RELATIONSHIP BETWEEN STOCK MARKET DEVELOPMENT AND ECONOMIC GROWTH: EVIDENCE FROM TANZANIA

RELATIONSHIP BETWEEN STOCK MARKET DEVELOPMENT AND ECONOMIC GROWTH: EVIDENCE FROM TANZANIA

By

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CERTIFICATION

We, the undersigned, certify that we have read and hereby recommend for acceptance by the Mzumbe University, a dissertation entitled **Relationship between stock market development and economic growth: Evidence from Tanzania**, in partial fulfilment of the requirements for award of the degree of master of Science in Accounting and finance of Mzumbe University.

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DEAN SCHOOL OF BUSINESS

DECLARATION AND COPYRIGHT

I, Innocent Justine Kimaro, declare that this dissertation is my own original work and that it has not been presented and will not be presented to any other university for a similar or any other degree award.

Signature _____

Date _____

ACKNOWLEDGEMENT

I would like to thank God the almighty for his protection, guidance and strength throughout the period of my study at Mzumbe University. I am also greatly indebted to my supervisor Dr. Davis Meela for his priceless advice and direction which enabled me to complete this dissertation. Additionally, I would like to thank my family, friends and my fellow classmates who have been with me through this journey. Finally, my appreciation goes to Mzumbe University for the valuable professional skills that I have gotten from the institution which I shall use to advance my career life.

DEDICATION

This dissertation is dedicated to my loving mother Ms. Anna Madale and my father Mr. Justine Kimaro for their unwavering love and support.

ABBREVIATION

CMSA - Capital Market and Security Authority

DSE - Dar es salaam Stock Exchange

GDP - Growth Domestic Product

IPO - Initial Public Offering

MCR- Market capitalization ratio

NBS - National Bureau of Statistics

STR- Stock market turnover ratio

VAR - Vector Autoregressive

VST- Value of share traded ratio

VECM - Vector Error Corrective Model

ABSTRACT

The main purpose of this study is to examine the relationship between stock market development and economic growth in Tanzania. In doing so, the study seeks to unravel the short-run and long-run dynamics between stock markets and economic growth and establishing the nature of causality. The study used real GDP growth rate as the indicator of economic growth, as for the stock market, market capitalization, value of share traded and stock turnover ratio were used as the proxies of stock market development.

Time series data were employed to conduct this study, data from stock market and economic growth from the period of 1999 to 2017 were included in the analysis. Secondary data which were obtained from DSE, NBS, and world bank development data base, and then software for statistics and data science (STATA) was used to conduct the analysis. The relationship between stock market development and economic growth was examined by using Johansen test for cointegration under VECM. We also, conducted a causality test based on granger causality test to find the causality which exist between variables.

The study found that, there is a long-run relationship between stock market development and economic growth. While scrutinizing individual indicators of stock markets, stock market capitalization was found to have a significant positive relationship with economic growth, also the stock turnover ratio, a significant effect on the growth of economy was found. While for the value of shares traded, a negative relationship was found. In the analysis for the short run dynamics, stock markets do not have any impact on economic growth. The granger causality test showed a unidirectional causality running from stock market development proxies to economic growth.

So, the results of the study revealed that, stock market development has a long-run relationship with economic growth. The study recommends that, stock market (DSE) should be well developed, increase its trading activities so as to spur economic growth. Also, DSE should increase trainings and other educational programs to enhance public awareness on the importance of investing with stock markets.

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CHAPTER ONE
PROBLEM SETTING

1.1 Introduction

The thriving usefulness of stock exchange markets globally has intrigued many researchers and economists to examine the association between financial development and economic growth, which mostly focus on the role of stock markets. Scholars has contrasting opinion on the usefulness of financial markets to the growth of economy. Schumpeter (1934) argue that, well-functioning financial markets stimulate technological innovation by financing investments and production processes so to improve and increase output. Although, some economist does not believe if financial markets are really significant in the progress of economy. Lucas (1988) postulate that, scholars severely overstress on the contribution of financial matters in advancement of economy, while development economists still ignore the importance of finance in spurring economic growth (Chandavarkar, 1992).

In view of theoretical ambiguity about the relationship between stock market development and economic growth, extensive empirical studies are of great importance to reveal the complete picture about stock markets and economic growth.

This chapter confer the background of the problem on which the history of stock exchange market in Tanzania is presented, together with the contributions of stock exchange markets in economy, the statement of research problem is then presented, followed by research objectives and research questions of the study based on the research objectives, and finally the chapter presents the significance of this study, hence the whole chapter is presented.

1.2 Background to the problem

The relationship between stock market development and economic growth has been a great debate in many literatures, previous studies and literatures had focused on whether there exists a relationship between stock market development and economic growth.

Other studies also have tried to find out the causal direction between stock market development and economic growth.

Stock markets are widely recognized for their contribution in the economic activities of the country, stock exchange markets provide a means on which capital can be allocated from investors to capital raisers which enhance the investment activities in the country and contribute to the growth of economy (Caporale, Howells, & Soliman, 2004). Stock markets have been growing positively with many participants in the market, emerging markets have been growing tremendously and are being integrated with the world capital markets (Demirguc-Kunt & Levine, 1996).

The major role played by stock markets in economic growth is to create liquidity in the market, with liquid market, investments tend to be more attractive because investors can acquire an asset and hold it or resell it at any time when they need to access their investment (Demirguc-Kunt & Levine, 1996). Stock markets have different ways to influence economic activities, first it helps in mobilizing domestic saving by improving the financial instruments available to investors, they also provide a mechanism through which investors can diversify risk of their portfolio through international integrated stock market. It provide a means to guide or moderate the monetary policy in the country, this is when the government through treasury issue and buy securities in the market (Adjasi & Biekpe, 2006; Stiglitz, 1993; Vazakidis & Adamopoulos, 2009). Also, stock markets increase firm efficiency by eliminating the premature withdraw of invested funds, this lead to increase in firm's capital and enhance the level of production, likewise stock markets raises the fraction of resources devoted to firm by increasing the liquidity level of the firm, this help firms to expand their investment and increase their production output (Levine, 1990) . Stock markets in other way help to attract foreign investors and thus to increase the inflows of capital in the country (N'Zué, 2006). When stock market in the country is well developed, companies will reduce over-dependence on loans from banks for financing their capital needs, instead they will use stock market in raising funds for their long-term capital needs and the cost of financing

is relatively low. Without stock markets, borrower who want to raise capital in long-term will have a difficult time finding a sensible source of financing or can acquire through another means that will be expensive for a business to handle. Lenders with surplus unit will have a difficult time to allocate their funds in long-term investment, so in absence of stock market those with deficit unit will hardly meet surplus unit, this will limit the flow of resources, and investors facing illiquidity shock will have to pull out their funds invested in long-term projects, this cause economic growth to deteriorate significantly. If investors pull out their funds, companies will suffer in running their operations and the contribution of these companies in economy will decline (Nieuwerburgh & Buelens, 2005).

The economy of Tanzania has been growing extraordinary since 1996, which made Tanzania one of the fastest growing countries in Sub-Saharan Africa, the economy grew by 3.5 – 7.8 percent in year since 1996 (Robinson, Gaertner, & Papageorgiou, 2009). This acceleration has been driven by domestic demand and investments, with the great contribution from service sector and industry sector. This fast moving in growth can be viewed to be a combination of higher investment and great increase in productivity. The prosper of investments in different sectors is the result of countless support from the financial market and institution (Robinson et al., 2009). In the late 1980s Tanzania was among the countries with poorly established financial system in the world, all main financial organizations were owned by the government and there was no stock exchange market until Capital Market and Security Authority was brought into existence in 1996.

Stock markets in Africa have been steadily growing, from 9 stock markets in 1992 to 18 stock markets in 2002 (Adjasi & Biekpe, 2006) and 29 stock markets in 2018. In Tanzania, The stock exchange market (DSE) was brought into existence in 1996, where the government approved the stock exchange rules, after its formation the Stock exchange market started its operational activities in 1998 with listing of TOL Gases Ltd followed by listing of Tanzania Breweries Limited in the same year (DSE, 2016).

Stock exchange market in Tanzania is regulated by Capital Market and Security Authority (CMSA) which is a government agency formulated to enhance and control securities business in the country. It was inaugurated under CMSA Act of 1994. Capital Market and Security Authority started working as an independent organ during the financial year 1996. The commencement of Capital Market and Security Authority followed major financial sector reforms in 1990s that were intended at enlarging capital markets in Tanzania. The capital markets are recognized for their contribution in providing the suitable mechanisms for mobilizing long-term investments and guarantee efficient distribution of funds to high-yielding sectors which enhance growth of economy. As the stock exchange markets has an important function in economic activities, the relationship between stock markets development and growth of economy need to be examined considering the trend of economic growth in Tanzania from the commencement of stock exchange market (DSE).

The establishment of feasible stock market lean on a strong position of private sector companies in the economy which are ready to engage themselves in the stock market for raising long-term capital. When individuals, companies and institutions are willing to integrate with stock market for investing or raising funds then the country can have an efficient stock market. African stock markets suffer from the illiquidity problem (Adjasi & Biekpe, 2006; Ziorklui, 2001), this make it difficult for local stock markets to support themselves with their own trading system. Illiquidity of stock market tend to increase downside risk and expense of injecting funds into projects which doesn't pay off in long-term (Yartey & Komla, 2007). When prices in the market remain constant or decrease, investor will have to hold their stake until the price stabilize which normally take long time for the markets experiencing illiquidity. But when the stock exchange market is liquid, savers do not lose their savings and they can easily sell their stake. Just like other African countries, stock market in Tanzania (DSE) is characterized by illiquidity in the market, infrequent trading and fewer private firms that are listed in the market (Adjasi & Biekpe, 2006; Massele, Darroux, Jonathan, & Fengju, 2013; Ziorklui, 2001), this tend to hinder the enchantment of the market to local savers and foreign

investors. Illiquidity of the market is the major problem which cause the stock market to lack long-term capital investment (Levine, 1997). In developing countries stock market are not well developed which cause the market to raise low capital from its activities, but since these stock markets operate in the in economy it poses a need to investigate its relationship with country's economy in which they operate.

1.3 Statement of the research problem

This study focusses on relationship between stock market and economic growth in Tanzania. Several researches were carried out to determine the relationship that exist between stock market development and economic growth in developed economies and developing economies (Adjasi & Biekpe, 2006; Caporale et al., 2004; Levine & Zervos, 1996, 1998; N'Zué, 2006; Naik & Padhi, 2015; Nieuwerburgh & Buelens, 2005; Pardy, 1992; Shahbaz, Ahmed, & Ali, 2008; Yartey & Komla, 2007) the contribution of stock market development to economic growth differ from one study to another. According to Pardy (1992) stock market has a significant contribution in economic advancement of developing countries, but they need to be well developed so as they can play an efficient allocative and monitoring role. Also Yartey and Komla (2007) comment that stock markets are critical essential source of fund for financing the development of large companies in some African countries. Adjasi and Biekpe (2006) found that growth of economy in the country can only be influenced with well grown and matured stock markets, on their view's, for countries in African and other least evolved markets supposed to improve more and elevate their markets to trigger off economic gain from stock exchange markets, thus stock markets in Africa has a great contribution toward economic growth for countries which are classified as upper middle income.

Singh (1999) argued that, stock markets have drawbacks on the development of African economy. He put emphasize that, most of African countries have to compete with another vital matters like lack of enough banking system with prudential regulation, this is what it is instantly required at this level of African economic development. He also argues that stock markets in Africa are unimportant and any priority to use resources for

the establishment of stock markets will be misuse of resources, he advises that banking system should be improved as savings and investments needs can be well met with banking system.

Some previous studies which have been conducted in Tanzania have focused on the role the financial markets play in the growth of economy (Odhiambo, 2005; Ziorklui, 2001). Besides, no study has been conducted in Tanzania focusing on the long-run and causality of stock market and the growth of economy. Thus, different researches focusing on the long-term and causal association between capital market development and economic growth in developing countries are very few, even if they exist empirical finding on the causality direction between stock market and economic growth is still not conclusive, and the present evidence reveal that the findings on stock exchange markets and growth of economy are different from one country to another, thus further studies should be conducted in developing countries to ascertain the contribution of stock markets in the growth of economy. In the light of aforesaid conflicting views regarding stock markets in developing countries, this research seeks to examine the relationship which exist between stock market development and economic growth in Tanzania using Johansen test of cointegration based on vector error correction model (VECM).

1.4 Objectives of the study

The study intends to determine the relationship between stock market development and economic growth in Tanzania. Specific objectives of the study were:

i. To assess the relationship which exist between stock market development and economic growth
ii. To examine the causal direction between stock market development and economic growth.

1.5 Research Questions

In order to achieve the objective of the study, this study was directed by the following research questions.

i. What is the relationship which exist between stock market development and economic growth in Tanzania?
ii. What is the causal direction between stock market development and economic growth.?

