

CHAPTER THREE  
LITERATURE REVIEW

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## CHAPTER THREE

### LITERATURE REVIEW

#### 3.1 INTRODUCTION

Since many years, economists have invested huge time for conducting research about the stock market development and economic growth in order to know what is the extent of this linkage in different type of countries; developed, developing, Arab, and African countries.

Christopoulos & Tsionas (2004) and Khan et al., (2005) reported that the comprehensive series of tests have fundamentally emphasized on the significance of the macroeconomic constancy, disparity, institutional advancement, earnings and assets, multiple diversified ethnic and religious identity, and monetary market deficiencies. They mentioned the issues demonstrate the fact that financial markets are important for economic growth.

Many authors emphasised a positive affiliation between financial development and economic growth such as, Kargbo & Adamu (2009), King & Levine (1993), Levine et al., (2000), Christopoulos & Tsionas (2004), Khan et al., (2005), Neusser & Kugler (1998), Roussean & Wachtel (2998) and Khan & Ghani (2006).

Besides, many studies, like those made by McKinnon (1973) and Fry (1978) have supported Schumpeter's opinion that the development of the financial sector promotes economic growth. The authors criticized the Keynesian theory that received attention from many governments of developing countries in the early 1970s. They stressed that government restrictions on the banking system such as high reserve requirement, interest rate ceiling, and directed credit programs and reduce output growth and hinder financial development as well. On the same side, the endogenous growth literature confirmed that there is an influence of financial markets for economic growth. So, the developed financial markets upgrade the investment and growth by channelling financial resources to the most productive uses (Kargbo & Adamu, 2009). On the

other hand, some studies reported that there is a bi-directional relationship between financial developments and economic growth Demetriades & Hussein (1996) and Luintel & Khan (1999). However, there are other authors who reject this hypothesis, such as Lucas Jr (1998).

In his study Oskooe (2010) indicated that the role of the stock market, as part of financial markets is asserted by growth theories. On the other hand, in his paper Agarwal (2010) reported:

“As the global equity markets have experienced their most explosive growth over the past decade, emerging equity markets have experienced an even more rapid growth, taking on an increasingly larger share of this global boom. For example, while overall capitalization rose from 4.7 trillion USD to 15.2 trillion USD global, the share of emerging markets jumped from less than 4 percent to 13 percent in this period. Trading activity in these markets surged equally fast: the value of shares traded in emerging markets climbed from less than 3 percent of the 1.6 trillion USD world total in 1985 to 17 percent of the 9.6 trillion USD shares traded in all world exchanges in 1994. Both the global boom and the involvement of the emerging markets in it have attracted the interest of academics and policy makers. As a result, a plethora of studies now focuses on how to measure the benefits of globally-diversified portfolios, while a large of countries expounds regulatory reforms to foster capital market development and attract foreign portfolio flows”.

This chapter reviews the literatures on this relationship and also discusses in detail the statistical analysis on the relationship between them in different countries. This review lets the readers know the gaps in these studies, which eventually helps to produce the research questions for this study.

### **3.2 THE RELATIONSHIP BETWEEN STOCK MARKET DEVELOPMENT AND ECONOMIC GROWTH**

The vast majority of the literatures studied the linkage between the stock market development and economic growth and the findings being widely varying. A number of studies argued that the stock market development has a significant effect on the economic growth. However, some studies disputed and claimed that the stock market has little effect in augmenting economic growth. Meanwhile, some other studies reported that the economic growth promotes the development of the stock market. In

brief, the economists in their literatures tried to cover sources, causes, direction and strength to support their arguments.

The most significant contribution to the theoretical literature of the relationship between stock market development and economic growth has been made by Levine (1991); Bencivenga et al., (1995); Diamond (1996) and Fulghieri & Rovelli (1998), they supported the significance of the stock market for economic growth and held that stock market liquidity is necessary for economic growth. An empirical study made by Levine (1996) based on 38 cases from developed and developing countries and that emphasised that stock markets might affect economic activity through the increase of liquidity. In addition, the increased liquidity could be the reason for the weak or slower growth rate of economic growth. However, this needs have to be investigated to know what level of liquidity could guarantee economic growth. It is more about what to do with the secondary market, where trade the stocks rather than the primary market, where issue the shares. This principle can help the new listed firms to increase their capital. Liquid share markets make investment more secure and more attractive to lessen unnecessary risks, so that they allow the savers to get asset equity and to sell it quickly and inexpensively facilitating access to their savings or when they wish to change their portfolios.

Some academics, theorists and observers found a positive significant relationship between the stock market and economic growth. Demirguc-Kunt & Maksimovic (1998), King & Levine (1993) and Levine (2002) showed a positive relationship between these two with their empirical studies. Some theorists posit that there is a negative relationship between the stock markets and economic growth.

In their studies Singh (1997), Bhide (1993), Obstfeld (1994) and Pagano (1993) pointed through their empirical observations that there is a negative interconnection between these two. In their view, stock markets are not positive for achieving high levels of economic growth rather they harm economic growth due to the prospect of vulnerability to failure of the market, particularly in developing economies.

In addition, Levine (1991) said that the linkage among the stock market and economic growth is positive through the issuance of new financial resources for companies. The

stock market is working to increase investment and capital allocation, which will lead indirectly to increased economic growth. Investors often try to avoid investing directly in companies because they cannot easily withdraw their money whenever they want. However, through the stock market, they are able to buy and sell shares quickly with more freedom. This study given policies toward financial markets, it helps to explain simultaneously the observed differences in growth rates across countries. Moreover, King & Levine (1993b) stated that the financial market can promote economic growth. They agreed with Schumpeter's evidence about this view; they used panel data that consists of 80 countries for the period 1960-1989. They found that the measures of financial market have a significant linkage with various economic parts such as, the rate of physical capital accumulation, real per capita GDP growth and the efficiency improvements with which economies employ physical capital.

In the observation of Thornton (1995) there were mixed facts. From his area of research in 22 developing countries, few economies have strong evidences where there is a strong positive relation between stock markets and economic growth. In his study, financial sectors, particularly the stock market induced economic development in notable parts of these countries. On the other hand, existing researches and observations do not leave any definite comment about this relationship between stock markets and economic growth. A lot of these studies and observations applied causalities in an imperfect way. Their studies failed to address issues in the context of particular economic environment of any country. Contexts vary from country to country, from region to region, from the developed area for developing the area in the underdeveloped area and from time to time. Updating with time frame and regimes (i.e. country/years) is another limitation of existing studies.

Besides that, Benvenista et al., (1996) and Levine (1991) addressed that liquidity in the stock market and the ease of the ability to buy and sell shares play a key role in economic growth, although profitable investments required the investors to wait for a long time to obtain a profit from its capital. However, savers prefer not to give up their savings for long periods without getting profit from their savings. Fortunately, liquid stock markets are able to reduce this tension by helping savers to get their assets easily and retrieve them at any time.

Moreover, Singh (1991), Singh (1996), Singh (1997), Singh (1998) and Singh & Weisse (1998) pointed that stock markets in developing countries do more harm than good and that the financial system which supported by the banks is more suitable for the developing countries. Singh (1997) reported that:

“Stock markets are potent symbols of capitalism, but paradoxically capitalism often flourishes better without their hegemony. [...] Developing countries simply cannot afford the luxury of stock markets. As Keynes noted [...], when the capital development of a country becomes the by-product of the activities of a casino, the job is likely to be ill-done.”

Otherwise, in her study, Levine (1998) reported that during the ten years starting from 1997, the total stocks listed value in all of the stock markets in the world increased from USD 4.7 trillion to USD 15.2 trillion. Meanwhile, the share of total world capitalization represented by the emerging markets rose from less than 4 percent to around 13 percent. On the other hand, shares traded value in the emerging markets also jumped from less than 3 percent in 1985 to 17 percent in 1995.

In addition, in another study, Levine (1998) using data on 47 countries from 1976 to 1993, showed that:

“Stock market liquidity and banking development, both positively predict growth, capital accumulation, and productivity improvements when entered together in regressions, even after controlling for economic and political factors. The results are consistent with the views that financial markets provide important services for growth, and that stock market provides different services from banks. The paper also finds that stock market size, volatility, and international integration are not robustly linked with growth, and that none of the financial indicators are closely associated with private saving rates.”

Another study made by Levine et al., (2000) was conducted in 71 countries for the period 1960 to 1995. The financial intermediation is measured deposit money banks, domestic assets ratio to deposit money banks, domestic assets plus central bank domestic assets, ratio of liquid liabilities to GDP and ratio of credit issued to private enterprises to nominal GDP. The study found that there is a positive correlation between the financial system and economic growth. The authors recommended that legal and accounting reform programmes should be undertaken to strengthen creditor

rights, contract enforcement and accounting practices in order to promote financial intermediary development and then improve the average economic growth.

On the other hand, there is a study made by Gursoy & Muslumov (2011) to investigate the causal relationship between the stock market and economic growth, using time series data compiled from 20 countries for the period from 1981 to 1994. The study countries are USA, Germany, Australia, Austria, G. Britain, Italy, Belgium, France, South Africa, India, Spain, Indonesia, Sweden, Canada, Norway, Pakistan, Japan, Turkey, Greece, and New Zealand. Economic growth is measured by real per capita gross domestic product (RGDP). Meanwhile, Total capitalization /GDP (size proxy), while the Liquidity is measured by Volume of transaction/GDP, and turnover ratio that proxied as (volume of transaction/Total capitalization). Causality test based on the Granger causality definition of causality was used.

