and 31.78%; while the minimum and maximum values for labour were 15.34% and 74.92% respectively. Democracy had a mean of 0.467 with standard deviation of 0.50 and skewness of 0.133, minimum value of 0 and maximum value of 1. The mean value of 0.467 can be approximated to 0.5 which is less than 1. This implies that the mean democracy period relates to periods prior to the adoption of the 1992 Constitution of Ghana.

Pre-test Results

The study provided the results for the unit root test and the granger causality test as pre-test results to enhance the robustness of the results of the study.

Unit Root Test

The study conducted unit root test to ascertain the stationarity properties of the variables using the Augmented Dickey Fuller Test and the akaike information criterion. This test was conducted under the null hypothesis that the variables have unit root (non-stationary) against the alternative hypothesis that the variables have no unit root (stationary). To avoid the problem of autocorrelation, all the variables were logged. For simplicity sake, the log operators were not indicated against the variables. The results were tested at 5% proberbaility level and the result was shown in Table 2.

Table 2: Unit Root Analysis

Variable	ADF – I(0) T-Stat [Prob]	ADF – I(1) T-Stat [Prob]	Decision
EG	-1.400701 [0.5751]	-6.117833 [0.0000]	I(1)
FMD	-3.051818 [0.0359]	-6.949319 [0.0000]	I(0)
GE	-2.262873 [0.1875]	-6.446795 [0.0000]	I(1)
GFCF	-1.621872 [0.4652]	-7.444408 [0.0000]	I(1)
LAB	-1.761168 [0.3913]	-7.628192 [0.0000]	I(1)
DEMO	-0.917302 [0.7760]	-7.615773 [0.0000]	I(1)

Source: Field Survey (2021)

Based on the result in Table 2, EG is economic growth, FMD is financial market development, GE is gross expenditure, GFCF is gross fixed capital formation, and LAB is labour. Furtheremore, the result indicated that financial market development was stationary at level while all other variables were stationary after the first differencing. Thus, economic growth produced t-statistics = -6.117833, p-value = 0.0000, ≈ I(1); financial market development had t-statistics = -3.051818, p-value = 0.0359, ≈ I(0); gross expenditure had t-statistics = -6.446795, p-value = 0.0000, with decision of I(1); gross fixed capital formation had t-statistics = -7.444408, p-value = 0.0000, with decision of I(1); and labour produced t-statistics = -7.628192, p-value = 0.0000 and a decision of I(1). In effect, all the variables were a combination of I(0) and I(1) hence they could be modeled together in a single ARDL co-integration equation.

Granger Causality Test

To ascertain before hand the evidence of causality between the main variables (economic growth, financial market development, democracy) of the study, the study principally performed VAR granger causality test using the block exogeneity wald test on economic growth and financial market development and the results were indicated by Table 3. The null hypothesis for the granger causality test states that the independent variables (financial market development, dempcracy, gross expenditure, gross fixed capital formation, and labour) do not granger cause the dependent variable.

Table 3: VAR Granger Causality Test

Dependent Variable: EG			Dependent Variable: FMD		
Variables	Chi-sq	Probability	Variables	Chi-sq	Probability
Democracy	29.596627	0.0000	EG	15.08367	0.0017
FMD	11.24277	0.0240	LAB	7.176398	0.0665
GE	3.949892	0.4128	GE	1.793545	0.6163
GFCF	21.24375	0.0003	GFCF	7.385836	0.0606
LAB	9.682704	0.0461	Democracy	1460.365	0.0000

Source: Field Survey (2021)

From Table 3, there was the evidence that democracy, financial market development (FMD), gross fixed capital formation (GFCF) and labour (LAB) granger cause economic growth but gross expenditure (GE) does not granger cause economic growth. On the other hand, the study also found evidence that economic growth and democracy granger cause financial market development. This in effect means that there was a bi-causality between financial market development and economic growth. Suffice to say, granger causality also exist between democracy and economic growth, hence the study had prior basis for establishing the short and long run relationship between the variables.

Relationship between Financial Market Development and Economic Growth

The first objective of the study sought to ascertain the short and long run relationship between financial market development and economic growth in Ghana. The study therefore employed the autoregressive distributed lag model to test this objective. As a precursor, the study used the lag selection graph (see Figure 7) to determine the optimal lag length for the ADRL equation.

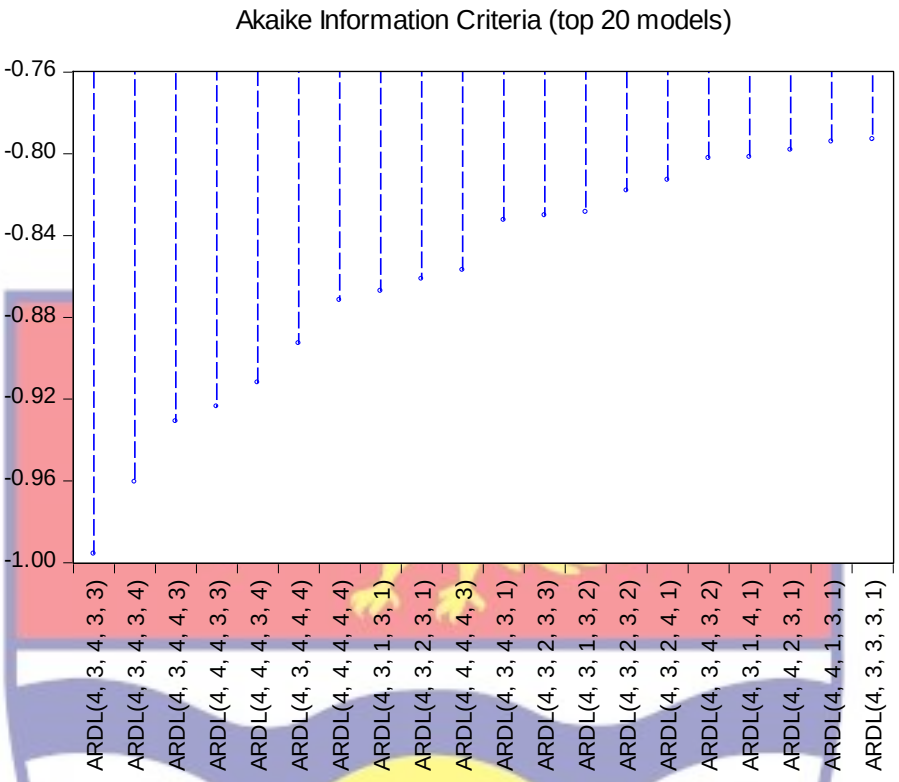

Figure 7: ARDL Lag Selection Graph

Source: Field Survey (2021)

The result in Figure 7 revealed the optimal ARDL model to be ARDL(4, 3, 4, 3, 3). This ARDL model was chosen because it represented the model with the least information criterion (that, akaike information criterion). Thus, the model revealed that economic growth is influenced by the previous four lags of economic, the first three lags of financial market development, the first four lags of gross fixed capital formation, the first three lags of gross expenditure, and the first three lags of labour. The optimal ARDL(4, 3, 4, 3, 3) model for economic growth and financial market development was produced in the Appendix of this study (see exhibit A).

Furthermore, the study performed the Bounds Test to ascertain whether there is evidence of long run co-integration between financial market

development and economic growth under the null hypothesis of no long run relationship against the alternative hypothesis of existing long run relationship. The result for the bounds test was shown in Table 4.

Table 4: Bounds Test

Test-statistic	Value	K
F-statistic	10.40147	4
Critical Value Bound:		
Significance	Lower Bounds	Upper Bound
10%	2.2	3.09
5%	2.56	3.49
2.5%	2.88	3.87
1%	3.29	4.37

Source: Field Survey (2021)

Based on the result in Table 4, the f-statistic value of 10.40147 was found to be more than the lower and upper bounds values for all the levels of significance. This therefore was a confirmation of long run relationship between financial market development and economic. Thus, the null hypothesis of no long run con-integration was rejected in favour of the alternative hypothesis.

