

THE IMPACT OF STOCK MARKET PERFORMANCE UPON ECONOMIC GROWTH OF THE USA

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Acknowledge

Dedicated to my beloved family...



Abstract

The economic development is at the core of policy making of every economy and almost all policy and strategic initiatives are directed towards the achievement of economic stability and growth. This study focused on the linkage of Stock market and economic development in USA, by applying stock market capitalization and stock market index as the major proxies for stock market growth. The financial stability and foreign direct investment were used as control variables of the study. Using a time series sample for all the variables for the period from 1985 to 2014 for USA, the study analyzed the relationship applying Ordinary least square technique. The output of the whole case study presents that Market Capitalization and Market index has a positive association with Economic Development. Market stability on the other hand has negative relationship with economic development whereas the FDI has insignificant relationship. The results propose that stock market development/growth is an important sign of Economic growth in United States of America.

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CHAPTER: 1

INTRODUCTION

1.1: Study Background

In a financial development of the economy, a vital role is played by the Capital Market. It is made through investments based on long terms which provide opportunities and financial help to companies. Stock market authorities control the markets' operational activities. The basic motive of investors is to gain a higher return on investment by investing in a diversified portfolio. The return from stock depends on different factors, which may be internal factors such as dividends, book value and earnings per share and may also be external factors like financial development, interest rate and the rate of inflation, government regulations and foreign exchange rate. The development of stock market may indicate improvement in the macro-financial environment of the economy, but the stock market development can also be the result of the financial development of the country (Barasa, 2014).

The financial theory assumes an affirmative relation between stock prices and financial activities, as the stock prices of a company is a present discounted value of the companies' expenditure. However, in the certain instance, it may not be the case, as in 1987 the stock price crash around the world barely affected the financial progress of Canada, Hong Kong, Spain, USA and the United Kingdom as was predicted (Fuentes-Nieva, & Pereira, 2010).

The stock market generally refers to a place where buyer and sellers meet to deal in stocks and securities. Stock market activities are regulated and organized by the stock exchange authorities. Two types of securities are generally traded in stock markets namely debt and equity. Debt securities are mainly referred to bonds issued by corporate and government bodies while equity refers to the ordinary share issued by companies (Duca, 2007). There are several pointers that illustrate the performance of the stock market. These are stock prices, liquidity and capitalization. Stock prices refer to the existing market prices of securities determined by supply and demand forces. Liquidity defines the extent of price stability in trading of securities in the stock market while market capitalization refers to the total value of stock registered and managed in the stock market. Market capitalization is a creation of existing stock prices and number of shares issued by the listed companies (Barasa, 2014).

Financial expansion refers to the improvement in the financial welfare of a country as a result of improvement in the manufacturing developments of production above a precise duration of time. Different theories assume that there are various factors that have effects on the financial development of a nation. The two most common theories are presented by the Solow-Swan model, which are named as exogenous development theory and Endogenous development theory (Quah, 2001).

According to Quah, (2001), the financial measurement that evaluates a nation's financial development is GDP. Gross Domestic Product (GDP) is the financial measurement to evaluate the country's financial development as a nation's generation of goods is defined by it. The most frequently used techniques to evaluate GDP are income or expenditure approach. Real GDP is considered as the most reliable tool to measure financial development as it is adjusted to inflation to avoid the problem of exaggeration in the measure of financial development (Nyamakanga, 2013). It has been widely discussed and is still remain the key concern for many economists and researchers that whether stock market presentation affects financial enlargement or development affect the performance of stock market. According to Har, Ee, and Tan, (2008), a decrease in stock prices indicates an upcoming recession in economic progress whereas augmentation in stock prices indicates a financial development in future, as stock market crises in 1987 leaded the world recession.

Developed stock market provide greater investment opportunities both to saver and investors to extend their risk by adding capital in different portfolios of stock and productive projects which eventually results in financial development (Kenny & Moss, 1998). The expansion of the stock market is needed to enhance the mobilization of domestic resources to attract more foreign direct investors. A sound and viable stock market enhance the competitiveness and efficiency of the security market. Lack of stock market makes the companies most dependent on their internal sources of funds, e.g. retain earning. large multinational organizations have sufficient amount of retain earning along with the access of bank loans to avail different investment opportunities and on the contrary small organization have low retain earning and are usually have low access to bank loans (Senbet & Otchere, 2008). Sometime retain earning is not enough for corporate to grape an investment opportunity, therefore these corporation issue bonds and commercial papers

to raise capital for investment which ultimately assists in financial development (Bernanke & Gertler, 1989).

Since the inception of the stock markets in the USA the markets have gone through four major disasters over its life which include the crisis of 1929, 1987, 2000 and the crisis of 2007. After each of this crisis, there has been significant market development in shape of regulation and structural changes into the markets. After the crisis of 1929, the Glass-Steagall Act was promulgated which marked a distinction between the Commercial and investment banking activities and resulted in some major development and prevalence of stability in the stock markets. However, in last few decades, some of the clauses of the act are softened by FED and other regulators to stimulate the market (U.S. SEC, 2012). After the 1987 crisis, some other major improvements took place in the market which includes the emergence of computerization and automation of the stock markets in the USA that further enhanced the level of stock market activity increased the efficiency and effectiveness of the markets. After 1987 new margin requirements were also introduced in the stock markets that reduced the volatility in the markets. The 2000 crisis further presented some new developments and regulation in the market, which includes the minimum capital requirements for investors in the markets, the CFO and CEO of the companies were bound to sign the balance sheets of the companies thereby reducing the risk of insider strategies in the markets. Restrictions were placed on the marketing methods used by the investment companies and also major penalties were incorporated in the markets in order to enhance the level of compliance with the standards set for the markets (U.S. SEC, 2012). It was mandatory for the companies to disclose the offshore investments and stock options of the companies to reduce the risk of the investors. The crisis of 2008 further led to the emergence of new regulation for stock markets to reduce the risk of the investors and attracts investors towards the markets.

The stock market developments in terms of the regulation and the structural changes incorporated in the markets are aimed at the enhanced level of market activity thereby increasing the level of market capitalization and stock market index process that has potential implication for the financial activity and hence the financial development in the USA. This study uses the stock market developments in the USA for analyzing its implication for the financial development in the USA.

1.2: Research Problem

Financial growth is one of the main motives of every government as it is the key driver of overall development in an economy. Previously Financial and Financial theories regarding stock market activity and financial growth have presented that stock market has a potential relationship with each other. It is observed that economies having more stable and developed stock markets have a high volume of financial activity and hence have a better perspective of financial development in the economy. The stock market directly increase the number of funds available for investment in the economy and hence guides the level of financial activity. The United States since its inception of its stock markets have gone through some major structural and regulatory changes for the efficiency and stability of the stock markets. Previously there are studies from developing economies around the world that have examined the connection among stock market growth and financial development, however, in the USA there is previously little work undertaken to analyze the relationship of these variables. This study therefore aims at filling this cluster by analyzing the impact of stock market growth on the financial development of USA.

1.3: Research Question

The major study questions of the research are presented below,

- What is the correlation of Market Capitalization with Economic Development in the USA?
- What is the linkage of Market Index with Economic Development in the USA?
- What is the relationship between Market Stability with Economic Development in the USA?
- What is the association between Foreign Direct Investment and economic growth in the USA?

1.4: Research Objectives

The essential point of the study is to find out the impacts of stock market growth in the USA on economic development. The main objectives are as follow,

- To analyze the relationship of Market Capitalization with Economic Development in the USA.
- To find out the relationship of Market Index with Economic Development in the USA.

