UNIVERSITY OF CAPE COAST

FINANCIAL DEVELOPMENT AND PRIVATE INVESTMENT IN GHANA

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2022

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BY

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Thesis submitted to the Department of Finance of the School of Business, College of Humanities and Legal Studies, University of Cape Coast in partial fulfilment of the requirements for the award of Master of Commerce degree in Finance

AUGUST 2022

DECLARATION

Candidate's Declaration

I hereby declare that this thesis 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: Audrey Nkrumah

Supervisor's Declaration

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

Supervisor's Signature:…… Date:……

Name: Prof. Siaw-Frimpong

ABSTRACT

The study sought to examine the effects of financial development on private investment in Ghana using data set for the period 1984 to 2018. The Vector Error Correction Model (VECM) approach to cointegration, a granger causality test, and an impulse response function were employed with annual data from WDI and the International Monetary Fund (IMF) database to estimate the results of the study. The study found that in the long run, financial development and private investment were negatively related but positively related in the short run. It was also found that there is a unidirectional causality between financial development and private investment in Ghana. Finally, financial development reactions to private investment innovations fluctuate in the short run but have a relatively stable negative impact on private investment in the long run in Ghana. Based on the findings, it is recommended that financial institutions and financial systems should be regulated to impact private investment positively in the long run. Again, the Ministry of Finance and Bank of Ghana as a matter of urgency intensify the development of the financial sector to promote private investment in Ghana. Any efforts or policies to develop the financial sector should include the provision of information and allocation of capital on investment opportunities as well as mobilization of savings and enabling exchange activities within the economy.

KEYWORDS

Autoregressive Distributed Lag

Financial Development

Private Investment

ACKNOWLEDGEMENTS

I am also incredibly grateful to my father, Mr. John Kwame Nkrumah, the sponsor of my education, Rose Nkrumah, Geoffrey Nkrumah, Dennis Nkrumah, and my fiancée Emmanuel Arkoh for their matchless love, support and astonishing patience throughout the course of my study. To my friends, especially, Samuel, your help is immeasurable, the late Otuo Serebour Agyemang of School of Business-UCC, Giovanni, Emmanuel, I cannot thank you enough.

Finally, I want to articulate my thankfulness for the support and encouragement of Mr & Mrs Essien, and the Church of Christ-UCC as well as all those who participated in distinct ways to the completion of my studies.

DEDICATION

To my family

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CHAPTER ONE

INTRODUCTION

A strong financial sector boosts the health and development of private investment by providing financial assistance to individuals and private firms. It also helps to achieve long-term investment by mobilising funds from excess or surplus units of the economy and distributing them as loans and advances. Financial development entails "the dynamics, guidelines, and organizations that lead to nominal economic intermediation and markets" (World Economic Forum, 2012).The goal of Ghana's financial institutions is to make formal financial and banking services, including institutional credit, easily available and accessible to private investors. Consequently, most governments around the world now have an increasingly widespread concern regarding financial development (Asare, 2013; Ouattara, 2004). Reallocating assets from low beneficial to high productive sectors and opening up credit for private investors are both encouraged by a strong financial sector. Owing to the contribution of financial development on private investment, it is imperative to investigate their relationship.

Background to the Study

Private investments play an indispensable role in every economy. They contribute significantly toward employment creation, poverty reduction and economic growth (Emene, 2012). Guma (2013) and Mustafa (2014) asserted that economies with a high level of private investments have higher economic growth. Frimpong and Marbuah (2010) stated that private investment is a central precondition for economic development because it consents capitalists to ensure

that financial activities are in motion by accumulating capital or the production of goods and services. As part of the development of private investment, the role of the financial sector cannot be left out (Sakyi, Boachie, & Immurana, 2016). A robust financial sector enhances the health and development of private investment by providing financial assistance to individuals and private firms. It also facilitates the achievement of sustained investment by mobilizing funds from excess or surplus units of the economy and giving them out as loans and advances. Huang (2010) contributed to the prevailing body of study on relations amid financial development and economic progression, by asserting that flourishing.

According to Jar and Hui (2012), a robust financial scheme promotes investment by mobilizing excess funds, financing productive business opportunities, and enhancing the trade of goods and services. Owing to the significance of the financial sector in inducing private investment, policies aimed at developing the financial sector are worthwhile (Asante, 2000; Asare, 2013; Ouattara, 2004). As asserted by Pour and Hajiabad (2015), financial sector development is a driving force for private investment.

Financial development constitutes any activity geared toward the faultlessness in the financial sector such as providing information and allocation of capital on investment opportunities as well as mobilization of savings and enabling exchange activities within the economy (Sakyi, Boachie, & Immurana, 2016). Financial development entails "the dynamics, guidelines, and organizations that lead to nominal economic intermediation and markets, also takes into consideration

the abysmal and wide admittance to capital and financial services" (World Economic Forum, 2012).

Additionally, it can be viewed as financial development that ensures excellence in financial roles such as generating information about worthwhile investment prospects and allotting capital to feasible opportunities, supervision of market threats, savings deployment, and easing exchange activities within a country's economy. According to Takyi and Obeng (2013), there is sufficient indication from economic development literature about how investment quickens economic advancement and enhancement of developing countries, of which Ghana is not exempted.

Inferring from this, most recent development and expansion approaches in Ghana have devoted more exertion to empowering private investment through financial development. The eighth goal of the Sustainable Development Goals (SDGs) aims at strengthening financial institutions to achieve the universal right of entry to financial services and credit by 2030. Achieving a robust financial sector has always been on the agenda by various governments in Ghana. Since the 1980s, successive governments have adopted policies to liberalize the financial sector in a quest to develop the sector in Ghana.

This tremendous development in the financial sector can stimulate private investment thus making the role of financial development toward private investment very crucial but limited studies have been conducted to confirm this role. The practical studies in this area in Ghana to aid policy-makers are few which was

stated (Acheampong, 2019) and private involvement in Ghana ought to be a vital part of advancing financial development and private investment in Ghana.

Statement of the Problem

Financial development has been found among the key determinants of private investment in Ghana (Asare, 2013; Frimpong & Marbuah, 2010; Frimpong & Adam, 2010). Financial development has, therefore, become an increasingly pervasive concern to most governments globally (Asare, 2013; Ouattara, 2004). Financial institutions can fulfill their mission of making institutional credit and other formal financial and banking services easily available and accessible to private investors. A well-developed financial sector is also an incentive to make credits available to private investors as well as reallocate assets from low beneficial to high productive sectors ((Sakyi, Boachie & Immurana, 2016).

Shah and Shah (2011) revealed that financial development is an important source of savings mobilization, credit allocation, capital productivity, and investment. As a result, much accentuation has been laid on the conceivable impacts of financial development in stimulating private investment through credit allocation. However, much has not been done to unveil the potential of Ghana's growing financial development in enhancing private investment in Ghana.

Studies relating to financial development and private investment nexus, remain scanty. It appears that studies (Sakyi, Boachie & Immurana, 2016; Asare, 2013; Frimpong & Marbuah, 2010**;** Frimpong & Adam, 2010) conducted relied on single indicators of financial development consequently incapable to distinguish which financial sector variables initiate private investment and which do not. As a

result, this study employs the latest index from the Global Financial Index which is a proxy of the Financial Depth, Access, Efficiency and Stability to measure financial development and its effects on private investment. The use of the Global Financial Index helps to provide stronger is a credible policy for improving private investment.

Purpose of Study

The purpose of the study is to examine the impact of financial development and its effects on private investment in Ghana with the aim to inform stakeholders and policymakers on the best approach to manage the impact such a relationship presents on financial development and its effects on private investment.

Research Objectives

1. To examine the short-run and long-run effects of financial development on private investment in Ghana
2. To examine the responsiveness of financial development to private investment innovation in Ghana.
3. To assess the causal relationship between financial development and private investment in Ghana.

Research Hypotheses

1. H_o: There is no short and long run effect of financial development on private investment in Ghana.
2. H_o: There is no responsiveness of financial development to private investment in Ghana.

3. H_o: There is no causal relationship between financial development and private investment in Ghana.

Significance of the Study

This study provides proof of the role of financial development in advancing private investment in Ghana and provides a premise for creating suitable policies for the financial sector in Ghana. This research work added to the few available researches works worldwide by exploring how financial development influences private investment in Ghana. Unlike previous studies that employ a single indicator to measure financial development, this study used the latest index from the Global Financial Index which is a proxy of the Financial Profundity, Access, Adeptness and Immovability to measure financial development.

Moreover, this study is to function as a director to rule makers and development practitioners in their quest to provide universal access to quality financial services and credit for the private sector to invest.

Delimitations

This study is limited to the effects of financial development on private investment in Ghana using annual time series data for the period 1984-2018. To avoid bias of any form when all developing and developed countries are analyzed simultaneously, the study is also limited to Ghana only however, the findings were generalized. The study employs gross fixed capital formation (private sector) and the latest index from the Global Financial Index which is a proxy of the Financial Depth, Access, Efficiency and Stability to measure financial development.

Limitations

The major obstacle that is encountered in this study is the unavailability of data which is common in Ghana. This study did not use a large sample size because of missing values for some of the variables. As a result, the VECM method has been used since it provides an efficient estimates in dealing with small sizes as is the case in this study.

Organization of the Study

This research is divided into five chapters. The first chapter introduces the concepts of study. The background of the study, the problem statement, the research objectives, the research hypothesis, the study's significance, delimitation, and limitations are all included. The second chapter offers a review of the literature. In chapter three, the research methodology was discussed and Chapter four presents and analyzes data, while Chapter five summarizes the findings, draws conclusions, and makes recommendations.

CHAPTER TWO

LITERATURE REVIEW

Introduction

The theoretical and empirical literature of the study is presented in this chapter. Specifically, the chapter is organized into three sections. The first section provides the definition and measurement of financial development, various phases of financial sector development in Ghana, definitions and theories of private investment. The second section was devoted to Ghana. Finally, literature on empirical works on financial development and private investment was reviewed.

Overview of Financial Development in Ghana

The relevance of an adequate and efficient financial sector has been observed to be pivotal in the rise of performance of many economies over the last three decades (Khan & Senhadji, 2000; Khan et al., 2005). A sound financial system according to Levine (2005) not only adds to the transformation of the economy in terms of economic growth but also creates an enabling environment susceptible to the mobilization and allocation of funds for improving growth and development. An adequate and efficient financial system has also been adjudged to be technological innovations boasting hence the dire need for reforms in financial sectors (McKinnon & Shaw, 1973).

Financial sector development signifies (Aryeetey et al., 2000). Unlike most developed countries where the benefits of the improved financial sector have since been recouped, for most developing countries. Ghana's financial system has transited through several reforms over the last 3 to 4 decades. Before the 1980s, the

financial sector policies implemented from 1960 through to the 1970s produced no result in mobilizing resources for growth leading to repressive policy outcomes (McKinnon 1973; Shaw 1973) like the money supply to GDP ratio dropping from 24 percent to 12 percent in 1984, negative real interest rate was recorded as a result of the from7.1 to 2.6 percent, and domestic credit from 38.8 to 15.6 percent (Aryeetey et al., 2000). Real GDP growth was not left out, it averaged about 3.04 percent between 1961 and 1970 and about 0.52 percent for the period 1971 to 1980 (Aryeetey et al., 2000; Bawumia, 2010).