Short Run Relationship between Financial Market Development and Economic Growth in Ghana

The result for the short run model depicting the relationship between financial market development (FMD) and economic growth (EG) was shown in Table 5. The ECT as shown in Table 5 represents the error correction term which depicts the speed of adjustment towards long run equilibrium.

Table 5: Short Run Model between FMD and EG

Dependent Variable: EG				
Variable	Coefficient	Std. Error	T-statistic	Probability
FMD	-0.235933	0.301906	-0.781478	0.4432
GE	0.567462	0.23584	2.406121	0.0254
GFCF	-0.611381	0.550284	-1.111029	0.2791
LAB	6.328371	1.927471	3.283250	0.0035
ECT(-1)	-24.09139	7.370138	-3.268784	0.0037
C	-1.384000	0.889522	-1.555893	0.1347
R-squared	0.507153	Adj. R-sqaure		0.389808
F-statistic	4.321908	Prob. (F-stat.)		0.007346
DW	1.691532			

Source: Field Survey (2021)

The result in Table 5 revealed that financial market development (FMD) does not influence economic growth (EG) in the short run and same applies to gross fixed capital formation (GFCF). This was because the probability values of FMD and GFCF were more than 5% probability level which represent indication of insignificant effect. Gross expenditure (GE) and labour (LAB) on the other hand were found to significantly influence economic growth in the short run.

Gross expenditure produced coefficient = 0.567462, standard error = 0.23584, t-statistic = 2.406121 and p-value = 0.0254. This means that a unit change in gross expenditure will increase economic growth by 0.567462 units in the short run. On the other hand, the coefficient of labour = 6.328371, standard error = 1.927471, t-statistic = 3.283250, and p-value = 0.0035. This also represents that a unit increase in labour will increase economic growth by 6.328371 units in the short run.

Regarding the error correction term (speed of adjustment) the study found it to be negative and significant with coefficient = -24.09139, standard error = 7.370138, t-statistic = -3.268784, and p-value = 0.0037. This means that the market returns to long run equilibrium after there has been short term deviation. Based on the coefficient size, the implication is that -24.09139% of the short run deviation is corrected per year; thus, it takes 4.2 years (that is, 100/-24.09139) for the market to be return to long run growth path.

Regarding the post result diagnostics, the short run model produced an R-square of 50.7153% and adjusted R-sqaure of 38.9808% representing that the independent variables jointly explain economic growth up the 50.7153% in the case of the R-square and 38.9808% in the case of adjustment in the independent variables. These values represent high goodness of fit as it is confirmed by the F-statistic value of 4.321908 with probability of 0.007346.

The value of the Durbin Watson statistic of 1.691532 (see Table 5) also indicates that there is no serial correlation in the regression model. The Breusch-Godfrey serial correlation langrangean multiplier (LM) test shown in Table 6. The probability values of both the chi-sqaure and the f-statistics were more than 5%, thus the study failed to reject the claim of no serial correlation in the short run model produced in Table 5.

Table 6: Breusch-Godfrey Serial Correlation LM Test

F-statistic	0.260696	Prob. F(2,19)	0.7732
Obs*R-squared	0.721137	Prob. Chi-Square(2)	0.6973

Source: Field Survey (2021)

Furthermore, the study tested for the presence of heteroscedasticity in the short run model using the Breusch-Pagan-Godfrey test as produced in Table 7. The result showed that there was no heteroscedasticity in the short run model as it is evidenced by the probability values of the F-statistic and chi-square values which were all more than 5%.

Table 7: Heteroscedasticity Test: Breusch-Pagan-Godfrey

F-statistic	1.801526	Prob. F(5,21)	0.1562
Obs*R-squared	8.104806	Prob. Chi-Square(5)	0.1506
Scaled explained SS	7.427297	Prob. Chi-Square(5)	0.1908

Source: Field Survey (2021)

The study also tested for the stability of the short run model using the CUSM test as shown by Figure 8. The result showed evidence of model stability over time since the blue line fell within the two diagonal dotted bound. The implication of this result is that the short run model can be relied on as being stable over time.

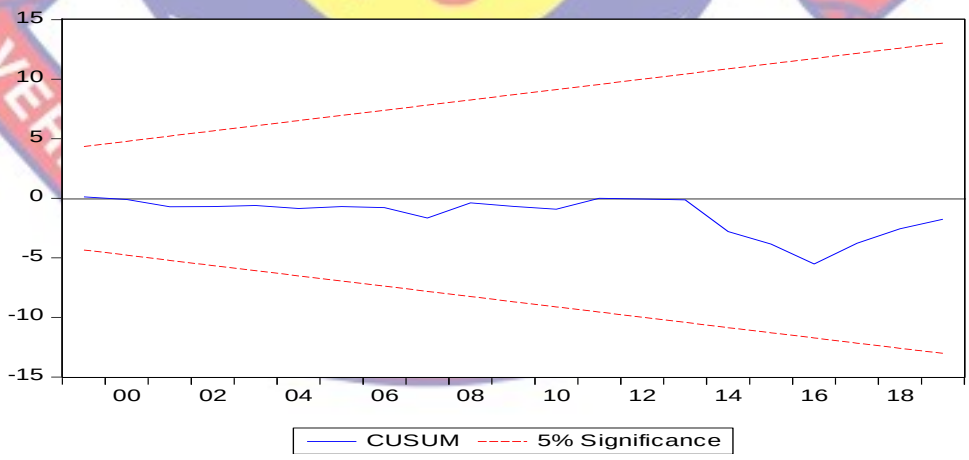

Figure 8: CUSUM Test

Source: Koranteng (2021)

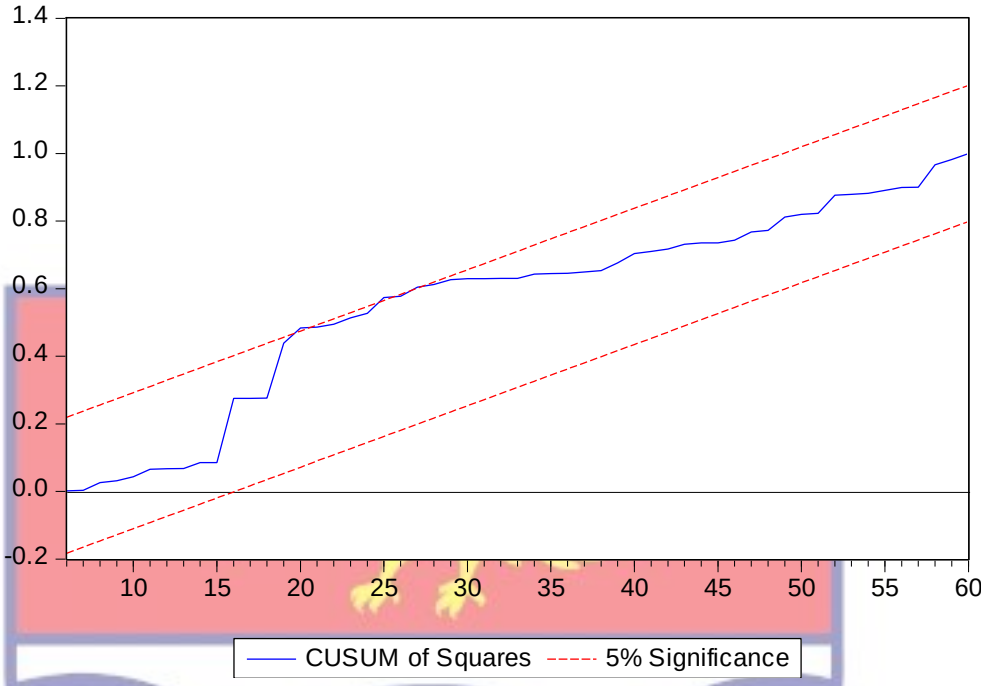

Figure 9: CUSUM of Squares Test

Source: Field Survey (2021)

The test of multicollinearity was also tested regarding the short run model and the result was indicated by Table 8. The specific test perfoemed for multicollinearity was the variance inflation factor (VIF) which as a precursor measures the level at which one variable multi-correlates with other variables in the same model. A VIF of more less than 5 signifies no multicollinearity while a VIF of at least 5 represents the presence of multicollinearity in the model.