- To analyze the relationship between Market Stability with Economic Development in the USA.
- To analyze the relationship between Foreign Direct Investment with Economic Development in the USA.

1.5: Significance of the study

Economic development is the cornerstone of every economy around the world and all the economic strategic planning, monetary and fiscal policies of the economies are directed towards the economic development of an economy. The stock markets hold a vital role in mobilizing and channelling the resources in an economy. It is therefore believed that stock market has a direct influence on the economic development of a country. It is therefore important for the policymakers and stock market developers as well as the investors to know the significance of stock market development in the economic growth of USA. The findings of the research will present new insights into the component of stock market growth in the economic development of USA. The results will further add insights from the USA into the previous work done in this kind of related field.

1.6: Hypothesis of the study

The main hypothesis of the study is presented below,

H1a: Market Capitalization has a positive relationship with Economic Development in the USA

H0a: Market Capitalization has no relation to Economic Development in the USA

H1b: The Market index has a positive relationship with Economic Development in the USA

H0b: Market Index has no relation to Economic Development in the USA

H1c: Foreign Direct Investment has a positive relationship with Economic Development in the USA

H0c: Foreign Direct Investment has no relation to Economic Development in the USA

H1d: Inflation has a negative relationship with Economic Development in the USA

H0d: Inflation has no relation to Economic Development in the USA

CHAPTER: 2

LITERATURE REVIEW

2.1 Introduction

In recent times, stock market's effect on financial expansion has been the major concern for many researcher and scholars throughout of the world because of its perceived positive effects on financial development. The stock market is often called as a barometer of business direction and provides a centre for capital market activities. An active stock market can utilize index to assess variations in economic activities (Levine and Zervos, 1996; Demirguc-Kunt and Levine, 1996; Obada, 1998; Onosode, 1998).

The stock market is a stage used to collect funds for a longer period from individuals, firm and government and employ these funds into productive investments projects (Schwert, 1989). Stock markets make a sizeable input to the financial prosperity of the nation as it mobilizes savings, provides risk diversification to the investor, acquirement of data and improved incentives for corporate control. Additionally, the stock market also creates liquidity and improves the efficiency of resource allocation (Quah, 2001).

A nation expansion is directly or indirectly related to financial activities performed by both private and public organization. The expansion and advancement of these organizations (e.g. buying new machinery, building new factories etc.) often require large funds for long period of time, which is normally provided by stock markets (Patrick, 1966).

Stock market Investors are usually concerned about the liquidity of their savings and do not want to retain their saving in the form of fixed asset for a longer period. The stock markets, therefore, provide an opportunity to the institutional investors to avail liquid investments opportunities at the stock markets. According to Bencivenga & Smith, (1991), the industrial uprising is not achievable without the continuation of a prolific liquid market as investors would be less likely to insert money in lengthy and long-term projects.

The effect of stock market prosperity on financial expansion varies according to the level of economic growth of a nation. The stock market has a significantly high control over financial upswing of non-developed nations as compared to developed countries. Nazir, Nawaz & Gilani, (2010) reported that the emergence of the stock market and its expansion enhance financial

prosperity and development through the apportionment of savings, risk divergence, saving mobilization, improving corporate governance and providing liquid investment opportunities. Bencivenga & Smith (1991) stated that the financial prosperity is influenced by the liquidity condition of the stock market, however, in reality, the long-term investments are more often suitable to gain maximum profit but investors are less interested to inject money in long-term projects (Humpe & Macmillan, 2005).

The following section of the research is expanded into two portions. The first portion presents theoretical literature by discussing different theories which explain the association between stock markets and financial development. The second portion of this section will focus on the empirical literature of different researchers and scholars who worked on analyzing the connection between stock markets and financial development.

2.2: Theoretical literature

2.2.1: Post Keynesian Growth Theory

This hypothetical theory is also known as Harrod & Domar ideal theory. Palley (1996) stated that financial growth of a country depends on policies related to enhancing investment through savings and capital accumulation. They further explained that growth rate will be low in those countries where there is sufficient supply of labour but have limited physical capital investments. Least developed countries are not able to save sufficient charges due to low revenue and thus investment in the physical capital remains low (Bernanke & Gertler, 1989).

This theory suggests that the financial growth has a strong linkage with the stock market function to allocate different production factors. Funds created by investments activities and savings must be assigned to the creative section of the budget in order to enhance the financial expansion of a nation. According to this theory, the allocation of capital by stock markets contributes effectively to the financial expansion of a country.

2.2.2: The New Classical Growth Theory (Exogenous)

This theory is also identified as Solow growth model developed by Robert Solow to make an extension to the Harrod Domar model. This theory state that financial growth is reliant on the supply of assets and labour, and technology advancement. As per this theory, the financial increase would be achieved in the presence of adequate availability of these elements. Countries with low technological advancement or where technology advancement remains constant with

increasing supply of labour reduce the availability of capital stock to its labour and thus will reduce production per capita (Binswanger, 2004).

This theory forecast that in the absence of technological progress financial growth will remain constant. The financial growth can only be accelerated by the technological advancement as to it influences on labour. This theory also suggests that labour and capital factors will automatically adjust itself as the technological advancement taking place (Biyan, 2012). Thus, this theory state that investment in stock markets to accumulate physical capital has an established connection with the financial prosperity of the nation. This theory also identified a particular stage of financial growth where further financial growth is supported by technological progress.

2.2.3: Endogenous growth theory

This theory explains that fiscal expansion is the function of endogenous factors apart from external factors. Kuznets (1973) supported this theory and state that technological advancement is an endogenous factor which has a greater influence on the financial development of a country. This theory suggests that investment in human capital and technological advancement are the major contributors to financial growth. Technological advancement is the result of an increase in savings, investments and increase in population which are in turn persuaded by structural policies of the economy (Bencivenga and Smith, 1991).

According to this theory financial growth is a positive effect of venture ratio in an economy and therefore long-term expansion in financial growth depends on government policies and measure related to investment and savings. This means that government policies which enhance the performance and expansion of stock market lead to consistent financial expansion over a long period of time.

2.2.4: Market Feedback Hypothesis

This theory presents the arguments that relation between stock market and financial development only exist in advanced nations with weak relation in developing economies and there is zero linkage between the stock market and financial growth in the less developed nation. According to this theory, most economies are still underdeveloped with slow-growing or unfledged stock market but once these economies start an upward movement it would surge the stock market. Therefore, financial expansion of a nation is likely to positively affect the prosperity of the stock market (Bulere, 2015).

Shirai (2004) stated that stock market performance works as a ‘barometer’ for the financial prosperity of a nation. He also suggested that the influence of stock market performance in long run is more significant as compared to the short run. According to Yartey and Adjasi, (2007) stock market has no relation to financial growth in developing economies due to liquidity issue, thin trading and limited investor base.

2.2.5: Economic Expansion and Financial Growth

For the past decades, the association between economic growth and financial expansion has been discussed by many researchers. These discussions are not a fresh subject for economists, but it is supported by the concept presented in 1911 by Schumpeter. In his seminal work, he argued that the purpose of financial sectors expansion is economic growth. According to Schumpeter good practices of the financial system, technological advancement with the availability of plenty of economic resources to entrepreneurs will ultimately increases the financial growth of a country. The connection between economic sector growth and financial progress has been explained by many researchers such as Debreu (1959), Arrow (1964) and Patrick (1966). Fry and Goldsmith (1970) provide empirical evidence by applying cross-country statistics where he found a positive relation between financial sector growth and financial progress. Patrick (1966) used ‘Demand following’ and Supply leading’ approach to analyses the influence of financial sector expansion on financial growth. The research disclosed that under ‘supply leading’ approach to financial expansion cause financial growth and under ‘demand following’ approach to financial growth cause financial expansion.