The study used panel data covering all countries over the analysis period to detect the direction of causation. Secondly, causal relationships were examined for each country by using the time series data.

In addition to the above studies Minier (2003) in her paper used regression three techniques to examine if the partial correlation between economic growth and financial development differs based on financial and economic development level of the country. This study arrived at the other studied results, and this result is the relation between growth and financial development are positively correlated in countries with high levels of market capitalization. However, this linkage does not appear in the countries with low levels of market capitalization.

Moreover, Arestis et al., (2001) utilized time series methods and data for five development countries (Germany during 1972:1 – 1997:4, the United States for the period 1972:2 – 1998:1, Japan for 1974:2 – 1998:1, the United Kingdom during 1968:2 – 1997:4 and France for 1974:1 – 1998:1). They examined the linkage among stock market development and economic growth. The variables are proxies as follows: The logarithm of real GDP (LY) is used to measure output, stock market development by the logarithm of the stock market capitalization ratio (LCM), determined as the ratio of stock market value of GDP, and banking system development is measured by

domestic bank credit to nominal GDP (LBY) ratio logarithm; stock market volatility (SMV) is proxied by an eight-quarter moving standard deviation of the end of quarter change of stock market prices.

The study carried out its empirical examination in a vector autoregression (VAR) framework, then performed a cointegration analysis for each of the five countries. The empirical analysis of this study shows that while stock market could be able to contribute to long-term output growth, their influence is, a small part of that of the banking system. Specifically, banks and the stock market seem to have an important contribution to output growth in France, Germany and Japan. Meanwhile, statistically the linkage between stock market development and growth in the United States and United Kingdom is weak.

Furthermore, Levine (2003) discussed that recent empirical work of financial systems plays a significant role in determining long-run economic growth. The study built its work by recent research has employed different econometric approaches and data sets to evaluate the role of the financial sector in improving economic growth. Therefore, the study ignored country case studies and the investigations of time-series. The empirical research body is growing, using various statistical measures, data analysis and produces consistent results.

Moreover, using causality test Caporale et al., (2004) investigated the causal linkage between financial developments, stock market development and economic growth in some Latin American and some Asian countries; which are Argentina, Chile, Greece, Korea, Malaysia, the Philippines and Portugal. These countries have at least fifty continuous quarterly observations. The model used quarterly data for the period 1977Q1 to 1998Q4. They used market capitalization ratio, and the value traded ratio as the measures of stock market development, and they used GDP as the measure of economic growth. The empirical part of this study exploited recent developed techniques to test for causality in VARs. The evidence suggests that investment, productivity is the channel for enhancing the economic growth through the stock market.

Besides, Liu & Hsu (2006) tried to investigate the relationship between financial development and economic growth for three Asian economies, namely, Japan, Taiwan, and Korea. The study focused on the role of financial development (including banking and stock markets), and monetary and financial policies, with the international capital movement in the economic growth processes. This study used the generalized method of moments (GMM) and principal component analysis. The study results suggested that the high investment have improved the economic growth in Japan while it did not necessarily lead to better growth in Taiwan and Korea cases. In addition, real export growth rate had contributed to Taiwan and Korea. Moreover, the finance development had positive effects on Taiwan's economy, but had a negative effect on other countries. Meanwhile, the stock market development had positive effects on Taiwan's economic growth.

Furthermore, Tang et al., (2007) seek to explore the relationship between stock market development and economic growth in twelve Asian countries during the period of 1980 – 2004, using Johansen co-integration and Granger causality tests for quarterly data. Because of the non-availability of the data for all study countries for the same period, this study employed quarterly data from 1980 to 2004. According to available data, the sample period for each country are used as follows: Japan, Malaysia, Korea, (1980:1-2004:4), China (1994:1-2004:4), Hong Kong (1980:4-2004:4), India, Singapore, Sri Lanka (1985:1-2004:4), Indonesia (1983: 2 - 2004: 4), Philippines and Taiwan (1987:1-2004:4), and Thailand (1987:3-2004:4). They are two variables used to analyse the data which are Real Gross Domestic Product (RGDP), and stock indices.

The data set contains two variables for each country, which are real gross domestic product (RGDP) and stock indices. All the variables are transformed into natural logarithms due to the usual statistical reasons. There are no quarterly data for some study countries, which are India, Sri Lanka and Taiwan. For this reason the study used an interpolation method to get quarterly data from annual data.

The empirical results of this study explored that China, Philippines, Singapore and Taiwan stock markets and economic growth to make co-integration relationship, and they have the possibility to move together in the long run tend to the equilibrium. In

the Philippines, the findings of Vector Error Correction Model (VECM) showed that the stock market can promote economic growth in the long run. Whilst in Malaysia, Hong Kong, Indonesia, and Thailand, there is a bi-directional, short run causal relationship between the stock market and economic growth. On the other hand, the empirical finding of this study discovered that Japan and Korea stock markets can stimulate to improve the economic growth in the short run. The opposite situation was observed for Korea and Japan and the stock market in India. While, the study found that there is no evidence of causality between the study variables in the case of Sri Lanka.

Based on Eugene Fama's theory 1970 which is called Efficient Market Hypothesis (EMH), Aga & Kocaman (2008) studied the efficient market hypothesis and emerging capital markets: empirical evidence from the Istanbul Stock Market. They reported that there are three types of stock market efficiency, according to the efficiency: weak form, semi-strong form and strong form.

In their study, Kargbo & Adamu (2009) said, from the empirical literature, that while some studies have used a single indicator of financial development, others have employed two or more indicators separately to analyse that relationship. However, recent developments in the literature have mentioned the importance of constructing a composite index as a proxy for financial development in analysing the finance-growth link.

Moreover, Nowbutsing (2009) analysed the long and the short run relationship between stock market development and economic growth in Mauritius over the period (1989 - 2006), by constructing stock market development measurements which are size and liquidity. He explained the size as a share of market capitalization over GDP, and liquidity as the volume of share traded over GDP. He found that stock market development has a positive effect on economic growth in long and short time.

Furthermore, Greenwood & Smith (1997) investigated those stock markets can contribute to pushing the cost of mobilizing savings to lower stages, and help to have more investments in the most productive technologies. Also, Nowbutsing in the same paper said that Obstfeld (1994) reported that there is another positive effect for stock

markets; that is, stock markets can share the international risks which will lead to improve resource allocation and accelerate growth.

In his study, Ogunremi (2010) mentioned that:

“The relationship between financial development and economic growth was examined initially by economists like Joseph Schumpeter (1911), who argues that well-functioning banks stimulate technological innovation by identifying and funding entrepreneurs with the best chances of successfully implementing innovative products and production processes.”

Although plausible, the supply-leading view is only one possible explanation Patrick (1966) held a different view, termed the ‘demand-following’ role of financial development. He reported that financial development enhances economic growth in the early stages of development. However, this causality is reflected in the later stages.

Besides, in their study Ake (2010) explored the causal relationship between the stock market and economic growth using the time series data for five Eurozone countries (France, Portugal, Belgium, Netherlands and United Kingdom) for the period 1995:Q1 to 2008:Q4. The Granger causality test was employed to test this linkage. The stock market was proxied through market capitalization, total trade value and turnover ratio while economic growth is measured by GDP and FDI. The study examines the causal relations for each country. The study found a positive link between the stock market and economic growth for several countries, which have a liquid and highly active stock market. However, the causality relationship for the rest of the countries in which the stock market is small and less liquid is rejected. In this study economic growth is proxied by capital accumulation and productivity. Meanwhile, market development is measured by liquidity indicators: the turnover ratio, which equals the total value of shares traded divided by stock market capitalization. Thus, differences in trading frictions will effect on the turnover ratio.

In another study, Augustine et al., (2010) used annual data with time series for 21-year period (1986– 2006) in Nigeria. Based on the regression result, they revealed that the stock market size and turnover ratios were having a positive relationship in explaining economic growth while stock market liquidity coefficient has a negative impact in

explaining long-run growth in Nigeria. Meanwhile, Ake & Ognaligui (2010a) used causality test to explore causality relationships between stock markets and economic growth in Cameroon for the period 2006 to 2010. The study also used Boot, Feibes and Lisman (1967) derivation method to extract quarterly data from the annual data. The findings suggested that the Douala Stock Exchange still doesn't affect Cameroonian economic growth. However, they found systematic evidence that the market capitalization affects positively on the GDP growth.

In his study Kim et al., (2014) analysed the effect of financial and stock market development on economic growth in varying levels of development in for 94 countries from 1976 to 2005, using a dynamic panel generalized method of moments on a panel data. The study found that the effect of financial and stock market development on economic growth is negative for high income countries. However, if these countries develop their financial markets with their manufacturing industries, the effect will be positive.

Moreover, in their study Low, S. H, et al., (2014) provided a new evidence on the relationship between finance and economic growth using an innovative dynamic panel threshold technique. The sample consists of 87 developed and developing countries. The empirical results indicated that there is a threshold effect on the finance–growth relationship. In particular, the study found that the level of financial development is beneficial to growth only up to a certain threshold; beyond the threshold level further development of finance tends to adversely affect growth. The study reported that these findings reveal that more finance is not necessarily good for economic growth and highlight that an “optimal” level of financial development is more crucial in facilitating growth.