Table 8: Multicollinearity Test

Independent Variable	Variance Inflation Factor
FMD	1.489290
GE	1.232292
GFCF	1.763331
LAB	1.630165
ECT(-1)	1.279470

Source: Field Survey (2021)

Based on the result produced in Table 8, the study concluded there no multicollinearity exist in the independent variables in the short run model. Thus, all the diagnostics performed on the short run model indicated that the short run model was well estimated.

Long Run Relationship between Financial Market Development and Economic Growth in Ghana

The result for the long run relationship between financial market development and economic growth as ascertained using the ordinary least square linear regression model. The result of the long run model was produced on Table 9.

Table 9: Long Run Model for FMD and EG

Dependent Variable: EG

Variable	Coefficient	Std. Error	T-Statistic	Probability
FMD	22.25027	7.177360	3.100063	0.0046
GE	0.512931	0.214303	2.393490	0.0242
GFCF	-0.153542	0.319340	-0.480810	0.6347
LAB	5.584159	1.863810	2.996099	0.0059
C	0.228953	0.289793	0.790060	0.4366
R-Square	0.442953		Adj. R-square	0.357253
F-statistic	5.168675		Prob(F-statistic)	0.003361
DW	1.919050			

Source: Field Survey (2021)

From the result in Table 9, financial market development (FMD), gross expenditure (GE), and labour (LAB) positively influence economic growth (EG) in the long run. Gross fixed capital formation does not cause significant influence on economic growth. Financial market development had coefficient = 22.25027, standard error = 7.177360, t-statistic = 3.100063 and p-value = 0.0046 with the implication that financial market development affects the growth of the economy by 22.25027 units. Gross expenditure had coefficient = 0.512931, standard error = 0.214303, t-statistic = 2.393490, and probability value = 0.0242. This indicates that a unit increase in gross expenditure increases the growth of the Ghanain economy by 0.512931 units. Labour also influence economic growth positively with coefficient = 5.584159, standard error = 1.863810, t-statistic = 2.996099, and probability value = 0.0059. Thus, a unit increase in labour employment will increase the growth of the economy by 5.584159 units.

In respect of the post result diagnostics, the long run model produced an R-square of 44.2953% and adjusted R-sqaure of 35.7253% representing that the independent variables jointly explained economic growth up the 44.2953% in the case of the R-square and 35.7253% in the case of adjustment in the independent variables. These values represent high goodness of fit as it was confirmed by the F-statistic value of 5.168675 with probability of 0.003361. The value of the Durbin Watson statistic of 1.91905 (see Table 9) also indicated that there was no serial correlation in the regression model. The Breusch-Godfrey serial correlation langrangean multiplier (LM) test shown in Table 10. The probability values of both the chi-sqaure and the F-statistics were more than 5%, thus, the study failed

to reject the claim of no serial correlation in the long run model produced in Table 9.

Table 10: Breusch-Godfrey Serial Correlation LM Test

F-statistic	0.141690	Prob. F(2,24)	0.8686
Obs*R-squared	0.361760	Prob. Chi-Square(2)	0.8345

Source: Field Survey (2021)

Furthermore, the study tested for the presence of heteroscedasticity in the long run model using the Breusch-Pagan-Godfrey test as produced in Table 11. The result showed that there was no heteroscedasticity in the long run model as it is evidenced by the probability values of the F-statistic and chi-square values which were all more than 5%.

Table 11: Heteroscedasticity Test: Breusch-Pagan-Godfrey

F-statistic	2.431495	Prob. F(4,26)	0.0729
Obs*R-squared	8.439387	Prob. Chi-Square(4)	0.0767
Scaled explained SS	7.042954	Prob. Chi-Square(4)	0.1336

Source: Field Survey (2021)

Furthermore, the study tested for the stability of the long run model using the CUSM test as shown by Figure 10. The result showed evidence of model stability over time since the blue line fell within the two diagonal dotted bound. The implication of this result is that the long run model can be relied on as being stable over time.

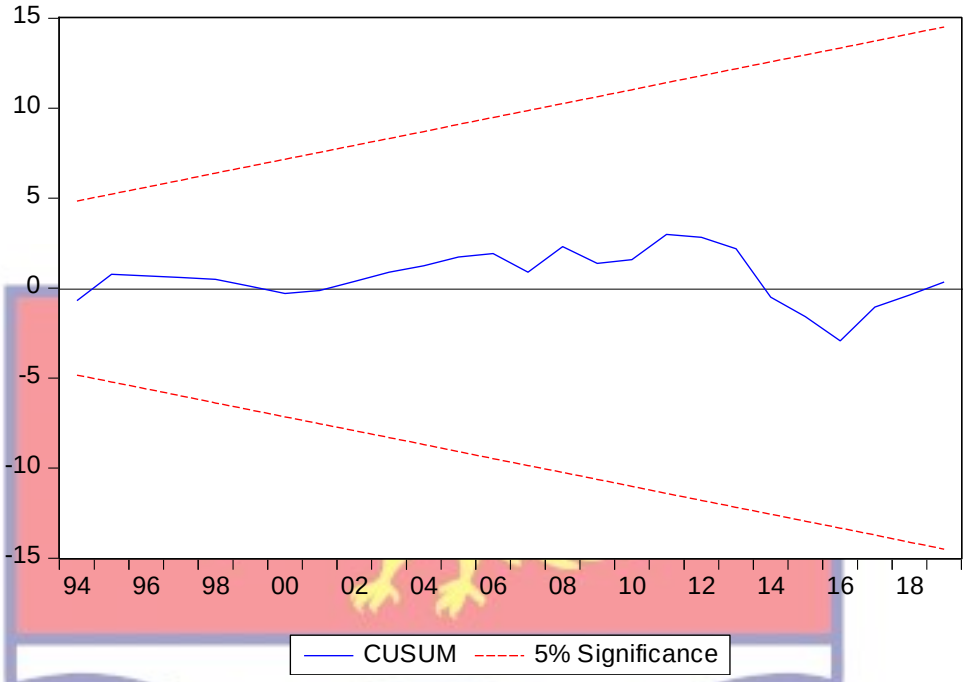

Figure 10: CUSUM Test

Source: Koranteng (2021)