It is frequently inquired that what the importance of these studies is in financial literature. For the policymaker, it is necessary to realize causality direction between economic expansion and financial growth. By using existing literature, it is evident that efficient financial system makes the economy able to enhance its real GDP growth. Therefore, policymakers need to develop and implement strategies that will reduce market failure by enhancing services that make an easy transaction, exert corporate governance and mobilize capital which will ultimately enhance the financial expansion (Sinha and Macri, 2001).

The economic system is a must for accomplishing the requirements of investors by manoeuvring their resources and changing it into assets. Therefore, an efficient economic market utilizes the resources in a proficient way to produce and recognize more investment chances (Ndikumana, 2001). Abu-Bader and Abu-Qarn (2008) carried out a research in Egypt to examine the causal

direction between economic development and financial expansion. The research evidenced that causality occurs from economic sector expansion to financial growth either by increasing the investment effectiveness or improved assets for investments. According to Levine and King (1993 & 1993), higher financial growth is a result of a well-functioning financial system which is deep and broad in nature. Kuznets, (1955); Robinson, (1952); Schwartz, (1963) and Friedman documented that financial development makes economic sector progress. Demetriades and Hussein (1996) stated that causality occurs in both directions between financial development and economic growth (e.g. economic growth cause financial development and vice versa). However, according to El-Wassal (2005), there is zero linkage between economic growth and economic development.

2.2.6: Economic Growth and Stock Market Progress:

Last few decades stock market shifts have seen increasing importance. The researcher emphasizes on determining the relation of cause and effect. This relation is observed between financial development and stock market presentation. Since the late 1980s, the stock markets of emerging economies throughout the world had shown significant development when it comes to shareholders, registered corporations and especially in market capitalization. According to El-Wassal (2005), there is an increase witnessed in market capitalization of evolving stock markets. It has increased by a ratio of 32 times as compared to 11 times increase in the developed stock market during the of 1980 to 2000. The expansion in capitalization of emerging stock market estimates almost three times of the capitalization of stock markets that developed. In the last few decades, it has been remained the subject of debate, that whether stock market predict financial development or it is the financial development that is a key predictor of stock market conditions. Economists like (Dailami and Atkin, 1990) and (Shirai, 2004), consider the increased stock charges as a signal of future financial development and on the contrary reduction in stock prices as the signal of upcoming financial recession.

Levine (1997), conducted a study in the duration between 1976 and 1993 to comprehend the relation between financial expansion and the stock market in 41 countries. The study used the stock index and real GDP per capita development as substitutions for the expansion of the stock market and financial development. The outcomes of this off-road regression analysis revealed that prerequisite of stock market progress has a strong and positive connection with financial expansion in the long run. Duca, (2007) investigated cause and effect association amid the stock

market and financial development for the time series data of Malaysia in between 1997 and 2006. The research used the (KLCI) annual data as a substitution for the stock market and real GDP as a substitution for financial development. The result of Granger (1969), causality test showed that there is causal relationship from only one direction, which is stock market effects the financial development of Malaysia. According to Binswanger, (2004) stock market gives direction to an economy. He carried out a study in the U.S. for the period of 1956 to 1983 and found that business market development is the pointer of future financial development.

Levine and Zervos (1998) provide an empirical indication of the stock market is a significantly affirmative influence on the financial progress. The outcomes of the research carried out by Bulere (2015) revealed that development of stock market has a strong relationship with financial development in the US. By using cross-sectional data, the study revealed that stock market expansion has a significant influence on financial development. Stock markets have a strong feature of allocating resources efficiently than financial intermediaries this ultimately results in financial development. This is because those stock markets have usually more information as compared to financial intermediaries. The active stock market plays a vital function in fostering the financial expansion of emerging nations.

According to (Dailami and Aktin, 1990), the stock market of established economies can improve investments and provides different monetary tools to savers at lower costs to vary their collections and to raise capital resources for the firms. With that, the stock markets can proficiently allocate these capital assets in creative projects. As a result, it will promote the financial development. Vazakidis and Adamopoulos (2009) investigated the cause and effect relationship among financial development and stock market for the time span of 1965-2007. The research used Granger (1969) causality test, error correction model along with the co-integration test. The study accomplished that financial growth has a progressive effect on stock market expansion. Additionally, the study revealed that rate of interest has an adverse effect on stock market performance. The results point out the stock market being positively associated with financial progression of Romania. However, a strong relationship between financial developments to stock market indicates that financial sector development follows financial development.

A study to analyze the linkage among stock market expansion and financial expansion in five established economies namely Germany, France, United Kingdom, Japan and the United States

for the time duration of 1968-1998. The study used time-varying quarterly data to control the effect of stock market volatility and banking system. The study revealed that both banks and stock markets promote output level in Germany France and Japan but in United Kingdom's case and in the case of United States the relation amid stock market expansion and financial expansion was statistically insignificant. Additionally, the results of the study revealed that the long-term bank-based financial system may have a sizeable positive effect on financial expansion as compared to the stock market based financial system.

Harris (1997) carried out a study to determine the causality direction among stock-market presentation and financial expansion in Iran for the duration of 1997 to 2008. The research used stock price indices and real GDP expansion as substitutions for stock market performance and economic expansion. The outcomes of the research specified that in long-run stock value is inclined by the actual financial activities but in short-run stock market performance use as a pointer for future financial expansion in Iran.

2.2.7: Determinants of Expansion of the Economy

There are numerous features which impact the financial health of a nation, if these features are enhanced and well managed, it would positively affect the financial expansion of an economy both for short period and a long period of time. These factors are discussed separately as follows. According to Singh, (1997) stock markets provide channels to raise domestic savings and boost investment both in the qualitative and quantitative term which as a result lead to financial prosperity and expansion in a country. Levine and Zervos (1998) stated that a business market is a place which generates domestic savings as individuals and business obtains additional financial tools which meet their uncertain appetites and increase the chances of liquidity. The basic feature of the stock market is that it provides liquidity in the economy which increases the aggregate demand of nation peoples for goods. Higher aggregate demand for goods allows employers to produce more by using innovative production techniques and achieving economy of measures which ultimately enhance financial expansion (Boyd and Smith, 1998). Quah, (2001) also, affirm that stock market enhances financial expansion due to symmetry information and well governance structures in firms.

According to Campbell and Viceira, (1998), stock market provides a venue where domestic savings are accumulated through investments in different securities. Productive firms in the economy can access a large amount of fund easily by issuing shares and bonds to finance their

investment and operational activities which eventually boost the financial expansion of the country (Soofi, 2008). Share prices in the stock market are the driving force to allocate firms resources because investors preferred high priced stocks which are usually driven by the firms future earning (Duca, 2007).