1.6 Significance of the study

The study was intended to contribute to both theoretical and empirical literature on the role of stock markets in development of economy for African countries. The study examined the long-run relationship between stock market and economic growth by providing evidence from Tanzania. The findings of this study were expected to be useful to the following parties.

CMSA and DSE: this study helps regulator authorities in Tanzania to improve regulations, rules and procedures to be followed by companies or institutions to be listed in stock exchange market. Also, the research information provides vital data to the management of DSE to improve the market, as currently the public awareness regarding stock market is very little hence few individuals and companies participate in the market. so, this study will hell DSE and CMSA to improve their strategies and public awareness so the market can have many participants.

Academicians: the findings of this study contribute to the body of knowledge on both researchers and academicians who want to explore the relationship and causal direction between stock market development and economic growth in developing countries like Tanzania, as currently there are limited findings regarding stock markets and economic growth in developing countries.

Economists: the information from this study will help economists who wants to predict economic performance in Tanzania by looking at the performance of the Dar es salaam stock market index, so economists will be able to analyse the growth of economy in Tanzania by taking into consideration the development of stock market.

The findings of this study also provide the general understanding to capital raisers on the importance of issuing their stake on stock market and the easy way of raising funds with minimal costs. The result of the study will also help the investors to understand how stock market can provide easy access of their long-term capital investment and as the result, many capital raisers and investors will be intrigued to participate in stock markets.

1.7 Structure of the report

To achieve the objective of the study, this report is organised in six chapters.

- **Chapter one**, makes the introduction to the study, it includes, the background of the study, the research problem, the objectives of the study, the research questions and the significance of the study.
- **Chapter two**, provides the review of literature explaining theoretical and empirical considerations, the chapter also explain the conceptual framework adopted in conducting the study, it also presents the hypothesis developed which was later tested.
- **Chapter three**, presents the methodology adopted in conducting the study, the chapter describe the types of data that was used in the study and empirical model used in data analysis.
- **Chapter four**, presents the finding of the study after conducting analysis using STATA software. It presents the descriptive statistics, correlation analysis, cointegration results and the causality test results.
- **Chapter five**, deals with the discussions of the cointegration results and granger causality results which were presented in chapter four.
- **Chapter six**, deals with the summary of the study, also will offer the conclusion and key recommendation based of the findings. This chapter will also highlight the areas for future studies.

CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction

This chapter presents the literature related to the study. The chapter starts by explaining theories of economic growth which explains how the stock markets facilitate the growth of economy, there after the chapter present the whole concept of economic growth and the indicators of economic growth, followed by the overview of stock markets in Africa, and the indicator of stock market developments. The chapter also presents the past empirical review relevant to the study conducted, on which evidences obtained from previous studies on the correspondence between stock market development and economic growth are presented, and there after the chapter presents the conceptual framework used in study, and finally the chapter presents the hypotheses developed in conducting the study.

2.2 Theoretical review

2.2.1 Relevant theories

2.2.1.1 Neoclassical growth theory

This theory was developed by T.S. Swan and Robert Solow, which made a great contribution to economic growth theory. The theory suppose that economic growth is contributed by capital accumulation, population and technological advancement and that labour and capital is subjected to the law of diminishing return. The theory asserts that, there should be continuous developments in technology in form of new goods innovated and new processes in order to keep positive production output in long-run (Aghion, Howitt, & García-Peñalosa, 1998).

The neoclassical model of economic growth argues that, when national income is large, people will be stimulated to save more and this will increase capital invested in production, so as national income increase, saving will increase and so as capital. These development will only be persistence if there's population growth and technological improvements (Solow, 2015). Population growth increase labour supply and if labour

and capital will double, then labour force could use the available capital to replicate what was being produced before, thus resulting into more output (Aghion et al., 1998)

Neo-classical theory of growth stipulates that, the only way for a country to evidence the long-run growth in economy is through technological improvements, advances in technology create a new way of production and hence increase the level of output per person. When output per person increases the overall output of the country will increase in long-run and so the economy will foster. This theory assume the law of diminishing return of capital accumulation, meaning that, when capital is scarce people will be very productive and national income will increase significantly in relation to capital, so people will be persuaded to make saving and as a result capital will increase and also income will increase, but in absence of technology improvements economic growth will start deteriorating and the rate of national output will start falling (Aghion et al., 1998). So, when individuals in a country have high saving rate, the country tend to grow faster than a country where its peoples have lower rate of saving.

The extend that stock market help in mobilizing savings which are directed to investment activities, it results into the growth of economy, so the ability of a country to collect savings is vital for its long-term economic growth. In the presence of stock markets, investors enjoy the high rate of capital accumulation facilitated by the market. stock markets encourage firm investment and growth by reducing the liquidity risk, so investors can inject their capital and be sure to get those funds at the required period of time. The model stipulates that, economic growth occurs if individuals invest and maintain a sufficient amount of capital in firms, the more resources allocated to firms, the rapid the country economic is growing (Levine, 1990)

2.2.1.2 New endogenous growth theory

This theory explains the long-run growth rate of an economy on the basis of endogenous factors as against exogeneous factors of neoclassical growth theory. This theory was developed by (Arrow, 1962), (Romer, 1986) and (Lucas Jr, 1988). It emphasizes on

technical progress as the result of investment rate, size of capital stock and human capital.

According to endogenous theory, the country can attain its economic growth through increase in investments and capital. Stock markets enhance investments by allowing a large fraction of investment to be directed to activities with high returns (Greenwood & Smith, 1997). Stock markets also help to mobilize financial resources from the surplus unit in the economy to deficit unit, this make capital to be easily available for investment purposes even to deficit unit.

The endogenous growth model stipulates that, stock market development may affect economic growth through; improvement of capital by lowering the cost of mobilizing saving, channelling more saving to productive investments, and through provision of liquidity to illiquid capital investment.

2.2.1.3 The Harrod–Domar Model

Harrod and Domar view investment as a key role to economic growth, investment tend to create income and increase production capacity in economy by increasing capital stock (Jhingan, 2011). The theory postulate that, when investment activities are taking place both income and output will increase as the result of increase in capital stock and productive capacity. Domar build his model by considering the role of investment in economic growth, so productive capacity will increase as people involves in investment activities and general output will increase, this make national income to increase too.

When saving ratio and output ratio increase, the country is said to have actual growth rate, this is portrayed by increase in income which stimulate people to invest their funds to generate more income, as the result of earning from investment people will increase their saving ratio (Jhingan, 2011). Also, the economy can grow at the natural rate of growth, this is influenced by increase in population, capital equipment, natural resources and technological advancement. If population grow labour supply tend to increase, the increased labour would make use of capital to fully employ the available resources to increase production level.

Investment activities are done through individuals who want to make saving, and those who want to circulate the borrowed fund to make profit out of it and they usually do that through banks, individual loans and stock markets. In Harrod-Domar model the cycle of production, consumption, investment and saving regenerate itself as individuals work out on their daily production activities. Harrod and Domar specify two groups which have a great contribution on the growth of economy, which are savers and investors. Households are savers who does so by minimizing their consumption on their current income to provide the available fund that will be used as saving. Firms do invest through buying property, plant and equipment also by acquiring latest technology which aid production processes to increase production capacity (Ray, 1998).

This model explains about consumption, saving and investment which is done by households and firm, the model is related with this study taking into accounts saving and investment activities done through stock exchange market. The stock exchange market enables saver and borrowers to invest and borrow money for the purposes of expanding their activities, through stock exchange markets, investment activities are facilitated easily since the market offer the chance of raising capital for the lower cost. When saving rate increase, investors use that amount to expand the investment activities, also borrower can raise more cash since there is more money available for lending with cheap cost. Stock markets provide a room for investors to invest their stake in many different firms, also to use the increased saving rate in maximizing their investments and to be sure to get their funds even before the maturity of their investments, this stimulate individuals to invest more and this act stimulate the growth of economy. So, the increase of investment activities in the economy as provided by stock exchange markets enable business firm to raise more capital and increase the overall output, this led to growth of country's economy.

2.2.2 Economic growth

Economic growth involves the sustained increase in per capital income and output of the country together with increase in labour force, consumption, capital and volume of trade

(Jhingan, 2011). One of the methods used to measure economic growth is in term of an increase in real gross domestic product (GDP) of the country. It measures the value all final goods and services produced within the country's borders for the period of time. GDP is considered as the main indicator of economic output and is the commonly used one. So, the increase in GDP means the value of all goods and services produced in the economy has increased. A country can stimulate the growth of economy by implementing policies that encourage accumulation of funds for firms to invest and for individuals to increase their savings. When economy of the country grows, products produced in the country by individuals and firms will increase in value and there will be a readily market available for the products, this generally improve the living standard of peoples. This study used real GDP growth rate as the measure of economic growth in Tanzania.

2.2.2.1 Indicators of economic growth

(i) Capital accumulation

Capital is the stock of physical reproducible factor of production (Jhingan, 2011) so capital tend to increase (accumulate) with the passage of time and this is called "capital formation". To accumulate capital there should be increase in real savings, presence of financial market or financial institution to mobilize these savings and finally an investment to invest savings through capital goods. Capital formation has a great importance to developing countries, when capital increase, national output will also increase. When individuals invest in capital goods as the result of increased capital, production will increase which will crease new employment opportunities. Capital formation also helps in technological improvements, when a country advance in technology all production activities will improve which leads to better product and increased output (Jhingan, 2011).

In neoclassical theory, capital was accumulated by sacrificing current consumption of consumer goods so as to increase the saving rate for capital goods. But Lewis (1954) in his study of economic growth and capital accumulation argued that, capital is created only out of profit earned but also out of an expansion of credit.

In developing countries, the rate of capital formation is 5% or less, while during the period economic growth, developed countries had net capital formation of 10% to 15% (Kuznets, 1955) so developing countries should boost the rate of capital formation in order to spur economic growth.

(ii) Technological progress

Technological advancements are considered to be the most crucial factor in the economic growth. Technology advances involve changes in the process and techniques involved in production which lead to improvement in the productivity of labour, capital, and also increment in output level (Jhingan, 2011).

Technological progresses which involves, innovation, invention and improvement, usually is accompanied by large improvements in term of quality and productivity level. Developing countries should import new technology to help them in improving productive capacity because it is hard for less developed countries to invent or modify the old technology on their own (Kuznets, 1955). Developed countries have low-cost capital saving and intensive labour productivity so it's easy for them to develop new technology which can be transmitted to developing countries. So, developing countries should enjoy enormous fund of technical know-how of advanced countries since inventing new technology is capital intensive. Industrial technology to be used in developing countries require great attention in processing it and to adapt with it in order to be used successful, so developing countries have to invest a lot in research and development to successful use the imported technology.

(iii) Natural resources

One among principal factor affecting the growth of economy is natural resources or land. Fertility of land, forest wealth, minerals, water resource and climate are the great natural resources which determine the growth of economy. For the growth of economy, presence of natural resource in the country is very essential, if a country is not rich of natural resources will not be in a position to develop quickly (Jhingan, 2011). In developing countries, natural resources are either misused, unutilized or underutilized, this is the main reason which make economic growth in developing countries stagnant. The presence of rich resources is not enough for the country to enjoy economic growth but what is important is exploitation of resources, if the existing resources are not well exploited the country cannot develop. So, natural resources can be exploited when there's improved technology and skills. The country can fully utilize its resources to adapt the changing needs of its people and through new discovery, when the country tries to adapt with the changing needs its economic activities will expand and thus overall economic growth can be evidenced. Thus, for the growth of economy presence of abundant natural resources is not enough, proper exploitation through improved techniques is essential for the country to enjoy the benefit of its natural resources.

2.2.3 Overview of stock markets in Africa

The role of well performing stock markets in enhancing the growth of economy have been noticed all over the world. Stock market have been regarded as a tool which boost economic growth see (Caporale et al., 2004; Levine & Zervos, 1996, 1998; N'Zué, 2006; Naik & Padhi, 2015; Nieuwerburgh & Buelens, 2005). Stock exchange market in Africa have been increasing over years, the financial reform in Africa seems to have intrigued emergence of stock exchange market (Smith, Jefferis, & Ryoo, 2002), from 8 stock markets in 1980's to 29 stock markets in 2018. Raising in the number of equity markets in Africa has been a result of enlargement and restructuring of financial sector which was initiated by African countries to enrich the economic environment. This alteration process has experienced diverse measures on reforming and denationalization

of government banks, promotion and development of capital markets, interest rate liberalization and credit ceilings (Massele et al., 2013). The improvement of technology and innovation has made African stock markets to integrate with globe markets. Levine (1997) argued that stock exchange market liquidity has been a stimulant for long-run growth in developing economies. According to him, without a liquidity in exchange markets, numerous profit-making long-term investments would not be embarked upon since investors would be hesitating to inject their funds for extensive periods of time. In contrast, a liquid stock market provide chance for investors to dispose their stake easily, thus, allowing companies to get capital in the conducive environment. By enhancing long-run, more paying investments, liquid market enhance capital allocation and improves prospects for long-run growth of economy.