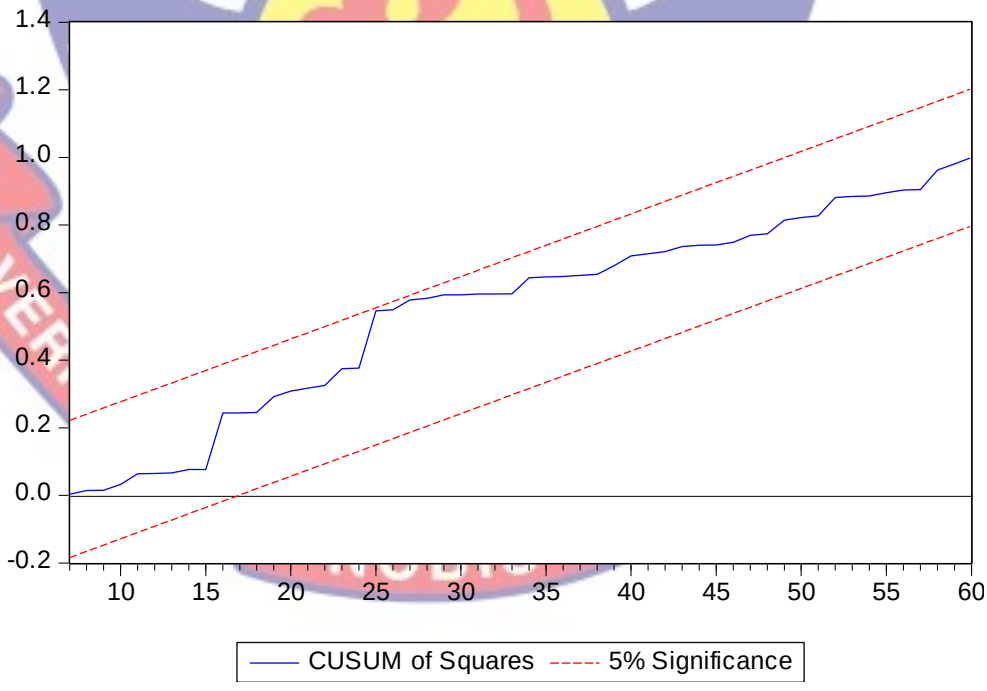

Figure 11: Cusum of Squares Test

Source: Field Survey (2021)

The test of multicollinearity was also tested regarding the long run model and the result was indicated by Table 12. The specific test perfoemed for multicollinearity was the variance inflation factor (VIF) which as a precursor measures the level at which one variable multi-correlates with other variables in the same model. A VIF of more less than 5 signifies no multicollinearity while a VIF of at least 5 represents the presence of multicollinearity in the model.

Table 12: Multicollinearity Test

Independent Variable	Variance Inflation Factor
FMD	2.130197
GE	1.110591
GFCF	2.015293
LAB	2.200480

Source: Field Survey (2021)

Based on the result produced in Table 12, the study concluded there no multicollinearity exist in the independent variables in the long run model. Thus, all the diagnostics performed on the long run model indicated that the long run model was well estimated.

Relationship between Democracy and Economic Growth in Ghana

The second objective of the study sought to ascertain the short and long run relationship between democracy and economic growth in Ghana. The study employed the autoregressive distributed lag model and the bounds test to test this objective. The lag selection graph (see Figure 12) was produced to provide pictorial view of the optimal lag length for the ADRL model.

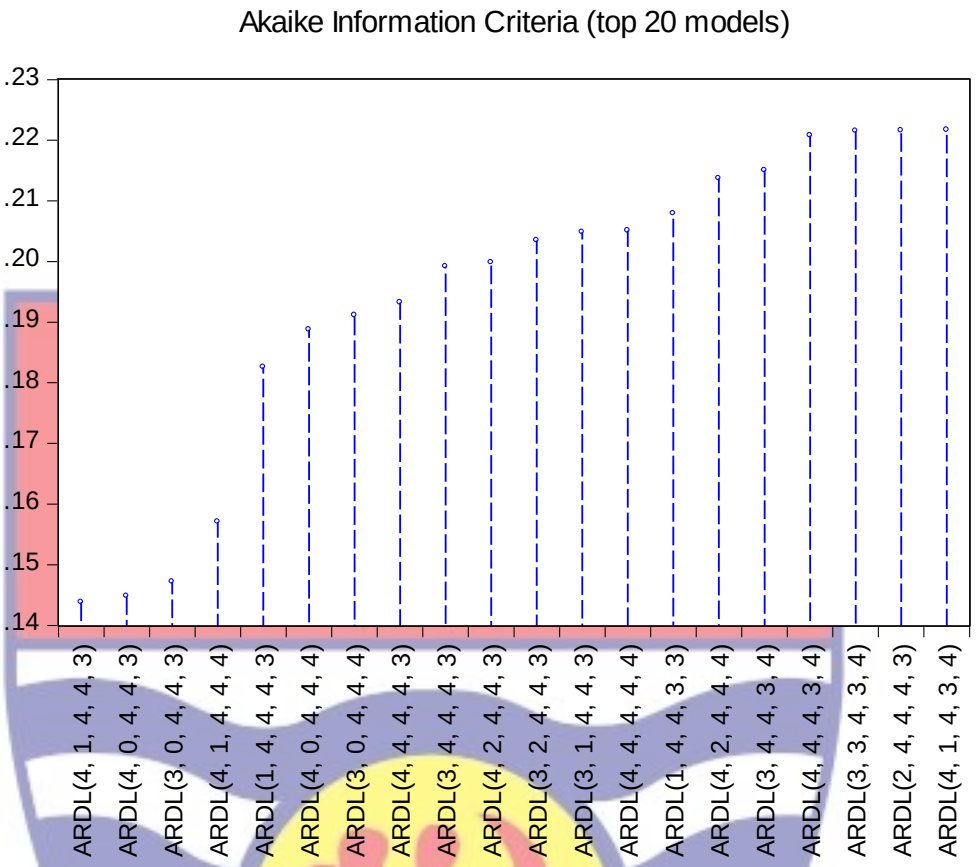

Figure 12: ARDL Lag Selection Graph

Source: Field Survey (2021)

The result in Figure 12 revealed the optimal ARDL model to be ARDL(4, 1, 4, 4, 3). This ARDL model was chosen because it represented the model with the least information criterion (that, akaike information criterion) of 0.14. Thus, the model revealed that economic growth is influenced by the previous four lags of economic, the first lag of gross expenditure, the first four lags of gross fixed capital formation, the first four lags of labour, and the first three lags of democracy. The optimal ADRL(4, 1, 4, 4, 3) model for economic growth and democracy was produced in the Appendix of this study (see exhibit B).

Furthermore, the study performed the Bounds Test (BT) to ascertain whether there is evidence of long run co-integration between democracy and economic growth under the null hypothesis of no long run relationship against the alternative hypothesis of significant long run relationship. The result for the bounds test was shown in Table 13.

Table 13: ARDL Bounds Test

Test-statistic	Value	K
F-statistic	5.049301	4
Critical Value Bound:		
Significance	Lower Bounds	Upper Bound
10%	2.2	3.09
5%	2.56	3.49
2.5%	2.88	3.87
1%	3.29	4.37

Source: Field Survey (2021)

Based on the result in Table 13, the F-statistic value of 5.049301 was found to be more than the lower and upper bounds values for all the levels of significance (10%, 5%, 2.5%, and 1%). This therefore was a confirmation of long run relationship between democracy and economic growth. Thus, the null hypothesis of no long run co-integration was rejected in favour of the alternative hypothesis.

Short Run Relationship between Democracy and Economic Growth in Ghana

The result for the short run model depicting the relationship between democracy and economic growth (EG) was shown in Table 14. The ECT as

shown in Table 14 represents the error correction term which depicts the speed of adjustment towards long run equilibrium.