Despite the recovery efforts of the SAP and ERP, the economy was far from being helped due to high default rates, high inflation rates and non-performing assets of banks which limited their capital base and their intermediation role hence in 1988, a comprehensive program was launched, the implementation of the Financial Sector Adjustment Program (FINSAP) financed by the World Bank and Japan and Switzerland and the government of Ghana (Bawumia, 2010). The program saw the restructure of distressed banks and non-performing assets clean up to restore bank profitability and viability (Aryeetey and Gockel 1991; Brownbridge & Gockel 1996; Bawumia 2010).

The intervening effect of knowledge transfer in the context of the study is anchored on the position of the contingency theory (Larson & Foropon, 2018). The theory posits there is no one generalized path to success or failure hence the need to factor in contextual factors (Sunder & Prashar, 2020). From the perspective of the contingency theory, the success of talent management practices in producing desirable employee-oriented outcomes including improvement in employee

competence is strongly influenced by the intervening effect of the extent of knowledge transfer and sharing from recipients of knowledge, skills and experiences from talent management programs in the colleges of education. Where recipients are unwilling to transfer their knowledge, skills and experiences gained through talent management, their level of competence is expected to be lesser compared to those that transfer such job-related prowess. Application of contingency theory in knowledge transfer (Ambos & Ambos, 2009; Lazarova & Tarique, 2005), talent management (Farndale, Pai, Sparrow & Scullion, 2014; Cappelli & Keller, 2014) and competence (Lee & Miller, 1996; da Cruz, Nunes & Pinheiro, 2011) studies.

Knowledge spillover theory postulates new knowledge is discovered through research and development activities in the work context (Grimpe & Hussinger, 2013). Knowledge produced is commercialized. But the theory argues only a part of such knowledge is actually commercialized. The theory recognizes the heterogeneity in context within which individuals find themselves. The salient context involves the creation of new knowledge and ideas. Knowledge spillover is recognized empirically as creator of innovative activities (Audretsch, 2005). From this perspective, higher education institutions such as colleges of education could generate knowledge that are translated into efficient job performance because of the intellectual capital that comes with it as a consequence.

Talent management thus become the conduit for knowledge creation and its subsequent transfer. Knowledge transfer is a mean to transferring intellectual human capital to building competencies among employees (Al-Azzam & Al-

Qura'an, 2018). Knowledge transfer is thus seen as means to building employee competence (Stuss, et al., 2020) through specific HR interventions such as training and development initiatives (Salman, et al., 2020).

The nature of services of academics demands strongly emphasis on knowledge transfer (Agarwal & Marouf, 2017) through talent management. Talented individual workers in higher education attract students, support the conduct of high-quality teaching and learning, conducting high-impact research and secure funds for further researches through improved firm performance orchestrated by these talented employees (Mohammed, et al., 2017). Knowledge acquisition and transfer are key strategic thinking for educational institutions (Stuss, Makiela & Sta´nczyk, 2020). Knowledge transfer deals with the movement of knowledge across organization (Al-Kurdi, El-Haddadeh & Eldabi, 2018). It is the process by which knowledge that concerns the making or doing useful things at an organized setting is brought for utilization in organizational context (de Wit-de Vries, Dolfsma, van der Windt & Gerkema, 2019). Knowledge transfer may be formal or informal. The formal knowledge sharing involving storing knowledge through institutional databases and transferring them through formal rules, structures and manuals (Kumari & Takahashi, 2014). Such knowledges are readily available and accessible in institutional artefacts and structural elements at the workplace (Lee, et al., 2020).

Informal knowledge sharing or transfer is embedded in trust among employees and it involves exchange of tactic knowledge. Informal knowledge transfer (Stadler & Fullagar, 2016; Thatchenkery & Chowdhry, 2007). The two main activities in knowledge sharing. With knowledge collecting, the seeker

consults others for their intellectual capital in order to learn what they know whilst knowledge donating deals with one's communication of personal intellectual capital to others (Kmieciak, 2020). Formal and informal networks serve as conduits for social interactions in which tacit knowledge is transferred through activities such as documentation practices, learning and reporting (Loebbecke, van Fenema & Powell, 2016). The essence of knowledge transfer is to solving problems at work given the knowledge one has acquired through organizational and personal interventions or initiatives. Knowledge transfer practices are activities carried out to needed knowledge in organizational context including teaching, data and technology sharing as well as managing interactions (de Wit-de Vries et al., 2019).

The social networks streams regard knowledge transfer as social phenomenon and social activity (Ren, Yan, Wang & He, 2020). This is true especially for inter-project knowledge transfer where social interaction and social practices among project team members flourishes (Chen & Huang, 2007). Knowledge transfer is also supported by the position of the institutional theory (Ren, Yan, Wang & He, 2020). The theory recognizes institutions as formal rules and norms established to shape and control activities and employees in organizations (Lammers & Barbour, 2006). Good institutions put in structures and systems that support knowledge transfer by standardizing the various transfer activities in their organizations (Ren, Yan, Wang & He, 2020). Notable institutional means for knowledge transfer include meetings, group discussions, case studies, special teams and so forth. Institutional repository and information systems are also key means. Such institutional systems and structures also relied strongly on reward systems

both financial and non-financial rewards to encourage knowledge transfer among employees (Martin-Perez & Martin-Cruz, 2015).

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context involves the creation of new knowledge and ideas. Knowledge spillover is recognized empirically as creator of innovative activities economic growth and competitiveness on global markets (Audretsch, 2005). From this perspective, higher education institutions such as colleges of education could generate knowledge that are translated into efficient job performance because of the intellectual capital that comes with it as a consequence.

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The decline witnessed from 1984 to somewhere 1990 are feedbacks to the repressive policies implemented prior to the reforms but after the adoption of the reforms the trend of financial development has greatly improved as seen in the mild swings from 1991 to 2019, with highest sectorial improvement recorded in 2012 (Figure 1).

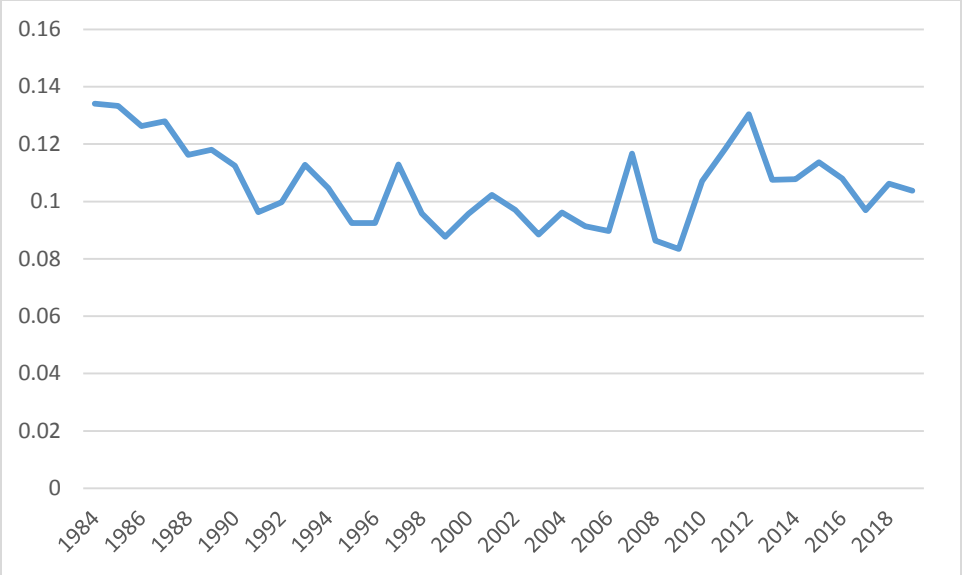

Figure 1: Trend of Financial Development in Ghana 1984 to 2019

Source: Authors' Own Construct

Definition and Measurement of Financial Development

Financial development has witnessed several definitions in empirical literature. According to Levine (2005) financial sector development is basically concerned with overcoming the "costs" incurred in the financial system.

Levine (2005) further quantify financial development into five different functions which are; providing and handling information about potential investment and allocating capital based on these valuations, mobilizing and pooling savings, facilitating and encouraging the inflows of foreign capital, facilitate trade and diversification as well as easing exchange of goods, services and financial instruments.

In simple terms, financial development ensures excellences in financial roles such as generating information about worthwhile investments prospects and allotting capital to feasible opportunities, supervision of market threat, savings

deployment, and easing exchange activities within a country's economy. Levine (2005) posited that an increase in investment stimulates economic growth, which inspire financial development. Gallagher (2014) maintained that financial markets play a vital part in coordinating investment resources to its crest esteemed use in connection to finance-growth models. Financial intermediaries are able to initiate a portfolio distribution in relation to productive investment by proposing liquidity to speculators, relieving liquidity dangers, dropping asset mobilization costs and utilizing corporate regulator.

The measurement of financial development is usually done relying on commercial banks of a country since these banks dictate the financial sector and security markets. There are various ways of measuring the financial development of an economy using various development indicators of banking that are commonly used in literature. Mostly, the popular indicators used in various research studies include liquidity liability, private credit and commercial central bank. Pesaran, Shin, Smith (2001) also included measures of life insurance and private pension fund assets to measure financial development.

Liquid Liabilities, is a foremost indicator employed to quantify the size comparative to the economy of financial intermediaries and the sorts of financial institutions (Dollar & Kraay, 2002). It is measured by dividing the Gross Domestic Product (Mohamed & Mazahir, 2016). In another vein, as the proportion of credit apportioned to the private investment sector by the central bank and other financial mediators to the Net Domestic Product (GDP) of a nation (Antwi-Asare & Addison, 2000). It does not incorporate the credit conveyed to government, government

organizations and public institutions as well as the credit designated by the monetary authority and development banks.

Definition and Theories of Private Investment

Private investments play a requisite role in every economy. They contribute ominously towards employment creation, poverty reduction and economic growth (Emene, 2012; Guma, 2013; Mustefa, 2014) asserted that economies with high level of private investments have higher economic growth. It is not astonishing that private security is the main locomotive of development in every economy. Private investment is renowned as a direct connection to economic growth in emerging countries (Anyanwu, 2006). Hence emphasis is placed on private investment as an instrument to grow and develop a country. Econometric evidence reflects that private sector investment takes a robust and adequate influence proceeding economic growth as compared to the public investment (Asante, 2000).

In recent years, attention has been given to the development of the private sector in less developed countries to help improve economic growth through enthusiastic contribution in private investment activities. Ghana's business in private sectors are incapable of floating enough to fund their investments. According to Suhendra and Anwar (2014), private investment is prejudiced by government investment and accessibility of investment credits. Bint-e-Ajaz and Ellahi (2012) specified that there have been just few economic models available that gives a limited knowledge into the real-world glitches fronting the developing world regarding private investment. The neoclassical and Keynesian schools of

thoughts, simple accelerator theory, and few others that was mention in this review are some of the theories that gave an insight on private investment.