In Africa, the South African stock exchange (JSE), Egyptian stock exchange (EGX), and Nigerian stock exchange, are the major equity exchange market in Africa. South African stock exchange is the main in Africa with many initial public offering (IPO's) per year and large capital raised in the market, JSE it was formed in 1887 and it is among 20 largest stock exchange market in the world (ASEA, 2016; PWC, 2017). Excluding South Africa, Egypt and Nigeria, other African exchange markets have less than 100 listed companies as of 2018, and other market does not have even one listing per year. African capital market (excluding South Africa) are extremely small by world standards. The Egyptian Exchange (EGX) is most old stock market in Africa and the most open stock markets in the world, it was instituted in 1883 and it has 252 companies which were listed for the period ended 2017. During the year 2015, the Dar-es-salaam stock exchange (DSE) was demutualized and in 2016 conducted an Initial Public Offerings (IPO) and then self-listed on its own exchange, making it a third stock exchange after Johannesburg and Nairobi Stock Exchanges to list it share (ASEA, 2016).

2.2.4 Stock market development indexes

2.2.4.1 Market size- Capitalization ratio

Stock market capitalization, it measures the value of all listed domestic share on the domestic market. It is a size-based measure which provide the chance for risk diversification and allocation of capital to different investments project. Even though large markets do not necessarily function effectively and taxes tend to destroy incentives available on listing to the exchange market, many previous studies use market capitalization as a proxy of market development. Market capitalization is used as main index of stock market development, since it portrays the total value of firms on stock exchange. As firms' grow in the market, we normally say the overall stock market is growing, as many investors and lender interact with the market. So, the increased level of stock market capitalization normally is accompanied with the increase in volume of business trading in the stock exchange market. So when using time series data to measure the role of stock market on economic growth, market capitalization is good indicator to which describe the influence of stock markets on the growth of economy (Arestis, Demetriades, & Luintel, 2001)

2.2.4.2 Value traded

Value traded, measures the total value of share traded in the stock exchange market. Value traded ratio, is the ratio of share value traded on the stock market as proportion of economic growth (GDP). It is contemplated to be an index which describe the liquidity of the market, value traded provide the value organized trading of companies equity as a share of national output (Naik & Padhi, 2015). A liquid market is the one where transactions take place easily among market participant, so when the large transactions can be made in the market instantly and continuously without substantial movement in price, the market is said to be liquid. Through creation of liquidity stock markets affect economic activities, with liquidity market investors can get access of their savings at any time since they can cheaply and quickly sell their stake in company (Levine & Zervos, 1998), so when stock markets are liquid risk in investments tend to be less and investments turn to be more attractive to investors. Scholars postulated that, with a

market which is liquid, it increases confident for the lenders and savers to involve in the market. Thus, as the liquidity of the market increase it simplify long-term investments and enrich the distribution of funds and improve the projections for the long-run growth of economy (Levine & Zervos, 1998)

2.2.4.3 Market turnover ratio

Stock turnover ratio, this measures between the value of equities transacted and market capitalization. The stock market turnover indicates the amount of share pass hands in local markets to the value of market cap. While value of stock traded grasps trading activities in relation to the size of the economy, stock market turnover grasps trading activities as relative to the size of the stock market, when the turnover ratio is high it implies that transaction cost costs are low in the market (Naik & Padhi, 2015). The stock market turnover has a positive impact on stock market capitalization, so as stock turnover increase the market capitalization will also increase.

A single proxy of capital market development can hardly justify the influence of stock market development on economic growth. So, in this study we used these three indexes of stock market development to measure the relationship with economic growth. Therefore, stock market capitalization, value of equity/ share traded and stock turnover ratio was used in a model independently to allow us to determine which specific proxy greatly explain the contribution of exchange market in economic growth.

2.3 Empirical review

This section provides a review on previous studies which related stock market development and economic growth on different countries. These studies were published in different journals.

Naik and Padhi (2015) conducted a study to assess the association between stock market development and economic growth in emerging market, the study used panel data covering 27 countries. The study found that stock market development significantly contributes to the growth of economy. It was further revealed that trade volume and turnover ratio robustly and positively influence the economic growth. Apart from

indicators of stock market development, other control variables involved in the study (foreign direct investment, trade openness and investment) also had a direct contribution in economic growth. The study also found the unidirectional causation from stock market development to economic growth.

Enisan and Olufisayo (2009) conducted a study to examine the relationship that persist in stock market development and growth of economy for seven African countries (Morocco, Egypt, Zimbabwe, Cote D'Ivoire, Nigeria, South Africa and Kenya). The study found the long-run cointegrating association in stock market development and economic growth exist for two countries (Egypt and South Africa). Unidirectional relation was found to exist from stock market development to economic growth. The findings of the research also revealed the weak one-way causality running from economic growth to stock market development in Nigeria.

Vazakidis and Adamopoulos (2009) used a vector error correction model to explore the causality association between stock market development and economic growth in France considering a period from 1965 to 2007. The results from the findings showed a short-run increase in economic growth of 1% led to an increase of stock market index for 0.24%, also based on the granger test conducted it was revealed that economic growth granger cause stock market development. Thus, the study showed that, growth of economy supported the growth of stock market development.

Caporale et al., (2004) analysed the causal linkage between stock market development and economic growth using data from Malaysia, Chile, Philippines, Korea, Portugal, Greece and Argentina. Proxies of stock market development and developments indicator for banks were used to test whether they have influence in economic growth. The study revealed that, well-performing and evolved exchange markets can lead to economic growth in long-term.

Adjasi & Biekpe (2006) in their study, they explored the effect of stock markets on enrichment of economy for the selected 14 countries in Africa. The study investigated the relationship based on income grouping and market capitalization. The findings of the

study indicated that, stock market play a crucial contribution into the growth of economy, this important role of stock market is evident only when there is improvement in the total value of share traded. So, there is importance of liquid and active trading market to the growth of economy. Also results showed that stock markets had a positive influence on the growth of economy for the countries that are classified as upper middle income.

Also Levine & Zervos (1996) in their study have examined whether there is solid practical connection between stock market development and long-run economic growth. The study used pooled panel data of different countries, time series regressions was adopted to examine the connection between exchange market and economic growth using data from 41 countries over the period of 17 years from 1976 to 1993. The study revealed that stock market development is positively correlated with economic growth. In 1998 Levine and Zervos conducted a study to investigate if well-functioning stock markets and banks promote economic growth. The study found that financial markets provide important services for the growth of economy and that, stock markets and banks should not be confused since they offer different services.

Shahbaz et al. (2008) conducted a research to explore whether there is association between stock market development and growth of economy in Pakistan. The study involved the time series data of 30 years from 1971 to 2006. The finding showed that there is a long-run relationship between stock market development and economic growth, the study also show that stock market development plays an important role toward a country's economic growth. The study further discovered there is bidirectional causality between stock market development and growth of economy in long-run. Although in short-run there is unidirectional causality running from stock market development to economic growth.

The study conducted by Imam Alam and Hasan (2003) examined the directional causality between stock market development and economic growth in USA. It was found that economic growth does not granger cause stock market development in short-run, but

stock market development and interest rate cause changes in economic growth as measured by GDP. It was further found that only stock market development anticipates real change in GDP. The study portrayed that the causality exists and it runs from stock market development to economic growth.

Arestis, Demetriades, & Luintel (2001) studied the connection that exists in equity market and country's monetary advancement while regulating the impact of stock market volatility and effects of banking system using data from five developed economies. The empirical findings showed that stock markets contribute to the long-term output growth. The study also revealed that both stock markets and banks have a great contribution to the growth of economy in France, Germany, and Japan. The findings further portrayed that stock market volatility had a negative real effect in Japan and France, but for case of UK and USA, market volatility had negative influence on both stock market development and economic growth.

Atje & Jovanovic (1993) conducted a research to determine impact of financial advancement particularly in equity market that affect the growth of economy. The study also investigated the influence of bank lending in economic growth. The findings of the study showed a large impact of exchange market on the growth of economic activity. Although the bank lending found not to have any effect on the growth of economy.

Bayar, Kaya, & Yildirim (2014) analysed the association of stock market development with the growth of economy in Turkey using time series data of 14 years from 1999 to 2013. The result from the study showed that, it exists a long-run association between growth of economy, market capitalization, total value traded and stock turnover ratio of stock traded. The findings also showed that long-run association exist between stock market development and growth of economy in Turkey, and stock market development has a positive impact on the growth of Turkish economy. Also, the postulated that for developing countries that want to experience growth of economy from stock markets they should improve their stock exchange markets.

Nieuwerburgh & Buelens (2005) conducted a study to determine the association which exist in stock market development and growth of Belgium economy, by using a time series data from 1830 to 2000. In their study, they found a strong evidence that economic growth does promote stock market, also the study found that, exchange market was a good predictor of economic progress compared to development spurred by banks system.

On the study conducted by Mohtadi & Agarwal (2001) to examines the connection that exist in capital market growth and economic expansion for 21 emerging markets from 1977 to 1997, using panel regression method, the researcher found that stock markets has a great contribution on the growth of economy in two sense. First, the stock market directly impacts on the economy through enhancing the liquidity in market which in turn trigger economic growth. Secondly, the stock market affect investments through improvement of market capitalization which in turn affect growth. Also, Ake (2010) conducted a research to explore the contribution of capital market development in stimulating growth of economy for five Euronext nations (United Kingdoms, Portugal, Netherlands, Belgium and France), in his study Granger causality test was adopted to assess the causal linkage that exist in stock market proxies with growth of economy. The study examined the causal association independently for each country. From the findings of the study it was revealed that, there exist a positive connection between the stock market and economic growth for some countries which have the liquid and active stock market. While the study did not find any connection for the counties with least developed stock market and illiquid.

Ngare, Nyamongo, & Misati, (2014) conducted a research to investigate the contribution paid by stock market development on the growth of economy in African countries. The study was conducted using single year data from 36 African countries, of which 18 countries have stock markets, a study covered a period from 1980 to 2010. In their results it was revealed that African countries with stock markets enjoy fast growth in economy than African countries which doesn't have stock markets, the study also found

that, African countries which are least developed and doesn't have stock exchange markets grow slowly economically as compared to those small countries with stock exchange markets, generally the study revealed a positive significant impact of stock market development on growth of economy. Also Mun, Siong, & Thing (2008) examined the relationship between stock market and economic growth in Malaysia for the period from 1977 up to 2006. The results of the study exhibited that stock exchange market granger causes economic activities, while economic growth does not cause development in stock markets.

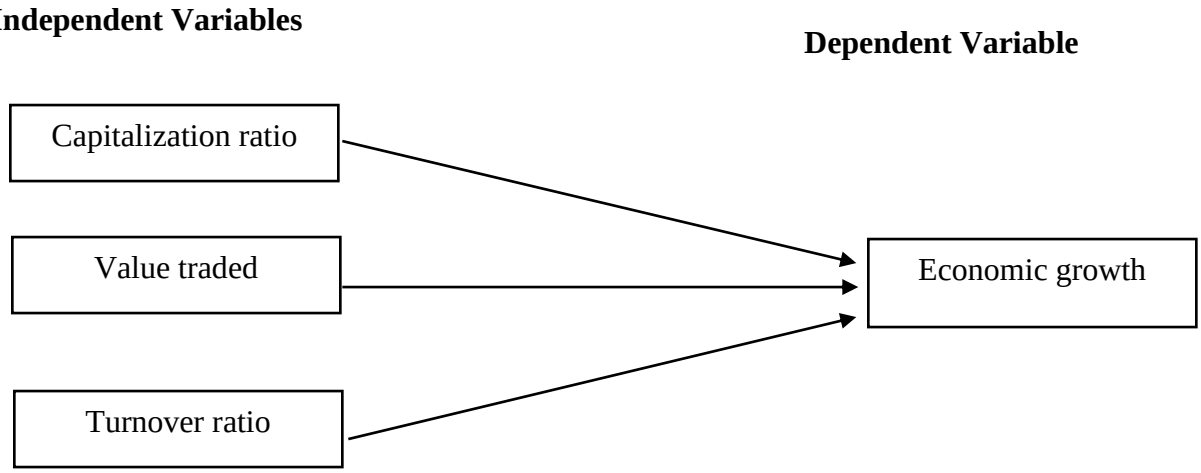
2.3.1 Summary of empirical review

The above empirical review provides the insight on related studies conducted on the relationship between stock market development and economic growth. The above literatures suggest the following. First, stock market development significantly contributes to the growth of economy, and its significant role in inducing economic growth is visible when there is improvement of value traded and stock turnover, studies found that, stock markets through provision of liquidity in the market it led more investments and increase in general economic activities. Second, stock market development has long run relationship with economic growth, and any efforts to improve stock market in long run will enhance economic activities. Third, evidence from the literature revealed that, for some countries a bidirectional causality was found between stock market development and economic growth, although on other countries the causality was running either from stock market development to economic growth, or from economic growth to stock market development. Which mean that, there some countries where stock market development contains necessary information to predict value of economic growth, for some countries where studies are conducted, a two-way causality was evidenced.