Table 14: Short Run Model between Democracy and EG

Dependent Variable: EG

Variable	Coefficient	Std. Error	T-statistic	Probability
DEMO	0.669620	0.247115	2.709747	0.0131
GE	0.243989	0.213489	1.142866	0.2660
GFCF	0.053006	0.339267	0.156236	0.8773
LAB	3.987699	1.762527	2.262489	0.0344
ECT(-1)	-17.01614	6.960785	-2.444572	0.0234
C	0.062266	0.753908	0.082592	0.9350
R-squared	0.534982	Adj. R-sqaure		0.424263
F-statistic	4.831901	Prob. (F-stat.)		0.004268
DW	1.815247			

Source: Field Survey (2021)

The result in Table 14 revealed that democracy (DEMO) influences economic growth (EG) in the short run and same applies to labour (LAB). This was because the probability values of democracy andlabour were more than 5% probability level which represent indication of significance effect. Gross expenditure (GE) and gross fixed capital formation on the other hand were found to have insignificant influence on economic growth in the short run. Democracy produced coefficient = 0.669620, standard error = 0.247115, t-statistic = 2.709747 and p-value = 0.0131. This means that as democracy is strengthened economic growth respond and increases by 0.669620 units in the short run. With the control variables, the coefficient of labour = 3.987699, standard error = 1.762527, t-statistic = 2.262489, and p-value = 0.0344. This also represents that a unit

increase in labour employment will increase economic growth by 3.987699 units in the short run.

Regarding the error correction term (speed of adjustment) the study found it to be negative and significant with coefficient = -17.01614, standard error = 6.960785, t-statistic = -2.444572, and p-value = 0.0234. This means that the market returns to long run equilibrium after there has been short term deviation. Based on the coefficient size, the implication is that 17.01614% of the short run deviation is corrected per year; thus, it takes 5.9 years (that is, 100/17.01614) for the market to be return to long run growth path.

Regarding the post result diagnostics, the short run model produced an R-square of 53.4982% and adjusted R-sqaure of 42.4263% representing that the independent variables jointly explain economic growth up the 53.4982% in the case of the R-square and 42.4263% in the case of adjustment in the independent variables. These values represent acceptable goodness of fit as it is confirmed by the F-statistic value of 4.831901 with probability of 0.004268. The value of the Durbin Watson statistic of 1.815247 (see Table 14) also indicates that there is no serial correlation in the regression model. The Breusch-Godfrey serial correlation langrangean multiplier (LM) test shown in Table 15. The probability values of both the chi-sqaure and the F-statistics were more than 5%, thus the study failed to reject the claim of no serial correlation in the short run model produced in Table 14.

Table 15: Breusch-Godfrey Serial Correlation LM Test

F-statistic	0.070472	Prob. F(2,19)	0.9322
Obs*R-squared	0.198814	Prob. Chi-Square(2)	0.9054

Source: Field Survey (2021)

Furthermore, the study tested for the presence of heteroscedasticity in the short run model using the Breusch-Pagan-Godfrey test as produced in Table 16. The result showed that there was no heteroscedasticity in the short run model as it is evidenced by the probability values of the F-statistic and chi-square values which were all more than 5%.

Table 16: Heteroscedasticity Test – Breusch-Pagan-Godfrey

F-statistic	1.543585	Prob. F(5,21)	0.2193
Obs*R-squared	7.256233	Prob. Chi-Square(5)	0.2023
Scaled explained SS	9.606505	Prob. Chi-Square(5)	0.0872

Source: Field Survey (2021)

The study also tested for the stability of the short run model using the CUSUM test as shown by Figure 13. The result showed evidence of model stability over time since the blue line fell within the two diagonal dotted bound. The implication of this result is that the short run model can be relied on as being stable over time.

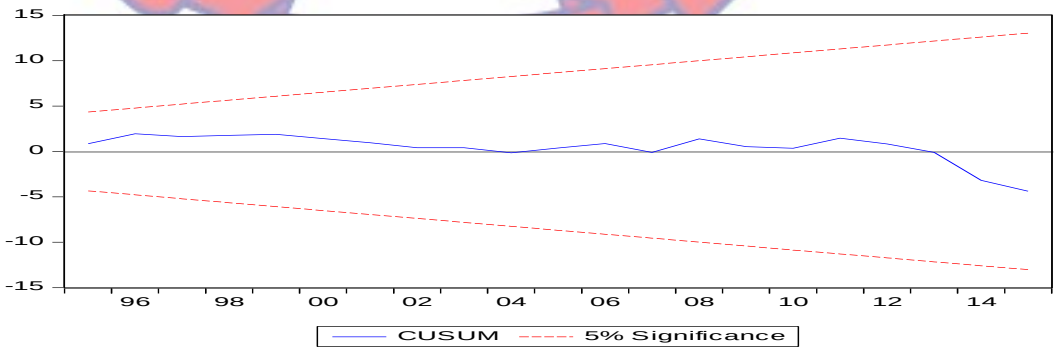

Figure 13: CUSUM Test

Source: Field Survey (2021)

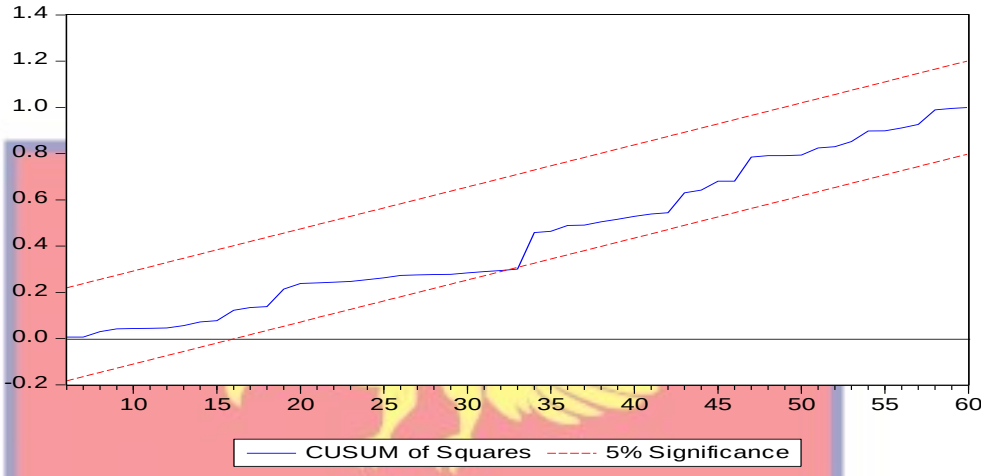

Figure 13: CUSUM Test

Source: Field Survey (2021)

The test of multicollinearity was also tested regarding the short run model and the result was indicated by Table 17. The specific test perfoemed for multicollinearity was the variance inflation factor (VIF) which measured the level at which one variable multi-correlates with other variables in the same model. A VIF of more less than 5 signifies no multicollinearity while a VIF of at least 5 represents the presence of multicollinearity in the model.

Table 17: Multicollinearity Test

Independent Variable	Variance Inflation Factor
DEMO	1.805658
GE	1.336134
GFCF	2.380605
LAB	1.805177
ECT(-1)	1.017852

Source: Field Survey (2021)

Based on the result produced in Table 17, the study concluded there no multicollinearity exist in the independent variables in the short run model. Thus, all the diagnostics performed on the short run model indicated that the short run model was valid and reliable.

Long Run Relationship between Democracy and Economic Growth in Ghana

The result for the long run relationship between democracy and economic growth was ascertained using the ordinary least square linear regression model. The result of the long run model was produced on Table 18.

Table 18: Long Run Model for Democracy and EG

Dependent Variable: EG

Variable	Coefficient	Std. Error	T-Statistic	Probability
DEMO	20.69844	6.500815	3.183976	0.0037
GE	0.530778	0.212684	2.495620	0.0192
GFCF	0.076287	0.348402	0.218963	0.8284
LAB	5.019895	1.634965	3.070338	0.0050
C	0.201711	0.221277	0.911577	0.3704
R-Square	0.447246		Adj. R-square	0.362207
F-statistic	5.259300		Prob(F-statistic)	0.003064
DW	1.837830			

Source: Field Survey (2021)

From the result in Table 18, democracy, gross expenditure (GE), and labour (LAB) positively influence economic growth (EG) in the long run. Gross fixed capital formation does not cause significant influence on economic growth.