Theories of Private Investment

The study was anchored on the theories of McKinnon and Shaw model and the Keynesian investment theory. These theories were selected because it projects the possible paths and the role of financial development on private investment.

McKinnon and Shaw Model

The study was underpinned by the McKinnon and Shaw Model. Mckinnon (1973) and Shaw (1973) advocated for a complementary relationship between real money balances and investment in real physical balances. They further asserted that financial deepening enhances high investment and economic growth (Salahuddin & Islam, 2008). Accordingly, high saving rates finances higher level of investment driving to higher economic growth. The intervening effect of knowledge transfer in the context of study is anchored on the position of the contingency theory (Larson & Foropon, 2018). The theory posits there is no one generalized path to success or failure hence the need to factor in contextual factors (Sunder & Prashar, 2020). From the perspective of the contingency theory, the success of talent management practices on producing desirable employee-oriented outcomes including improvement in employee competence is strongly influenced by the intervening effect of the extent of knowledge transfer and sharing from recipients of knowledge, skills and experiences from talent management programs in the colleges of education. Where recipients are unwilling to transfer their knowledge, skills and experiences gained through talent management, their level of competence is

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Keynesian Investment Theory

The theory of investment falls in vertebral to the time of Keynes John Maynard. Keynes remained the original brain behind the theory of an independent investment function in the economy. Keynes (1936) postulated that investment is the most determinant of aggregate output, work, and brief run variances in financial action. To Keynes, investment will take put as long as the anticipated yield on investment surpasses the real interest rate since investment is unstable and profoundly subordinate on desires of firm's productivity. The theory posited that, individuals and firms undertake investment decision by comparing them. This

implies that, investment pivots on the imminent Marginal proficiency of capital (MEC). The Minimal proficiency of capital constitutes the rate of discount that compares the present value of a series of cash streams realistic from an income-earning resource like apparatus over the apparatus whole financial life to the cost of that machinery relative to some interest rate (Serven & Solimano, 1992)

The Keynesians economists revealed that monetary policy is ineffective in influencing the level of investment in any economy since they argued that investment hinges to a great extent upon anticipated return and isn't exceptionally interest rate delicate, which suggests indeed large changes in intrigued rates have small impact on investment. This explains why their marginal efficiency of capital curve is steep.

An important characteristic of the Keynesian study is they observed that even though investment and savings must be indistinguishable, investment decisions and ex-post savings were in universal used by different investment decision makers and investment was regarded as a utility of the potential marginal productivity of capital in relative to an assumed level of interest rate replicating the real cost of the capitalized fund (Ababio, Kumankoma & Osei, 2018). Erden and Holcombe (2006) asserted that the Keynesian investment model is related to the complementarity theory of public investment which postulates that government venture in core infrastructure improves efficiency of contributed private capital.

To Keynes, investment is not regarded as an adjustment process toward equilibrium and further debunked the assertion that investment was based exclusively on technological conditions of capital productivity instead radical

uncertainty and monetary factors takes a crucial role in individual and firm's investment decisions. Keynes stated that investment is substance to undertake unknown the current worth of the impending revenue stream through a given standard can be equated to capital investment otherwise it should be higher than the primary cost of capital. He further explained that the core instability of private investment as a concern of the fundamental ambiguity is in relation to expected proceeds on investment.

Keynesian theories considered private investment not solely as a source of economic growth but then again as a basis of the potential scope of the income of a nation (Dequech, 2003). Keynes explains that the demand for investment is taking the value of the current value of the projected net gain over the additional capital expenses sustained by the total of capital as at a particular time. However, the Keynesian theory of investment has been criticized as unrealistic by the neo-classical economists such as Dale Jorgenson and his co-workers. Investment theory has experienced a swift advancement subsequent to Keynes' novel invention.

Relation of theory to the Study

The Keynesian theory is linked to the study because the theory emphasized that financial development is one of the major determinants of private investment within a country. The theory also maintain that private sector investment projects can be financed from external debts through a well-developed financial sector existing in a country, which in this case Ghana.

Q- Investment theory

This theory brings into light the significant role that stock market plays in determining private sector investment behaviour. One of the fundamental obstacles of the neo-classical and accelerator theories of investment was that expectations play no role in investment decision, Hence, Brainard and Tobin (1968) introduced the Q-theory of investment to deal with this problem. The Q theory of investment opined that Q could be the data important to a firm's investment decision. According to the theory, investment is embraced until the market value of resources is equal to the replacement cost of the resource. It is expressed mathematically as:

$$Q = \frac{\text{Market value of installed capital}}{\text{Replacement cost of installed capital}}$$

Where the substitution taken a toll of introduced capital pivots on the circumstance within the capital products divisions. The intervening effect of knowledge transfer in the context of study is anchored on the position of the contingency theory (Larson & Foropon, 2018). The theory posits there is no one generalized path to success or failure hence the need to factor in contextual factors (Sunder & Prashar, 2020). From the perspective of the contingency theory, the success of talent management practices on producing desirable employee-oriented outcomes including improvement in employee competence is strongly influenced by the intervening effect of the extent of knowledge transfer and sharing from recipients of knowledge, skills and experiences from talent management programs in the colleges of education. Where recipients are unwilling to transfer their knowledge, skills and experiences gained through talent management, their level of competence is expected to be lesser compared to those that transfer such job-related

prowess. Application of contingency theory in knowledge transfer (Ambos & Ambos, 2009; Lazarova & Tarique, 2005), talent management (Farndale, Pai, Sparrow & Scullion, 2014; Cappelli & Keller, 2014) and competence (Lee & Miller, 1996; da Cruz, Nunes & Pinheiro, 2011) studies.

The nature of services of academics demands strongly emphasis on knowledge transfer (Agarwal & Marouf, 2017) through talent management. Talented individual workers in higher education attract students, support the conduct of high-quality teaching and learning, conducting high-impact research and secure funds for further researches through improved firm performance orchestrated by these talented employees (Mohammed, et al., 2017). Knowledge acquisition and transfer are key strategic thinking for educational institutions (Stuss, Makiela & Sta´nczyk, 2020). Knowledge transfer deals with the movement of knowledge across organization (Al-Kurdi, El-Haddadeh & Eldabi, 2018). It is the process by which knowledge that concerns the making or doing useful things at an organized setting is brought for utilization in organizational context (de Wit-de Vries, Dolfsma, van der Windt & Gerkema, 2019). Knowledge transfer may be formal or informal. The formal knowledge sharing involving storing knowledge through institutional databases and transferring them through formal rules, structures and manuals (Kumari & Takahashi, 2014). Such knowledges are readily available and accessible in institutional artefacts and structural elements at the workplace (Lee, et al., 2020).

Informal knowledge sharing or transfer is embedded in trust among employees and it involves exchange of tactic knowledge. Informal (Thatchenkery

& Chowdhry, 2007). The two main activities in knowledge sharing or transfer are. With knowledge collecting, the seeker consults deal with one's communication of personal intellectual capital to others (Kmieciak, 2020). Formal and informal networks serve as conduits for social interactions in which tacit knowledge is transferred through activities such as documentation practices, learning and reporting (Loebbecke, van Fenema & Powell, 2016). The essence of knowledge transfer is to solving problems at work given the knowledge one has acquired through organizational and personal interventions or initiativHes. Knowledge transfer practices are activities carried out to needed knowledge in organizational context including teaching, data and technology sharing as well as managing interactions (de Wit-de Vries, et al., 2019).

The social networks streams regard knowledge transfer as social phenomenon and social activity (Ren, Yan, Wang & He, 2020). This is true especially for inter-project knowledge transfer where social interaction and social practices among project team members flourishes (Chen & Huang, 2007). Knowledge transfer is also supported by the position of the institutional theory (Ren, Yan, Wang & He, 2020). The theory recognizes institutions as formal rules and norms established to shape and control activities and employees in organizations (Lammers & Barbour, 2006). Good institutions put in structures and systems that support knowledge transfer by standardizing the various transfer activities in their organizations (Ren, Yan, Wang & He, 2020). Notable institutional means for knowledge transfer include meetings, group discussions, case studies, special teams and so forth. Institutional repository and information systems are also key means.

Such institutional systems and structures also relied strongly on reward systems both financial and non-financial rewards to encourage knowledge transfer among employees (Martin-Perez & Martin-Cruz, 2015).

Empirical Review

Empirical works of financial development on private investment especially in the Ghanaian context is limited. The few studies conducted relied on single indicators of financial development hence incapable to recognize which financial sector variables actuate private investment and which does not. For instance, Ababio, Kumankoma and Osei (2018) indicated that in the long run, all the cost factors had not statistical influence in Ghana. However, there was a positive effect of the non-cost factors on private investment in Ghana and a negative. The authors indicated that in the long run, that all the variables used in the research are co-integrated with private investment.

The Bank of Ghana has boarded on a spacious clean-up with Ghana's financial sector since 2017. The clean resulted in the loss of GH¢14 billion. The International Monetary Fund (IMF) indicated that it would have cost the nation more than just GH¢14 billion if the central bank has not taken such a measure. The World Bank approved this reform with a remark that it was an urgent initiative to save the economy. The alternative to not cleaning up the banking sector is indeed a greater fetched to the budget and to the economy as this may cause a disruption.

The reform which started in September 2017 led to an increase in minimum requirement to GH$ 400 million over 120% increment compared to the initial minimum capital requirement which used to be GH$120. This was to take effect

on 31st December 2018. Although critics say that the reform has led to loss of jobs and increase in the unemployment rate, the International Monetary Fund contradicted this by stating that the penalties of not intervening would have been calamitous for the economy. The reform was also to manage risks that have existed in the financial sector for a period of time. The owners of the various banks, Royal Bank, UniBank Ghana Ltd, Capital Bank, UT Bank, Construction Bank, Heritage Bank, Beige Bank and some supervisors of central bank were prosecuted for non-compliance to professional rules, ethics, poor corporate management and other roles they played that led to the collapse of banks**.**

Private investments play a requisite role in every economy. They contribute ominously towards employment creation, poverty reduction and economic growth (Emene, 2012; Guma, 2013; Mustefa, 2014) asserted that economies with high level of private investments have higher economic growth. It is not astonishing that private security is the main locomotive of development in every economy. Private investment is renowned as a direct connection to economic growth in emerging countries (Anyanwu, 2006).

Balcilar, Çiftçioğlu, Güngör (2016) examined the influence of financial development and investment in Turkey between 1960 and 2008. The study constructed a composite index comprising three alternative measures of financial development. The autoregressive distributed lag method was used in the data analysis. The result from the autoregressive distributed lag method showed that financial development positively and significantly influence investment in Turkey.

Suhendra and Anwar (2014) found, credit availability, and economic growth have a positive influence on private investment, leading to a recommendation that in order for government to improve private investment, it needs to allocate government budget expenditure to invest more in infrastructure and also manage importation and exportation to stabilize the exchange rate. The research stated in furtherance that inflation, and interest rate has negative impact on private investment, therefore, government have to keep fairly inflation rate by ensuring price stability.