2.4 Conceptual framework

The conceptual framework in this study as shown in figure 2.1 presents the dependent variable and independent variables used to be used in this study.

Figure 2.1 conceptual framework



Source: Research findings 2019

The above figure explains the conceptual framework adopted in conducting this study. The framework proposes that economic growth in Tanzania is determined by stock market development indexes; market capitalization ratio, value traded ratio and stock turnover ratio.

2.5 Research hypotheses

The aim of this study was to ascertain the relationship between stock market development and economic growth in Tanzania, thus the study presents the hypotheses which are null hypothesis and the alternative one that was tested during analysis of data.

Hypothesis 1

- Null: There is no long-run relationship between stock market development and economic growth in Tanzania.

- Alternative: There is a long-run relationship between stock market development and economic growth in Tanzania.

Hypothesis 2

- Null: Stock market development proxies does not granger cause economic growth.
- Alternative: Stock market development proxies' granger cause economic growth.

Hypothesis 3

- Null: Economic growth does not granger cause stock market development.
- Alternative: Economic growth granger cause stock market development.

CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Introduction

This chapter describes the research methodology that has been adopted in conducting this study. The chapter commence with descriptions of research design, on which the variables that was used in a study are described. It then presents the study area on which the research was undertaken, it also describes the source and types of data that was used in this study. The chapter also presents the data collection method that used to collect relevant data of the study, and finally the chapter describe data analysis method that was used to scrutinize the collected data, and the processes undertaken to analyse the collected data.

3.2 Research design

Experimental research design was adopted to examine the long-run and causal association that exist in stock market development and economic growth. Experimental research design enables the researcher to test the hypothesis between variables to determine the causal and effect relationship that exist between studied variables.

In this study, we measured economic growth by real GDP denoted as GDPR, the study also used stock market size and liquidity level of the market to measure stock market development. The market size is measured by capitalization ratio, which equals the value of listed share divided by GDPR (MCR). The liquidity level of the market has been measured by value traded ratio, which equals the total value of share traded on stock exchange market divided by GDPR (VST), and the turnover ratio, which equals the value of share traded divided by value of listed shares (STR).

3.3 Study area

The United Republic of Tanzania specifically its economy, and the stock exchange market has been used as the study area. The Dar es salaam Stock Exchange Market (DSE), and National Bureau of Statistics (NBS) were used as the area of study.

3.4 Types and source of data

Quantitative data was employed to answer research questions in the study. The researcher gathered secondary data from the Dar es salaam Stock Exchange, National Bureau of Statistics, and the World bank development indictors database.

3.5 Data collection

This study used secondary data to obtain information about stock market indicators and GDP. Data for stock market indicators was obtained from The Dar es Salaam Stock Exchange (DSE) and World bank development indictors database. But for the real gross domestic product (GDP) data were obtained from National Bureau of Statistics, and the world bank development indicators database, covering 19 years from 1999 to 2017.

In this study, we measured economic growth by using real GDP. Stock market development was measured using stock market development index. We exclusively used stock market development indexes and real GDP to explore the relationship that exist between stock market development and economic growth.

3.6 Data analysis

The data was analysed using STATA econometrics software. Time series data from 1999 to 2017 was used in the analysis. Based on the conceptual framework the study estimated the following model.

$$GDPR = \alpha_0 + \beta_1(MCR) + \beta_2(VST) + \beta_3(STR) + \varepsilon \ldots\ldots\ldots\ldots 1$$

Where:

α_0 = y-intercept (constant)

$\beta_{1\ldots\ldots3}$ = coefficient

MCR = Market capitalization ratio

VST = Total value of share traded

STR = Stock turnover ratio

3.6.1 Dickey-Fuller Test

This study used the augmented Dickey-fuller test to measure the time series characteristics of the variables under the study. Augmented dickey-fuller test the null hypothesis that the variable contains a unit root, and the alternative hypothesis that the variable was generated by a stationary process.

3.6.2 Johansen Test

This study employed Johansen co-integration test as propounded by Johansen (1991) to explore the connection between stock market development and economic growth. This cointegration test was adopted since it can involve more than two variables in testing the cointegrating vectors.

This test is based on the maximum likelihood method and gives two main statistics: Eigen value statistic and Maximum statistic. The maximum eigenvalue test determines whether the largest eigenvalue is zero with respect to the alternative that the following largest eigenvalue is zero. The first test in Johansen cointegration measure if the rank of matrix π is zero. The null hypothesis postulates that rank of matrix (π) = 0 and the alternative hypothesis is that (π) = 1. The trace test is a test whether the rank of the matrix π is r0. The null hypothesis is that rank (π) = ro. The alternative hypothesis is that $r0 < \text{rank}(\pi) \leq n$, where n is the maximum number of possible cointegrating vectors (Dwyer, 2015)

For both test statistics, the initial Johansen test is a test of the null hypothesis of no co-integration against the alternative of cointegration. When the rank is zero it means there is no long-run relationship and if the rank is one it means there is one co-integration equation

3.6.3 Granger causality test

We also conducted the Granger causality test based on vector autoregressive (VAR). Granger causality Wald tests was used to examine the causality relationship which exist in stock market development and economic growth.

The basic idea of causality is that, variable X granger cause variable Y, if past value of variable X can help to explain current value of variable Y, conversely if past value of variable Y contributes to forecast current value of variable X then we conclude that Y granger cause X (Granger, 1969). If the granger test reveals the presence of causality, this does not guarantee that variable X causes variable Y. That's why we say 'Granger causality' rather than just 'causality'. However, if past values of variable X have descriptive power for current values of variable Y, it at least proposes that variable X might be causing variable Y. Thus, the Granger test for causality model is expressed as follows

$$GDPR_t = \alpha + \phi GDPR_{t-1} + \beta_1 STOCK_{t-1} + \varepsilon_t \text{.....2}$$

Where STOCK refers to the three indicators of stock market development (MCR, VST, and STR)

This model suggests that last period's lagged value of STOCK has interpretative power for the present period value of GDPR. The coefficient β_1 is the measure of influence of $STOCK_{t-1}$ on $GDPR_t$. If $\beta_1 = 0$, then the past value of STOCK has no effect on GDPR, and there is no way that STOCK could granger cause GDPR.

$$STOCK_t = \alpha + \phi STOCK_{t-1} + \beta_1 GDPR_{t-1} + \varepsilon_t \text{.....3}$$

This signifies that last period's estimated coefficient of lagged GDPR has interpretative power for the present value of STOCK. The coefficient β_1 examines the prediction of $GDPR_{t-1}$ on $STOCK_t$. If $\beta_1 = 0$, and the last period value of GDPR has no impact on STOCK, and it is not possible for GDPR to granger cause STOCK.

The description of the variables used in this study are presented in the table 3.1 below

Table 3.1 Description of Variables

Dependent Variable		
GDP Growth		Real GDP growth rate
Independent Variables		
Market capitalization rate	MCR	Total value of listed share as percentage of GDP
Value Traded	VST	Total value of shares traded on the stock market as a percentage of GDP
Turnover ratio	STR	The ratio of value of shares traded to market capitalization

Source: Research Findings 2019

The table above show the measure used to determine economic growth and those used to determine stock market development. Economic growth was measured by using real GDP growth rate. Stock market development indicators were divided by GDP growth rate to establish their relationship with the economic growth. Stock market turnover is used as the ratio of value traded to market capitalization which measures the liquidity of the market.

CHAPTER FOUR
PRESENTATION AND INTERPRETATION OF FINDINGS

4.1 Introduction

This chapter presents the findings of the study based on the analysis conducted, to ascertain the link that exist between stock market development and economic growth in Tanzania also to ascertain the nature of such relationship. The secondary data was collected to obtain the information about stock market development indexes and economic growth as quantified by real GDP growth rate. Secondary data were analysed using STATA statistical software to reveal the long-run relationship that could be existing between variables under the study.

4.2 Descriptive analysis.

The descriptive statistics considered in this study are trends in real GDP growth rate (GDPR) as the indicator of economic development, Stock market capitalization (MCR), Value of shares traded on the stock market (VST) and Turnover ratio (indexes for stock market development).

The descriptive analysis is presented on the Table 4.2 below, it shows mean, standard deviation, minimum and maximum values of both dependent and independent variables.

Table 4.2 Summary statistics

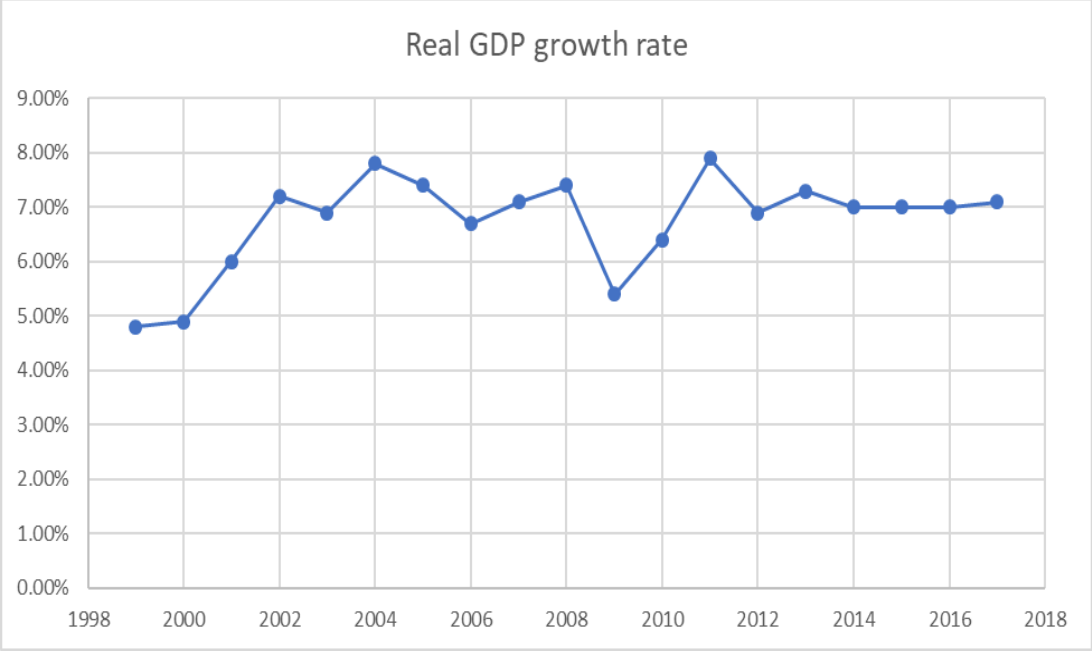
Variable	Obs	Mean	Std. Dev.	Min	Max
GDPR	19	38349.27	34394.91	8430.51	116101.9
MCR	19	7921.16	8472.67	113.67	23076.01
VST	19	157.63	273.05	0.03	1071.11
STR	19	0.018	0.014	0.00023	0.05

Source: Research findings 2019.

Table 4.2, shows that the average real GDP of Tanzania between 1999 and 2017 was 38,349.27 billion and it ranged from the minimum of TZS 8,430.51 billion and the maximum of 116,101.9 billion. The maximum stock market capitalization was TZS 23,076.01 billion while the minimum was TZS 113.67 billion. For the entire period covered by the study the average trading volume was TZS 157.63 billion and it range from the minimum of TZS 0.03 billion and the maximum of TZS 1,071.11 billion.

The figure below shows the trend of economic growth in Tanzania from 1999 to 2017.

Figure 4.1 Trend of economic growth



Source: National Bureau of Statistics

The trend dictated in figure above show the growth of Tanzania economy from 1999 up to 2017. We see a high growth rate of GDP during 2011 due to increase in agricultural production, industrial production and power supply. The severe economic slump during 2009 was contributed with severe effects of the Global Financial Crisis (GFC) and the great drought affected the country in 2008 to 2009, this impaired the productions of crops and animal keeping, also it caused a severe decline in hydro power generation

which lead to deterioration of production for local industries, these factors had a great contribution in total GDP for the period. During the year 2015, 2016 and 2017 the economic has been growing at a constant rate of 7% for 2015 and 2016, and at the rate of 7.1% in 2017. This growth is due to increase in electrical power production mainly by using natural gas, increase in industrial production, improvements of transportation facilities and improved agriculture sector performance. Economic activities which recorded highest growth during the period include: mining and quarrying; water supply; transport and storage; information and communication; construction; and agriculture sector.