### **3.2.1 Finance and Growth Nexus in Developed Countries**

This section examines the finance and growth nexus based on the literature that investigated into the economies of the developed countries. Firstly, Hondroyiannis et al., (2005) empirically examined the relationship between the banking system development, and the stock market and economic performance in Greece. The empirical analysis used VAR model and an Error - Correction Model (ECM), and

Granger Causality Test (GCT) based on monthly data for January 1986 to December 1999. The empirical results suggested that there is a bi-directional causality relationship between finance and growth in the long run. The findings indicated that bank and stock market financing can enhance economic growth, in the long run, but their effect is relatively small. This paper can contribute to the empirical investigation of the finance growth nexus, recognizing the separate roles of banking and the stock market. Although, Greece is a medium size EU country with a less mature financial market compared to other advanced economies. However, could be instructive to other medium-sized economies in the region, such as the new EU member countries.

Another study was made by Shan (2003) to investigate the impact of financial market on economic growth in China using a VAR. Financial market, measured by Total Credit, Trade, Investment and Labour, while GDP is proxy the economic growth. The results indicated that there is a bi-directional relationship between GDP growth and financial development in china. The study of this kind in the case of China is limited, it therefore provides an interesting advance in the literature on the finance-growth nexus.

Besides, Van et al., (2006) examined the long-run relationship among financial market development and economic growth in Belgium. In this study annual data is used for the period of 1830-2000 for the Brussels Stock Exchange (BXS). The study used many variables, such as a total market capitalization ratio, the total number of listed shares. They found a strong result for stock market development that caused economic growth in Belgium, especially in the period between 1873 and 1914. The main contribution of this paper is to quantitatively assess the role of finance for growth in Belgium post 1830, using a new data set on indicators of stock market development of the Brussels stock exchange.

On the other hand, Stefani (2007) investigated the finance - growth relationship with Brazil using quarterly data between 1986 and 2006. This study used a p-dimensional Gaussian vector autoregressive model – VAR (k). The study concluded that there is a positive and significant relationship between finance and growth. The contribution of this study appears in two aspects. First, it tries to shed light on how did financial

development in an emerging economy like Brazil has contributed to the country's long run economic growth. Second, it uses time series techniques and quarterly data to try to better handle the causality question.

Meanwhile, Antonios (2010) investigated the causal linkage between the stock market development and economic growth in Germany. The author used annual data covering the period 1965-2007. The study employed Granger causality test and a Vector Error Correction Model (VECM). The findings indicated that there is a unidirectional causality relationship between stock market development and economic growth. This study considered one of the very few empirical studies that have concentrated on examining the causal relationship between economic growth and stock market development and bank lending.

Furthermore, Duca (2007) employed the Granger Causality test to investigate the relationship between the stock market and economic growth. This paper focused on long-term trends and the evidence presented garnered from five of the top ten of world stock markets in terms of the market capitalisation. According to the author the top ten stock markets are the United States, Japan, United Kingdom, France, Canada, Germany, Switzerland, Italy, Australia, and the Netherlands. The five stock market chosen are (United States, UK, Japan, France, and Germany). The study used quarterly data for two variables namely nominal GDP and stock market indices. The data used in the United States is for the period from 1957:Q1 to 2005:Q2, for Japan is from 1957: Q1 of 2004: Q4. However, the analysis carried out in France, Germany, and the UK ranges from 1970:Q1 to 2004:Q4. The results of Dow-Jones stock market show that the US stock price movements cause movements of GDP, but there is no evidence that there is any causality from GDP on stock prices. The same results found in the UK. The study rejected, which is on the basis of the F-statistic the null hypothesis that is stock market movements do not Granger GDP. However, no causality was found in the reverse direction in France. Whilst, in Germany, the movements of GDP and stock prices are found to be independent to one another. The study used long run data, but it doesn't employ co-integration test to investigate this relationship. Also, the study used different times for each stock market which making it complicated.

Moreover, Kemal et al., (2007) examined the empirical relationship between financial development and economic growth in high income countries (HIC). Their study focuses on direct and indirect finance, separately and jointly. They applied the methodology of Nair-Reichert & Weinhold (2001) for causality analysis in heterogeneous panel data. The study used inflation rate (INFL) as the measure of macro-economic instability, government consumption to GDP ratio (GCGR) as fiscal policy variable, and international trade openness (TRGR) as international trade policy variable. The study reached two results. Firstly, financial sector development may even be harmful to economic growth when inflation is increasing. Secondly, there is no definite evidence that the finance is enhancing economic growth or vice versa. The control variables in this study are the inflation rate INFL as a measure of macro-economic instability, government consumption to GDP ratio GCGR as fiscal policy variable, and international trade openness TRGR as international trade policy variable. This study has a good analysis to achieve its goal.

In addition, Athanasios & Antonios (2012) explored the relationship between financial development and economic growth in Ireland uses annual data for the period of 1965-2007, using Granger causality test within a vector error correction model (VECM). This study said that economic growth has an effect on stock market development and credit market development, and there is a positive effect of industrial production growth on economic growth. Also, there is a feedback causal relationship between stock market development and economic growth. The study didn't use co-integration test, although this study used long time series data and test is a strong test to examine the long run relations.

In their study TU (2012) examined whether the United States, US economic variables can predict Chinese stock market after 2001 using the regression model framework. The study used many United States economic variables such as Dividend-Layout ratio (log); Stock variance spread, Default Return spread, Long-Term Yield LTY, Long-Term Return LTR, Earnings-price ratio (log), stocks to the total end-of-year market capitalization of NYSE stocks. The study compared the return predictability in the Chinese stock market by the following nine Chinese economic variables before and after China joined the World Trade Organisation (WTO). The study used various

variables such as, Inflation (INF), Turnover TO. This study also considered two periods the first period before China joined WTO covers 1993M07-2001M12, while the second period is after China joined WTO covering 2002M01-2008M12. The study found that although, before 2001, United States economic variables are not useful in predicting the stock market of China; they provide significant predictability after 2001. This study considers one of the few studies that examine the effect of economic growth of one country on the stock market in another country.

Moreover, the study introduced by Frenandez-Amador et al., (2011) examined the actual impact of monetary policy on stock liquidity, and then investigated their role as a determining factor of commonality in liquidity. The study applied panel estimations and vector autoregressive models. The study considered data of three Euro Zone countries, namely Germany, France and Italy, from January 1999 to December 2009. The macroeconomic variables of the Euro Zone are the rolling twelve – month inflation rate, the base money growth rate, the ECB (European Central Bank) policy rate and monthly industrial production figures. Meanwhile, the dependent variables are the number of shares traded and outstanding, the daily total return index, and the end-of-day price as well as bid and ask prices. The study found that an expansionary monetary policy of the European Central Bank (ECB) led to increase stock market liquidity in the France, Germany, and Italian markets. These results are strong for seven measures of liquidity and two of monetary policy.

The study that made by Florackis, C et al., (2014) examined whether stock market liquidity forecasts real United Kingdom GDP growth using data over the period 1989:Q1-2012:Q2 as apart from standard linear model specifications. The study also utilized non-linear models, which allow for regime switching behaviour in terms of a liquid versus an illiquid market regime and over the phases of the business cycle. The findings supported a statistically significant negative relationship between stock market liquidity and future UK GDP growth over and above the usual control variables. This relationship is found to be stronger during periods of highly illiquid market conditions and weak economic growth. The out-of-sample forecasting analysis indicated that a regime-switching model of liquid versus liquid market conditions predicts UK growth better than any other model. The study pointed out that this model

is the only one to significantly outperform the GDP growth forecasts published in the Bank of England's Inflation Report.

Furthermore, in their study Kyophilavong, P et al., (2014) examined the relationship between financial development and economic growth. The aim of this study is to test two hypotheses: 'supply-leading' hypothesis and 'demand-following' hypothesis, using Laos time series data. The ARDL bounds testing approach to cointegration is used to carry out this task. The results confirmed the presence of feedback effect between both variables. Financial development promotes economic growth and in the resulting, economic growth leads financial development. This paper is pioneering efforts to investigate the relationship between financial development and economic growth in the case of Laos economy, which consider it as a significantly adding to the theoretical library.

In addition, the paper that made by Peia et al., (2014) re-examined the empirical relationship between financial and economic development while (i) taking into account their dynamics and (ii) differentiating between the stock market and banking sector development. The study the cointegration and causality between finance and growth in 26 countries. The study's time series analysis suggested that the evidence in support of a finance-led growth is weak once the authors take into account the dynamics of financial and economic development. The findings revealed that causality patterns depend on whether countries' financial development stems from the stock market or the banking sector. Stock market development tends to cause growth, while a reverse or bi-directional causality is present between banking sector development and output growth. The study also brought evidence that causality patterns differ between market-based and bank-based economies suggesting that financial structure influences the causal direction between financial and economic development. The findings indicated that the relation between financial and economic development is likely to be more complex than suggested in earlier studies.

Most of the previous studies agreed on the strong relationship between stock market development and economic growth in developed countries, but some of them found a directional linkage; whereas the others discovered a bidirectional relationship between the two fields.

### 3.2.2 Finance and Growth Linkage in Developing Countries

Various studies have investigated the relationship between stock market development and economic growth in developing countries. Some of them found a positive relationship, but the others found the opposite results.

In their study Kenny & Moss (1998) contradicted with Singh's suggestion that stock markets will cause such problems as to do more harm than good for developing economies. Rather, they insist on a justification for their opinion that in developing countries the concentration should be on stock markets rather than on the banks. They supported their opinion, including three points. Firstly, short-terms become less necessary to the creation of investment tools that no longer have to match the preferred liquidation dates of shareholders, also the stocks can be sold at any time for which the liquidity risk will be reduced. Secondly, stock markets can make equity finance increasingly cheaper for the companies. Stock markets can do that by encouraging new supplies of capital. This will decrease the cost of capital average and new investors entering the market will raise the price-to-earnings (P/E) ratio. Finally, through financing their activities via issuing shares, firms will have the opportunity to take greater risks than they could finance from a bank loan. They also become more willing to take risks than corporate owners, because that risk has been diversified between many investors. They also pointed that, stock markets are free from the problem of the need for reserving requirements and moving capital from the informal market to the banking sector credit. These authors employed good points that open more doors in this field to examine and make sure if these points acceptable or not. The researcher totally agrees with the authors especially in the second point.