A stock market is a place where demand and supply forces to determine the price of marketable securities. The stock of growing and the more profitable firm are valued more by investors due to high demand for such stock (Kenny & Moss, 1998). Thus, the stock market is useful both to investors and government in making investment decisions Singh, (1997). Stock market helps to remove the gap between buyer and seller of securities by providing information related to stock market both to individuals and institutional investor. Firms obtain useful information about capital and investment option with minimum transaction cost. The stock market also helps the investors to make a decision about the stock of different firms excluding the chance of having to allocate time and money on studies (Senbet & Otchere, 2008). Ang and Mckibbin (2007) stated that in stock market firms identify and choose profitable investment projects and diversify risk among various projects taking into consideration their lenders. This has a deep effect on the financial expansion of the country.

A straight connection between financial expansion and interest rate as it addresses those elements which have a detrimental impact on financial expansion is observed. However, he studied the association between higher rate of interest and financial expansion in Nigeria and it was revealed that higher interest rate has a negative effect on financial expansion. High-interest rate reduces lending to productive investment projects in the economy which eventually decrease the total output of the economy (Kithinji, Oluoch & Mugo, 2014).

Inflation has been explained as the persistent increase in the standard of prices of goods and services. Financial theory state that a straight connection between inflation and financial expansion of a country is observed. Policy makers, Central banks and Macroeconomist argue that high rate of inflation has a harmful result on financial expansion as it reduces the efficiency of the economy to manufacturing goods and services to meet the aggregate demand of people.

Due to increase price volatility in inflation the prospect profit of firm's investment project is uncertain. This leads to reducing investment activities in the country which as a result harm the financial expansion of a nation (Barasa, 2014).

2.3: Empirical Literature

Schwert (1989) examined association among financial activities and stock prices by investigating the connection between instability in financial accomplishments and unpredictability in stock revenues. He observed that unpredictability with the average of 179% was caused during the periods of depression. Most recently many researchers have conducted studies to comprehend the connection between financial action and the stock market. Osei (2005) carried out a study for the period of 1991 to 2003 in Ghana to analyze the result of the stock market on financial expansion by using (VAR) and then used Granger (1969) causality test to build the relation. He found that variables of stock market variables and market capitalization ratio affect real GDP expansion of the country.

Palley, (1996) conducted a study for the duration of 1989-2006 to examine the connection between Mauritius stock market act and financial expansion. The variables used for the study liquidity market scope (capitalized market and turnover proportion were used as proxy respectively) and for fiscal expansion, he used human money and overseas direct investment. The finding of the study confirms to endogenous expansion theory and reveals that stock market has an affirmative influence on the expansion of the economy both in the long run and short run. A similar study was carried out Osaze, (2007) using Ordinary Least Square (OLS) technique. It concluded that before market liberalization the stock market significantly impacts financial expansion but the negative association was found after liberalization.

A study to analyze the linkage between the stock market and financial expansion of Pakistan by Nazir, Nawaz & Gilani, (2010) for the period of 1986 to 2008 concluded that market liquidity and market capitalization have a positive effect on financial expansion. He further states that in short run stock markets affect financial expansion which in turn lead to a stock market expansion in the long-run.

Another in-depth study carried out by Badr (2015) 1988 to 2005 to understand the linkage between financial expansion and the stock market in Nepal found a positive relation between stock market variables (Turnover ratio to market capitalization, market capitalization to GDP ratio and turnover to GDP ratio). The study used Johansen cointegration and Granger (1969) causality test. The results of the study revealed that stock market has a positive effect on financial progress in the long run.

Odhiambo (2010) investigated the result of stock market performance on the economy of South Africa. The variables of the study were income ratio, market capitalization and price of stock used to measure the stock market presentation and actual GDP used as a substitution for financial progress. The study concluded that there is a significantly positive relation between stock market variables and financial expansion in South Africa both in the long run and short run. A similar study was conducted in South Africa by using Johansen Co-integration test and Vector Error Correlation Model. The outcome of the study shows a linkage between the financial progress of the country and stock market performance only in a long run.

Matu (2007) used the vector autoregressive test to explore the long-run connection among stock market expansion and financial progress of Kenya. The research used market capitalization and GDP as substitutions for financial expansion and stock market performance, with liquidity ratio to GDP. The result of the research revealed that there is an affirmative link between market capitalization and financial progress with no relation amid financial expansion and liquidity. Biyan (2012) found a weak relation between stock market performance and financial expansion in Tanzania economy.

Bulere (2015) carried out a research to investigate the effect of stock markets on the expansion of Uganda economy. Although the research found stable financial expansion from 1988 but was not predictable to find the influence of the stock market on financial expansion using Granger (1969) causality test. However, using Johansen test the researchers observed that stock market and financial expansion are co-related and faster financial expansion was noted after the Uganda stock exchange started its operation in 1988. This research was further supported by Harris (1997) who argued that although the country showed faster financial expansion after the establishment of the stock market it is due to efficient resource allocation and not because of physical capital accumulation which results in an increase in financial output.

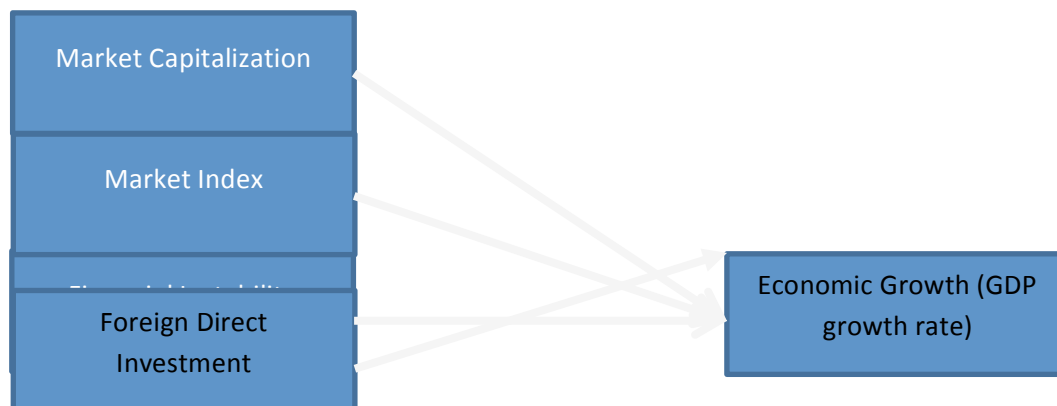
Osamwonyi and Kasimu (2013) Conducted research Nigeria, Kenya and Ghana with an aim to establish directional and fundamental connection amid stock market performance and financial expansion for the duration of 1989-2009. The research used stock income proportion, market capitalization, stock index and stock trade worth as proxies to measure stock market performance against real GDP for financial growth. The results of the research revealed that there is a positive association between market capitalization and GDP, turnover ratio and GDP with the negative connection amid the worth of stock dealt and GDP.

Using a time series data of 25 years, Maghanga and Quisenberry (2015) evaluated the impact of Uganda stock market on the financial progress of the nation before and after the establishment of Uganda stock exchange. The research used Autoregressive Distributed Lag (ARDL) to examine the information. To measure the performance of stock market the research took market capitalization, the worth of stock handled and income proportion as proxies with using real GDP for financial expansion. The research concluded the significant positive association between stock market presentation and financial expansion. Though, the result of Granger (1969) test was unsure.

2.4: Conceptual Model

Based on the evaluation of the empirical literature and theoretical work on the connection between stock market growth and financial expansion the following conceptual model is developed by the research. In the figure given below the financial expansion in the USA is the dependent variable whereas the market capitalization, Market index, inflation and FDI are the explanatory variable sunder analysis of the research.