The figure below depicts the trend of stock market capitalization in Tanzania from 1999 to 2017

Figure 4.2 Trend of stock market capitalization

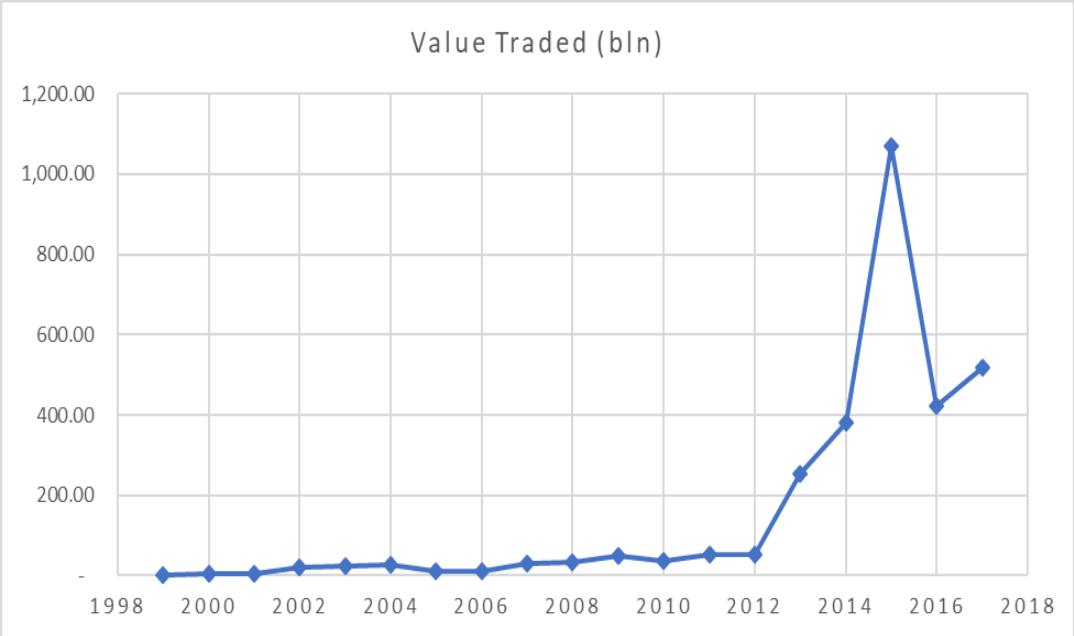
Source: DSE

Figure above show the trend of stock market capitalization, stock market has experienced lower capitalization for consecutive seven years up to 2005, the poor performance of the market from 1999 to 2005 was due to fewer listing in the market.

From 2006 the performance of the market started to improve, the market experienced the high capitalization during the 2014, 2015, 2016 and 2017 this was the result of; increased number of companies listing in the market; enhanced exchange settlement process by linking DSE platform with the National Payment System; the use of mobile trading which made DSE the first Exchange in the region using mobile phone on trading of securities; Also the market undertook its own Initial Public Offering (IPO) to be the third stock market in Africa to undergo self-listing; and general country's economic trend.

The figure below portrays the trend of value traded of Dar es Salaam stock exchange from 1999 to 2017

Figure 23 Trend of Value traded of stock market



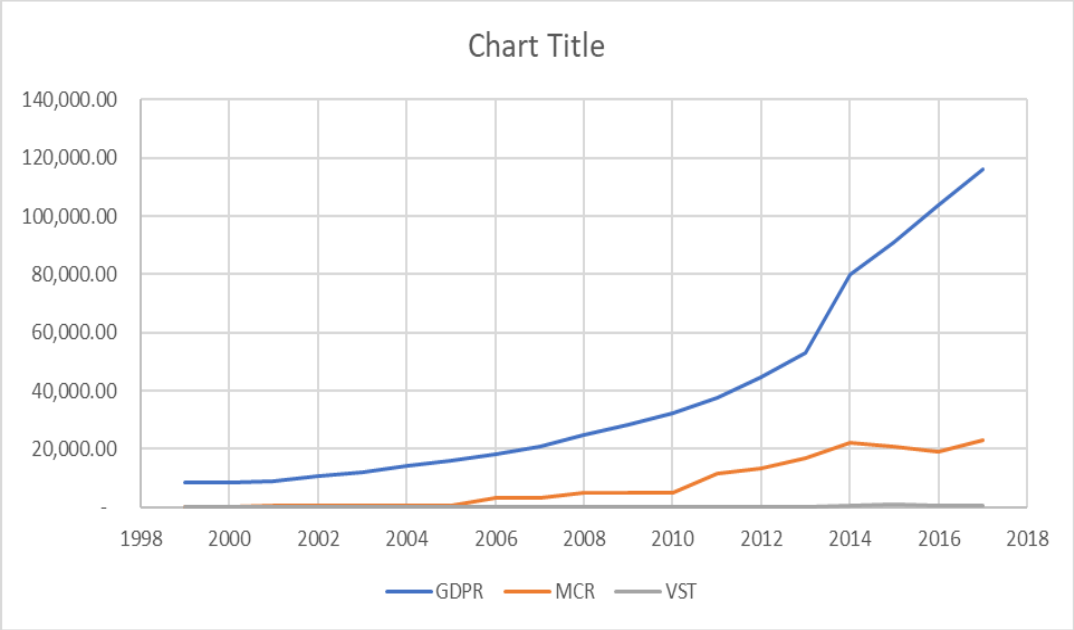
Source: DSE

The figure above depicted the value traded of the market for 19 years from 1999 to 2017. The value traded was low in the beginning of the market, but it increased tremendously from 2013 up to 2017 this was the result of improved way of operating the market and increased number of market participants. As the market increase the number

of its listing per year, and market players participate fully in the market, the value traded of the market increases. This was revealed from 2013 when DSE listing increased compared to the previous years.

The figure below presents the trend of both GPD, Market capitalization and value traded in a single graph.

Figure 4.4 Trend of GDP, Market capitalization and Value Traded



Source: Research Findings 2019

The trends depicted by figure 6 above shows different variations in real GDP, market capitalization and Value traded Tanzania. In majority of times, it shows a direct relationship among the three variables whereby, as the GDPR increases, there is also an increase in MCR and VST and vice versa. From the year 2014 up to 2017 we experienced high market capitalization and value traded of which GDP also grew at a high constant rate of 7%.

4.3 Correlation analysis

We have computed correlation from the variable used in the study as presented by the table below. The correlation coefficient portrays the association that persist in response variables and predictor variables, so the correlation shows to what extent the selected independent variables can influence the outcome variable (real GDP growth rate).

The results of correlation analysis are presented in table 4.3 below.

Table 4.3 Correlation Analysis

VARIABLES	GDPR	MCR	VST	STR
GDPR	1			
MCR	0.3452	1		
VST	0.3214	0.4413	1	
STR	0.3278	-0.2179	0.6557	1

Source: Correlation results from Stata

The table above presents the output of correlation analysis represented in pair-wise correlation. It has the calculated correlation coefficient of dependent variable (GDPR) with those of independent variables (MCR, VST, and STR). As the correlation coefficient is close to 1, it shows a strong positive or negative relationship between variables. It has been shown that GDPR was positively correlated with market capitalization, value traded and stock turnover ratio with a correlation coefficient of 0.3452, 0.3214) and 0.3278 respectively although its relationship was weak. On the other hand, market capitalization showed a weak positive relationship with the value of share traded its correlation coefficient was 0.44, also there was a weak negatively relationship between market capitalization and stock turnover -0.2179. A moderate positive relationship was revealed between value of share traded and stock turnover ratio with the correlation coefficient of 0.66.

4.4 Time series properties

We used time series data for 19 years from 1999 to 2017, as time series data are involved it is vital to determine whether data used in analysis are stationary or first differencing stationary.

The results of unit root test are presented in table 4.4 below.

Table 4.4 Dickey-Fuller test for unit root

Variable	ADF at level p-value for Z(t)	ADF at first difference p-value for Z(t)
DGPR	0.0225*	
MCR	0.5167	0.0001*
VST	0.167	0.0000*
STR	0.0805	0.0000*

Source: Unit root test from Stata

The table above presents the results of unit root test for the examined time series variables involved in the analysis. Augmented Dickey-fuller test was used to measure the unit root of variables under the study. Dickey-fuller test the null hypothesis that the variable contains a unit root, and the alternative hypothesis that the variable was generated by a stationary process. The results found that DGPR has a p-value of 0.0225 which is significant at the conventional level, this made us to reject the null hypothesis that GDPR contains unit root. Also, by first differencing MCR has a p-value of 0.0001, VST has a p-value of 0.0000, and STR has a p-value of 0.0000 which is less that significance level of 0.05, this made us to reject the null hypothesis that MCR, VST and STR contains unit root. Thus, the variable GDP growth rate was found stationary at the level, but for market capitalization, value of share traded and turnover ratio were found stationary at first differencing.

The primary objective of this study was to examine the relationship between stock market development and economic growth in Tanzania. The analysis of this study was guided by the following hypothesis

Hypothesis 1

- Null: There is no long-run relationship between stock market development and economic growth in Tanzania.
- Alternative: There is a long-run relationship between stock market development and economic growth in Tanzania.

Hypothesis 2

- Null: Stock market development proxies does not granger cause economic growth.
- Alternative: Stock market development proxies' granger cause economic growth.

Hypothesis 3

- Null: Economic growth does not granger cause stock market development.
- Alternative: Economic growth granger cause stock market development.

4.5 Long-run relationship between stock market development and economic growth

The study tested the null hypothesis that, there is no long-run relationship between stock market development and economic growth in Tanzania, and the alternative hypothesis which state that, there is a long-run relationship between stock market development and economic growth in Tanzania.

In conducting the analysis, the study employed Johansen (1991) cointegration test to examine the association which exist among the variables involved in the study (GDPR and MCR, VST and STR). The Johansen co-integration test takes into consideration the

trace statistics and the maximum eigenvalue tests to examine if the time series employed in the study are cointegrated with another time series.

The table below presents the analysis findings from Johansen cointegration test.

Table 4.5 Johansen cointegration results

Johansen tests for cointegration					
Trend: constant					Number of obs = 17
Sample: 2001 - 2017					Lags = 2
Rank	Parms	LL	Eigenvalue	Trace statistic	5% Critical value
0	20	237.8823	.	48.8579	47.21
1	27	250.6737	0.77795	23.2751*	29.68
2	32	256.3742	0.48862	11.8741	15.41
3	35	260.533	0.38692	3.5566	3.76
4	36	262.3113	0.18878		

Source: Johansen cointegration results from Stata

The table 4.5 above portrays the results of cointegration test from the four variables used in the analysis, the results presents the Trace statistics and the Critical value which are used to examine the long run relationship.

Maximum rank zero

For the maximum rank zero, the null hypothesis state that there is zero cointegration. In our results as presented in the table above, it shows that the trace statistics is 48.8579 which greater than the critical value of 47.21, this make us to reject the null hypothesis which say there is zero cointegration. Maximum rank zero pinpoint that the variables under the study have long-run association, so the trace statistic show there is a

cointegrating vector among market capitalization, value traded, stock turnover ratio and GDP growth rate

Maximum rank one

For the maximum rank one, the null hypothesis state that, there is cointegration of equation one. While the alternative hypothesis state that, there is no cointegration of equation one. Our results from the findings show that at maximum rank one, the trace statistic (23.2751) is less than critical value (29.68), this made us to fail to reject the null hypothesis stated that, there is cointegration of equation one. Thus, from the results it has been revealed that there is cointegration of equation one among variables under the study, the equation revealed to exist one cointegrating vector among variables studied. The variables GDPR, MCR, VST, and STR move together in long-run. Thus, the findings discovered the existence of long-run association between stock market development and economic growth.

Maximum rank two

For the maximum rank two, the null hypothesis state that there is cointegration of equation two and alternative hypothesis state that, there is no cointegration of equation two. At maximum rank two, the trace statistic (11.8741) is less than the critical value (15.41), thus we do not reject the null hypothesis which state that there is cointegration of equation two. Thus, as per maximum rank two, the time series variables GDPR, MCR, VST and STR are cointegrated of equation two. There are two cointegrating vectors among variable in the study.

Maximum rank three

For the maximum rank three, the null hypothesis state that, there is cointegration of equation three and alternative hypothesis state that, there is no cointegration of equation three. The finding of this study shows that, at maximum rank three, the trace statistic is 3.5566 which is less than the critical value of 3.76, in this case we fail to reject the null hypothesis which state that there is cointegration of equation three. Thus, as per

maximum rank three the time series variables GDPR, MCR, VST and STR are cointegrated of equation three. The results reveal to exist three cointegrating vectors for the variables under the study.

Johansen cointegration measured the long-run relationship between stock market development and economic growth as the results presented in the table 4.5 above, it is revealed that stock market development and economic growth are cointegrated, that means that, these variables move together in the long run at the same rate, so the improvement of one variable will lead to improvement of another variable of the study, this imply that stock market development can induce economic growth in the long run.