Another study on the developing countries was conducted by Garcia & Liu (1999), he investigated the macroeconomic determinants of stock market development from fifteen industrial and developing countries during the period (1980-1995) using pooled data. This study used market capitalization to measure stock market development. The paper results found that saving rate, financial intermediary development, real income, and stock market liquidity are important indicators of stock market capitalization. While macroeconomic volatility does not prove significant. This paper can be further

extended along two lines. One is to include the OECD countries in the sample. The other is to incorporate regulatory and institutional factors in the study

In their study Campos et al., (1999) tried to provide evidence of positive significant causal impact from the stock market for economic growth, especially for 64 less developed countries for the period from 1985 to 1997, using a Granger causality test. The stock market was proxied by three variables, market capitalization over GDP, turnover volatility and the change in the domestic shares listed number. While economic growth was measured by GDP. The study arrived at results which found that there is a significant relationship between stock market activity and future economic growth for lower and lower middle income countries, but not in higher income countries especially in more developed economies. This study incorporated expected future growth in current prices, which are consistent with the efficient market hypotheses.

On the other hand, in his study Chong (2000) examined the dynamic linkage between Kuala Lumpur Stock Exchange (KLSE), macro variables and economic growth. The author lamented:

“It is a general belief that the macro variables, namely the inflation rate, interest rate, aggregate output, money supply, exchange rate and the trade balance are some prominent factors to the performance of the stock market. The stock market, in turn, is one of the leading indicators for the economic growth.”

The study used the VAR model of Johansen–Juselius multivariate co-integration test, multivariate Granger-causality test and also the impulse response, to find the dynamic relationship among the study variables during the period January 1987– to February 1997. The general performance of the market is measured by a composite index. Meanwhile, the performance of individual sectors is substituted by individually sectorial indices like Industrial Index, Finance Index, Property Index, Plantation Index, and the Mining Index. Empirically, this study found that in the long run, the stock indices and macroeconomic variables are moving together to the equilibrium point and that there is a causality running among the variables.

In brief, the study found that the general performance of the market, which is measured by the Composite Index, is caused by the changes in inflation, output, money supply and the trade balance. Meanwhile, the sectoral performance has shown different responses to the fluctuations in the macroeconomic variables. The property sector appears to be the least sensible to this fluctuation. This study success in its attempt to extend the previous studies findings in a more comprehensive setting to enhance the knowledge in this discipline.

Otherwise, Ibrahim & Yusoff (2001) analysed the dynamic interactions between three macroeconomic variables-real output, price level, and money supply. They also studied the exchange rate and share prices in the Malaysian stock market, using time series techniques of co-integration and Vector Auto Regression. To measure the stock price, the authors used monthly end values of the Kuala Lumpur Composite Index (KLCI). The exchange rate (EXC) is represented by the bilateral Ringgit exchange rate against the US dollar. Since the monthly data on real GDP were not available. The study used Real Industrial Production (IP) to capture real economic activity. The study noted that money supply affects the stock prices in the short run positively. But in the long run, however, these factors are negatively related. It also observed the negative effects of consumption shocks on stock prices. The study also found that there is valuable information on the stock prices for future variations in macroeconomic variables, especially in the currency depreciation and the price level are both deflationary and inflationary. The ADF test is widely used for the testing of the integration order of time-series data. However, this study used Phillips-Perron (PP) tests instead of it.

Besides, in their study Sinha & Macri (2001) examined the linkage between financial development and economic growth in eight Asian countries, using time series data. The study performed two types of analysis; first one estimate augmented production functions where a financial development variable is added, and the second analysis conducted multivariate causality tests the growth rate of income and the financial development variable's growth rate. This study used many variables such as Growth rate of real per capita income GLPY, Growth rate of quasi-money supply as a ratio of GDP (nominal) GLQMR, real investment growth rate as a ratio of GDP, GLRINVR

and GLRGDP: Growth rate of real GDP, GLRGDP. While most of studies use bivariate causality tests (which are much easier to compute), this study use multivariate causality tests

In another study Wacabaca (2004) investigated empirically the causal linkage among financial development and growth in Fiji, using time series data. The tests used in this study are unit root test and co-integration techniques within a Bivariate Vector Autoregressive (BVAR) framework for the period 1970-2000. Stock market size is measured by the ratio of stock market capitalization to GDP, which is equal to the total of listed shares divided by GDP. Meanwhile, the liquidity of the stock market is proxied by the stock market total value traded to GDP ratio. Conversely, the efficiency of the stock market is measured by the stock market turnover ratio. This study reported that economic growth proxies used are Level of real GDP (RY), the level of real GDP per capita (CRY) and the ratio of investment to GDP (IRY). Meanwhile, financial development is measured by financial institution indicators which are the ratio of financial assets to GDP (FAY), ratio of liquid liabilities to GDP (LLY), and the ratio of private sector credit to GDP (PCY). The study found a positive relationship between financial market development and economic growth in Fiji with the direction of causation running mostly from economic growth to financial development.

Moreover, Christopoulos & Tsionas (2004) examined the relationship between financial development and economic growth using panel analysis in 10 developing countries. The study measures the financial depth by the ratio of total bank deposit liabilities to nominal GDP, and included the ratio of investment to GDP and inflation rate as control variables. The study found the presence of long-run causality from financial development to economic growth, but their study didn't find any evidence of bi-directional causality. Besides, the study also found that there was no short-run causality between financial deepening and output. The study recommended that improving financial markets will have an effect on growth, which is a slow process but is important. This paper provides a useful analysis on the evolvement of financial institutions and markets in Fiji in terms of their relative sizes, activity and efficiency, and their important in the economy.

Furthermore, the study conducted by El-Wassal (2005) investigated whether there is a relationship between stock market growth and economic growth, privatization and stock returns. He performed this study based on 12 emerging economies of following countries- Chile, Colombia, Greece, India, Jordan, Korea, Malaysia, Mexico, Pakistan, Philippines, Venezuela, and Zimbabwe for the period (1988-2000), using monthly data within the Johansen co-integration and Granger causality test. Stock market growth is measured by two main variables, size and liquidity. Size is measured by stock market capitalization whereas the liquidity is proxied by trading value. The industrial production index is used as an indicator to measure real economic activity. The study found that, the results from cointegration test explore a long run relationship among stock market size and liquidity, real activity, privatization and stock market returns in five countries- India, Korea, Malaysia, the Philippines and Zimbabwe. However, Granger causality results found that there is a bi-directional linkage among stock market growth indices, real economic activity, privatization, and stock returns for most of the above mentioned countries. This study is one of the few studies that examined the long and short run relationship between stock market and economic growth.

Another study has been conducted by Choong et al., (2005) analysed the relationship between stock market development and economic growth in Malaysia for the period of 1978-2000. They used the Autoregressive Distributed Lag (ARDL) bounds test approach. The economic growth was measured by per capita nominal GDP. The stock market is proxied by the size and the liquidity level of the stock market. This study included two control variables; the discount rate and openness ratio. The study revealed that stock market development is co-integrated with economic growth in the context of Malaysia. This test also discovered that stock market development has a positive effect on economic growth. This study employed newly developed ARDL bound test, which has been shown more robust, in examining the cointegration relationship between financial development and economic growth

In another study, Gamolya (2006) investigated the statistical correlation between financial and real sector performances applying causality test for monthly data in Ukraine. He stated that the financial field was a very important part of the national

economy, which connected to the real sector productivity, and this relationship is basically of the two-sided nature. The author used four variables in his study- SM index to measure general marker profitability, volume of Ukrainian Stock Market USM trade to measure investors' activity, total banking institutions capitalization, and average wage rate introduced as testing instrument. The result from causality test showed that the stock market has a small effect on economic growth when the ratio of underwriting is close to zero, which approximately has no impact on economic growth.

The regression results illustrated a significant and positive linkage between the income variables and financial variables for Malaysia, Pakistan, India and Sri Lanka. Meanwhile, multivariate causality tests found a two-way causal relationship between the income and finance variables in India and Malaysia, one-way causality linkage from financial variables to income variables for Thailand and Japan and opposite causality for Korea, Pakistan and the Philippines. The research of this interdependence could be advanced further by means of introducing new data on different financial intermediaries. Another chance to improve results is to collect data on Stock Market Capitalization, which will certainly add to the understanding of financial sphere progress.

Moreover, Ang & Mckibbin (2007) investigated the causal relationship between financial development and economic Growth in Malaysia, using time series data for the period of 1960-2001. Using principal components analysis, the ratio of liquid liabilities (or M3) to nominal GDP, commercial bank assets to commercial bank plus central bank assets and ratio of domestic credit to the private sector of nominal GDP were used to develop an index as a measure of financial depth. The results suggested that growth has a positive and unidirectional causal effect on finance in the long run.

Moreover, Brasoveanu et al., (2008) examined the correlation between capital market development and economic growth in Romania. They used quarterly data for the period 2000-2006 using a regression function and VAR models. Stock market variables were divided into three types: size variables- market capitalization/GDP ratio and the logarithm of the stock market capitalization ratio, liquidity variables-

turnover ratio and value traded ratio and volatility variables- eight-quarter moving standard deviation of the end of quarter change of stock market prices.