Democracy had coefficient = 20.69844, standard error = 6.500815, t-statistic = 3.183976 and p-value = 0.0037 with the implication that democracy increases the growth of the economy by 22.25027 units in the long run. Gross expenditure had coefficient = 0.530778, standard error = 0.212684, t-statistic = 2.495620, and probability value = 0.0192. This indicates that a unit increase in gross expenditure increases the growth of the Ghanain economy by 0.530778 units. Labour also influence economic growth positively with coefficient = 5.019895, standard error = 1.634965, t-statistic = 3.070338, and probability value = 0.0050. Thus, a unit increase in labour employment will increase the growth of the economy by 5.019895 units.

In respect of the post result diagnostics, the long run model produced an R-square of 44.7246% and adjusted R-sqaure of 36.2207% representing that the independent variables jointly explained economic growth up the 44.7246% in the case of the R-square and 36.2207% in the case of adjustment in the independent variables. These values represent high goodness of fit as it was confirmed by the F-statistic value of 5.259300 with probability of 0.003064. The value of the Durbin Watson statistic of 1.83783 (see Table 18) is closer to 2; and it is an indication that there was no serial correlation in the long run regression model. The Breusch-Godfrey serial correlation langrangean multiplier (LM) test shown in Table 19. The probability values of both the chi-sqaure and the F-statistics were more than 5%, thus, the study failed to reject the claim of no serial correlation in the long run model.

Table 19: Breusch-Godfrey Serial Correlation LM Test

F-statistic	0.197928	Prob. F(2,24)	0.8218
Obs*R-squared	0.503017	Prob. Chi-Square(2)	0.7776

Source: Field Survey (2021)

Furthermore, the study tested for the presence of heteroscedasticity in the long run model using the Breusch-Pagan-Godfrey test as produced in Table 20. The result showed that there was no heteroscedasticity in the long run model as it is evidenced by the probability values of the F-statistic and chi-square values which were all more than 5%.

Table 20: Heteroscedasticity Test: Breusch-Pagan-Godfrey

F-statistic	2.468121	Prob. F(4,26)	0.0697
Obs*R-squared	8.531525	Prob. Chi-Square(4)	0.0739
Scaled explained SS	8.524501	Prob. Chi-Square(4)	0.0741

Source: Field Survey (2021)

Furthermore, the study tested for the stability of the long run model using the CUSUM test as shown by Figure 14. The result showed evidence of model stability over time since the blue line fell within the two diagonal dotted bound. The implication of this result is that the long run model can be relied on as being stable over time.

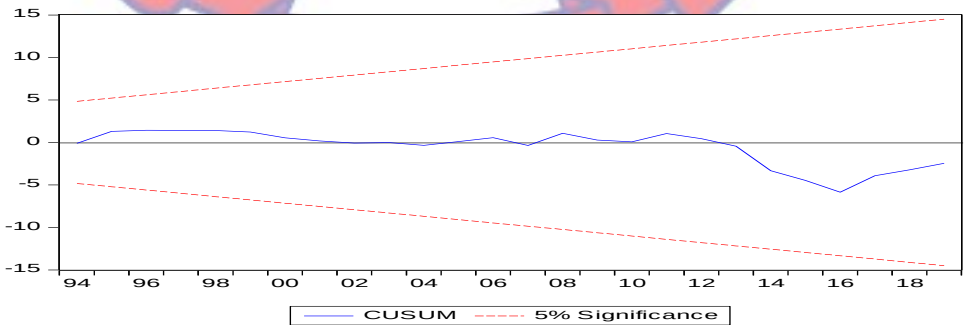

Figure 14: CUSUM Test

Source: Field Survey (2021)

The test of multicollinearity was also tested regarding the long run model and the result was indicated by Table 21. The specific test perfoemed for multicollinearity was the variance inflation factor (VIF) which as a precursor measures the level at which one variable multi-correlates with other variables in the same model. A VIF of more less than 5 signifies no multicollinearity while a VIF of at least 5 represents the presence of multicollinearity in the model.

Table 21: Multicollinearity Test

Independent Variable	Variance Inflation Factor
DEMO	1.784616
GE	1.102370
GFCF	2.417425
LAB	1.706440

Source: Field Survey (2021)

Based on the result produced in Table 21, the study concluded that no multicollinearity exist in the independent variables in the long run model. Thus, all the diagnostics performed on the long run model indicated that the long run model was well estimated.

Moderating Effect of Democracy on Financial Market Development and Economic Growth Relationship

The third objective of this study examined whether or not democracy moderates the relationship between financial market development and economic growth in Ghana. From the findings already presented, it had been revealed that financial market development influence economic growth only in the long run but

democracy influence economic growth in both the short and the long run. These findings were however obtained from separate models. The third objective therefore puts democracy and financial market development into a single model by examining whether democracy strengthens the financial market development and economic growth relationship. The basic model for the financial market development, democracy and economic growth was shown in Table 22.

The result produced in Table 22 revealed that both financial market development and democracy influence economic growth positively. The effect size of financial market development on economic growth was 0.701544 and that of democracy was 22.53893. With resgards to the control variables, labour and gross expenditure also influenced economic growth with labour having the effect size of 5.559926 and gross expenditure having the effect size of 0.518614.

Table 22: Financial Market Development, Democracy and Economic Growth Model

Dependent Variable: EG

Variable	Coefficient	Standard Error	T-statistics	Probability
FMD	0.701544	0.312560	2.244513	0.0428
DEMO	22.53893	7.248474	3.109473	0.0046
LAB	5.559926	1.879906	2.957555	0.0067
GE	0.518614	0.216254	2.398170	0.0243
GFCF	-0.032766	0.359959	-0.091028	0.9282
C	1.090529	0.342657	3.182564	0.0072
R-square	0.855247		Adjusted R-square	0.746296
F-statistic	4.178470		Prob (F-statistic)	0.006757
DW	1.890513			

Source: Field Survey (2021)

The Durbin-Watson (DW) statistic of 1.890513 (close to 2) further indicated that there is no serial correlation in the residual of the model. Furthermore R-square of 0.855247 was an indication of a good fit in the model as it was confirmed the the probability value of the F-statistics of 0.006757 which is less than 5%. In order to examine the moderating effect, the study interacted financial market development (FMD) and democracy (DEMO) and the result was produced in Table 23.

Table 23: Moderating Effect of Democracy on the Relationship between Financial Market Development and Economic Growth

Dependent Variable: EG

Variable	Coefficient	Standard Error	T-statistics	Probability
FMD	0.942622	0.360443	2.615178	0.0214
DEMO	25.35911	7.705388	3.291088	0.0031
FMD*DEMO	0.893542	0.304557	2.933909	0.0262
LAB	5.226945	1.901495	2.748861	0.0112
GE	0.511264	0.215839	2.368725	0.0262
GFCF	-0.004990	0.360039	-0.013860	0.9891
C	7.025233	1.931430	3.637323	0.0030
R-square	0.872585		Adjusted R-square	0.676561
F-statistic	4. 686081		Prob (F-statistic)	0.003749
DW	1.910628			

Source: Field Survey (2021)

The result produced in Table 23 clearly showed that the interaction between finanancial market development and democracy was significant at 5% probability level. That is, the interactional or moderated variable had coefficient = 0.893542, standard deviation = 0.304557, t-statistic = 2.933909, and probability value = 0.0262. It was also found that the effect size of financial market

development had increased from 0.701544 to 0.942622 after it was moderated with democracy. Also. the moderated aspect increased economic growth by the coefficient of the interaction term (that is, 0.893542). This implies that democracy strengthened the relationsip between financial market development and economic growth in Ghana.