4.5.1 Vector error corrective model

In conducting the analysis there was a chance that a series could be cointegrated or could not be integrated. If the series were not cointegrated, we would have run Vector Auto Regression to examine impact of predictor variables on dependent variable and short-run dynamics of the time series. When the time series is cointegrated, we run VECM. From the analysis finding of cointegration test we found the time series is cointegrated, thus we specify and estimate a Vector Error Correction Model (VECM) to examine the short run influence of variables dynamic behaviour of the model.

The table below presents the results of Vector error -correction model for the four variables.

Table 4.6 Vector error-correction model

Vector error-correction model							
Sample: 2001 – 2017						No. of obs =	17
						AIC =	-26.3146
Log likelihood = 250.6737						HQIC =	-26.183
Det (Sigma_ml) = 1.83e-18						SBIC =	-24.9912
Equation		Parms	RMSE	R-sq	chi2	P>chi2	
D_gdpr		6	0.005199	0.6409	19.63453	0.0032	
D_mcr		6	0.052265	0.4299	8.295011	0.2173	
D_vst		6	0.002747	0.3422	5.723055	0.4549	
D_str		6	0.015489	0.1542	2.005475	0.9192	
		Coef.	Std. Err.	z	P>|z|	[95% Conf. Interval]	
D_GDPR							
	_ce1 L1.	-0.75932	0.236415	-3.21	0.001	-1.22268	-0.29595
	gdpr LD.	-0.21385	0.196304	-1.09	0.276	-0.5986	0.170893
	mcr LD.	-0.04437	0.033092	-1.34	0.18	-0.10922	0.020493
	vst LD.	0.902028	1.306894	0.69	0.49	-1.65944	3.46349
	str LD.	-0.09204	0.249526	-0.37	0.712	-0.5811	0.397022
	_cons	-0.0017	0.001643	-1.03	0.302	-0.00492	0.001523
Cointegrating equations							
Equation		Parms	chi2	P>chi2			
_ce1		3	19.76659	0.0002			

Identification: beta is exactly identified							
Johansen normalization restriction imposed							
	Beta	Coef.	Std. Err.	z	P>|z|	[95% Conf. Interval]	
_ce1	gdpr	1	.	.	.	.	.
	mcr	-0.0748	0.020151	-3.71	0.000	-0.11429	-0.0353
	vst	4.329168	0.975776	4.44	0.000	2.416682	6.241654
	str	-0.65904	0.177815	-3.71	0.000	-1.00755	-0.31053
	_cons	-0.05955	.	.	.	.	.

Source: VECM results from Stata

Table 4.6 above present the result of VECM from the data analysed. We used the model VECM since our variables were integrated and so there is a need to analyse the causal relationship between variables to examine the short run influence of variables dynamic behaviour. From our findings we observe that, the cointegration equation 1 (_ce1) in above table has both negative coefficient (-0.75932) and it is significant (0.001) at 1% level of significance, this means that the market capitalization, value traded and turnover ratio causes the changes in economic growth rate at long-run. The results from VEC model indicate that stock market development proxies cause economic growth in long-run, but in the short-run, stock market proxies do not cause growth of economy. We also examined all proxies of stock market development to see a proxy with great contribution on the change of real GDP growth rate. Johansen normalization was used to identify the causality effect of each variable to the GDP. We found that, market capitalization has a positive influence on the growth of economy, this was significant at 1% level, but for the value of share traded a significant negative effect on GDP growth was revealed. Value of share traded is measure of liquidity in stock market, so for the case of Tanzania stock market, the liquidity affects real GDP negatively, this is due to the fact that Tanzania stock market is not liquid. Stock turnover ratio revealed a positive significant effect on the growth of economy.

Presence of cointegration between stock market development and economic growth led to specifying and estimating the VECM model to examine how the model is adjusting itself toward its long run equilibrium state. It is possible for the variable to influence

another variable in both short run and long run, the results presented in table 4.6 above show that, stock market development do not influence economic growth in short run, but in long run stock market development induce economic development.

4.6 Causality relationship between stock market development and economic growth

Granger causality was employed to examine the casual relationship between stock market development proxies and economic growth. We have used estimates from VAR to examine the presence of causality from each variable to another. The table below present the results of granger causality test among variables in the study.

The results of granger causality test are presented in Table 4.7 below.

Table 4.7 Granger causality results

Granger causality Wald tests				
Equation	Excluded	Chi2	df	Prob > chi2
GDPR	MCR	6.6554	2	0.036
GDPR	VST	6.8052	2	0.033
GDPR	STR	8.9447	2	0.011
GDPR	ALL	9.4601	6	0.149
MCR	GDPR	1.9637	2	0.375
MCR	VST	1.962	2	0.375
MCR	STR	7.4185	2	0.024
MCR	ALL	15.912	6	0.014
VST	GDPR	.49046	2	0.783
VST	MCR	4.1995	2	0.122
VST	STR	.46346	2	0.793
VST	ALL	9.5267	6	0.146
STR	GDPR	.6467	2	0.724
STR	MCR	1.2095	2	0.546
STR	VST	1.2253	2	0.542
STR	ALL	3.1065	6	0.795

Source: Research findings 2019

The table above show the results obtained from granger causality test, which was used to examine the causality direction among the variables in the study. The null hypothesis for granger causality was.

First equation: Lagged value of MCR, VST, and STR do not cause GDPR

Second equation: Lagged value of GDPR, VST, and STR do not cause MCR

Third equation: Lagged value of GDPR, MCR, and STR do not cause VST

Fourth equation: Lagged value of GDPR, MCR, and VST do not cause STR

First equation

The first equation has the following hypotheses (i) the lagged value of MCR do not cause GDPR, (ii) the lagged value of VST do not cause GDPR, and (iii) the lagged value of STR do not cause GDPR. From the first hypothesis, the lagged value of MCR is 0.036 which is less than the significance level of 0.05, thus we reject the null hypothesis which state that the lagged value of MCR do not cause GDPR. Thus, stock market capitalization granger causes economic growth in Tanzania. In the second hypothesis, the lagged value of VST is 0.033 which is less than 0.05 thus, the null hypothesis that, the lagged value of VST do not cause GDPR is being rejected. Thus, the lagged value of VST causes GDPR. By rejecting the null hypothesis, we conclude that value of share traded granger cause economic growth in Tanzania. In the last hypothesis of equation one, the lagged value of STR (0.011) is less than the significance level of 0.05, and that, the null hypothesis which state that the lagged value of STR does not causes GDPR should be rejected. Thus, turnover ratio does contain useful information to predict the changes in economic growth.

Second equation

The second equation has the following hypotheses (i) the lagged value of GDPR do not cause MCR, (ii) the lagged value of VST do not cause MCR, and (iii) the lagged value of STR do not cause MCR. Hypothesis one, the lagged value of GDPR is 0.375 which is greater than the significance level of 0.05, so the hypothesis that the lagged value of GDPR do not cause MCR cannot be rejected. Thus, economic growth as measured by real GDP does not granger cause stock market capitalization (MCR). In the second

hypothesis, we tested if the lagged value VST does not cause MCR. The lagged value of VST 0.375 which is greater than 0.05 make us fail to reject the null hypothesis that, the lagged value of VST do not cause MCR. Thus, the value of share traded (VST) does not granger cause stock market capitalization (MCR). But in the last hypothesis, the lagged value of STR is 0.024 which is less than the significance level of 0.05, thus we reject the null hypothesis which state that, the lagged value of STR do not cause MCR. So, the lagged stock turnover ratio granger cause market capitalization.

Third equation

In third row, we had three hypotheses, which are (i) the lagged value of GDPR do not cause VST, (ii) the lagged value of MCR do not cause VST, and (iii) the lagged value of STR do not cause VST. From the first hypothesis, the lagged value of GDPR is 0.783, which is greater than significance level of 0.05, thus we fail to reject the null hypothesis which state that the lagged value of GDPR do not cause VST, so the lagged value of economic growth (GDPR) does not granger cause value of share traded (VST). In the second hypothesis, the lagged value of MCR is 0.122, which is greater than 0.05, thus we fail to reject the null hypothesis which state that, the lagged value of MCR do not cause VST under 0.05 significance level. So, the lagged value of market capitalization does not granger cause value of share traded. In the third hypothesis, the lagged value of STR is 0.793, which exceed the significance level of 0.05, in this case the null hypothesis which say that, the lagged value of STR do not cause VST cannot be rejected, thus the lagged value of stock turnover ratio (STR) does not granger cause value of share traded (VST)

Fourth equation

The fourth row had the following hypotheses (i) the lagged value of GDPR do not cause STR, (ii) the lagged value of MCR do not cause STR, and (iii) the lagged value of VST do not cause STR. In the first hypothesis, the lagged value of GDPR is 0.724 which is exceed the significance level of 0.05, in this case we fail to reject the null hypothesis which stipulate that, the lagged value of GDPR do not cause STR. From the second

hypothesis, the lagged value of MCR is 0.546 which is greater than significance level of 0.05, so the null hypothesis which state that the lagged value of MCR do not cause STR cannot be rejected. Also, the lagged value of VST (0.542) is greater than significance level (0.05) so we fail to reject the null hypothesis of the lagged value of VST do not cause STR.

We conclude that, there one-way causality running for the variable studies and it runs from stock market development indexes to the GDP growth rate. We see the strong evidence that lagged value of stock market development indexes, which are 0.036 for market capitalization (MCR), 0.033 for value of share traded (VST) and 0.011 for stock turnover ratio (STR) contain necessary information to predict economic growth as measured by real GDP.

The table below show the summary of the hypothesis tested and the decision reached.

Table 4.8 Summary of hypothesis tested

Hypothesis	**Decision**
There is a long-run relationship between stock market development and economic growth	Accepted
Stock market capitalization granger cause economic growth	Accepted
Value of share traded granger cause economic growth	Accepted
Stock turnover ratio granger cause economic growth	Accepted
Economic growth granger cause stock market capitalization	Rejected
Economic growth granger cause Value of share traded	Rejected
Economic growth granger cause stock turnover ratio	Rejected

Source: Research findings 2019

The table 4.8 above show the summary of the findings obtained from the study, the first hypothesis tested was the long-run linkage in capital market development with economic growth, and our findings evidenced the existence of such linkage. Stock market development proxies were found to granger cause economic growth. While economic growth does not granger cause stock market proxies. Whereas, stock market development helps to improve the financial stability of companies.

CHAPTER FIVE
DISCUSSION OF THE FINDINGS

5.1 Introduction

In this chapter, we discuss the analysis findings conferred in chapter four. This chapter begins by discussing the relationship between stock market development and economic growth, followed by a discussion of the causality relationship between stock market proxies and economic growth as measured by real GDP.

5.2 Discussion of the findings

The primary objective of this study was to examine the relationship between stock market development and economic growth in Tanzania. Following the extensive review of literatures concerning stock markets and economic growth, two specific objectives were examined:

i. The relationship which exist between stock market development and economic growth; and
ii. The causality direction between stock market development and economic growth.

The objectives of the study as afore mentioned triggered the researcher to come up with 8 hypotheses which were employed in conducting the study. These hypotheses were tested so they can be rejected or accepted. Out of 8 hypotheses, five were not rejected while three hypotheses were rejected. The next sections present the discussion of hypotheses.

5.2.1 Relationship between stock market development and economic growth

The first hypothesis tested the long-run relationship between stock market development and economic growth, stock market development proxies (stock market capitalization, value traded and turnover ratio) were used as the determinants of stock market development. While real GDP growth rate was used as a measure of economic growth. From Johansen cointegration results, for the maximum rank zero trace statistic is 48.85 which is greater than the critical value of 47.21, this made us to reject the null

hypothesis of zero cointegration. Also, for the maximum rank one, the trace statistic (23.2751) is less than critical value (29.68) which made us to fail to reject null hypothesis states that, there is cointegration of equation one. Same for the maximum rank two, the trace statistic (11.8741) is less than the critical value (15.41), thus we fail to reject the null hypothesis which state that, there is cointegration of equation two. Likewise, for the maximum rank three the trace statistic is 3.5566 which is less than the critical value of 3.76, in this case we fail to reject the null hypothesis which state that, there is cointegration of equation three. From the findings, it become clear that, there is long run association for the security market development and growth of economy. Exchange market development indexes which are, stock market capitalization, value traded and stock turnover ratio have the long run relationship with real GDP growth rate.

The trace statistic results show more than one cointegration vectors among variables under the study. The findings show that the variables being studied are integrated in order 1, 2, and 3. This show that there is a long-run movement relationship among real GDP, Stock market capitalization, value traded and turnover ratio. On this case, the variables, GDP, Market capitalization, Stock value traded and Turnover ratio have long run relationship. This is consistence with the study of Levine & Zervos (1996), who examined the association which exist between stock market development and long-run growth of economy, in their study it was revealed that stock market development is positively related with economic growth, and there was a strong connection between stock market development proxies and long-term economic growth.