The results disclosed the fact that there is a positive linkage between capital markets and economic growth, with feedback effect. To specify, financial development follows economic growth, while economic growth pushes financial institutions to develop. Also, using Granger-causality test based on vector error correction model (VECM), the study found that stock market development has causal effects on economic growth. This study used just 25 observations to examine the correlation between the capital market and economic growth in Romania. The time series data is small to do this investigation.

On the other hand, Shahbaz et al., (2008) sought to investigate the relationship between stock market development and economic growth in Pakistan uses annual time series data from 1971 to 2006. To investigate long-run causal linkages and short-run dynamics, Engle-Granger causality and ARDL tests are applied respectively. The variables used in this study are RNPC real income per capita and MC market capitalization as a share of GDP. The study found that there exists a very strong

a percentage of GDP). Other two variables are foreign direct investment (FDI) as a percentage of GDP and human development index of Pakistan (HDI). The study found that the size of the market, as measured by market capitalization, has a strong influence on economic growth than the liquidity of the stock market. In addition to that, FDI as well as the development of human capital also has a strong positive relationship with the economic growth in Pakistan.

Furthermore, Shafii, Z (2009) examined the stock market development and economic growth linkage in 20 Organisation of Islamic Countries (OIC) members, for the period of 1989–2006. They applied Johansen co-integration method to determine the presence the long-run relationship between the selected variables, which are market capitalization ratio (MC) and turnover ratio (TR) as independent variables and GDP as the dependent variable. The results found this linkage in Malaysia, Egypt, United Arab Emirates, Turkey, Bahrain, and Uzbekistan. Specifically, the study found one co-integrating vector in Egypt and Uzbekistan. This study considers one of the pioneer studies that examine the linkage between the stock market and economic growth in OIC countries which make it an important additional in the theoretical library.

In his paper, Islam (2010) investigated the impact of the development of banks and stock markets on economic growth in a sample of 80 developing countries during the period 1973-2002 using Generalized Method of Moments (GMM) dynamic panel analysis. The empirical results proposed that banks and stock markets have positive and significant impacts on economic growth and, therefore, both of them are important to accelerate long-run growth in developing countries. In addition to that, the study found that the relationship between finance and growth is non-linear. The study reported that the results were strong while using alternative measures for banks and stock markets, and suggested that developing countries should undertake suitable policy measures to develop both banking and stock markets in order to achieve higher long run economic growth through better financial arrangements. This study used unbalanced panel data which make it one of the few studies using this type of data.

An empirical study was conducted by Hamid et al., (2010) including the countries: Malaysia, China, Korea, Hong Kong, Pakistan, India, Sri Lanka, Indonesia, Philippines, Singapore, Thailand, Taiwan, Japan and Australia. The author used the

monthly observations for the period January 2004 to December 2009. The study concluded that monthly stock prices did not follow a random walk in all Asian Pacific Countries. This study is one of the few studies that performed Jarque -Bera test and visualized the skewness and kurtosis to examine the weak form of market efficiency in the Asia-Pacific region.

Furthermore, Hossain, M. S, et al., (2010) investigated in their study the causal relationship between stock market development and economic growth in Bangladesh for the period from 1976 to 2008. The study used secondary data collected from annual and official reports, using Engle- Granger causality and ML tests and cointegration test. This paper also attempted to examine the non-stationary series of stock market development and economic development by using a new econometric technique. Market capitalization ratio to real GDP is used to measure stock market development. Meanwhile, the growth rate of real GDP is used to proxy economic development.

The study concluded that there is a long-run equipoise linkage among the stock market and economic growth in Bangladesh. It also found that there is unidirectional significant causality resulting from stock market development in the economic growth. But for the short term the linkage from economic growth to stock market development is insignificant. Regarding to Bangladesh economy no one conducted any study in order to investigate the causal linkage between stock market development and economic growth. So, few studies have been conducted for less developed/underdeveloped countries.

Moreover, Matadeen et al., (ND) analysed the linkage between stock market development and economic performance in the Island during the period 1988 – 2009. This linkage will be examined both by static panel date techniques and dynamic panel VAR (PVAR) model. The study also used the Granger causality to consolidate the direction causality among the variables in the long run. The dependent variables were measured by Gross Domestic Product, while stock market development was proxied by three measures. These variables are, Market Capitalization Ratio, Turnover Ratio and Total Value Trade Share Ratio. Stock market capitalization is used to measure the

stock market size, which equals the value of listed shares divided by GDP. Meanwhile, the turnover ratio and the total value traded share ratio are used to measure the stock market liquidity, which is believed to be a strong predictor of real per capita gross domestic product (GDP) growth. The study found a significant and positive relationship between stock market development and economic growth in the Island; it found that both the PVAR and Granger Causality arrived at the same results. Furthermore, a bi-directional causality was observed between the liquidity measure of stock market development and economic growth. The findings from this study can help reinforce the link between stock market development and economic growth in Mauritius through some policy issues and recommendations.

Furthermore, Rioja & Valler (2014) investigated the effects of the stock markets and banks on the sources of the economic growth, productivity and capital accumulation using a large cross country panel including high income and low income countries. The data contain a panel of observations for 62 countries for the period from 1980 to 2009. The study used dynamic panel Generalized Method of Moments (GMM) to address the potential endogeneity in the study data. This study used two measured proxies to measure economic growth, which are Capital Growth (CG) and Productivity growth (PG). Meanwhile, stock market variables are, market capitalization- the total value of all shares in the stock market as a percent of GDP, value traded- the value of all shares traded in the stock market as a percent of GDP, and turnover ratio- the value of the traded shares in the domestic stock market. The study found that the bank credit primarily affects capital accumulation and productivity growth in all the countries considered. The contribution arises when this paper studied Low and High Income countries separately. In Low Income countries, banks are essential as they have a sizable positive effect on capital accumulation. The study found that stock markets, however, have not contributed to capital accumulation or productivity growth in these countries. Perhaps the size and activity of equity markets in developing countries have not yet reached levels where they are significant determinants of the sources of growth”.

On the other hand, Boopendra et al., (2012) investigated the impact of stock market development on economic growth for selected 10 countries of the least developed

category, using annual data for the period 1995 to 2009. Economic growth is measured by per capita GDP as the dependent variable. Meanwhile, SMDEX means the stock market development index, which includes two measures-size and liquidity. The size is proxied by the concentration ratio, which is measured by dividing the market capitalization of the stock exchange over GDP. Liquidity contains trading value ratio and turnover ratio. Conversely, banking development is measured by domestic credit provided by financial intermediaries to the private sector over GDP. The other variables are, inflation, which is measured by Consumer Production Index (CPI), Education (EDUC) demonstrating the quality of human capital, Secondary Enrolment Ratio (SER) and total exports divided by the GDP of the country (EXGDP).

The result from the static analysis conducted by Boopendra et al., (2012) illustrates that, there is positive and insignificant relationship between stock market development and economic growth in the sample of the least developed countries. But the impact of banking development on economic growth is significant. The study shows that the inflation and education are also essential elements towards economic growth.

Moreover, Athapathu & Jayasinghe (2012) examined whether the stock market can promote economic growth in the case of Sri Lanka, during eleven years starting from 1997. The author conducted a study based on time series data and using co-integration analysis, error correction mechanism and granger causality test methods provided that the involved data series is stationary for investigating this linkage. The economic growth in the study is indicated by changes in nominal and real GDP over the duration of the study. On the other hand, the stock market variables were market capitalization value, the average index of market capitalization, turnover ratio. The study indicated that there is a unidirectional causal relationship between stock market performance indicators and GDP growth in Sri Lanka. The study discovered that there is limited evidence of economic activity influencing stock market performance.

On the other hand, Regmi (2012) examined similar relationship in Nepal for the period 1994–2011 using co-integration, unit root test and vector error correction models. Market capitalization ratio, number of listed companies, the total value traded, and turnover ratio, are used to measure stock market development. The

dependent variable chosen are per capita GDP and GDP deflator in order to measure GDP. The study eventually discovered that the stock market has a significant contribution to economic growth in Nepal.

In addition, in his study Ray (2012b) examined the effects of different macroeconomic variables on the stock market prices in India for the period 1990-91 to 2010-11, using annual data. The study used two tests: a multiple regression test and Granger causality tests. A multiple regression model is designed to examine the impact of macroeconomic variables on stock prices, while the Granger causality test is conducted to investigate whether the relationship between stock prices and macroeconomic variables exists. The independent variables or macroeconomic variables are- inflation, exchange rate, foreign direct investment, gross domestic product, gross fixed capital formation, foreign exchange reserve, money supply, crude oil price, whole price index, gold price, interest rate, oil price, balance of trade and industrial production index.

The study estimate of multivariate Granger causality test indicated that though there is no causal linkage between stock price and industrial product, unidirectional causality is found among stock price and gross domestic product, exchange rate and gross fixed capital formation. Meanwhile, bidirectional causality exists among stock prices and foreign exchange reserve, money supply, crude oil price and whole price index. The multiple regression results referred that oil price and gold price have significant negative impact on stock price. Meanwhile, the interest rate, balance of trade, gross domestic product, foreign exchange reserve, industrial production index and money supply have positive effects on Indian stock price. Otherwise, the inflation rate, foreign direct investment, exchange rate and wholesale price index do not have an important effect on stock price. The study reported that the results have effects on domestic as well as foreign investors, stock market regulators, policy makers and stock market analysis.