Figure: 1: Conceptual Model



CHAPTER: 3

METHODOLOGY

3.1 Introduction

The section of the research provides a brief overview of the systematic process followed for answering the research questions. The sections provide a brief description of the research design followed by the research for analyzing the connection between stock market growth and the financial expansion in the USA. The conceptual framework provided in the previous section of the research presented that the dependent variable is financial expansion in the USA and is analyzed for its association with the stock market in the USA. This chapter presents the ontological and epistemological assumptions of the research to test the hypothesis of the investigation, stated in previous sections of the research.

It is important to state the ontological and epistemological assumptions of the research as these are the important factors in the research paradigm and shape the philosophical outlay of the research. This assumption about the research to a large extent explains the perceptions, reality and beliefs regarding the research topic and hence guides the thesis from its design to its final conclusion. This assumption and choice of the research philosophy are essential in effectively answering research questions of the analysis.

3.2 Research Philosophy

The research philosophy refers to the paradigm of the research and is instrumental in determining the nature of knowledge and reality in the analysis of the research. The research philosophy influences the choice of the data collection and analysis approaches followed by a research for answering its research questions. According to Saunders et al. (2009), there are four main types of research philosophies which include Positivism, pragmatism, realism and interpretivism. Positivism refers to the ontological assumptions of objectivism and states that reality and knowledge is something independent of the subjectivity and personal thoughts and perceptions of the researchers and hence there are ways like the scientific approaches that can be used for inquiring and expansion of knowledge. Contrary to positivism the interpretivism presents that knowledge is not necessarily independent of the social actors and hence the role of social context around different phenomena cannot be undermined (Saunders et al. 2009). The realism is a mix of

Positivism and Interpretivism and states that knowledge can be obtained from experiences through empirical analysis however it does not detach the role of social context and states that knowledge, though can be created through scientific approach meaning assigned does contain social influence. Pragmatism, on the other hand, postulates that knowledge is that which can be determined through practice or empirical analysis (Cooper and Schindler, 2006). This research analyzes the association among stock market expansion and financial expansion, therefore, the Positivism philosophy best meets the objectives of the research so that statistical analysis tools can be used for determining the association among stock markets and stock market expansion.

3.3 Research design

The research is correlational in nature. It describes the situation that prevails the connection between stock market expansion and financial growth in the USA. Having said the reason, the research uses a descriptive research design for analysis of the research questions of the research. The descriptive research design collects data through different modes and uses the data for the description of the situation that prevails among the different variables in the context of the research. The research uses a time series research approach under the descriptive design of the research to analyze the questions of the research.

3.4 Population of the research

As presented in the previous section of the chapter the research uses a descriptive research design and a time series data analysis approach is adopted. For the reason, observations for proxies of stock market expansion and financial growth are included in the population of the research for the period of the research from 1970 to 2015.

3.5 Sample of the research

The research uses a time-series data investigation approach for studying the connection and hence the sample of the research should consist of the time series observation for the variables used in the research. Centred on the purpose of the research that is to analyze the connection of stock market with the financial expansion in the USA, the research uses a sample of the 30-year time period from 1985 to 2015 as the sample of the research. Explanations for the variables under the analysis of the research are collected from this sample period.

3.6 Data and Variables

The data for analysis of the connection among Economic Expansion (ED) and stock market expansion (SMD) in the USA is secondary in nature and is sampled from a stochastic process. The time sequence data for the variables of the research is available at the official website of World Bank data stream www.worldbank.org. All the time series observation for the variables of the research is collected from the World Bank website. Information for some of the variables not available at World Bank website is collected from the Federal reserve USA and also some of the data is collected from yahoo finance www.yahoofinance.com and www.marketwatch.com.

Centred on the theoretical framework of the research presented in the previous section, stock market expansion is the explanatory variable while the dependent variable is economic growth. The proxies and operational meaning of the variables under the analysis of the research are presented below.

3.6.1 Economic Expansion

The financial expansion is the dependent variable of the research and refers to the rate of financial expansion achieved in terms of the manufacture of the goods and services in the country. Economic growth is a key indicator of the outcome of financial policies of the country and studies have highlighted different variables ranging from the monetary and fiscal policy of the country to political and financial stability. Previous studies have used many different proxies for measuring financial expansion of a country that include per capita income, purchasing power parity, GNI expansion rate, GDP expansion rate and etc. This research, however, uses the GDP expansion rate of USA as a substitution for measuring the financial expansion in the USA. Obstfeld (1994) comments that stock market expansion provides an effective and efficient mode of resource allocation that contributes towards the fiscal expansion in a country. Thus, stock market expansion is capable enough to explain the financial expansion of an economy. It is further argued that the integrated stock market further influences the financial expansion of a country. The proxy for economic growth in this research is the GDP rate expansion which refers to the change in current year GDP relative to the previous GDP of the economy. The time series data for financial expansion of USA is collected from World Bank official website.

3.6.2 Market Capitalization

As presented in the conceptual framework of the research, stock market growth is the explanatory variable of the research and Market capitalization is one of the proxies used for

measuring the stock market growth in the USA. Market capitalization refers to the total value of share prices of the listed firms at stock exchange of the economic times the outstanding number of shares of the companies. According to Greenwood and Smith (1996), the market capitalization is one of the most instrumental pointers of the financial activity in a country and studies have found the significant connection of market capitalization with financial expansion in an economy. Schwert, (1989) also suggest that increase in market capitalization possess significant implication for the financial growth of a country. The market capitalization is thus used as the first proxy for measuring SMD in the research and data for a market capitalization of USA is collected from World Bank database.

3.6.3 Stock Market Index

Indexes are commonly used across the world for following the stock market of different economies. The stock market index is an average of the prices of different stocks traded at an exchange and presents and overall direction of the stock market. Harris (1997) presents that stock market index is a representative of the overall stock market performance and direction of the market. This research uses the Dow Jones Market index as a substitution for stock market growth in the USA. The Dow Jones index is an index of 30 large publicly traded firms listed at the London stock exchange and shows the presence of the prices of these companies over a standard period. Data for Dow Jones index is collected from www.yahoofinance.com and www.marketwatch.com.

3.6.4 Financial Stability

Financial stability is one of the control variable used in the analysis of the connection of SMD and ED in the USA. According to Boyd & Smith (1998), financial stability is the financial stability in an economy in terms of the prices in an economy. There are several different proxies used for assessing the financial stability in an economy, however, the most commonly used proxy for financial stability is inflation rate in an economy. Binswanger (2004) refer to inflation as the rate of increase in customer price index over a period of time. This research uses the inflation rate as a substitution for the financial stability in an economy. The inflation rate for USA economy is available at World Bank official website and data for inflation rate for the period from 1985 to 2015 is collected from World Bank website.

3.6.5 Foreign Direct Investment

Foreign direct investment is the second variable used in the analysis of the research and refers to the flow of overseas direct stock. Barasa (2014) argues that Foreign Direct Investment (FDI) is a key determinant of financial growth of a nation as it increases the level of financial activity in a country. It suggested by several studies that FDI positively influence the level of financial expansion in an economy. The FDI data for the USA is available on the World Bank website and is collected from there.

Data for the Fiscal policies elements i.e. public expenditures is collected from the World Bank financial indicators from the official website of the bank. The data from the World Bank database is collected for the duration from 1961 to 2014 and the series obtained are on yearly basis. Some of the data which is not available on the World Bank website is then collected from IMF website and Statistic Bureau of Pakistan. The output information is also gathered from the World Bank website and in case information is not available there then the IMF database is used for collecting the data.