Also, the government as reasonable level, to ease private investors troubles of finding capital with low cost. In a related study, Sakyi, Kofi Boachie and Immurana (2016) sought to provide evidence on whether financial development drives private investment in Ghana. The study examined the effects of in both the short run and long run. The study found that financial development drives private investment in the long run. However, the effect hinges on the measurement of financial development.

In another related study, examined the influence -1999 in achieving the objectives of the study. The result of the study confirmed a positive effect of the investment accelerator effect on private investment relationship. However, the same positive relationship exist between credit expansion (financial development) and private investment but failing terms of trade and weary real exchange rate exhibited an adverse effects on private investment. The study also revealed that public investment with good investment climate stimulates private investment in a country.

Moreover, Akpalu (2002) investigated private investment correlates in Ghana. The comparative terms private investment in the short-run retorts to public investment, credit availability and real per capita income growth. Huang (2010) concluded that the positive influence financial markets. This was in line with Baltagi, Demetriades and Law (2009) research work, on possible channel through which find out that trade openness and financial honesty appear to encourage financial development and organizational development has led to financial development (Huang 2010). The nexus between financial development and financial improvement was moreover progressed by Huang (2010).

Moyo and Le Roux (2020) examined the relationship between financial development and private sector investment in Tanzania. The financial market depth index and the financial institution's depth index were used as proxies for financial development. The results highlight the connection between financial development and private sector investment in Tanzania using the Autoregressive Distributed Lag (ARDL) technique. The financial market depth index has a favorable and considerable impact on private sector investment over time, but not in the near run, according to the findings. Similarly, it was revealed that the financial institution depth index has a favorable and significant long-term and short-term influence on private sector investment. In contrast, it was revealed that the real exchange rate has had a long and short-term negative and considerable influence on private investment. This indicates that the real exchange rates rise had a negative impact on private investment. To extend and deepen the financial system and effectively

support the mobilization of short, medium, and long-term finance for private sector investment.

Afonso and Aubyn (2019) through a VAR analysis using annual data from 1960 to 2014, investigated the macroeconomic consequences of public and private investment in 17 OECD economies. Public investment had a positive growth effect in most nations, but a contractionary effect in Finland, the United Kingdom, Sweden, Japan, and Canada, according to impulse response functions. In Belgium, Ireland, Finland, Canada, Sweden, and the United Kingdom, public spending resulted in private investment crowding out and crowding-in impacts, respectively. Private investment boosts growth in all nations; in Belgium and Sweden, it floods out (crowds in) public investment (in the rest of the countries). Partially positive rates of return on public and private investment are the norm. Our findings are unaffected by the ordering of private information.

Bader and Ahmad (2014) looked at the significance of interest rates in motivating investment is gaining popularity around the world, particularly in developing economies. However, figures reveal that Egypt's investment has been moderate over this time (1980-2018). Data was gathered from databases at the World Bank and the International Monetary Fund. It also verified that the time series were balanced and interconnected before analyzing them using the Auto Regressive Distributed Lag (ARDL) approach. The empirical findings show that there is long-run cointegration between investment and interest rate, as well as that interest rate granger causes investment, which is the main focus of this study.

Changes in global economic thinking have had a significant impact on Ghana's banking sector policies. Prior to the 1980s, when interventionist policies were prominent in the development literature, the country's financial sector was tightly regulated beyond contract enforcement and fraud prevention. When the new orthodoxy became the norm in the 1980s, the government embarked on another big policy experiment with these policies. Asare (2013) investigated how financial sector reforms have affected private investment in Ghana. To do so, the researcher created a simple econometric model and estimated it using data from 1980 to 2007. According to the findings, private investment responded only moderately to financial liberalization measures in Ghana. The study's overall conclusion is that financial deregulation would not benefit private investment unless foreign and unproductive assets such as cash and gold are funneled into developing country banking systems.

Iheonu, Asongu, Odo and Ojiem (2020) examined the influence of financial sector development on domestic investment in selected nations of the Economic Community of West African States (ECOWAS) and was studied from 1985 to 2017. The Granger non-causality test was used to test for causality in the presence of cross-sectional dependence, and the augmented mean group technique was used to account for country-specific heterogeneity and cross-sectional dependency. The findings from their study showed that (1) the impact of financial sector development on domestic investment varies depending on the measure of financial sector development used; (2) domestic credit to the private sector has a positive but insignificant impact on domestic investment in ECOWAS, whereas banking

intermediation efficiency (i.e., banks' ability to convert deposits into credit) and broad money supply have a negative and significant impact on domestic investment; (3) In the selected ECOWAS countries, there are cross-country variances in the impact of financial sector development on domestic investment; and (4) Domestic lending to the private sector Granger causes domestic investment in ECOWAS. The study suggests that the measure of financial development used as a policy tool to encourage domestic investment to be carefully considered. We also stress the need of using country-specific domestic investment strategies rather than broad-brush initiatives. When anticipating future domestic investment, domestic lending to the private sector should take precedence.

The economic growth literature provides substantial evidence that investment enhances economic growth and development in emerging nations, including Ghana. As a result, Ghana's recent growth and development policies have emphasized the expansion of the financial sector as a means of stimulating private sector investment. For the period 1970–2014, Sakyi, Boachie and Immurana (2016) examined the short- and long-run effects of financial development on private investment in Ghana. Several financial development indicators are also used to see if the measurement of financial development matters for private investment. The findings, which are based on the ARDL bounds testing approach to cointegration, suggest that financial development has not been a significant driver of private investment in the long run, while the effect of financial development on private investment in the short run is dependent on how financial development is measured. Given these findings, policymakers should exercise caution when selecting a

financial development indicator to employ as a policy tool in the establishment and implementation of Ghana's private investment policies.

Theoretical and empirical research on the causal relationship between financial development and investment is reviewed by Muyambiri and Odhiambo (2018). Based on the literature reviewed, it is clear that there is little agreement on the direction of causality between financial development and investment at this time. The analysis concludes that the majority of studies on the causal relationship between financial development and investment are heavily slanted toward evaluating the causal relationship between the bank-based side of financial development and the market-based side of financial development. The causal association between financial development and investment appears to be equivocal at best, based on the number of papers examined. Furthermore, the analysis reveals that the link between these two macroeconomic variables appears to vary per nation, depending on the proxies used to quantify financial development as well as the technique used.

Between 1976 and 2014, Caldera-Sanchez et al., (2016) examined the impact of financial development on investment in South Africa. The flexible accelerator investment model is used to calculate the model. Explanatory factors include composite indices for bank-based and market-based financial development indicators. Both bank-based and market-based financial development have an accelerator-enhancing influence on investment, according to the calculated model. The findings suggest that market-based financial development has a long-term beneficial influence on investment, whereas bank-based financial development has

a short-term negative impact. Market-based financial development has a positive accelerator-enhancing effect on investment in the long run, which has implications for South Africa. Bank-based financial development, on the other hand, has been demonstrated to have a negative accelerator-increasing effect on investment in the short run.

The impact of financial development on investment was explored in this study by Bara et al., (2016). It presents a topical analysis of empirical research focusing on the interaction between financial development and investment, as well as the determinants and measurement of both financial development and investment, as well as empirical findings on the relationship between the two variables under consideration. According to the study, most research on the relationship between financial development and investment is heavily slanted toward examining the relationship using largely bank-based financial development indicators rather than market-based financial development indicators. The impact of financial development on investment appears to be equivocal at best, based on the number of papers reviewed. Furthermore, the research reveals that the association between these two macroeconomic variables appears to vary by country.

CHAPTER THREE

RESEARCH METHODS

Introduction

This chapter specifically outline the detailed description of the research methods utilized in conducting the study, empirical specification of the model that capture the effects of financial development on private investment. The measurement and justification of the variables, source of data and estimation technique are presented in this chapter. The chapter also focus on the estimation technique with emphasis on the stationarity test, cointegration test and diagnostic tests. Finally, the V-ector Error Correction Model (VECM) estimation was utilize to estimate the results of the study.

Research Design

The researcher collected secondary data for the period 1984 to 2018. The data was annual time-series data. The variables used include inflation, real exchange rate, Gross Domestic product domestic savings, Foreign Direct investment, interest rate, gross fixed capital formation (private sector) was used to measure private investment and financial development index. The data was sourced from the World Development Indicators and the International Monetary Fund (IMF) database.

Empirical Model Specification

Based on empirical literature, the effects of financial development on private investment were specified as follows:

$$lnPIV_t = \beta_0 + \beta_1 lnFIND_t + \beta_2 lnGDP_t + \beta_3 lnINFLAT_t + \beta_4 lnINT_t + \beta_5 lnFDI + \beta_6 lnRER + \varepsilon_t \quad (1)$$

Where $\beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \beta_6$ are the parameters of the respective variables in the model, β_0 is the constant term, ε_t is the error term and t is time. lnPIV is the natural log of private investment, $lnFIND$ is the natural log financial development index, $lnINFLAT$ is the natural log of Inflation, $lnINT$ is the natural log of Interest rate, $lnGDP$ measures the natural log of Gross Domestic Product Growth, $ln\ FDI$ is the natural log Foreign Direct Investment, $lnRER$ is the natural log of real interest rate.

Estimation Techniques

In time series modelling, it is important to undertake several procedures such as unit root test to determine the regression model to be estimated in order to achieve the stated objectives of the study. The study conducted unit root test.

Unit Root Tests

The stationarity of each of the variables was assessed by conducting the unit root test. Time series data are likely to be non-stationary in the level forms and that regression with non-stationary times series data generate spurious results. This refers to the situation results from the regression explains a strong as well as statistically significant relationship between dependent and independent variables, however in real sense there is no relationship among such variables. A time series is considered stationary when its statistical properties such as the mean, variance are steady over time and the covariance as it were depending on the crevice between the two period and not on the precise time at which the covariance is calculated. If

the series is stationary then, it has no unit root. To avoid the estimated coefficients being spurious we employ the Augmented Dickey-Fully (ADF) and the Phillip Perron (PP) tests. The equation to be estimated with the ADF is as follows.

$$\Delta X_t = \beta + \delta_t + \rho X_{t-1} + \sum_{i=1}^{\rho} \theta_i \Delta X_{t-1} + \epsilon_t \quad (2)$$

Where ϵ_t is a pure white noise error term, and Δ is the first difference operator, X_t denoting the series at time t, ρ δ are the estimable parameters.

The null and the Alternative hypothesis for the test is given by:

$H_o: \rho = 0$ Has unit root

$H_A: \rho < 0$ Has no unit root

Therefore, the series is considered stationary, if the t statistics is more negative than the critical values otherwise, we fail to reject the null hypothesis and conclude that the series is non-stationary meaning it has unit root.