Various researches have been conducted to assess the relationship which exist between stock market development and economic growth, although these studies offer a conflicting conclusion regarding this relationship. Laopodis & Papastamou (2016) contemplated that exchange market is positively associated with a future economic development and it contribute to growth of economy through accumulation of capital and through the financing companies and thus to increase the productivity. In our study we found the stock market of Tanzania has a long-run association with economic

growth, and that stock exchange market stimulate the advancement of economic activities and the economy overall.

The VECM result as presented in chapter four indicate to exist a long-term casual association for economic growth as measured by real GDP and proxies of stock market development (capitalization, value traded and turnover ratio). The long-run causality found in our study can be exhibited from the indexes of stock market development to economic growth, general in long-run stock exchange market causes economic growth in Tanzania. Though, long-term causality from GDP to market capitalization, value traded and turnover was not available. Growth of economy does not cause development of stock market but when stock market is developing it enhance growth of economy. The findings from the analysis of this study are consistent with the results of Marques, Fuinhas, & Marques (2013), in their study they uncovered a strong proof that developments in exchange market encourage progress in country's economy. Also, Ngare et al. (2014) conducted a study to examine the role of stock market development on the growth of economy in Africa, and they discovered that stock exchange market contribute to the advancement of economic activities, and nations with well-established exchange market enjoy fast economic growth than nations with poor established stock exchange market.

Stock market help in spurring economic growth through provision of liquidity to companies, many profit making investments needs a long-term commitment of capital and fund, although savers are mostly unwilling to surrender control of their savings for long period, thus stock exchange market bring together those investors who are willing to give up their funds and lenders who needs to use funds for enhancing their businesses (Bencivenga, Smith, & Starr (1999) and Levine (1990))

Our results show that stock market capitalization has a positive significant impact on the growth of economy, stock market capitalization measure the size of the security market, its value increases when the stock market list a new company, as a company issue new shares in the market subscribers are involved in buying company's share and form part

of the ownership of the company. The overall market capitalization in the market, increases as listing increase and when listed companies issue new share. The positive impact of market capitalization to the growth of economy comes from the fact that, as companies increase their capital base through issuing shares, their trading activities ought to expand, expansion of company's activities increases output in the economy in term of products, services and increase in employment opportunities. For the economy to grow we expect companies, organizations and firms in the country to prosper, since they have a great contribution in the economy. As a new company enter in the economy through security market, it raises funds from different savers and in turn they inject in the economy new outputs. High market cap implies large amount of capital obtained from the capital market, as investors inject more capital in companies' operational activities boom and a contribution to the growth of economy will be feasible. As we have discovered from our study, increase in market capitalization has a significant impact in spurring advancement of economy. Our results correspond with the results of Levine & Zervos (1996) who found market size (stock market capitalization) has a positive significant correlation with economic growth. Our findings are inconsistent with the findings of Adjasi & Biekpe (2006) who used market capitalization as a ratio of real GDP to measure the influence of stock market development on the growth of economy, in their study they discovered that stock market development does not influence changes in economic growth.

Value traded was pinpointed to have a negative significant linkage with economic growth. Value traded indicate the trading volume of the exchange market in a particular time, it shows the transaction frequent among buyers of securities and sellers of security. When there are plenty transactions occurring in the market, securities are said to be highly traded, with a busy market increases the liquidity of the exchange market. Trading volume is expected to affect the economy positively, since it is an indicator of how often buyer and sellers meet to exchange securities, and through exchange of security new capital flows from investors to the economy. We normally expect a positive impact on the growth of economic activities when new capital flow into

economy. Exchange market which trade persistently attracts investors to poor their funds which directly enter into circulation in the economy. Thus, for the economic activities to advance, exchange market should be trading frequently. But the results of our findings have discovered a negative association between the value of share traded and advances in economy, these results are absolutely significant considering the market traits of the capital market under the study. The exchange market observed in the study has few participants who are involved in buying and selling securities. Fewer market players limit the trading activities of the market. Also, the price of security traded keeps on being the same from period to period, this make the market to be unattractive, with the market which is not attractive, investors are hesitant to relinquish their funds since the return on investment is not assured. With fewer market participants, unattractive market and infrequency trading makes a market non-liquid. For capital market with all features of illiquidity, it is difficult to enhance economic growth. Our discoveries evidence that DSE is not liquid enough to spur economic growth. With illiquid stock market, there will be no change in GDP growth, the negative association evidenced in the findings of this study, it is due to illiquid of the market, poor trading system and fewer market players. The study of Osamwonyi & Kasimu (2013) uncovered that stock exchange market in Kenya has not accelerated to the growth of economy. Although Adjasi & Biekpe (2006) revealed that stock market development plays a significantly positive role in economic growth when value traded is used as the indictor of stock market development. An increase in stock market liquidity will have positive effect on economic growth, but for the stock markets which are not liquid, value traded do not affect the GDP growth.

Our discoveries from the study portrayed that stock turnover ratio has a positive significant impact on economic growth. Market turnover was expected to have a positive link with economic growth, as our results found. Turnover portray the how frequent shares are traded among market players. It reveals how easy or hard for the security holder to exchange the security at times, when the turnover is high it means the securities can easily be bought and sold, same when turnover is low it evidences how

hard it is to transact the security on hand. Exchange markets with high trading volume have high turnover, while those with poor trading volume have low turnover. New companies and small one has low turnover in their share, although the turnover is supposed to increase as the company gain experience in the market. Investors are always not willing to inject their funds in companies with low turnover since it is tough to release the asset of low turnover. Stock turnover for DSE is very low which signify the very poor trading volume of listed companies in the exchange and illiquid of the market. Although the increase of turnover in the market should impact the economic growth positively. DSE should improve the trading system, encourage many players in the market, increase the activeness of the market to enhance the liquidity so as to spur the growth of economy. We revealed a nonconflicting evidence with the result of Levine & Zervos (1996) in their study of stock market development and long-term growth, they found a significant positive association for the predetermined proxies of stock market development and GDP growth. Ngare et al. (2014) evidenced that when stock market development is indicated by the stock market turnover ratio, the estimated coefficients are positive and significant at the conventional levels of testing, thus stock market turnover has a positive and significant effect on the economic growth.

5.2.2 Causality direction between stock market development and economic growth

The second specific objective of the study analysed the causality direction between stock market development and economic growth. In assessing this causality direction, the study developed two hypothesis which are; Stock market development proxies does not granger cause economic growth; and Economic growth does not granger cause stock market development

5.2.2.1 Stock market capitalization and economic growth

The second hypothesis tested the null hypothesis that stock market development proxies does not granger cause economic growth, from the results, the estimated coefficients of lagged market capitalization are 0.036 which is significant at conventional levels, thus we rejected the null hypothesis which stated, that the lagged value of market

capitalization do not cause economic growth. Market cap was examined as a standalone index of stock market development, to analyse its causality to the growth of economic and our findings revealed that market capitalization granger causes the growth of economy in Tanzania. This means that stock market capitalization contains necessary information that can predict the growth of economic. The evidence from this study declare that current value of market cap could have basic information that may result into growth of economy in the next period. This does not basically mean market cap causes growth of economy, but from our findings it is revealed that, by looking at the current trend of market cap, we can predict the future trend of economic growth. Market capitalization contains necessary attributes which have impact on growth of economy, the findings reveal that increase in market capitalization is the result of increase in number of companies in the exchange market or increase in number of share listed in the exchange, contribution of each company in the economy can be viewed from the output companies release into economy. The economy with many healthy trading companies experience a very fast growth, these companies upsurge per capital income which rise individual expenditures, increase in spending's stimulate productions of goods and services which in turn increase the income of overall country. We view market capitalization to contain crucial information in the growth of economy, and when are well utilized, they affect growth of economy. Our findings are consistence with the results of Ngare et al. (2014) who examined the casual relationships that exist in stock market development and economic growth, in their study it was revealed that market capitalization as a proxy of stock market development granger causes economic growth. So, the findings reveal the one-way causality running from the stock market capitalization to real GDP growth rate. Thus, any changes in stock market capitalization anticipate changes in GDP growth. According to the results found it this paper, changes in real GDP do not affect stock market capitalization. Our results are in line with Imam Alam & Hasan (2003) who found that, changes in stock market capitalization causes changes in GDP, but changes in GDP do not affect stock market capitalization.

We also tested the null hypothesis which stated that, lagged value of economic growth does not granger cause stock market development (Market capitalization). The estimated coefficients of lagged GDPR (economic growth) are 0.375 which is not significant at conventional level of 0.05, so the null hypothesis that the lagged value of economic growth does not cause market capitalization cannot be rejected. Thus, from the findings it was noted that economic growth does not granger cause stock market capitalization. The evidence obtained from this study suggest that changes in economic growth for Tanzania does not have any vital information that could result into advance of exchange market, but this is not a case for Tanzania. With the economy that prospers we expect many companies and organization are being established, companies needs to raise fund for their long-term progress and the exchange market is the only place where these companies can raise funds at cheap cost, so many companies would be listing their share to raise funds to cover their operational and other future plans. The economy of Tanzania has been growing positively for years with new established companies every single day but there few companies that are ready to raise funds from the exchange market. Companies are sometime willing to secure funds at high cost from commercial banks rather than in stock market. In this scenario, economic growth does not stimulate development of exchange market. This limit the size of exchange market and also limit the flow of funds from savers to lenders. Our finding are consistent with the results of N'Zué (2006) who conducted a study to examine the relationship between stock market development and economic growth, the results of his study found that economic growth does not granger stock market development. Also Imam Alam & Hasan (2003) in their study they found that, change in economic growth does not lead to market capitalization. Our findings evidence that there is no causality running from economic growth to market capitalization, there is only unidirectional causality from stock market capitalization to economic growth.

5.2.2.2 Value of share traded and economic growth

We conducted a causality test by considering the value of share traded as a proxy of economic growth. Lagged value of VST (value of share traded) were tested if they can predict value of economic growth. In our findings, the estimated coefficients of lagged VST was 0.033 which are significant at 5% level of significance thus, the null hypothesis that, the lagged value of VST (value of share traded) do not cause economic growth is being rejected, this imply that coefficients of lagged VST (value of share traded) granger cause economic growth. Value traded indicate how liquid the exchange market it is by observing the number of transactions from savers to lenders in the market. Trading volume found to have a prognostic ability in the future value of economic growth, it does so by increasing the supply and demand of funds in the economy. Exchange market needs to be active in its trading with many transactions occurring per day to contribute largely in the economy. Our findings evidenced that trading volume could impact on future growth of economy, even though the trading volume of DSE is very low. This imply that, when the exchange market is well-established with many participants in the market its contribution in the growth of economy will be feasible. The findings of this study depict that trading volume contains vital information that could explain the future growth of economy. Our findings are consistent with the result of Naik & Padhi (2015) who conducted a study to examine the association which exist between stock market development and growth of economy in emerging market economies, in their study it was found that total value of share traded granger cause economic growth.

Also, in a model of causality we tested if the lagged value of GDP granger causes value traded (VST), the estimated coefficients of lagged GDP was 0.783 which are not significant at 5% level of significance, so it was proved that the lagged value of economic growth (GDP) does not cause value of share traded (VST). The causality was found from the value of share traded to economic growth and not otherwise. The results of this study found the economic growth do not contain the required contents that can predict the development of exchange market. Since changes in economic growth do not

have increment in development of exchange market. Even when the country experienced a high rate of GDP, still the trading volume was very low. Local investors still hesitate to poor their fund in long-term investments by doubting their funds would be tied up, and it could be difficult to regain those funds when needs arise. The findings of this study are inline with the study of Bayar et al. (2014) whose results indicated that there was a unidirectional causality from value of share traded to real GDP growth rate. Similarly, changes in real GDP was found to have insignificant effect on value of share traded, but changes in value of share traded had impact on the growth of economy. Our findings also are consistent with the results of Bayar et al. (2014) who conducted a study to examine the effect of stock market development and economic growth, in their findings it was revealed that there one way causality running from value traded to economic growth, economic growth was not found to granger cause value of share traded.

5.2.2.3 Stock turnover ratio and economic growth

Turnover ratio as a proxy of stock market development was analysed to check whether it has a relationship with the growth of economy. In this study we tested the hypothesis that, lagged value of turnover ratio does not granger cause economic growth. The results from the analysis we found the estimated coefficients of lagged stock turnover ratio to be 0.011 which are significant at conventional levels. This led to the rejection of hypothesis tested (lagged value of turnover ratio does not granger cause economic growth) and thus it was revealed that, the estimated coefficients of lagged stock turnover ratio granger cause economic growth. Our findings are in line with the study of Bayar et al. (2014) who found that, stock turnover granger cause economic growth. Also Naik & Padhi (2015) in their study for emerging economies, it was found that stock turnover granger cause economic growth. The evidence from the study depict that, when stock turnover ratio increases it impact the growth of economy significantly. Stock turnover increase as many shares and other long-term security passes ownership from one market participant to another. The high turnover shows that the supply of money is efficient and individuals are willing to save their funds through the exchange market. Poor turnover

imply that market participants are not liquid enough to commit their funds in saving, also the low turnover could imply that, the security being traded does not attract savers, either their prices does not increase for investors to gain returns. But the findings of this study evidence that increase in trading volume has positive impact on the growth of economy. And the trading volume contains necessary information that can predict economic growth.