3.7 Econometric Model

The research analyses the connection between stock market expansion and financial expansion using the times series data collected from different sources. The conceptual model and the review of the previous studies suggest that stock market expansion holds key implication for the level of financial growth in an economy. The stock market has long-term and short-term implications for the financial expansion of a country (Ang & McKibbin, 2007).

Based on the conceptual model, the econometric connection between the dependent and independent variable of the research can be presented by the resulting linear equation,

$$Y = f(X) \dots \dots \dots (1)$$

Where: Y = Financial Expansion (GDP Expansion Rate)

X = Stock Market Expansion (Market Capitalization & Market Index)

It is expected that stock market growth is linked with financial expansion in the USA and the mathematical connection among these variables is represented by the following equation of the research,

$$Y_{ti} = \beta_0 + \beta_1 SMD_t + e \dots \dots \dots (2)$$

Where $\beta > 0$

Rodrik (1998) noted that Market capitalization and Market index are two important proxies that can analyze the level of stock market expansion in an economy and hence in case of this analysis these proxies are used to measure the stock market expansion whereas the GDP expansion rate is used as a key pointer for fiscal expansion in the USA. The financial stability and the level of foreign direct investment in an economy are also considered important determinates of financial expansion in an economy (Bejan, 2006). Thus Equation (2) of the research can be expressed in more explicit forms a simple linear equation model as summarized below;

$$ED = \beta_0 + \beta_1 MC + \beta_2 MI + \beta_3 INF + \beta_4 FDI + u_t \dots \dots \dots (3)$$

Where,

ED = Financial Expansion

MC = Market Capitalization

MI = Market Index

INF = Inflation rate

FDI = Foreign Direct Investment

3.7.1 Unit Root Test

The data of the research is a sample from a stochastic process and hence there is always chances of data being non-stationary. Stationarity of the data refers to the fact that time series variables have constant mean and variance over time (Badr, 2015). However, in most of the time series observation, the required criteria are not met by the data and data has the problem of non-stationarity. To check the stationarity of the data, the Increased Dicky Fuller test is conducted which test can be explained by taking a simple AR (Autoregressive) (1) processes such that:

$$Y_t = a_1 + a_1 y_{t-1} + H_t + \varepsilon_t \dots \dots \dots (5)$$

Under the Null hypothesis of the test in EViews is that Statistics has a Unit root a significant test value discards the Null hypothesis and implies that the data is static. In case of non-stationarity of the data, the level data is not used and data is transformed. The level data can be transformed either by taking the natural log of the data or by taking the first difference of the data. In this research the first difference of the data is used to make the data stationary.

3.7.2 Autocorrelation

One of the other problems comes with time series data is the autocorrelation problem, the autocorrelation problem refers to the correlation among the lag values of variables with its

lagged values (Badr, 2015). The research uses the autocorrelation test to analyze the problem and in case there is problem m of autocorrelation in the data than transformed values of the variables is used to overcome autocorrelation in the data.

3.7.3 Multiple Regression Model

To analyze the relation of between market expansion and financial growth the research uses a multiple regression model. According to Cooper and Schindler (2006), a regression analysis regresses the explanatory variable against the dependent variable and check the association among between variables. A multiple regression model is the one which uses multiple explanatory variables with single dependent variable. The level of significance used is 5% for the model of multiple regression to evaluate the coefficients predicted for the connection of the variables under investigation of the research. The entire test and the regression analysis of the research is conducted using the econometric software EViews.

CHAPTER: 4

ANALYSIS AND RESULTS

4.1 Introduction

The aim of the research was to analyze the connections between economic expansion and stock market expansion in the USA. The research used the economic expansion as the dependent variable of the research with economic expansion rate as the proxy used for the economic expansion in the USA. For stock market expansion, stock market capitalization and market index are used as the main explanatory variables in the analysis. Along with these main explanatory variables the research also used foreign direct investment and Consumer price index as the control variables of the research. Data for a period of 30 years from 1985 to 2014 was collected for all the explanatory and dependent variable of the research. The data so collected were analyzed using different statistical tools and techniques. The results are provided in following sections of the chapter.

4.2 Descriptive Statistics

The descriptive statistics of the variables under the analysis of the research were generated and are presented in table 1 of the chapter. In the table, it can be observed that the research has used observation from 1985 to 2014. The first column in the table presents the variables under the analysis of the research. The second column in upper section of Table 1 presents the mean values for each variable of the research and it can be observed from the table that the mean value of CPI is 2.65, for ED it is 2.5 for MC mean value is 112.318 while for FDI and MI the mean values are 1.53 and 10033.7 respectively.

Table 1: Descriptive Statistics

Summary Statistics, using the observations 1985 - 2014				
Variable	Mean	Median	Minimum	Maximum
CPI	2.65457	2.81580	-0.355546	5.39796
ED	2.52000	2.69280	-2.77553	4.68520
MC	112.318	119.748	51.7335	165.651
FDI	1.53057	1.45664	0.302938	3.40373
MI	10033.7	10441.0	2168.57	24719.2

Variable	Std. Dev.	C.V.	Skewness	Ex. kurtosis
CPI	1.25001	0.470890	-0.207939	0.317392
ED	1.61693	0.641638	-1.25171	2.12420
MC	33.5865	0.299030	-0.386631	-1.12015
FDI	0.773283	0.505226	0.600621	-0.241621
MI	5546.32	0.552771	0.568581	0.0896229

In the upper section of the table, the second, third, fourth and fifth column presents the mean, median, maximum and minimum values for the variables under examination of the research and which are self-explanatory. The first column in the lower section of Table 1 presents the standard deviation for each of the variable under analysis. In the table it can be observed that the Market capitalization shows a very high standard deviation of almost 33 standard deviations from its mean, the market index has an even higher standard deviation of 5546 standard deviations from its mean. The remaining three variables show a standard deviation close to 1 and suggest that this value does not vary much across the time period of the research. The second column shows the coefficient of variance of each variable and it also depicts that MI and ED present the highest variance from its mean. The results of standard deviation and Variance suggest that the Market index and Economic expansion along with the market show significant variance among its value for the duration of the research.

The third column in the lower section of the table presents the skewness coefficient and it can be observed that the value for skewness of each variable in the research is not different from zero and hence suggest that the data doesn't have any skewness problem and the time series distribution of the research is usually spread. The Kurtosis test is presented in the last column of the table and it can be seen that the kurtosis value for all the variables under the analysis of the research is less than 3 and hence suggest that the data is normally distributed for the times series of each variable of the research.

4.3 Augmented Dicky Fuller Test

As discussed in chapter 3 of the research the time series data often have the problem of not stationarity which implies that the data mean and variance changes over time. For a reliable time, series analysis, it is needed that the mean and variance of the data remain constant over time. The ADF test is used for checking the stationarity of the data. The ADF test in Gretel checks stationarity under the null hypothesis that the data has a unit root, the rejection of the null hypothesis suggest that the data is stationary and does not have a unit root.in the case where the

data is not stationary at the level then transformation either through log transformation or through first difference of the variables is generated for analysis of the data. The results of ADF test for level data of the variables under the analysis of the research is given in table 2 of the chapter.

In the table given below, it can be witnessed that the ADF test statistics of the variables present that the T value for each variable of the research is greater than the critical value compulsory for the significance of the test value. The P value for the ADF test statistics is less than .05 thus suggesting that the Test statistics are significant at $P < .05$.