Ayadi. R, et al., (2015) in their paper explored the relationship between financial sector development and economic growth, using a sample of northern and southern Mediterranean countries for the years 1985-2009. The authors included several variables to measure the development of the financial sector to account both for

quantity and quality effects. The results indicated that credit to the private sector and bank deposits are negatively associated with growth, which confirms deficiencies in credit allocation in the region and suggests weak financial regulation and supervision. On the stock market side, the study found that stock market size and liquidity play a significant role in growth, especially when accounting for the quality of an institution. Investment, whether domestically or in the form of FDI, contributes significantly to economic growth. Stronger institutions and low inflation are key growth factors. Initial GDP has a persistent and significantly negative impact on growth, which implies that poorer countries are catching up richer countries in terms of economic growth.

Furthermore, in their study, Cavenaile. L, et al., (2014) examined the long-run relationship between the development of banks and stock markets and economic growth for five countries (Malaysia, Mexico, Nigeria, Philippines and Thailand) using cointegration and causality tests. The study used two different indicators of the banking system that are liquid liabilities (LL) over GDP and private credit by deposit money banks over GDP (PRIV). For the financial markets, the study used three indicators which are the stock market capitalization over GDP (MKTCAP), the stock market turnover ratio (TURN) and the stock market value traded over GDP (VALTRAD). On the other hand, economic growth is measured as the logarithm of real GDP per capita in local currency (GDP). The study found little evidence of reverse causation as well as bi-directional causality.

Moreover, Srinivasan (2014) investigated the causal direction between stock market development and economic growth in India. Using the co-integration and causality tests for the period of 1991 to 2013, the findings indicated bidirectional causality among the market capitalisation and economic growth, and unidirectional causality from turnover ratio to economic growth in the short-run and long-run. Thus, this section illustrated the strong relationship between stock market development and economic growth in developing countries through the researches of different authors who found this important linkage in their studies.

In their study, Pradhan et al., (2014) investigated the impact of stock market development, money supply and inflation on economic growth in India during the

post-globalisation era of the 1990s, especially during the period from 1994 to 2012. Using autoregressive distributed lag (ARDL) bounds testing approach, the study found that stock market development, money supply, inflation and economic growth are cointegrated, suggesting the presence of a long-run equilibrium relationship between them. The vector autoregressive error correction model (VECM) further confirmed the existence of both bidirectional and unidirectional causality between economic growth, money supply, inflation and stock market development in India. The policy implication of this study is that inflation and money supply can be considered a policy variable to predict both economic growth and stock market development in the Indian economy during the post globalisation era.

### 3.2.3 Finance and Growth Relationship in African Stock Markets

African stock market is a subject of interest for many researchers in capital markets. Many studies have been made to analyse the relationship between the African stock markets development and economic growth. The results of these studies were mixed; the first group found that there is a positive relationship between these two sectors, while the second group discovered the negative linkage. Meanwhile, the third group reported that there is a bi-directional relationship between these two fields. However, the fourth one revealed that there is no relationship at all between stock market development and economic growth. In this section, the researcher tries to discuss some related studies regarding African countries such as Nigeria, Cameroon and West African Monetary Union.

Using annual data, Agarwal (2001) investigated the linkage between stock market development and economic growth for nine African countries for the period 1992 - 1999. The study used market capitalization ratio (MCR) and turnover ratio (TR) as independent variables. Meanwhile, investment (INV), Primary School Enrolment (PE) and foreign direct investment (FDI) are used as dependent variables. The study found that there is a positive relationship between some of the indicators of the stock market performance and economic growth. The study tried to evaluate the link between stock market development and economic growth by providing a small relationship between some stock market variables and investment. Besides, it discovered that the value-of-shares-traded ratio (TR) doesn't have an impact of stock market liquidity. But this

principle is not applicable to all nine African countries. It just applies to the countries which have highly volatile stock markets, and it caused the turnover ratio to become a misleading indicator of liquidity.

Besides, Elliott (2009) tried to empirically examine two things in his thesis. The analysis is to test the relationship between stock market development and long term economic growth and the macroeconomic determinants of stock market development, especially market capitalization as a percentage of GDP. The study was conducted in nine of Southern African Development Community (SADC) for the period 1992–2004. The study used a panel data approach which covered nine countries within the SADC region. To be more specific, the author used a fixed effects panel data model. The dependent variable in this study was Real GDP growth rate to measure the economic growth, stock market development proxied by market capitalization ratio (stock market size variable) (MCR) as a percentage of GDP, turnover ratio (TR) and total shares traded ratio (VIR) (stock market liquidity variable). The other variables are Macroeconomic Industry, and Financial Intermediary Development.

The study found that the stock market has a positive effect on economic growth through the liquidity channels. To specify, the value of shares traded to GDP ratio has a positive and significant coefficient in three out of the four different fixed effects models run. On the other hand, turnover ratio was has the same relationship in two out of the four. This empirical relationship obtained between stock market development and economic growth is still strong even after controlling last year GDP growth rate, macroeconomic instability, investment and two indicators of financial intermediary development.

The study explored some interesting results through the control variables where their coefficients were found to be statistically significant in inflation. However, credit to the private sector and last year GDP growth rate were found to have a consistent negative effect on economic growth. Furthermore, investment and liquid liabilities appeared to have a consistent positive coefficient. The study concluded that stock market development contributes to economic growth directly through stock market liquidity by the positive influence of the value of shares traded ratio and turnover ratio

on economic growth. However, although a market capitalisation ratio affects positively, but it does not significantly affect economic growth.

Besides, Tachiwou (2009) studied the causal relationship for the West African Monetary Union economy over the period 1995-2006. This study used two factors-size and liquidity. It analysed the long and short term relationship by constructing an ECM method. The study used market capitalization and total value traded as independent variables while using GDP as the dependent variable. The findings reported that the stock market development has a positive impact on economic growth in West African monetary union in both short and long term.

Furthermore, Fajimi (2009) investigated how the growth rate of the stock market helps prediction of the economy growth rate in Nigeria using Granger causality test within quarterly time series data for the period 1980–2004. Economic growth was measured by the rate of change of GDP at 1984 factor cost, meanwhile stock market development was proxied by market capitalization (size proxy) and a total value of shares traded (liquidity size). The findings showed that there is a strong relationship with a stock market capitalization and a total value of shares traded. Overall, it is found that stock market moderation effects are reflected in the Nigerian economy with a lag of four years.

In his paper Ahmad (2010) examined the relationship among financial liberalization, financial development and growth. He used the recently developed unit root tests, co-integration and Granger causality tests as applied to panel data and dynamic time series. The study used data from 15 Sub-Saharan African countries, whose financial development is proxied by the share of domestic credit to income and private sector credit. Meanwhile GDP per capita was used to measure economic growth. The results indicated a long-run equilibrium relationship between financial development and economic growth. This agrees with the view that financial development can act as an 'engine of growth' and also contribute significantly in the process of economic development. But there is small evidence to support the hypothesis that financial liberalization directly leads to growth.

Moreover, Akinlo & Egbetunde (2010) used the vector error correction model (VECM) with time series data, to examine the long term and the causal relationship between financial development and economic growth for ten Sub-Saharan African countries. The study measured per capita real output as a real (GDP) ratio to the total population, financial development (F) is proxied as a ratio of broad money (M2) to GDP. Real per capita capital market is measured by the ratio of total capital stock to the total population. The real interest rate was mentioned as (R). The study included two control variables: per capita stock (K) and real interest rate (R) to avoid simultaneous bias in its regression.

In another study, Ake & Ognaligui (2010a) analysed the causal relationships between stock markets and economic growth in Cameroon using causal relationship based on the time series data from 2006 to 2010. The study used Boot, Feibes and Lisman (1967) derivation method to generate annual data to get quarterly data. It found that market capitalization has positive effects on the GDP. They recommended the Cameroonian government to realize that it should find the right financial policies, to encourage firms through developing a financial stock market culture, and to enhance pushing companies to choose the initiation of IPO choice instead of bank loans when they needed money to increase their investments.

In a different study, Ujunwa, A. et al., (2010), said that

“Specifically the impact of stock market development on long-run economic growth in Nigeria was examined. The study used time serial data for 21-year period: 1986- 2006, to fill this important research gap. The Ordinary Least Squares regression was used to estimate the various models. The gross domestic per capita growth was adopted as the dependent variable, the independent variables include total market capitalization, total value of shares traded, turnover ratio, while controlling for other variables that may introduce bias in our results. The regression result showed that stock market size and turnover ratios are positive in explaining economic growth, while stock market liquidity coefficient was negative in explaining long-run growth in Nigeria”.

Moreover, Sililo (2010) evaluated the causal linkage among stock market development and economic growth in Zambia, using quarterly data for the period 2002-2009. The investigation was conducted using two methods: 1) Toda and

Yamamoto Causality Test, and 2) the older and popular Granger causality test. This study found that the Toda and Yamamoto Causality Test approach were more reliable than the Granger Causality Test. So he preferred using the first approach. The study argued that the Zambian stock exchange could help to promote economic growth and it should be integrated in the whole economic system.

Furthermore, Odhiambo (2010) tried to explore the relationship between stock market development and economic growth in South Africa during the period 1970–2007. In his study, the researcher used the newly developed ARDL–Bounds testing approach. This study used three aspects of stock market development, market capitalization, stock market traded value and stock market turnover. Similar to many previous studies, the economic growth was measured by real GDP per Capita. The empirical results illustrated that the causal linkage between stock market development and economic growth is follow the proxy used as a proxy for stock market development, it means when the stock market measures by stock market capitalization, the economic growth is found in Granger stock market development. But, stock market Granger causes economic growth when the stock market proxies by stock market traded value and the stock market turnover.