Another hypothesis tested was the null hypothesis stated that, lagged value of economic growth does not cause stock turnover ratio. From the findings, the estimated coefficients of lagged GDPR was 0.726, which are found not significant at conventional levels, thus we fail to reject the null hypothesis which state that the lagged value of GDPR do not cause STR, so the estimated coefficients of lagged economic growth (GDPR) does not granger cause stock turnover ratio (STR). Our findings are in line with the results of Ngare et al. (2014) who found there was a causality running from stock market turnover to economic growth. Also, our results are consistent with the results of Bayar et al. (2014) in their study they revealed that economic growth does not granger cause total stock turnover ratio. From the findings of the study it was revealed that, there was unidirectional causality which runs from stock market turnover to economic growth.

CHAPTER SIX
SUMMARY, CONCLUSION AND POLICY IMPLICATIONS

6.1 Introduction

The chapter presents the major conclusions derived from the study, also it presents the implication of the findings. The first section presents the conclusions regarding the hypotheses developed, this is followed by the implications and the suggestions for further researches. The main objective of the study was to examine the relationship between stock market development and economic growth in Tanzania. The proxies for the stock market were market capitalization, value of share traded and stock turnover ratio. While Real GDP growth rate was used as the indicator of economic growth.

6.2 Summary

This study examined the relationship which exist between stock market development and economic growth in Tanzania from 1999 to 2017. Three proxies of stock market were used to measure stock market development, which are stock market capitalization, value of share traded and stock turnover ratio. While real GDP growth rate was used as an indicator of economic growth. Data regarding stock market development were collected from the Dar es salaam stock exchange offices and annual reports, whereas data on economic growth were extracted from the National Bureau of Statistics publication. The study employed Johansen cointegration test and Vector error-corrective model to examine the long-run relationship among variables under the study, while the causality among variables was examined using the granger causality test. The findings of the study revealed to exist a long run relationship between stock market development and economic growth. The results from granger causality portrayed one-way causality running from stock market development proxies to economic growth.

6.3 Conclusion

The question as whether stock markets contribute to the growth of economy is one of the most intriguing question in the field of finance. Many researchers have focused on addressing this issue and particularly to identify factors that spurs economic growth by

using different economies. In this study we assessed the linkage between stock market development and economic growth in Tanzania, in this study three essential proxies of stock market development were included to determine the association with economic growth, these proxies are stock market capitalization ratio (market size index), value of share traded ratio (liquidity index) and stock market turnover (liquidity index). Real GDP growth rate was used as an indicator of economic growth. Time series data from 1999 to 2017 were employed to examine the linkage between variables. The study was guided by the following specific objectives.

i. The relationship which exist between stock market development and economic growth; and

ii. The causal direction between stock market development and economic growth

Relationship between stock market development and economic growth

The empirical results from the research findings show that, there is long-run relationship between stock market development proxies and economic growth in Tanzania. Johansen cointegration test was employed to test nature of the relationship, Johansen cointegration test the null hypothesis of no co-integration against the alternative of cointegration. In our as presented in the table 4.5 above, it shows that the trace statistics for the maximum ran zero is 48.8579 which greater than its critical value of 47.21 this make us to reject the null hypothesis which say there is zero cointegration. For the maximum rank one, the trace statistic (23.2751) is less than critical value (29.68), this made us to fail to reject the null hypothesis stated that, there is cointegration of equation one. Also, at maximum rank two, the trace statistic (11.8741) is less than the critical value (15.41), thus we do not reject the null hypothesis which state that there is cointegration of equation two. And at maximum rank three, the trace statistic is 3.5566 which is less than the critical value of 3.76, in this case we fail to reject the null hypothesis which state that there is cointegration of equation three, thus the results revealed to exist the long-run relationship between stock market development and economic growth. The long-run relationship evidence that, stock market plays a significant role in economic growth.

Specifically, stock market capitalization was revealed to have a significant positive effect on the growth of economy, the same for the stock market turnover, a positive significant effect was revealed. The value of share traded showed a negative significant effect to the growth of economy. This significant role of stock market to the growth of economy is only evident in an improvement in the total market capitalization which is the value of all listed shares in the market, so Tanzania stock market needs to increase its listing in the market to encourage the growth of economy. Also, the value of shares traded, this indicate the significance of liquidity and active trading system to economic growth. The value of share traded did not seem to have a significant effect of the growth of economy since the Tanzania stock market is illiquid and it is not well active.

The causal direction between stock market development and economic growth

In examining the causality direction between stock market development and economic growth, granger causality test was used to assess the causality direction among the variables in the study. In examining the causality direction, the following hypotheses (i) the lagged value of MCR do not cause GDPR, (ii) the lagged value of VST do not cause GDPR, and (iii) the lagged value of STR do not cause GDPR were tested. The results as presented in table 4.7 above showed that, the lagged value of MCR in GDPR is 0.036 and the lagged value of VST in GDPR is 0.033, also the lagged value of STR in GDPR is 0.011, which are all less than the significance level of 0.05, and that, the null hypothesis which state that, the lagged value of stock market development proxies does not causes GDPR should be rejected, the results show that proxies of stock market development granger cause economic growth. Also, the study tested whether economic growth granger cause stock market development by considering the following hypotheses (i) the lagged value of GDPR do not cause MCR, (ii) the lagged value of GDPR do not cause VST, and (iii) the lagged value of GDPR do not cause STR, and the results found that, the lagged value of GDPR in MCR is 0.375, and the lagged value of GDPR in VST is 0.783, also the lagged value of GDPR in STR is 0.724 which are all not significant at the convectional level of 0.05, thus the hypothesis that lagged value of

economic growth does not granger cause stock market development failed to be rejected. The evidence from our findings show the unidirectional causality for the variables examined. The causality direction was from the indexes of exchange market to economic growth. The current value of all three proxies involved in the study were found to have a significant explanatory power to the future value of economic growth. For the period under the study, past value of economic growth was discovered to be insignificant in explaining the current value of stock market indexes. So, the causality was only from stock market proxies to the growth of economy and not the other way around.

The results of the study also reveal that, investors do not have enough consciousness regarding the stock exchange market, the illiquidity of the market, narrowness of trading system, and infrequency of trading limit the soundness of the stock exchange. The lack of absorption and low demand for stock exchange products also account for the low performance of the stock exchange. So, our findings reveal that stock exchange market in Tanzania is small and not liquid. Despite the fact that stock exchange market in Tanzania (DSE) has been assisting companies to raise long-term funds to finance their business operations and expansion of their projects.

Thus, in this study the exchange market in Tanzania was used to assess its relationship with economic growth. Three proxies of stock market development were used to establish the relationship. These proxies are; market cap, volume trading and stock turnover. For the economic growth, the GDP was used as an indicator. The study employed time series data to analyse the association for the all four variables. The analysis was conducted using Johansen test and granger causality also the study estimated VECM. In summary the subsequent results were attained.

- GDP is positively correlated with the stock market development indexes
- There is a long-run relationship between stock market development and economic growth (GDP growth rate and stock market indexes are cointegrated)
- Vector error correction representation indicates that stock market development proxies causes economic growth in long-run

- The causality test conducted suggests unidirectional causality from the stock market development variables to economic growth, but no causality was running from economic growth to stock market development indicators.

6.4 Policy implications

From the findings of this study, it seems that reforms of the stock market as a standalone can induce economic growth, but stock market should be well developed, frequent trading and liquid for the country to enjoy fast growth from the stock market.

We have evidenced the one-way causality running from stock market development to economic growth. Thus, improvements of the exchange market will contribute greatly to the advancement of economic growth. Efforts should be made to increase the frequency of the trading activities of the market so that the market can be active with its securities trading at attracting prices. Strategies should be employed to increase the effectiveness of the market. By doing so the exchange market will have a great contribution to the growth of economy.

We have seen that stock market in Tanzania has fewer listing, and this could be due to lack of awareness by the majority of the population, so the DSE should inject more power in educating the public regarding the advantages of participating in the market, by doing so, public awareness will be increased and investors will be attracted to be involved in the market.

Loosening of ordinance on foreign cooperation in the local capital market has the capability of upgrading rivalry and inflow of external funds to the local security exchange. Nonetheless, the authority should not adopt internal-looking requirement that hinder outsiders from involvement in local security exchange market since it has a tendency of compelling challenges and restraining remote funds inflow to the local economy. Thus, an open scheme to support outside investment in the local securities exchange should be included into former schemes that prohibited foreigners to collaborate in the local security market. This may address the problem of liquidity and the limited absorption capacity of the stock exchange.

The participation of private sector in the local security exchange is exceptionally vital for the development of security market. Though, the government's strategy of applying inconsistence tax rates on government bills and dividend on stocks has inclination of demoralizing savings in stock securities. Thus, standardization of tax strategy which affect earning on returns of investment for government bonds and other securities will increase the venue for foreign and local investors to inject their funds in securities.

Poor means of communication, technology, computer network, and insufficient trainings to personnel is major drawback to the development of stock market in Tanzania. The government should improve the technology involved in the stock market, communication and the use of advanced machine and computer to enhance the operational activities of the market.

It is well known that, the amalgamation of African financial exchanges into the economies is as yet powerless. The exchange system of Tanzania security markets and other stock markets in Africa should be improved through provision of education and enhancing the need for lenders to raise funds on security market. Effectiveness and profitability impacts of the securities exchange on monetary development are enthusiastic when markets are fluid and dynamic. Efforts should be made to make sure African stock markets are liquid and active for them to contribute largely in the growth of economy as for the market capitalization is not a serious problem.

6.5 Recommendations for future study

It should be noticed that while this investigation makes various commitments, there are few constraints that point to significant roads for future studies. First, the information for this investigation was gathered from just one financial exchange market and one country which is Tanzania. So, we don't have a clue about the relevance of these discoveries to different economies since the stock markets differ with the economy and the country. Therefore, future research should include cross sectional studies to include other stock markets in East Africa countries or other African countries to ascertain if the result will be same as the one presented in this study.

Second, the study used exclusively stock market capitalization, value of share traded, and stock turnover ratio to measure the relationship between stock market development and economic growth, results could be different if different indicators were added in the analysis. So, for the future researches, other measures of stock market development should be used to conduct a study. Also, different measure of economic growth other than GDP growth rate should be used to measure the relationship.

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APPENDICES

Appendix 1: Dataset used in analysis

Year	GDPR	MCR	VST	STR
1999	0.048	0.013483	3.14683E-06	0.00023
2000	0.049	0.019904	0.000413	0.02074
2001	0.06	0.034645	0.000621	0.01791
2002	0.072	0.06444	0.001857	0.02882
2003	0.069	0.056123	0.002051	0.03655
2004	0.078	0.048606	0.001872	0.03850
2005	0.074	0.041848	0.000750	0.01793
2006	0.067	0.171831	0.000552	0.00321
2007	0.071	0.150574	0.001417	0.00941
2008	0.074	0.196327	0.001329	0.00677
2009	0.06	0.177766	0.001728	0.00972
2010	0.07	0.151593	0.001114	0.00735
2011	0.064	0.30845	0.001379	0.00447
2012	0.069	0.295126	0.001138	0.00386
2013	0.073	0.31372	0.004750	0.01514
2014	0.07	0.27497	0.004792	0.01743
2015	0.07	0.22685	0.011788	0.05196
2016	0.07	0.18434	0.004060	0.02202
2017	0.071	0.198757	0.004449	0.02238

Appendix 2: Value of GDP, MCR and VST (figures in Tshs Billion)

Year	GDP	Capitalization	Value Traded
1999	8430.511	113.6717	0.026529
2000	8585.34	170.8824	3.54344
2001	9100.274	315.2834	5.646748
2002	10444.51	673.04	19.39464
2003	12107.06	679.49	24.83762
2004	13971.59	679.1	26.14857
2005	15965.29	668.11	11.97977
2006	17941.27	3082.86	9.896664
2007	20948.4	3154.28	29.68693
2008	24781.68	4865.32	32.9373
2009	28212.65	5015.26	48.75382
2010	32293.48	4895.47	35.98685
2011	37532.96	11577.05	51.76036
2012	44717.66	13197.34	50.8941
2013	53174.68	16681.98	252.555
2014	79718.42	21920.15	381.9837
2015	90863.83	20612.43	1071.109
2016	103744.6	19124.3	421.1818
2017	116101.9	23076.01	516.5535