Discussion of Results

The result showed that financial market development does not influence economic growth in the short run. At a glance, the result of this study rejected the null hypothesis of this study which projected positive relationship between financial market development and economic growth. Intuitively, the result obtained in this study fall in line with the arguments of Adusei (2013) and Amartey (2017) who variously predicted that financial market development does not cause economic in the event of underdeveloped financial market. They even argued that poorly developed financial market can even cause negative effect on economic growth in the short run. Looking at the financial market of Ghana, there is the general evidence of low development given indicators such as the the percentage of banks' credit to the private sector.

Taking for instance, the descriptive statistics reported early in this study showed average FMD (measured by the ratio of bank credit to the private sector) to be 26.40 percent which is below average. This serve as evidence of weak or underdeveloped financial market as it was witnessed by the study of Mandifie (2015) in many emerging economies. In another breadth, evidence of weak financial market is lack of demand for credit by the private sector due to high

interest rate as it has been the case in Ghana with average borrowing cost being 28% per annum (Bank of Ghana, 2020). Thus, low demand for credit does not cause expansion in the private sector which does not cause growth to occur in the economy.

Evidence from this study has shown that financial market development enhances economic growth in the long run. This result is consistent with the study of Ahmed and Malik (2009), Mandifie (2015), and Puatwoe and Piabuo (2017) who variously agreed that financial market development and economic growth are related in the long run. In the long run, as more firms enter the financial market, competition increases and financial institutions compete among themselves by lowering interest rate making credit assessible to the private sector.

The study of Puatwoe and Piabuo (2017) identified competition in the financial market as development in the long run. As a consequence financial institutions such as banks makes credit available to firms with flexible payment conditions (Mandifie, 2015). This present study therefore argues that expansion of credit to the private sector in the long run causes the expansion in the physical output of the Ghanain economy which increases its growth levels.

Also, reasons can be adduced as to why democracy causes growth of the Ghanaian economy in the short run. At a glance, the result of this study rejected the null hypothesis of this study which projected positive relationship between financial market development and economic growth. The result of the study disagree with earlier studies such as Rachidi and Saidi (2014) and Wade (2017) who variously predicted negative relationship relationship between democracy

and economic growth. They argued that democracy negatively growth through delayed decision making and red tape processes in the various arms of government and institutions.

However, the evidence of positive short run relationship between democracy and economic has received empirical support from the study of Feng (2015), Lake (2013), Halpperin, Siegle and Weinstein (2015). In these studies they aregued that democracy serve as vulcrum against which peace and stability emerge in economies. According to Tavares and Wacziarg (2011), the democracy propels short term growth through creating enabling environment for private sector businesses to thrive. Thus, in the short term, democracy creates stable business environment and the successful transition from one government to another project hopes in investors which supply capital for output expansion.

In this study, data collected from 1960 to 2019 revealed that the average growth from 1960 to 1991 was 1.99 percent compared to 5.66 percent for 1992 to 2019. It is obvious that democratic regime propels growth more than the non-democratic regime and this view was supported by Halpperin, Siegle and Weinstein (2015). The result that decomracy impact economic growth in the long run is in agreement with recent studies such as Ndzendze (2021) and Baumand and Lake (2019) who found a positive long run relationship between democracy and economic growth. The argument to support this finding is that democracy contributes to growth through the enhancement of human capital and by closing the disparity in income distribution (Ndzendze, 2021).

The study of Baumand and Lake (2019) also agree that democracy improves human capital, lowers or eliminate political instability in the long run, brings down inflation which variously promotes growth of the economy. Put differently, democratic regimes improves economic growth more than non-democratic regimes in Ghana in that democracy enable stabilized political and economic environment where education of the citizenry can rapidly take place and hence influencing human capital development (labour) which positively influence economic growth as shown in this study.

It can further be argued that democracy democracy enable people to demand better living conditions from government in the form of quality education, portable water, and infrastructure among others. These demands increases the gross expenditure of the government and according to the Keynessian Cross, aggregate expenditure correlates with output. Hence, democracy directly increases government expenditure which in turn increases output thereby causing growth in the long term. It is therefore not surprising that gross expenditure positively influenced growth in this study.

Finding on the long run relationship between democracy and growth in Ghana in this study adds to similar findings found in the case of emerging economies such as Botswana, Senegal, and Costa Rica (Tavares & Wacziarg, 2021). According to Tavares and Wacziarg (2021), democratic economies such as Botswana, Senegal, Costa Rica, and Ghana have higher long run growth than non-democratic economies such as Syria, Zimbabwe, Angola, and Uzbekistan.

The study also showed that democracy modeartes the relationsip between financial market development and economic growth in Ghana. The result of the study is in line with the findings obtained in the study of Durmaz (2017) whose study found that the relationship between financial market development and growth of emerging economies is positive. The justification is that sustainable democracy draws in more direct investment into the financial sector that enhances the development of the financial sector by financial institutions being able to provide more credit to firms to enhance production which causes national output to grow.

Furthermore, result of this study agrees with Raggl (2014) which revealed that financial market development and democracy significantly influence the growth path of emerging economies. Thus, democracy serve as the basic requirement for investors who enter the financial market. In other words, the study showed that democracy opens up for growth of justice, rule of law, investor protection, and instills investor confidence in the financial market.

At the core of the aforementioned indicators, investors regard the financial markets with highly democratic principles as less risky to enter. Investors and savers therefore gains confidence in the financial sector believing that their investments are protected under sound democracy. Financial institutions are therefore able to compete effectively and accumulate funds from surplus spending units which can be given out as credit to the private sector for the expansion of their firms which eventually raise gross national output and growth of the economy.

Furthermore, the result of this present study is similar to the study of Rachdi and Saidi (2014) who revealed that both democracy and financial market development influence economic growth positively. This study therefore argues that democracy strengthens the basic structures of the economic sectors of the economy, such as the financial sector. Put differently, democracy enables functional laws to be enacted that protect investments made in the financial sector.

The study also argued that investors in the financial secotr are keen to investing in economies that are highly democratized due to the belief in the the rule of law and justice relative to non-democratic economies. Thus, democracy contributes to the development of the financial market and as the financial market is developed funds are made available to the various sectors of the economy to become more functional. With funds released to the various sectors of the economy, productivity increases and national output consequently rise and this improves the growth of the economy. Thus, this study hypothesized that financial market development and economic growth are positively related but democracy moderates the relationship by strengthening the relationship.

Chapter Summary

Chapter four of this study presented the results and discussions. On the first objective, the study revealed that financial market development and economic growth are not related but they are related in the long run. On the second objective, the study found that democracy and economic growth are related both in the short and long run. Regarding the third objective, the study

found that democracy moderates the relationship between financial market development and economic growth by strengthening the relationship.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Introduction

Chapter five is the final chapter of the study which focuses on the summary of the study and findings, the conclusions and the recommendations based on the conclusions and the findings of the study.

Summary of the Study

The study examined the relationship among financial market development, democracy and economic growth in Ghana by employing time series data from 1960 to 2019. The study used the quantitive design. The objectives of the study were in three folds: the first objective focused on the short and long run relationship between financial market development and economic growth; the secon objective examined the short and long run relationship between financial market and economic growth; and the third objective examined the moderating effect of democracy on the relationship between financial market development and economic growth in Ghana.

The study explanained variable was economic growth, with the financial market development and democracy being the explanatory variables. The study also controlled for the effect of gross recurrent expenditure, capital, and labour. Economic growth was measured as the real gross domestic product (GDP) per capita; financial market development was measured as the ratio of private credit of deposit money banks to GDP; democracy was measured as a dummy variable where 1 denoted democratic regimes and 0 denoted non-democratic regimes.