Furthermore, Olweny & Kimani (2011) investigated the causal relationship between stock market performance and economic growth in Kenya for the period 2001–2010. The study used vector autoregressive (VAR) model and Granger causality test. In addition to that, the study used Johansen Co integration test in order to investigate if the variables are Co integrated of the same order by taking into account the trace statistics and the maximum eigenvalue tests. Stock market performance is measured by trends of SNE 20-shares index, whereas economic growth is proxied by growth of GDP in real terms. The study used of quarterly secondary data for the period 2001 to 2010. The NSE 2 shares index was chosen as a measure of the stock market because it is able to proxy price movement in 20 relatively stable and best performing listed companies in the course. The study found that the causality between economic growth and stock market runs unilaterally or totally in one direction from the NSE 20-share index to the Gross Domestic Product. The study also reported that the movement of

stock prices in the Nairobi stock market reflected the macroeconomic condition of the country and hence it can predict the future path of economic growth.

Moreover, in his study Eita (2011) examined the macro-economic determinant effects on stock prices in Namibia for the period 1998–2004, using a VECM econometric methodology. The linkage between macroeconomic variables and stock prices were investigated by the regression equation. Stock market prices are determined by interest rates, inflation, money supply, economic activity and exchange rates. Stock market prices increased positively depending on the rise of economic activity and money supply, while the increase of inflation and interest rates decreased stock prices. The study found that shares are not a hedge against and Contractionary Monetary Policy and inflation in Namibia which generally reduces stock prices.

On the other hand, in their study Ihendinihu & Onwuchekwa (2012) have attempted to determine if there is a causal linkage between stock market performance and economic growth in Nigeria during the period 1984–2011. The study indicated the Ordinary Least Square (OLS) Technique in analysing the data by utilising time series data and error correction model. Stock market performance was measured by market capitalization (MKTCAP), the value of transactions in the market (VALTRAN), all-shares index (ALLSVI) and listed companies' total number in the Nigerian Stock Market. Meanwhile the economic growth was measured by the country's GDP. The study found that in the short-run and long-run implicated market capitalization, value of Transaction has a significant impact on economic growth. Whilst the All-Share Index (ALLSVI) failed to sustain its predictive power in the long run, but the total number of listed companies (TOLIST) in the stock market remained insignificant.

On the other hand, Kagochi et al., (2013) examined the relationship between financial development and economic growth in seven Sub-Saharan African countries using the panel Granger causality test. To measure the economic growth the study used Gross Domestic Product (GDP). Here, stock market development is proxied by Stock Market Capitalization Ratio (SMC), Stock Market Value Traded (VT), and Stock Market turnover Ratio (TR). Meanwhile, the banking sector is measured by Private Credit (PC), Liquid Liabilities (LIQ), and bank assets (BA). The study found that there is one way causality running from economic growth to bank development

indicators whereas two way causality exists between stock market development indicators and economic growth. The study reported that the fixed effects estimation shows the fact that stock market development has significant positive effects on economic growth. However, impact of banking development indicators of economic growth is uncertain.

The results showed that the financial development caused economic growth in Central African Republic, Gabon, Congo Republic, and Nigeria. On the contrary, economic growth caused financial development in Zambia. However, a bi-directional relationship between financial development and economic growth was found in South Africa, Kenya, Sierra Leone, Chad and Swaziland. The results recommended that Sub-Saharan African countries have to develop the financial sector and macroeconomic policies. Zambia, on the other hand, needs to be placed on economic growth to promote financial development.

Another researcher, Osamwonyi & Kasimu (2013) investigated the causal link between stock market development and economic growth in Kenya, Ghana, and Nigeria for the period 1989-2009 in his empirical paper. The study was conducted using the Granger Causality test procedure. The stock market was measured by stock market capitalization (MC), the stock traded value (TVL), stock turnover ratio (STO), number of listed securities (LS), and stock market index (MI), while the economic growth was measured by real gross domestic product (RGDP). The study found that there is no causal linkage between stock market development and economic growth in Ghana and Nigeria, but a bi-directional causal relationship exists between these two factors in Kenya. The study also found that MC and LS Granger cause economic growth, whereas bidirectional causality exists between STO and GDP. On the other hand, TVL was found to possess a strong negative effect on GDP.

In their study, Ngare E., et al., (2014) investigated the role of stock market development on economic growth in Africa. It used annual data from a panel of 36 countries, of which 18 have stock markets, in Africa over the period 1980–2010. The panel data econometric technique is used in the data analysis. The study findings are as follows: (i) countries with stock markets tend to grow faster compared to countries without stock markets, (ii) countries which are relatively developed and have stock

markets tend to grow less faster compared to small countries with stock markets, (iii) Stock market development has a positive effect on economic growth, (iv) investment, human capital formation and openness positively influence economic growth in the Africa region, (v) macroeconomic instability (inflation) and government consumption impact economic growth negatively, and (vi) countries that are politically stable and less corrupt tend to grow faster

Furthermore, in their paper Nyasha S., et al, (2015) investigated the dynamic causal relationship between bank-based financial development, stock market development, and economic growth in Kenya - during the period from 1980 to 2012. In order to address the problem of omitted variable bias, the study included savings and investment as control variables - thereby creating a multivariate Granger-causality model. The method of means-removed average is employed to construct a bank-based financial development index and a stock market development index. Using the newly developed ARDL-bounds testing approach, the empirical results of this study revealed that there is a distinct unidirectional Granger-causal flow of economic growth of bank-based financial development in Kenya. This causal flow applies irrespective of whether the causality is estimated in the short run or in the long run. The study, however, failed to find any causal relationship between market-based financial development and economic growth, and between bank-based financial development and market-based financial development in Kenya. The study, therefore, concluded that the development of the Kenyan banking sector is largely driven by the country's real sector.

In addition, in their study Odhiambo et al., (2014) examines the relationship between banks, stock markets and economic growth in South Africa. The study attempted to answer one critical question: are stock markets and banks complementary to one another in the process of enhancing economic growth? The complementarity between the stock markets and banks is examined by including a set of interactive terms in a standard growth model, alongside bank development and stock market development proxies. In order to test the robustness of the results, three proxies of stock market development have been used, namely stock market capitalization, stock market traded value and stock market turnover – against the ratio of bank credit to the private sector,

a proxy for bank-based financial development. The economic growth is, however, proxied by real GDP per capita. Using the ARDL-Bounds testing procedure, the study found that the complementarity between stock market development and bank-based financial development is weak and sensitive to the proxy used to measure stock market development.

Moreover, Sethi, P. et al., (2014) built their study on the concept of optimal financial structure and examined its dynamics with the economic development process of India. Specifically, this study intended to examine the evolving importance of banks and markets during different stages of economic development. Using annual data from 1988–2009 for India and selected benchmark OECD countries. The study has conducted controlled and robust regression to assess the impact of deviation from the optimal financial structure on the output growth. The authors reported that this study is one of the pioneer works in calculating the optimal financial structure in Indian context. The empirical evidence suggested that as the economy develops the services provided by banks are comparatively more important than those provided by the stock markets. The financial structure matters for the growth process. The deviation from the optimal structure has harmful effects on the economy and the financial structure gap retards the growth process.

#### **3.2.4 Finance and Growth Relationship in Arab Stock Markets**

There is a big difference among Arab countries in terms of formation of their stock markets. Some have been aware of the importance of establishing financial market for a long time (e.g. Egypt), while others have become alert to its significance quite recently, (e.g. Libya). But others like Yemen still have not realized the importance of financial market for the national economy. It is worth mentioning here that, there is a lack of studies that analysing the Arab stock markets as a whole or about some of them together. An attempt was made to find this type of studies, but unfortunately there seems to be few studies about the stock market development and economic growth in Arab countries.

Having said so, there exists a study conducted by Albatel (2000) which examines the relationship between Saudi Stock Market development and economic growth during

the period of 1964 –1997. He used Engle and Granger (1987) test and co-integration test to determine if there exists a long run relationship between the variables. According to the author, the financial sector played an active role to promote and accelerate the growth of non-oil based private economy in Saudi Arabia.

In addition, in his PhD research Maghyereh (2001) examined the relationship between Jordanian Stock Market development and economic growth using both the macro and micro level data sets. Thus, the study uses an assortment of different data sets and empirical methodologies. This study used many variables such as the Market Capitalization Rate, Value Traded Rate, Investment Rate, Secondary School Enrolment, Banking Sector Development Indicators, Government Expenditure, (Export + Import) /GDP, Inflation Rate etc. Other two indicators of stock market liquidity trading used in this study are Volatility and Turnover volatility. The results indicated that there was a significant positive connection between the stock market and economic growth in Jordan, and stock market capitalisation was statistically correlated with per capita real GDP growth. However, the banking sector development variable had a positive and insignificant effect.

In his study, Abdelnour (2003) reported that the last years have witnessed a rise in developing and establishing stock markets across the Arab countries, whatever may be the reasons underlying the establishment of a particular stock market. This bears many advantages like reducing the costs of financing and providing vital contributions to the nation's capital market. These effects resulted the establishment of stock markets in Bahrain, Egypt, Kuwait, Jordan, Lebanon, Libya, Morocco, Oman, Saudi Arabia and Tunisia.