For empirical analysis of the results, V-ector error correction model (VECM) estimation technique will be used to check for their short and long run relationship between the variables in the model. Enders (1995) and Feasel et al (2001) suggested that VECM is more superior for analysis than any single equation approach for capturing the long run dynamics of the variables. Impulse response function will also be used to trace the effect of the present and future values of the endogenous variable of one standard deviation shock to one of its innovation and variance decomposition, augmented Dickey Fuller test and Philips-Peron was used to check for stationarity. By adopting the method of Enders (1995) and Feasel et al (2001) as presented in Choong, Yusop and Liew (2005), equation (1) was expressed in a VECM model as:

$$\Delta lnPIV_t = \alpha + \sum_{i=1}^{k-1} \beta_i \, \Delta lnPIV_{t-i} + \sum_{j=1}^{k-1} \gamma_j \Delta \, lnFIND_{t-j} + \sum_{m=1}^{k-1} \delta_m \, \Delta lnGDP_{t-m} + \sum_{h-1}^{k-1} \theta_h \, \Delta lnINFLAT_{t-h} + \sum_{z=1}^{k-1} \emptyset_r \, \Delta lnINT_{t-z} + \sum_{q=1}^{k-1} ₮_q \, \Delta lnFDI_{t-q} + \sum_{w=1}^{k-1} ₥_w \, \Delta lnRER_{t-w} + \lambda_1 ECT_{t-1} + u_{1t} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots 1$$

$$\Delta lnFIND_t = \alpha + \sum_{i=1}^{k-1} \beta_i \, \Delta lnPIV_{t-i} + \sum_{j=1}^{k-1} \gamma_j \Delta \, lnFIND_{t-j} + \sum_{m=1}^{k-1} \delta_m \, \Delta lnGDP_{t-m} + \sum_{h-1}^{k-1} \theta_h \, \Delta lnINFLAT_{t-h} + \sum_{z=1}^{k-1} \emptyset_r \, \Delta lnINT_{t-z} + \sum_{q=1}^{k-1} ₮_q \, \Delta lnFDI_{t-q} + \sum_{w=1}^{k-1} ₥_w \, \Delta lnRER_{t-w} + \lambda_2 ECT_{t-1} + u_{2t} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots 2$$

$$\Delta lnGDP_t = \alpha + \sum_{i=1}^{k-1} \beta_i \, \Delta lnPIV_{t-i} + \sum_{j=1}^{k-1} \gamma_j \Delta \, lnFIND_{t-j} + \sum_{m=1}^{k-1} \delta_m \, \Delta lnGDP_{t-m} + \sum_{h-1}^{k-1} \theta_h \, \Delta lnINFLAT_{t-h} + \sum_{z=1}^{k-1} \emptyset_r \, \Delta lnINT_{t-z} + \sum_{q=1}^{k-1} ₮_q \, \Delta lnFDI_{t-q} + \sum_{w=1}^{k-1} ₥_w \, \Delta lnRER_{t-w} + \lambda_3 ECT_{t-1} + u_{3t} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots 3$$

$$\Delta lnINFLAT_t = \alpha + \sum_{i=1}^{k-1} \beta_i \, \Delta lnPIV_{t-i} + \sum_{j=1}^{k-1} \gamma_j \Delta \, lnFIND_{t-j} + \sum_{m=1}^{k-1} \delta_m \, \Delta lnGDP_{t-m} + \sum_{h-1}^{k-1} \theta_h \, \Delta lnINFLAT_{t-h} + \sum_{z=1}^{k-1} \emptyset_r \, \Delta lnINT_{t-z} + \sum_{q=1}^{k-1} ₸_q \, \Delta lnFDI_{t-q} + \sum_{w=1}^{k-1} ₵_w \, \Delta lnRER_{t-w} + \lambda_4 ECT_{t-1} + u_{4t} \quad \ldots\ldots 4$$

$$\Delta lnINT_t = \alpha + \sum_{i=1}^{k-1} \beta_i \, \Delta lnPIV_{t-i} + \sum_{j=1}^{k-1} \gamma_j \Delta \, lnFIND_{t-j} + \sum_{m=1}^{k-1} \delta_m \, \Delta lnGDP_{t-m} + \sum_{h-1}^{k-1} \theta_h \, \Delta lnINFLAT_{t-h} + \sum_{z=1}^{k-1} \emptyset_r \, \Delta lnINT_{t-z} + \sum_{q=1}^{k-1} ₸_q \, \Delta lnFDI_{t-q} + \sum_{w=1}^{k-1} ₵_w \, \Delta lnRER_{t-w} + \lambda_5 ECT_{t-1} + u_{5t} \quad \ldots\ldots 5$$

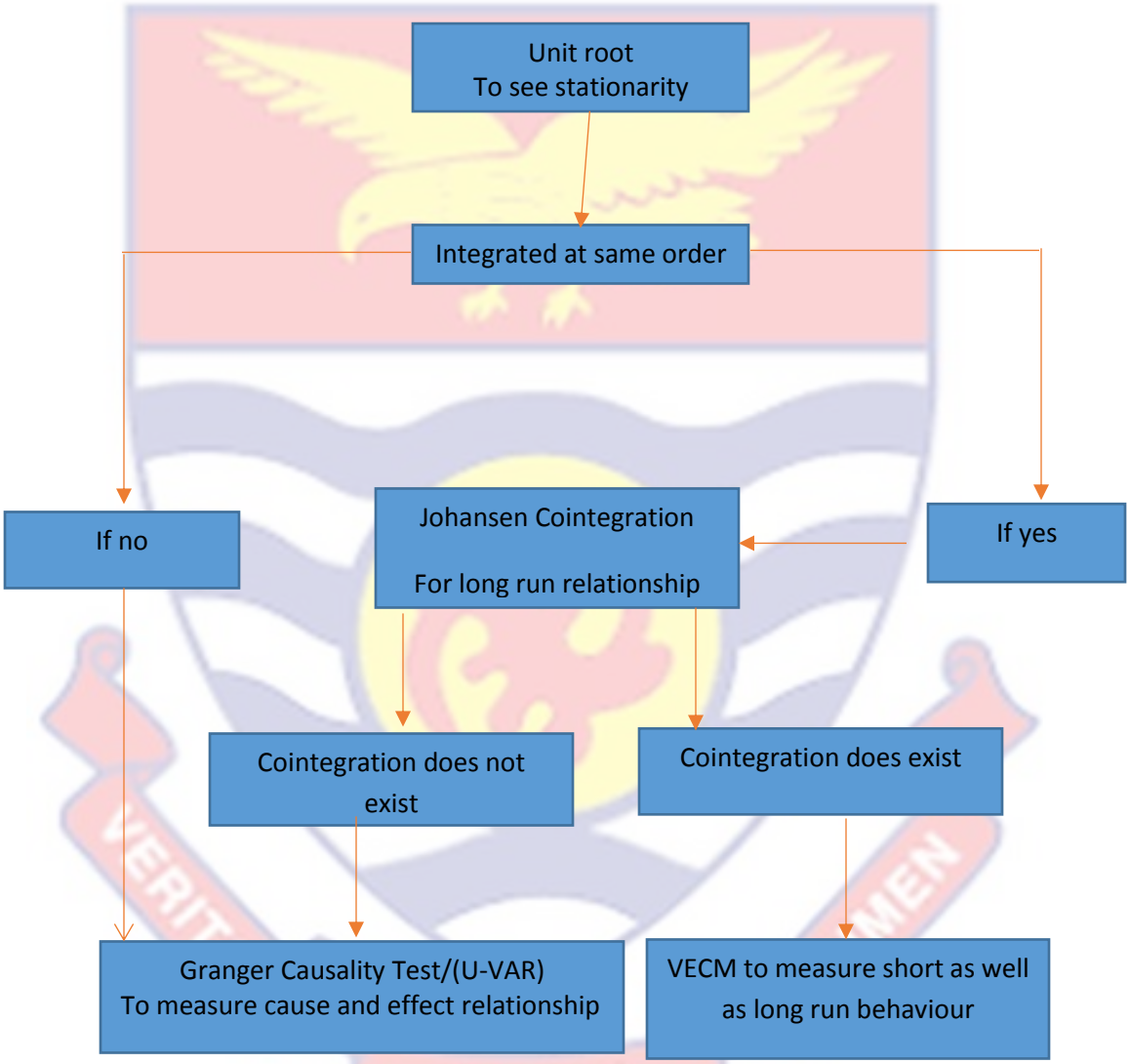
$$\Delta lnFDI_t = \alpha + \sum_{i=1}^{k-1} \beta_i \, \Delta lnPIV_{t-i} + \sum_{j=1}^{k-1} \gamma_j \Delta \, lnFIND_{t-j} + \sum_{m=1}^{k-1} \delta_m \, \Delta lnGDP_{t-m} + \sum_{h-1}^{k-1} \theta_h \, \Delta lnINFLAT_{t-h} + \sum_{z=1}^{k-1} \emptyset_r \, \Delta lnINT_{t-z} + \sum_{q=1}^{k-1} ₸_q \, \Delta lnFDI_{t-q} + \sum_{w=1}^{k-1} ₵_w \, \Delta lnRER_{t-w} + \lambda_6 ECT_{t-1} + u_{6t} \quad \ldots\ldots 6$$

$$\Delta lnRER_t = \alpha + \sum_{i=1}^{k-1} \beta_i \, \Delta lnPIV_{t-i} + \sum_{j=1}^{k-1} \gamma_j \Delta \, lnFIND_{t-j} + \sum_{m=1}^{k-1} \delta_m \, \Delta lnGDP_{t-m} + \sum_{h-1}^{k-1} \theta_h \, \Delta lnINFLAT_{t-h} + \sum_{z=1}^{k-1} \emptyset_r \, \Delta lnINT_{t-z} + \sum_{q=1}^{k-1} ₸_q \, \Delta lnFDI_{t-q} + \sum_{w=1}^{k-1} ₵_w \, \Delta lnRER_{t-w} + \lambda_7 ECT_{t-1} + u_{7t} \quad \ldots\ldots 7$$

The flow chart for performing the VAR/VECM model is espoused below.

If the linear combination of the variables is stationary at the same order, then the cointegration test can be applied.

The flow chart for performing the VAR/VECM model



Source: Author's construct (2022)

Cointegration Test

The cointegration analysis permits us to check for the long-run relationship among the variables included within the model. The arrangements are cointegrated,

in case they show a well-established long run relationship or a common trend. Thus, if there exist a two non-stationary series, then a linear combination of the two variables would also be non-stationary. To deal with the problem of non-stationary, the first differenced data was employed in the estimation of the results. The test for cointegration test can be done using varied methods. The residual-based Engle and Granger (1987) test, Johansen-Juselius (1990) test and the maximum likelihood-based Johansen (1995) are some of the methods that can be conducted to check for cointegration. The methods above are considered by several researchers as efficient method to apply for series integrated of order one (that is I (1)) and generally requires larger observation variables. However, the number of observations employed in the study will not permit us to use Johansen-Juselius test. As a result, the existence of long-run relationship among the variables was ascertained by the bounds test procedure.

Definition, Measurement of Variables and Expectations of Signs

Financial Development

Financial development constitutes any activities geared towards the perfections in financial functions such as providing information and allocation of capital on investments opportunities as well as mobilization of savings and easing exchange activities within the economy (Sakyi, Kofi Boachie, & Immurana, 2016). Financial development was measured based on the latest index from the Global Financial Index which is a proxy of the Financial Depth, Access, Efficiency and Stability. Financial development was expected to promote private investment.