With the control variables, capital was measured as the natural log of the ratio of gross physical capital formation to GDP, government recurrent expenditure was measured as the natural log of the ratio of final consumption recurrent expenditure of general government to GDP, and labour was measured as the natural log of labour force participation rate as a percentage of total population. The study employed the autoregressive distributed lag model and the bounds test as well as OLS regression to analyse the objectives and to test the hypotheses of the study.

Summary of the Results

The result obtained from the study was summarized as follows:

(a) With regards to the first objective which examined the short and long run relationship between financial market development and economic growth, the study found that financial market development does not significantly affect economic growth in the short run. In the long run however, financial market development positively influenced economic growth.

(b) With regards to the second objective which examined the short and long run relationship, the study found that democracy had a significant positive relationship on economic growth both in the short run and the long run.

(c) Regarding the third objective which assessed the moderating effect of democracy on the relationship between financial market development and economic growth, the study found that democracy moderates the relationship. That is, democracy exerted positive and significant influence on the relationship between financial market development and economic growth.

Hence, democracy contributed in strengthening the relationship between financial market development and economic growth in Ghana.

Conclusions

Based on the results of the study, the study made the following conclusions:

(1) The development of the financial market through the provision of more credit to the financial sector by banks contributes to expanding national output and thereby increasing economic growth in the long run. However, in the short run financial market development is not fully integrated to support the growth of the economy. This proposition is supported by the classical and the neo-classical growth theories and the supports the hypothesis raised in this study.

(2) Democracy contributes to the growth of the economy in both the short and long run. The conclusion therefore is that economic growth of Ghana is a function of the democratic principles that guides and regulates the country such that democratic regimes positively enhance growth more than non-democratic regimes. The hypothesis that democracy influences economic growth was also not rejected by this study.

(3) The relationship between financial market development and economic is strengthened with democracy. Thus, in the absence of democracy financial market development marginally affects economic growth but democracy can be used to boost financial market for development and towards boosting national output and growth.

Recommendations

Based on the findings and the conclusions of the study, the study made the following recommendations:

1. The government of Ghana should strengthen the financial market so that banks can provide more credit to the private sector to help deepen the financial market. This can be achieved by banks providing less stringent conditions to the private sector to enable them to increase output to enhance the growth of the economy in the long term.
2. The government of Ghana should seek to continuously improve the democratic stance of Ghana so as to positively influence institutions, and to encourage more investment in the financial sector for productivity and economic activities to thrive.
3. The government of Ghana should employ democratic principles to strengthen the financial market by way of setting rules and regulations that will inure to instill the confidence and protection of investors and private sectors in the financial sector. This when done will contribute to more investors supplying funds to the financial sector and the financial sector relaying those funds to the private sector which can be used for productive activities to enhance the growth of the country.

Suggestion for further Studies

This study focused on measuring financial market development by using a single indicator: the ratio of private credit of deposit money banks to GDP. Further studies may therefore use different indicator such as broad money supply

as a share of GDP, domestic credit as a share of GDP, number of financial institutions in the financial market or combination of these to re-examine the effects so as to enhance the knowledge regarding whether or not different result will be obtained under different measurement.

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APPENDICES

Exhibit A

Dependent Variable: EG
Method: ARDL
Model selection method: Akaike info criterion (AIC)
Dynamic regressors (4 lags, automatic): FMD GFCF GE LAB
Fixed regressors: C
Selected Model: ARDL(4, 3, 4, 3, 3)

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
LEG(-1)	-0.727147	0.216763	-3.354572	0.0153
LEG(-2)	-0.376026	0.150492	-2.498648	0.0466
LEG(-3)	-0.512222	0.208253	-2.459616	0.0491
LEG(-4)	-0.324589	0.208655	-1.555623	0.1708
LFMD	0.140214	0.317431	0.441716	0.6742
LFMD(-1)	-0.061359	0.357975	-0.171404	0.8695
LFMD(-2)	-0.103610	0.378925	-0.273431	0.7937
LFMD(-3)	-0.893542	0.304557	-2.933909	0.0262
LGFCF	-0.131874	0.354455	-0.372048	0.7226
LGFCF(-1)	0.743776	0.313332	2.373764	0.0552
LGFCF(-2)	0.262537	0.285420	0.919829	0.3931
LGFCF(-3)	0.049255	0.353512	0.139330	0.8937
LGFCF(-4)	-0.582926	0.393561	-1.481156	0.1891
LGE	0.561856	0.284088	1.977753	0.0953
LGE(-1)	0.704466	0.326419	2.158162	0.0743
LGE(-2)	-0.124978	0.307655	-0.406229	0.6987
LGE(-3)	-0.610967	0.341309	-1.790071	0.1236
LLAB	16.97607	25.06142	0.677378	0.5234
LLAB(-1)	-34.56241	44.13998	-0.783018	0.4634
LLAB(-2)	70.98077	42.37089	1.675225	0.1449
LLAB(-3)	-34.38649	21.66137	-1.587457	0.1635
C	-75.88521	13.69294	-5.541922	0.0015

R-squared	0.962762	Mean dependent var	1.668199
Adjusted R-squared	0.832428	S.D. dependent var	0.348905
S.E. of regression	0.142826	Akaike info criterion	-1.023392
Sum squared resid	0.122396	Schwarz criterion	0.023340
Log likelihood	36.32748	Hannan-Quinn criter.	-0.703395
F-statistic	7.386903	Durbin-Watson stat	2.320117
Prob(F-statistic)	0.009948		

*Note: p-values and any subsequent tests do not account for model selection.

Exhibit B

Dependent Variable: EG
Method: ARDL
Model selection method: Akaike info criterion (AIC)
Dynamic regressors (4 lags, automatic): GE GFCF AB DEMOCRACY
Fixed regressors: C
Selected Model: ARDL(4, 1, 4, 4, 3)

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
LEG(-1)	-0.181882	0.215232	-0.845050	0.4134
LEG(-2)	-0.181243	0.183030	-0.990236	0.3401
LEG(-3)	-0.203914	0.117831	-1.730573	0.1072
LEG(-4)	-0.297728	0.231433	-1.286451	0.2207
LGE	0.150252	0.362652	0.414315	0.6854
LGE(-1)	0.374664	0.418600	0.895040	0.3870
LGFCF	-0.459861	0.498139	-0.923160	0.3727
LGFCF(-1)	0.231084	0.552866	0.417974	0.6828
LGFCF(-2)	-1.240312	0.398552	-3.112042	0.0083
LGFCF(-3)	0.042435	0.391354	0.108432	0.9153
LGFCF(-4)	-0.942622	0.360443	-2.615178	0.0214
LAB	0.005889	0.004822	1.221330	0.2436
LAB(-1)	-0.004840	0.005110	-0.947177	0.3608
LAB(-2)	0.009564	0.004984	1.918994	0.0772
LAB(-3)	0.701544	0.312560	2.244513	0.0428
LAB(-4)	-0.527741	0.294860	-1.789805	0.0968
DEMOCRACY	-47.82118	21.07557	-2.269033	0.0409
DEMOCRACY(-1)	36.28004	19.83867	1.828754	0.0905
DEMOCRACY(-2)	-0.680059	0.481654	-1.411924	0.1815
DEMOCRACY(-3)	1.090529	0.342657	3.182564	0.0072
C	7.025233	1.931430	3.637323	0.0030

R-squared	0.872585	Mean dependent var	1.614604
Adjusted R-squared	0.676561	S.D. dependent var	0.398678
S.E. of regression	0.226735	Akaike info criterion	0.143814
Sum squared resid	0.668314	Schwarz criterion	1.086566
Log likelihood	18.55517	Hannan-Quinn criter.	0.465319
F-statistic	4.451429	Durbin-Watson stat	2.504614
Prob(F-statistic)	0.004116		

*Note: p-values and any subsequent tests do not account for model selection.