Table 2: ADF TEST

S.no	Variables	ADF test Statistic	P value	Decision
1	ED	2.36	0.005	Stationary
2	MC	3.421	0.000	Stationary
3	MI	2.971	0.000	Stationary
4	CPI	4.31	0.000	Stationary
5	FDI	3.331	0.000	Stationary

The significance at $P < .05$ implies the dismissal of the null hypothesis of the research and propose that the data doesn't have a unit root problem. As all the variables are significant at the level form, therefore, the transformation of the data is not needed and the level values for each variable under the analysis of the research are used for analysis of the data.

4.4 Correlation Matrix

The normality of distribution of the time series under the analysis of the research was checked through skewness and kurtosis in section 4.1 of the research. The correlation matrix of the time series is used to analyze the collinearity in data of the research. It is the association of the explanatory variables with each other.

Table 3: Correlation Matrix

Correlation coefficients, using the observations 1985 - 2014 5% critical value (two-tailed) = 0.3610 for n = 30					
CPI	ED	MC	FDI	MI	
1.0000	-0.1914	-0.6479	-0.5300	0.6952	CPI
	1.0000	0.1113	0.1083	0.2973	ED
		1.0000	0.6718	-0.6815	MC
			1.0000	-0.4129	FDI
				1.0000	MI

In case the explanatory variable has a correlation greater than .70 with each other then there is a problem of collinearity and the results of the research are not very much reliable. Table 3 of the chapter presents the correlation matrix for the variables examination of the research. It can be seen in the table that the correlation coefficient of CPI with FDI, MC, and MI is .69, .53 and .64 respectively. Similarly, the correlation coefficient for the connection of MC and MI is .68 and .76 respectively. The association among FDI and MI is .412. In the table it can be observed that none of the association among the explanatory variables under analysis is greater than .70 and hence suggest that there does not exist any significant association among the explanatory variables under analysis of the research and hence does not depicts any serious problem of collinearity among these explanatory variables under analysis of the research.

4.5 Multiple Regression Analysis

In order to analyze the association between the Economic expansion in USA and Stock Market expansion in the USA, the research uses time series OLS model. The time series OLS model uses the Economic expansion (ED) as the dependent variable while the MI, MC, CPI and FDI are used as an explanatory variable of the research. The results of the time series regression analysis of the research are provided in Table 4 of the research.

In the table given below the value for unadjusted R square in the table is .47 which submits that the explanatory variables of the model for impacts on economic expansion are USA explains almost 47% of the variation in Economic expansion in the USA. The percentage of variation explained by explanatory variables in Economic Expansion suggest that these variables are

significant determinates of Economic Expansion in the USA. The value of adjusted R square as presented by table 4 of the research depicts a value of .38 which further implies that collectively all the four explanatory variables of Economic expansion presents almost 38% of the variance in the dependent variable of the analysis.

The F statistics in the regression model presents the overall reliability and significance of the regression model used for analyzing the association between the Economic Expansion and Stock Market expansion in the USA. The F statistic as given by Table 4 of the analysis presents that the F value as given in the table is 5.608 and the P value for this statistic is .0023. This implies that the overall model of the research is significant at $P < .05$ and hence suggest the overall goodness of fitness of the regression model used in the analysis. The significance of the overall model of the research thus implies that the prediction made by the model for the connection of Economic expansion and Stock Market expansion are accurate and are reliable for analyzing the associations among these variables of the research.

Table 4: Regression Analysis

Model 1: OLS estimates using the 30 observations 1985-2014					
Dependent variable: ED					
<i>Variable</i>	<i>Coefficient</i>	<i>Std. Error</i>	<i>t-statistic</i>	<i>p-value</i>	
const	-0.242552	1.74756	-0.1388	0.89072	
CPI	-0.877975	0.284661	-3.0843	0.00493	**
MC	0.0225202	0.0119215	1.8890	0.07054	*
FDI	-0.293434	0.422777	-0.6941	0.49404	
MI	0.0300278	6.60557e-05	4.5458	0.00012	***
Mean of dependent variable = 2.52					
Standard deviation of dep. var. = 1.61693					
Sum of squared residuals = 39.9618					
Standard error of residuals = 1.26431					
Unadjusted R^2 = 0.472932					
Adjusted R^2 = 0.388601					
F-statistic (4, 25) = 5.60806 (p-value = 0.00231)					
Durbin-Watson statistic = 1.94608					
First-order autocorrelation coeff. = 0.172584					
Log-likelihood = -46.869					
Akaike information criterion = 103.738					
Schwarz Bayesian criterion = 110.744					
Hannan-Quinn criterion = 105.979					

The coefficient of association among CPI and ED is -0.87 suggesting that there is a negative association between CPI and Economic expansion in the USA. The T values for the association among CPI and ED is -3.08 that falls ahead of the critical value required for the significance of the connection among ED and CPI. The p-value against this T statistics is $.0049$, thus implying that the connection among CPI and ED is substantial at $P < .05$. The significance of the connection rejects the Null hypothesis that Inflation and ED do not have any connection and expect the alternate supposition that there is a negative association among CPI and ED in the USA. The coefficient of association among MC and ED is $.022$ suggesting that there is a positive association among MC and Economic expansion in the USA. The T values for the association among CPI and ED is 1.8890 that falls ahead of the critical value required for the significance of the connection among ED and MC. The p-value against this T statistics is $.070$, thus imply that the connection among MC and ED is significant at $P < .10$. The significance of the connection rejects the Null hypothesis that Market Capitalization and ED does not have any connection and expect the alternate assumption that there is a Positive association among MC and ED in the USA. The Coefficient of association among FDI and ED is -0.29 which suggests a negative association among FDI and ED in the USA. The T value however for the association is -0.069 which is less than the critical value and the P value for the association is 0.49 which implies that the association among FDI and ED is insignificant at $P > .10$.

The coefficient of association among MI and ED is $.030$ suggesting that there is a Positive association among MI and Economic expansion in the USA. The T values for the association between MI and ED is 4.54 that falls ahead of the critical value required for the significance of the connection among ED and MI. The p-value against this T statistics is $.000$, thus implying that the connection among MI and ED is significant at $P < .05$. The significance of the connection rejects the Null hypothesis that MI and ED do not have any connection and expect the alternate assumption that there is a negative association between MI and ED in the USA.

CHAPTER: 5

DISCUSSION AND CONCLUSION

5.1: Discussion

The research evidenced that causality occurs from financial sector expansion to financial progress either by increasing the investments effectiveness or increasing resources for investment activities. According to King and Levine (1993a & 1993b) deeper, broader and well-functioning financial structure will lead to higher financial expansion. Robinson, (1952); Kuznets, (1955); Friedman and Schwartz, (1963) documented that financial expansion cause financial sector expansion. Demetriades and Hussein (1996); Luintel and Khan (1999), Arestis et al. (2001) Stated that causality occurs in both direction between financial expansion and financial expansion (e.g. financial expansion causes financial expansion and vice versa). However, according to Ram (1999), there is no linkage between financial expansion and financial expansion.