Real Exchange Rate (RER)

Basically, the real exchange rate can be defined as the nominal exchange rate that takes the inflation differentials among the countries into account. Its importance stems from the fact that it can be used as an indicator of competitiveness in the foreign trade of a country. Therefore, when real exchange rate increases, private investment was expected to increase.

Foreign Direct Investment (FDI)

This refers to the investment made by foreign nationals in a domestic economy for which the foreign investor gains a complete ownership of the company purchase. They include mergers and acquisition, building new facilities, reinvesting profit earn from overseas operation etc. This study made use of the net inflows as the share of GDP in the measurement of foreign direct investment. Thus, consistent with how it was measured in previous studies such as Frimpong and Oteng-Abayie (2006) and Asiedu (2013). The nature of home country economic structure and macroeconomic environment determines the influence of FDI on private investment (Al-Sadig, 2013). We expect private investment to increase as the net FDI inflows increases.

Private Investment

In macroeconomic terms, private investment is the purchase of a capital asset that is projected to create income, appreciate in value, or both generate income and appreciate in value. A capital asset is simply property that is difficult to sell and is typically purchased to assist an investor in making a profit. Gross fixed capital formation (private sector) was used to measure private investment.

Gross Domestic Product

This is the final value of output produced in an economy at a particular point in time usually a year. The investment opportunities of every country is determined by the growth of GDP. The accelerator model posited that the rise in output is positively correlated with the rate of investment. Therefore, GDP was expected to stimulate private investment (Konor, 2014).

Inflation Rate

Inflation constitutes the rate at which prices rise over time. Inflation is usually defined as a wide measure of price increases or increases in the cost of living in a country. Inflation rate was expected to positively influence private investment.

Interest Rate

Interest rate is an essential determinant of private investment. The level of interest rate informs investment decisions of the private investor. An increase in interest rates is disincentive for private investor to invest and vice versa. Interest rate was expected to negatively influence private investment.

Data Analysis

The researcher used both the descriptive and quantitative method to estimate achieve the objectives of the study. To aid in the descriptive analysis, the study employed charts such as graphs and tables. The order of integration of the variables was ascertained by a unit root test. The study adopted V-ector error correction model (VECM) methodology for cointegration as employed by Enders

(1995) and Feasel et al (2001). The statistical program used for the analysis was Eviews 10.0.

Chapter Summary

The research methods used in conducting the study were presented in this chapter. The study employed the quantitative research approach. The study also used explanatory research design as it seeks to clarify the impact of short-run and long-run effects of financial development on private investment in Ghana in Ghana. The study employed secondary data for the period 1984 to 2018**.** Some baseline models were further developed for the study. Unit root test was conducted to assess the stationarity of variables. To avoid the estimated coefficients being spurious, the study employed the Augmented Dickey-Fully (ADF) and the Phillip Perron (PP) tests. For empirical analysis of the results, the study adopted Vector error correction model (VECM) methodology for cointegration as employed by Enders (1995) and Feasel et al (2001) to check for their short and long run relationship between the variables in the baseline model.

CHAPTER FOUR

RESULTS AND DISCUSSION

Introduction

The purpose of this chapter is to present an in-depth analysis and discussion of results of the study. This section of the study outlines the pre-estimations results such as descriptive statistics, lag selection criteria, unit root testing and co-integration testing. It also highlights the estimations (main results and discussion) and post estimation results which includes normality test, serial correlation test and Heteroskedasticity Tests (No Cross Terms). The estimations are done in relation to the objectives of the study.

Descriptive Statistics

The study visualized the nature of the variables by using descriptive statistics. The results of the descriptive statistics of the variables in the study are presented in Table 1 below. The result shows that the mean private investment over the study period is US $19.663 billion dollars, with a maximum investment of US $23.992 billion dollars and a minimum investment of US $13.845 billion dollars. This implies that private investment is a key component of Ghana's economy. Also, the mean financial development is -2.223 with a maximum and minimum financial development of -1.918 and -2.538, respectively. The negative sign implies that the contribution of financial development in Ghana is still below the targeted expectation. Again, the mean of Ghana's economic growth is US $22.040 with maximum and minimum growth of US $26.455 and US $17.113 respectively over the study period. This means that Ghana's economy has seen a significant

improvement over the study period. Moreover, the average inflation rate over the study period is 2.92%, ranging from 4.085% as the maximum to 1.582% as the minimum over the study period. Furthermore, the average rate of interest over the period of study is 7.275%, with the maximum rate of interest at 7.446% and a minimum rate of interest of 6.9%. Interest rates have been relatively stable over the study period in Ghana. Furthermore, the mean contribution of foreign direct investment is 0.49% of Ghana's economic growth (GDP), with its maximum contribution of 2.253% and the minimum contribution of -3.094%. Finally, the average exchange rate over the period, especially from Ghana cedi to the US dollar, is 4.732%, with the maximum rate of exchange considered to be 6.644% and the minimum rate of exchange as 4.206%.

Table 1: Summary Statistics of the Variable

	LNPIV	LNFIN_D	LNGDP	LNINFLAT	LNINT	LNFDI	LNRER
Mean	19.663	-2.223	22.040	2.915	7.275	0.490	4.732
Median	19.923	-2.272	22.060	2.860	7.279	0.740	4.644
Maximum	23.992	-1.918	26.455	4.085	7.446	2.253	6.181
Minimum	13.845	-2.538	17.113	1.582	6.900	-3.094	4.206
Std. Dev.	3.329	0.158	2.857	0.594	0.113	1.631	0.413
Skewness	-0.266	0.549	-0.063	0.029	-1.078	-0.740	1.835
Kurtosis	1.814	2.421	1.800	2.277	4.745	2.342	6.794
Jarque-Bera	2.463	2.249	2.122	0.767	11.220	3.826	40.624
Probability	0.292	0.325	0.346	0.681	0.004	0.148	0.000
Sum	688.210	-77.821	771.386	102.036	254.641	17.138	165.610
Sum Sq. Dev.	376.762	0.849	277.466	12.005	0.437	90.481	5.804
Observations	35	35	35	35	35	35	35

Source: Field data (2022)

Lag Selection Criteria

The optimal lag for the study was determined by using the Akaike information criteria (AIC) and the results are presented in Table 2 below. The Akaike information criteria results selected lag 2 as the optimal lag for the study as indicated by the asterisk. Thus, the study used the optimal lag 2 for the checking the co-integration of the variables, for estimations and post estimations.

Table 2: Lag Selection Criteria

Lag	LogL	LR	FPE	AIC	SC	HQ
1	90.11810	NA	3.07e-11*	-1.582915	1.319402*	-0.606374*
2	162.6864	74.76732	3.44e-11	-2.102205*	3.702430	-0.149122

Source: field data (2022)

Unit Root Test Results

The study determined the stationarity of the variables or the series to ascertain whether the series has a unit root or not. The Augment Dickey Fuller and Philips-Perron stationarity techniques were employed in testing the series. The results of the test are presented in Table 3 below. The result of the Augment Dickey Fuller indicated that the series were stationary at the first difference except for the real effective exchange rate, which was stationary both at levels and at the first difference. The results of the Philips-Perron stationarity technique also confirmed the findings of the Augmented Dickey Fuller technique that all the series were stationary at first difference. This means that there could be a long-term relationship among the series, thus precluding co-integration testing.

Table 3: Unit Root Test

	AUGMENTED FULLER	DICKEY	PHILIPS-PERRON	
Variable	I(0)	I(1)	I(0)	I(1)
LNPIV	-2.391070	-2.690801***	-2.922226**	-9.121930*
LNFIN. DEV	-0.997819	-7.744090*	-2.347885	-14.00836*
LNGDP	-1.573274	-5.309167*	-2.531751	-5.323376*
LNFDI	-2.083521	-5.812512*	-2.974287**	-7.323131*
LNINT	-1.295348	-6.098243*	-3.501907**	-8.958566*
LNINFLAT	-0.881243	-5.831023*	-4.312392	-13.94546*
RER	-5.355291*	-3.901676*	-3.767840	-5.059923*

, ** and * Denotes 1%, 5% and 10% significance level*

Source: Author's Construct

Cointegration Approach

The study conducted a cointegration test to ascertain whether there was a long-run relationship among the series or not. The Johansson cointegration method was used to determine the long run relationship among the series by comparing the trace statistics at the various ranks with the critical value. The null hypothesis of the test states that there is no cointegration among the series, as against the alternative hypothesis that there is cointegration among the series or the variables.

Table 4 presents the results of the Johansson unrestricted cointegration test. The result indicates that there are three (3) cointegrating equations. This further means that the study fails to accept the null hypothesis of no cointegration. Thus, it is evident that there is a long-term relationship among the series or variables in the study.

Table 4: Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.811385	186.5192	125.6154	0.0000
At most 1 *	0.787332	131.4735	95.75366	0.0000
At most 2 *	0.681459	80.38869	69.81889	0.0056
At most 3	0.468487	42.63656	47.85613	0.1417
At most 4	0.292635	21.77963	29.79707	0.3109
At most 5	0.236788	10.35473	15.49471	0.2544
At most 6	0.042625	1.437492	3.841466	0.2305

Source: Author's Construct

Long Run Effect of Financial Development on Private Investment

The study examined the long-run effect of financial development on private investment in Ghana over the study period from 1984 to 2020 using the vector error correction model (VECM). The VECM vitality is that if variables are not stationary at levels but co-integrated, the VECM estimates are more effective than estimates from ordinary least squares or standard VAR because they overcome the endogeneity problem and the inherent spurious inferences from ordinary least squares. Thus, a vector error correction model was used in analysing the long-run effect of financial development on private investment.

Table 5 shows the empirical results of the effect of financial development on private investment. The results indicate that financial development has a negative effect on private investment at a 5% significance level in the long run. A percentage increase in financial development will result in a 7.98% decrease in private investment. This could be attributed to a variety of factors, including

increased bank capitalization and foreign entry; rapid credit growth and its impact on non-performing loans (Le Roux & Moyo, 2015); and domestic credits and international private debt flows (Caldera-Sanchez et al., 2016; Bara et al., 2016). Moyo and Le Roux (2020) concluded that the negative impact of financial development on private investment is as a result of currency devaluations, account deficits, high inflation, and interest rates. It could also be as a result of weak legal and regulatory supervisory systems that cause such a relationship between financial development and private investment (Moyo & Le Roux, 2020). This study validates the previous studies on the relationship between financial development and private investment.

Similarly, to financial development, other factors that have a negative association with private investment are foreign direct investment and exports. The resultant effect of a percentage increase in foreign direct investment inflows into Ghana is a reduction of private investment by 0.68%, holding all other things constant. This could be as a result of the technological superiority of foreign firms that positions them in an advantageous position to be more efficient in investment than private investors. Cordon and Neary (1982) concluded that the negative relationship between foreign direct investment and private investment is possibly the result of the exchange rate appreciating from the financial flows.

Contrary to financial development and foreign direct investment inflows into Ghana, economic growth has a positive connection with private investment at a 10% level of significance. This further indicates that a percentage increase in economic growth will lead to a 1.86% rise in private investment in the long run,

ceteris paribus. The private sector invests in new projects, innovates and takes advantage of the opportunities offered by available technologies, thereby creating jobs and increasing productivity. These conditions bring about efficient public investment that compounds with private investment to increase growth. In line with expectations, Afonso and Aubyn (2019) showed that private investment induced a positive growth path in all sample countries.