On the other hand, in their study Boulila & Trabelsi (2004) explored the causality among financial development and economic growth in the MENA region. This was done for different periods starting from 1960 to 2002 using co-integration techniques and Granger Causality test. The first financial development is measured by the ratio of the total assets of the financial system to nominal GDP. The second indicator used to proxy the financial activity extension is the credit allocated ratio to the private sector. The third indicator is the ratio of financial savings to GDP. For economic growth measurement, the study used the real GDP per capita. The study found that the

financial sector has a big control in these countries during long periods, the belatedness in the implementation of financial repairs in these countries, the continuation of issues in reform implementation (Especially non-performing loans) and the information still high and deal costs, which prevent resources promotion and financial deepening.

Moreover, Abu-Sharia (2003) studied the Arab stock markets; using annual data, cross-country and modern econometric techniques on a panel data for the 11 Arab countries over the period 1980-2002. The author reported on his methodology part that the model of his study is based on pooled data, the dependent variable growth, equals real per capita GDP growth, stock market equals either stock market capitalization, value traded or turnover ratio; and control variables set represents a vector of conditioning variables that controls for other factors associated with economic growth. The investment rate is used as a ratio of fixed-capital investment to GDP. The labour growth is measured by employment growth, calculated as the annual employment growth rate. Exports and imports as a percentage of GDP are used to measure the openness rate of the economy. Economic reform is measured by the annual freedom scores, which represents the political rights, civil liberties, and freedom status.

The study revealed that statistically, the level of stock market development was weakly related to the economic growth. Also, they disclosed that investment and government consumption had positive effects on growth of economics, while the inflation had a negative impact on the economic growth.

Moreover, Moustain, F. A. (2004) investigated the causal relationship between financial development and economic growth in Morocco for the period 1970-2000, using a Granger causality test. The financial depth indicators were Ratio of Liquid Liabilities (M3) to GDP, Ratio of domestic credit provided by Domestic Credit to the private sector to GDP and the banking sector to GDP. The study found a short-run relationship between financial development and economic growth.

Besides, Bolbol et al., (2005) studied the Egypt's financial structure and its relation with the Total Factor Productivity (TFP) for the period 1974-2002. The study focused

firstly on economic performance, then highlighted the main features of the financial sector: The securities markets and the banking system. The impact of financial development on TFP is modelled by interaction of bank-based and market-based financial indicators with two enabling factors: private net resource flows and per capita income. The finding showed that bank-based measures affected negatively on TFP but it has a relation to the threshold level of per capita income. Meanwhile, the effect of market-based indicators is positively reinforced by private net resource flows. The paper emphasizes that widening the financial sector to include the stock markets has benefited the growth and TFP in Egypt, but more reforms are needed towards that target.

In another study, Al- Tammam (2005) investigated the short-run and the long-run relationships and causality among financial development and economic growth in Kuwait, Oman and Saudi Arabia; using OLS estimation, Johansen multivariate co-integration technique and short-run and long-run Granger Causality within the Error-Correction mechanism (ECM). The findings illustrate that there exists a positive relationship among financial market indicators and economic growth in Saudi Arabia and Oman but this linkage is negative in the case of Kuwait.

Besides, Abu-Bader & Abu-Qarn (2006) investigated the causal relationship between financial development and economic growth in five of Middle-Eastern and North-African (MENA) countries, using Granger Causality test method for different periods starting from 1960 to 2004. The study employed four different measures of financial development. The results showed weak support for the finance-led growth hypothesis. In addition, in several cases where co-integrating relationships were confirmed, the Granger causality tests showed a bidirectional or causality running from the output to financial development.

In his PhD research Masoud (2009) examined the economic growth reform determinants and stock market performance in Libya during the period 1999 – 2007. He used three methods: i) Self-administered questionnaires were distributed in the Libyan Stock Market, the banking sector and some companies, ii) Semi-structured interviews and iii) Collected financial market data from 42 emerging countries during the period 1995-2006. The independent variables are financial maturity and economic

reform programme and macroeconomic; while the dependent variable is the stock market performance. The study found that the banking sector and the stock market in emerging countries in general and in Libya in special are more complementary rather than alternatives in improving financial services to the economy.

Besides, Siam et al., (2010) employed a time series data to investigate the effects of interest rates on the stock market capitalization in Amman stock market using annual data during the period of 1999 to 2008. The study used a simple regression model and multiple linear regression models to examine this linkage. Stock market capitalization rate (S) is applied to measure the stock market development. Meanwhile, the interest rate is proxied by government prevailing interest rate (R) and government development stock rate (D) as independent variables. The finding indicated that there is a strong and positive linkage between the stock market capitalization rate and government prevailing interest rate. However, the government development stock rate has a negative influence on stock market capitalization.

Furthermore, Abdalla (2011) performed their study of the causal relationship between Sudanese Stock Market development and economic growth. The study used time series data for the period 1995-2009. The study employed the Granger Causality Test based on Unit Root tests. Market Capitalization Ratio, and the Real Value Traded Ratio are used to measure stock market. On the other hand, the economic growth is approximated by real GDP. The results showed that there is a bi-causal relationship between Sudanese Stock Market development and economic growth in Sudan. However, when the real value traded ratio is used the results illustrated that there is relationship become unidirectional. Overall, the study found that stock market development in Sudan has lead the Sudanese economy to grow at least in the period of study. According to the author, this result corresponds with the "supply leading" hypothesis.

On the other hand, another study made by Eman & Nedal (2011) analysed simultaneously the causal linkage among stock market, banks and the economic growth in Jordan. The main aim of this study is to know whether financial market development is supply-leading or demand-following. Quarterly data for the period of (1992:1 to 2010:4) of economic growth (Real GDP), stock market (market

capitalization, value trade and turnover ratio), trade (sum of exports and imports as a rate of GDP), banking (bank credit to the private sector), lending interest rate (IR) and industrial production index (IP) are measures using co integration system in a Vector Error Correction Model (VECM) and Granger Causality test.

The study results are against to the hypothesis, which assumes the finance development lead to changes in the economic growth in Jordan. However, the econometric analysis showed that the effect of the local macroeconomic indicators (trade openness and industrial production) on the economic growth is more significant than that of financial indicators. Add to that, Granger Causality test and innovation accounting technique confirm that there is a significant unidirectional causal linkage running from economic growth in bank credit to the private sector in Jordan.

In conclusion, according to the previous references to the stock market development and economic growth, there are great similarities between the different markets based on their results; due the fact that the capital market has a significant impact in supporting economic growth.

Besides, in their paper Moosa & Mousa (2013) examined the relationship between financial sector development and economic growth in the Saudi Arabia economy over the period 1970-2012. They used four alternative measures for financial development and some techniques including unit root tests, the Granger Causality Test, co-integration test and the Vector Error Correction Model (VECM). The study used time series data to examine the causal linkage between Saudi financial sector development and economic growth. The study stressed that there is a positive relationship between financial sector development and economic growth in Saudi Arabia. So, the development of the financial system will have an affect positively on the growth of the Saudi economy.

In their study Al-Majali and Al-Assaf (2014) investigated whether Amman Stock Exchange performance is affected by a set of macroeconomic variables. Johansen cointegration test and Vector Error Correction model (VECM), Impulse Response Function (IRF) and Variance Decomposition (VD) are employed. Amman Stock Exchange (ASE) performance is measured by the stock price index. Meanwhile,

macroeconomic variables which are Real Gross Domestic Product, Consumer Price Index, Credit to Private Sector, Weighted Average Interest Rate on Time Deposit, and a dummy variable explain the global financial crisis period are used to measure economic growth. The data used in the study are quarterly data from 1992:Q1 to 2014:Q1. The study has shown that the speed of adjustment in the VECM is significantly and relatively slow. The results also indicated that there is a bi-directional long run relationship between the stock price index and credit to the private sector, the weighted average interest rate on time deposits, and the consumer price index.

Moreover, Wild, J. et al., (2014) explored the relationship between stock market development and economic growth in Morocco for the period from 2000 to 2013 on a quarterly basis. As proxies for stock market development, the study chose the Morocco All Shares Index (MASI), market liquidity, market capitalization and a principal component analysis based stock market development index. After testing for cointegration, the dynamic interactions between GDP growth and stock market development are investigated using both vector error correction model (VECM) and Granger-causality techniques. The results showed that long run association exists between stock market development and economic growth, and unidirectional Granger-causalities running from MASI, traded volume and stock market index to the real GDP exist, but no evidence is confirmed for a Granger-causality from the capitalization to the real GDP. The VECM revealed the presence of adjustment mechanisms for the stock market in the long run; deviations from the equilibrium are corrected in the case of market capitalization and the stock market development composite at 1.2% and 0.4% on a yearly basis.

The results provided evidence of the demand-following hypothesis and suggested the presence of threshold level before a positive interaction between the real and financial sectors takes effect.

### 3.3 CONCLUSION

In summary, this study as most of the above-mentioned studies investigated the relationship between stock market development and economic growth. Many of them used the causality test as the main method to prove the validity of their hypothesis, but some of them also used this method within the Vector Error Correction Model, Regression Model, and other tests. While existing researches have examined the issue of the impact of stock market development on economic growth in all countries, hardly any research has focused specifically on this linkage for the case of Libya. This study considered one of the a few studies that use cointegration test to investigate the linkage between LSM and economic growth in Libya. In addition to that, a very few studies used qualitative and quantitative and qualitative studies at the same time, which make this study one of the pioneer studies that used the two methods in its analysis.

This study, similar to the above studies, analyses the role of the stock market in economic growth using some of these methods, which is vector Error Correction model VECM within Granger Causality test. However, this study is unique compared to the other studies is that considered as one of the pioneer studies to be conducted exclusively in Libya. Due to this, the researcher has faced many problems regarding data collection due to insufficiency of existing data.