The research used time series data for Financial expansion and used two main explanatory variables for the stock market expansion in the USA, which includes a Market index and Market Capitalization in the USA. The research also utilized foreign direct investment and Financial stability as control variables in the research. Like all time-series data samples, the data was first diagnosed with several tests to check the stationarity, normality and multicollinearity in the data. In the descriptive analysis, it was presented that the skewness and Kurtosis values for the time series values of the sample were in the critical region and there was neither skewness found in the data neither it has kurtosis problem. The ADF tests were used by the research for analyzing the stationarity of the time series level data. The Test was conducted for each variable under the analysis of the stud and it was observed that for each variable the ADF test was significant and hence suggested that the data has constant mean and variance over time. As the data was found stationary hence no transformation was performed for the data as suggested by (Enders, 1995). The stationary data at levels with a normal distribution is further analyzed for the presence of multicollinearity in line with (Enders, 1995). The correlation matrix for the association between the explanatory variable in the econometric model of the research presented that there is not any significant association between the explanatory variables under the analysis of the research and

hence does not have any problem of multicollinearity. The diagnosed data was further analyzed using the multiple regression model of the research which was found significant and the R square analysis of the model presented that the explanatory variables under the analysis of the research specifically the proxies used for Stock market expansion are vital determinants of Financial expansion in the USA.

The coefficients of the association between the variables under analysis presented insights regarding the association of explanatory and dependent variable under the analysis of the research. As presented by Petros (2009) the researchers found that the association between Market Capitalization and financial expansion is significant and Positive. This implies that an increase in the market capitalization in the US stock market there are positive outcomes for fiscal expansion in the USA. Greenwood and Smith (1996) suggest that increase in market capitalization of an economy provides more capital for investment and financial activity and hence have favourable impacts on the financial expansion and expansion in an economy. This is also supported by the results of the research which also suggest that expansion in the stock market in terms of the market capitalization it would lead to a financial expansion in the USA. Previous studies such as Dailami and Aktin (1990) and Vazakidis and Adamopoulos (2009) also presented that the financial expansion in developed economies around the world is positively stimulated by stock market expansion in these economies.

The results of the research further presented that the association between Market index and stock market expansion in the USA is significant and hence the hypothesis of a positive association between the two was accepted as supported by previous studies such as (Ang and Mckibbin (2007); Udoka (2012)). It is observed that stock market index is an indicator of the overall direction of the stock market activity in an economy and as results in an increase in the stock market index suggest an increase in the financial activity and hence results in financial expansion. Deb and Mukherjee (2008) presents that stock market index is a representative of the overall stock market performance and direction of the market. The result for the association between a Market index and Financial expansion in the USA is in line with the results of the previous studies such as Mukherjee (2008) and Petros (2009). According to Mukherjee (2008), financial stability is the financial stability in an economy in terms of the prices in an economy. There are several different proxies used for assessing the financial stability in an economy

however, the most commonly used proxy for financial stability is inflation rate in an economy. Mukherjee (2008) refer to inflation as the rate of increase in consumer price index over a period of time. The association of financial stability and Financial expansion is found negative and it is observed that an increase in inflation rate reduces the market stability in the economy and hence have negative impacts on the overall financial expansion in the USA. The association between FDI and Financial expansion in the USA is found is found insignificant and hence suggest that the level of FDI inflows in the economy has no significant consequences for the financial expansion in the USA. Although Petros (2009) argues that Foreign Direct Investment (FDI) is one of the key determinants of financial expansion of a country as it increases the level of financial activity in a country. It suggested by several studies that FDI positively influence the level of financial expansion in an economy. The FDI data for the USA is available at the World Bank website and is collected from there. However, in case of USA, the FDI does not turned out as a significant factor in explaining the financial expansion in the USA.

The overall results for the association between the Financial expansion and Stock Market expansion in the USA suggest that Stock market expansion is an important determinant of the financial expansion as presented by the theories regulating the casual association between the two variables and the empirical studies in the area.

5.2: Conclusion

In recent times the role of the stock market in financial expansion has been the major concern for many researcher and scholars throughout of the world because of its perceived positive effects on financial expansion. The stock market is often called as a barometer of business direction and provides a centre for capital market activities. An active stock market can measure changes in financial activities by using the stock market index (Levine and Zervos, 1996; Demirguc-Kunt and Levine). A nation expansion is directly or indirectly related to financial activities performed by both private and public organization. The expansion and advancement of these organizations (e.g. buying new machinery, building new factories etc.) often require large funds for long period of time, which is normally provided by stock markets. Stock market Investors are usually concerned about the liquidity of their savings and do not want to retain their saving in the form of fixed asset for a longer period. The stock markets therefore provide an opportunity to the institutional investors to avail liquid investments opportunities at the stock markets. There would

be no industrial revolution without liquid capital market because savers would be less likely to invest in large and long-term projects.

This research aimed at analyzing the role of stock market expansion in stimulating the financial expansion in the USA. The research used the Financial expansion rate as the main dependent variable for analyzing the impacts of stock market expansion. For stock market expansion two variable namely, Market Capitalization and Market Index are used, whereas the Financial Stability measured by CPI and Foreign Direct Investment is used the control variable in the analysis. Data for all the five variables of the studies over the period of 30 years from 1985 to 2014 was collected from different sources and were then analyzed using different statistical tools of analysis. After a preliminary diagnosis of the variables under the analysis of the research, Time series OLS model was employed to predict the association between Stock Market expansion and financial expansion in the USA. The results of the regression model presented that both the proxies used for Stock Market expansion i.e. Market Capitalization and Market Index are found to have a significantly positive association with the Financial Expansion in the USA. It is predicted by the regression model of the research that an increase in the stock market activity in the USA has a positive implication for the financial expansion in the country. The association between Market stability and Financial Expansion is also found with the significantly negative association between the two and it is concluded that increase in inflation reduces the level of financial stability in the economy and hence has a negative implication for the Financial Expansion in the USA. The association for FDI and Financial Expansion is found insignificant and implies that the FDI in case of USA does not significantly explain the financial expansion. The overall results for the association between the Financial expansion and Stock Market expansion in the USA suggest that Stock market expansion is an important determinant of the financial expansion as presented by the theories regulating the casual association between the two variables and the empirical studies in the area.

5.3: Recommendations

The theories regarding the association of Stock market expansion and Financial presented a positive association between the two which is also supported by the results of the regression model of the research. Based on the literature presented and the insights provided by the results of the research, the following few recommendations are presented by the research. This

recommendation presents some policy measures and improvements that can lead to increased market activity in the USA and hence will have positive impacts on the overall financial expansion in the USA.

- The reforms and structural changes in the stock markets hold a key position in developing and strengthening the confidence of investors in the stock markets that would result in the increased investment and enhanced level of market capitalization in US economy. So, will result in increased level of financial expansion in the USA.
- The level of discount rates in the economies is the key driver of stock market activity and hence key determinates of Market Capitalization and Market index. Keeping a tactical monetary policy in an economy will lead to an enhanced level of Stock market activity and hence would result in higher level of financial activity in the USA.
- The inflation rate or broadly speaking the Market stability is also an important determinant of stock market stability as ultimately builds the investors trusts and reduces the uncertainties assumed by the investors. Inflation rate should be carefully adjusted and controlled in order to bring on the desired level of investor trust and hence financial activity in the economy.
- Keeping a minimum but investors favourable regulations in the markets attract both national and international investors that further enhances the level of stock market activity and hence results in an enhanced level of financial activity in an economy.

5.4: Future Research

The research analyzed the association using the times series data and multiple regression analysis techniques. However, it is often presented by some studies that Autoregressive models can be more precise in predicting the association among the time series variables hence the association can be further analyzed using time series autoregressive models. Similarly, a cross-country analysis of the association between the stock market expansion and financial expansion may further present some important insights from other economies as well. Similarly, some other indicators or proxies can also be used for stock market expansion and financial expansion to further explore the association.

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