In the same vein, interest rates have a positive relationship with private investment at a 5% level of statistical significance. This implies an increase in the rate of interest stimulates private investment by 0.45% while holding another factors constant in the long run. Higher interest rates reduce investment, because higher rates increase the cost of borrowing and require investment to have a higher rate of return to be profitable. Contrary to this expectation, poorly developed financial markets in less developed countries (LDCs) and inadequate access to foreign financing for most private projects both imply that private investment is constrained largely by domestic savings. These, in theory, are expected to respond positively to higher real interest rates. For this reason, private investment could, on balance, be positively related to interest rates in developing countries (Bader & Ahmad, 2014), as cited in Greene and Villanueva (1990).

The study's long run results showed that inflation has a positive relationship with private investment, but the effect of the relationship was not significant. This could be attributed to the implementation of inflation programs such as targeting the monetary policy rate and inflation target, which offset the impact of inflation on private investment. In contrast, the real effective exchange rate has a negative

association with private investment, but the effect thereof on private investment is not significant. This is due to exchange rate policies such as import reduction and export promotion resulting in their having no significant effect on private investment.

Table 5: Long Run Effect of Financial Development on Private Investment

Variables	Coefficient	Standard Error	t	p-value
LNPIV(-1)	1.000000			
LNFIN_D(-1)	7.980704	0.59879	13.3280	0.0449
LNGDP(-1)	-1.856504	0.06884	-26.9688	0.0688
LNINFLAT(-1)	-0.292534	0.12940	-2.26070	0.1294
LNINT(-1)	-0.450560	0.59691	-12.13127	0.03714
LNRER(-1)	0.935380	0.18546	5.04353	0.18546
LNFDI(-1)	0.679250	0.06539	10.3883	0.06539
C	74.76383			

Source: Author's Construct

Short Run Effect of Financial Development on Private Investment

The study examined the short-run effect of financial development on private investment in Ghana. Prior to the short run results of financial development on private investment, the error correction term, which shows the speed of convergence, was negative and statistically significant at 10%. This indicates that the short run will converge to the long run at a speed of 0.57%. In analysing the effect of financial development on private investment, Table 6 shows the short run results.

The results show that lag 1 of financial development has a positive and statistically significant association with private investment at a 5% level of

investment. The resultant effect of financial innovation or development by 1% will result in a 0.96% increase in private investment. Business investment can affect the economy's short-term and long-term growth. In the short term, an increase in business investment directly increases the current level of gross domestic product (GDP), because physical capital is itself produced and sold.

Moreover, economic growth at both lags has a positive association with private investment at a 5% level of significance in the short run. Thus, a percentage increase in economic growth leads to an average increase in private investment of 0.48%. During a healthy economic expansion, businesses tend to see rising demand for their products. This is what leads them to increase investment in order to increase production in order to accommodate the increased demand.

Contrarily, the inflation rate has a negative association with private investment at a statistical significance level of 5%, indicating that a percentage increase in inflation leads to a decline in private investment by 0.25% in the short run, holding other things constant. Because of the high inflation rate, the credibility of methods for predicting medium and long-term profit decreases, and this distorted economic situation prevents private investors from making sound investment decisions of them will stay indecisively. For this reason, negative relationships between them exist.

Similarly, interest rates have a negative relationship with private investment. A percentage change in the interest rate will lead to 0.50% in the short run. Business investment is typically financed through loans and other debt. As such, interest rates influence business investment decisions by either increasing or decreasing the cost

for a business to borrow funds, thus affecting the profitability of making additional investments. All else equal, when the interest rate rises, the cost of investing increases, which intends to increase the interest rate the business will pay, resulting in less investment overall.

Finally, the effective exchange rate contributes negatively to the improvement of private investment at a 5% significance level. A percentage rise in the exchange rate results in a decline in private investment of 0.43%. An exchange rate depreciation (appreciation) stimulates (dampens) investment by enhancing demand in both the domestic and export markets, but it reduces investment because of the increasing cost of imported intermediate goods and the user cost of capital.

Table 6: Short Run Effect of Financial Development on Private Investment

Variable	Coefficient	Standard Error	t	P-Value
Error Correction:	D(LNPIV)			
CointEq1	-0.566182	0.28232	-5.00544	-0.0564
D(LNFIN_D(-1))	**0.959365**	**1.53819**	**29.92392**	**0.0321**
D(LNFIN_D(-2))	1.205869	1.33942	0.90029	1.3394
D(LNGDP(-1))	**0.117114**	**0.92586**	**9.12649**	**0.0128**
D(LNGDP(-2))	0.843086	0.87297	17.96577	0.0469
D(LNINFLAT(-1))	-0.104787	0.18799	-0.55740	0.18780
D(LNINFLAT(-2))	**-0.245072**	**0.17605**	**-23.3921**	**0.0105**
D(LNINT(-1))	**-0.501392**	**1.29166**	**-9.80951**	**0.0511**
D(LNINT(-2))	-0.107028	1.12436	-0.09519	1.1244
D(LNRER(-1))	-0.015993	0.84218	-0.01899	0.8422
D(LNRER(-2))	**-0.431157**	**0.86204**	**-15.50016**	**0.02781**
D(LNFDI(-1))	0.339569	0.27445	1.23728	0.2745
D(LNFDI(-2))	0.161228	0.22990	0.70130	0.2299
C	-0.024199	0.36425	-0.06643	0.3643

Source: Author's Construct

Responsiveness of financial development to private investment innovations

The impulse response function is an analytical tool which describes the evolution of a variable of interest along a specified time horizon after a shock at a given moment, thus relevant in casual analysis and policy effectiveness. It is also able to trace the effect on present and future values of the endogenous variable of one standard deviation shock to one of the innovations. The study also examined the responsiveness of the industrial sector to oil price volatility using the impulse response function, and the results are illustrated in Figure 1 below.

The response of financial development to private investment fluctuates from period 1 to period 6, declines to negative between period 6 and period 8, increases to positive in period 9 and subsequently declines to negative in period 10. This further indicates that financial development reactions to private investment innovations fluctuate in the short run but have a relatively negative impact on private investment in the long run. This implies that financial development is not flexible enough to match any changes or innovations in private investment in the short run due to the short time length. However, financial institutions, in the long run, have a longer period to adjust the financial systems to match innovations in the private sector. The negative reaction of financial development on private investment is in line with expectations because if financial development does not favour investors, most of them will reduce their investment in the short run, but in the long run, some investors will exit. Asare (2013), analysing the impact of financial development on private investment in Ghana, suggested that the response of private investment to financial development is only marginal.

Again, economic growth's reaction to private investment innovation initially declines, increases from period 2 to period 4, and decreases sharply from period 4 to period 5. Thereafter, it experiences a sharp rise from period 5 to period 6 and fluctuates from period 6 to 10 but remains positive throughout. From the above, it can be deduced that economic growth has a positive association with private investment and innovation from the short run to the long run. Economic growth (GDP) is important for investors because it can affect how the financial markets behave, both positively and negatively. In most cases, strong GDP growth translates into higher corporate earnings, thus positively affecting private investment both in the short and long run.

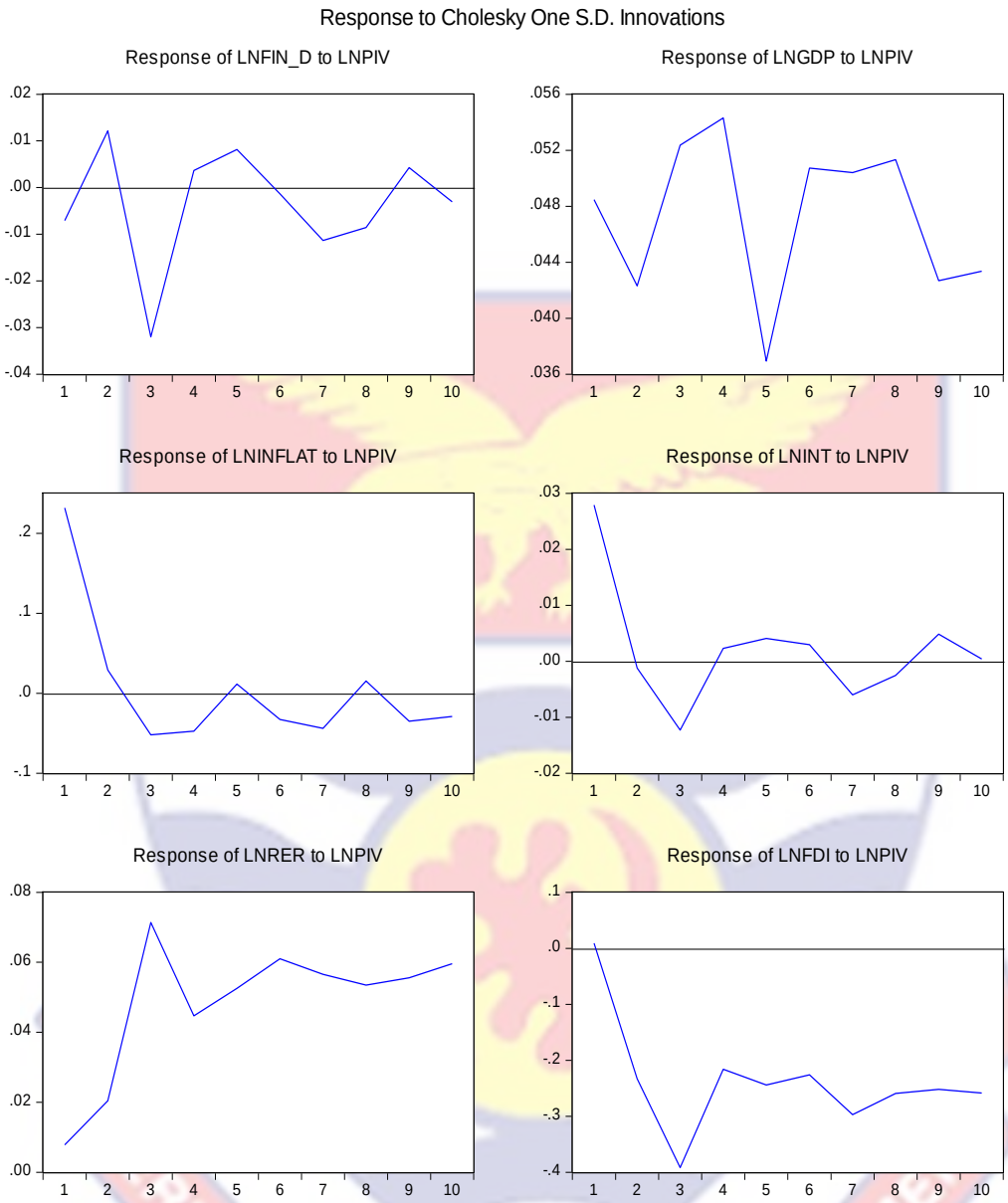
Moreover, the inflation rate decreases suddenly from period 1 to period 3 and remains negative from period 3 to period 10. It can be ascertained that the inflation rate's response to private investment is generally negative from the short run to the long. This means a rise in inflation results in a decline in private investment. Assets with fixed, long-term cash flows tend to perform poorly when inflation is rising, since the purchasing power of those future cash flows falls over time, thus correlating negatively to private investment.

Furthermore, similar to the inflation rate, the interest rate declines to negative from period 1 to period 3, rises from period 3 to period 4 and remains relatively stable from period 4 to period 10. This means that interest responds to private investment innovations by declining to negative in the short run but remaining positive and relatively stable in the long. Interest rates have an effect on businesses because of loans, and on a broader level, interest rates determine

economic activity and asset prices. Higher interest rates mean that people have less money, which lowers asset prices due to decreased demand.

Also, the exchange rate appears to rise sharply from period 1 to period 4, declines from period 4 to 5, then rises from period 5 to 6, and finally remains stable from period 6 to period 10. Generally, the exchange reacts positively to private investment innovations. Thus, establishing a positive relationship between the exchange rate and private investment innovations from the short run to the long run.

Finally, foreign direct investment reacts negatively to private investment innovations from period 1 to period 10, thus establishing a negative connection between foreign direct investment and private investment innovation. This implies that an increase in foreign direct investment will result in a reduction of private investment both in the short run and the long run.



Source: Field data (2022

Figure 2: Responsiveness of financial development to private investment innovation.

Causal relationship between financial development and private investment

The study further examined the causal relationship between financial development and private investment over the study period. The Engel-Grange causality technique was adopted in assessing the causal link between financial development and private investment. The results are presented in Table 7 below.

Inferring from the results, the null hypothesis states that financial development does not granger cause private investment with a probability value greater than the critical value of 0.05. This implies that the test fails to accept the null hypothesis and accept the alternative hypothesis that financial development granger causes private investment. However, the null hypothesis of the second part states that private investment does not granger cause financial development with a probability value less than the critical value of 0.05. This means that the study fails to reject the null hypothesis and concludes that private investment does not granger cause financial development.

Overall, the study establishes a unidirectional causality between financial development and private investment over the study period. The provision of services such as management of liquidity risk, information acquisition and resource allocation, monitoring of investment projects, mobilisation of savings, facilitation of exchange, and risk amelioration leads to increased investment (Muyambiri & Odhiambo, 2018) as cited in Levine (1997). Thus, the influence of financial development on private investment but private investment, however, does not influence private investment. This is the reason behind the bidirectional causality between financial development and private investment.

The results also highlighted the causal link between private investment and the control variables. The results showed that economic growth granger causes private investment and private investment granger causes private investment. Thus, the null hypothesis in both cases was rejected, thus establishing a bidirectional causality between economic growth and private investment.

Furthermore, the results also showed that the inflation rate granger causes private investment, but private investment does not granger cause the inflation rate. The study rejected the null hypothesis that inflation does not cause private investment, but it did accept the null hypothesis that private investment does not cause inflation rate. This means that there is a unidirectional causality between the inflation rate and private investment.

When the study examined the causal link between interest rate and private investment, it failed to accept the null hypothesis in both cases: that interest rate does not cause private investment and that private investment does not cause interest rate. The study concluded a bidirectional causality between interest rates and private investment.

The study further examined the causal link between the exchange rate and private investment. The study failed to accept the null hypothesis that the exchange rate does not granger causes private investment. However, the study failed to reject the null hypothesis that private investment does not granger causes exchange. Thus, a unidirectional causal link between the exchange rate and private investment is established.

Finally, the study further examined the causal relationship between foreign direct investment and private investment. The study failed to accept the null hypothesis in both cases, which stated that foreign direct investment does not granger cause private investment and private investment does not cause foreign direct investment. Thus, the study found a bidirectional causality between foreign direct investment and private investment over the study period.

Table 7: Causal relationship between financial development and private investment

Null Hypothesis:	Obs	F-Statistic	Prob.
LNFIN_D does not Granger Cause LNPIV	33	0.68619	0.5118
LNPIV does not Granger Cause LNFIN_D		4.08340	0.0278
LNGDP does not Granger Cause LNPIV	33	1.17236	0.3244
LNPIV does not Granger Cause LNGDP		1.24770	0.3026
LNINFLAT does not Granger Cause LNPIV	33	0.96392	0.3937
LNPIV does not Granger Cause LNINFLAT		7.81599	0.0020
LNINT does not Granger Cause LNPIV	33	0.45217	0.6408
LNPIV does not Granger Cause LNINT		1.73301	0.1952
LNRER does not Granger Cause LNPIV	33	2.42530	0.1068
LNPIV does not Granger Cause LNRER		4.04838	0.0286
LNFDI does not Granger Cause LNPIV	33	0.23930	0.7888
LNPIV does not Granger Cause LNFDI		1.71268	0.1987

Source: Author's Construct

Diagnostics Test

Diagnostics test was conducted to ascertain the reliability of the results for predictions or making inferences. The diagnostics considered are the serial correlation test, normality test and Heteroskedasticity Tests (No Cross Terms).

Serial Correlation Test

Table 8 presents the serial correlation test. The findings showed that the model was free from serial correlation since all the probability values were greater than the critical value of 0.05. The study fails to rejects the null hypothesis of no autocorrelation at lag 2. Thus, results are free from serial correlation and this model can be used for making inferences.

Table 8: Serial Correlation LM Tests

Lags	LM-Stat	Prob
1	46.00722	0.5952
2	65.99233	0.0530

Source: Author's Construct

Normality Test

Normality test was conducted to ascertain whether the residuals were normally distributed and the results are presented in Table 9. The study fails to accept the null hypothesis that the residuals are not normally distributed. Thus, establishing that the residuals are normally distributed from each component and the residuals are jointly are distributed.

Table 9: Normality Test

Component	Jarque-Bera	df	Prob.
1	4.276397	2	0.1179
2	0.147149	2	0.9291
3	11.16238	2	0.0038
4	1.614718	2	0.4460
5	0.607878	2	0.7379
6	1.449395	2	0.4845
7	4.008576	2	0.1348
Joint	23.26649	14	0.0561

Source: Author's Construct

Heteroskedasticity Tests: No Cross Terms (only levels and squares)

The study also conducted Heteroskedasticity Tests (No Cross terms) and results are presented in Table 10. The results show that there the model is free from Normality test Heteroskedasticity because the probability value is greater than the critical value of 0.05.

Table 10: Heteroskedasticity Tests: No Cross Terms (only levels and squares)

Chi-sq	Df	Prob.
869.8697	840	0.2307

Source: Author's Construct

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Introduction

The summary, conclusions and recommendations of the study are presented in this chapter. The overview of the research problem, objectives, methodology and the findings of the study are presented in this chapter. The conclusions contain all results with respect to the findings of the study based on the hypotheses. Also, policy recommendations to be implemented and suggestions for future research are presented in this chapter.

Summary of Findings

As part of development of private investment as the main engine of growth, the role of financial sector cannot be left out (Sakyi, Boachie, & Immurana, 2016). A robust financial development promotes investment by mobilizing excess monies, financing productive business opportunities and enhancing the trade of goods and services. Owing to the significance of the financial sector in inducing private investment, policies aimed at developing the financial sector is worthwhile. However, studies on the effects of financial development on private investment in Ghana remain scanty. It appears that this issue has not pulled in the consideration of financial researchers in later times. It is against this backdrop that this study sought to provide stronger evidence that financial development is a credible policy for improving private investment.

The study main objective of this study is to examine the effects of financial development on private investment in Ghana. Specifically, the study sought to:

1. To examine the short run and long run effect of financial development on private investment in Ghana.
2. To examine the responsiveness of financial development to private investment innovation in Ghana.
3. To assess the causal relationship between financial development and private investment in Ghana.

The study examines the effect of financial development on private investment by specifically considering the short and long-term effects, causal relationship, and responsiveness of financial development to private investment innovations. The study used a vector error correction model, a granger causality test, and an impulse response function, and the major findings are highlighted below;

In the long run, the empirical findings highlighted that financial development and private investment were negatively related. Similarly, foreign direct investment was found to also have a negative association with private investment. Economic growth and private investment, on the other hand, were positively related. Interest rates, on the other hand, had a positive relationship with private investment while holding other factors constant. In the short run, financial development had a positive effect on private investment. Similarly, economic growth in line with expectations has a positive relationship with private investment

in the short run. Contrary to the above short-run results, the inflation rate and interest rate were found to have a negative relationship with private investment.

The study also examined the relationship of financial development to private investment shock or innovation. The results show that financial development reactions to private investment innovations fluctuate in the short run but have a relatively stable negative impact on private investment in the long run. In line with expectations, the speed of adjustment was negative, implying that there will be convergence in the long run.

Furthermore, the study explored the causal link between financial development and private investment. The empirical findings indicated that there is a unidirectional causality between financial development and private investment. However, the predominant causal link between the control variables and private investment was both unidirectional and bidirectional.

Finally, diagnostics test considered are the serial correlation test, normality test and Heteroskedasticity Tests (No Cross Terms). The study revealed that model employed is free from serial correlation, functional form misspecification, and heteroscedasticity.

Conclusion

In examining the long run and short run effects of financial development on private investment, it can be concluded that financial development in the long run has a negative impact on private investment, whereas in the short run, financial development has a positive impact on private investment. Thus, financial development has an asymmetric effect on private investment both in the short and

long run. It can also be concluded that other long-term factors that influence private investment include economic growth, interest rates, and foreign direct investment, whereas the short-run factors that influence private investment are economic growth, inflation, interest rate, and exchange rate.

Furthermore, based on the results, it can be concluded that financial development reactions to private investment innovations fluctuate in the short run but have a relatively stable and negative impact on private investment in the long run.

Finally, in exploring the causal relationship between financial development and private investment, it is evident from the findings that financial development and private investment have a unidirectional causality. However, the predominant causal links between the control variables and private investment are the unidirectional and bidirectional causality types.

Recommendations

The following recommendations are proposed in relation to the findings of the study.

Based on the conclusion that financial development has a positive impact on private investment in the short run and a negative impact in the long run, the study recommends that financial institutions and financial systems should be regulated to impact private investment positively in the long run. Policy-makers should also aim at improving economic growth in Ghana.

Again, factors such as the exchange rate, inflation, and interest rates have a huge impact on private investment, and policymakers should implement new policies as well as enforce existing ones to stabilise the financial sector.

The study revealed that financial development causes or influences private investment. To improve private investment, it recommends that financial institutions should be strengthened through enforcement of the regulations. This will further stabilise the financial system and improve private investment.

Lastly, the Ministry of Finance and Bank of Ghana as a matter of urgency should intensify the development of the financial sector to promote private investment in Ghana. Any efforts or policies to develop the financial sector should include the provision of information and allocation of capital on investments opportunities as well as mobilization of savings and enabling exchange activities within the economy.

Direction for Future Research

The development of the financial sector was considered as the avenue to boost private investment in this current study. Future studies can investigate factors such as laws and government policies in stimulating private investment in Ghana. Also, future studies can consider financial development in terms of both stock market and the bank-based points of view to ensure an improved and thorough investigation.

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