Macroeconomic Determinants of Stock market Development of South Asian Countries

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Contents

Abstract

This study investigates the relationship between stock market development and macroeconomic determinants using panel data of seven developing economies for the period 1995 to 2014. Macroeconomic variables include financial intermediary development (FID), foreign direct investment (FDI), income level (IL), macroeconomic stability (MES) and saving (SVG). The data have been tested fixed effect model. This study found that financial intermediary development, macroeconomic stability and foreign direct investment have significant positive relationship with stock market development of south Asian countries. Financial intermediary development, macroeconomic stability and foreign direct investment are important determinants of stock market development. Saving has insignificant negative relationship with stock exchange development. Income level has insignificant negative relationship with stock market development of south Asian countries.

Keywords: stock market development, macroeconomic determinants, panel data

CHAPTER 1

INTRODUCTION

1.1 Background of the Study

Stock exchange is a place where securities of public listed firms are transacted. A stock exchange facilitates stockbrokers to trades different securities. Singh (1997) argued that stock market is the head of the financial intermediary that provides a platform, where investors can easily meet their financial requirements. Many researchers initiated in their study that stock market play a significant role in country's development (Demirguc Kunt & Levine, 1996). According to the contribution of World Bank Economic Analysis in May 1996 to the economic development of nation depend on stock market. Stock market of every nation plays a vital role in the nation's economic growth. Many factors which effects stock market development.

Kemboi & Tarus (2012) studied macro-economic determinants which effects stock exchange development of country. A recent study considered the effect of macro-economic factors effect on stock market development (Cherif & Gazdar, 2010). Yartey (2008) investigated the macro-economic determinants that enhance stock exchange development. Billmeier & Massa (2007) tested the macro-economic determinants which affect stock market.

The study of Gurley Shaw (1955) and McKinnon (1973) investigated the connection among financial intermediary development and stock exchange is an important issue for discussion. Many researchers have dealt with diverse viewpoint of relationship both theoretically and practically. The previous study shows that the financial intermediary is an important factor of stock market (Levine & Zervos, 1996). When worldwide stock market rises it provides deigns for developing the stock market and great volume of modification. Therefore, current study highlights the relationship among the financial intermediary and stock market development.

Theoretical effort shows how the development of stock market could push up economic growth in the long term. Financial intermediary development is substantial for economic growth and the stock exchange development since it allows investors with liquidity by advancing loans, and allowing saving.

Garcia & Liu (1999) stated that banking sector effect the stock market of country. Nacuer et al., (2007) suggested that financial intermediary causes stock market development. Emerging markets have large profit margins, and have a large risk. Presently there are twenty eight emerging markets throughout the world, the biggest two markets of China and India are considered risky (Pagano, 2009).

The study of Yartey (2008) investigated that macroeconomic factors the level of income, investment and savings, liquidity of the market, macro-economic stability and foreign direct investment causes the stock exchange development. Levine & Demirguc-Kunt (1996) have investigated that banks are interconnected to the stock exchange development. We propose to examine a significant relationship between financial intermediary and stock market development.

Many study investigated that income level causes the stock market development. According to the demand determined assumptions, the rise in income level of individuals will make new interest for stock market facilities. In support to hypothesis, Garcia & Liu (1999) stated that level of income causes stock market development. Higher income level will encourage stock market development. The study of La Porta et al., (1996) stated that level of income will have valuable outcome on stock exchange development.

Previous studies suggested that macroeconomic stability effect stock exchange development. Nacuer et al. (2007) stated that macroeconomic stability causes stock market.

Garcia & Liu, (1999) investigated that macroeconomic stability effect the stock market development. In literature inflation has been utilized as a measure of macro-economic stability. Boyd et al. (2001) stated a nonlinear association among inflation and stock market development, when inflation rise, the negligible effect on stock exchange development decreases quickly.

National saving and investment of country cause to stock market development. Ben Naceur (2009) investigated that When saving more cash is create higher inactivity of individuals to make investment in stock market, this component of investment funds more cash capital is moving through the stock market. Omran (2007) stated that saving and investment effect the stock market development. Kalim and Shahbaz (2009) stated that saving and investment affect stock market development. The study of Cherif & Gazdar (2010) stated that saving rate causes stock exchange development.

The key source of the development of investment for developing nations is foreign direct investment. The study of Adjasi and Biekpe (2005) stated that foreign direct investment causes the stock market of nation. The effect of foreign capital investment FDI is the advancement of expertise and organization skills, and human capital and inside the host nation. A previous study of Adam & Tweneboah (2009) investigated foreign direct investment directly affect stock market of country. However foreign direct investment causes the economic development and stock market of the country (Ayanwale, 2007).

It is greatly documented that the economic system is very essential for country's financial development. The portion of economic structure and stock market play key a role in development of economy. Then, the question arises that what determinants are necessary for the development of the stock market. However, little research is available on this matter. This study investigated the effect of macroeconomic elements on stock exchange development.

This study analyze the effects of income level, saving, financial intermediary development, macroeconomic stability, and foreign direct investment on stock markets of South Asian countries. We expect that these macroeconomic determinants develop the stock market of South Asian countries as well as promote the country's growth.

1.2 Relevant Theories

1.2.1 Capital Asset Pricing Model

The Capital Asset Pricing Model (CAPM) is the most widely recognized and among the other proposed models for measuring the risk and return relationship. Sharp (1964) and then Linter (1965) contributed their effort to develop this commonly accepted model. After them, many other researchers tested CAPM empirically (Black, Jensen & Scholes, 1972). Their study concluded that the CAPM gives useful platform and insight on asset pricing.

CAPM says: the market would compensate the investor for time value of money and systematic risk only.

$$E(R_i) = R_f+\beta_i(R_m-R_f)$$

Time value of money means what investor will get on putting his money in an investment and can be defined through (R_f) in the formula.

The other part is the systematic risk that investor will bear additionally on his contribution; it can be defined through Beta which is the result of asset's market return as compare to the market premium.

CAPM observe anomalies about stock returns. According to CAPM there is only a market risk and other diversified risks cannot be compensated. So other than the market factors no other factor will affect the stock returns. But the finding of different researcher about book to market, size and earning to price ratio give the evidence that the investor is able to earn abnormal returns.

1.2.2 Arbitrage Pricing Theory

The discussion proves that CAPM is mis-specified. Later, Stephen Ross (1976) developed arbitrage pricing theory (APT). Theory stated that return of assets can be explained by using the relationship of the same asset with many other common risk factors. Return on asset is dependent on many macroeconomic variables which directly or indirectly make a significant impact on returns. The main purpose of this study is to investigate the macroeconomic economic determinants of stock market development.

1.3 Statement of the Problem

This study will determine the different macroeconomic factors of stock market development and the factors how stock markets will developed. Numerous studies investigate the different macroeconomic factors of stock market but still there is no result found which determinant is dominating in stock markets. Some other studies discovered that economic growth of a country leads to financial development of a country. In this observation, financial markets confirm by economic extension (Goldsmith, 1969).

Furthermore, studies conducted in Western and some Asian countries cannot be generalized and may not necessarily have any application in context of emerging countries such as, South Asian countries. The reason for the this research is to full fill the gap of required research area on the relationship of macroeconomic determinants of stock market development with regards to developing nations like, South Asian Countries.

1.4 Research Questions

This study has the following research questions:

- What is the relationship between income level and stock market development?
- What is the relationship between saving and investment and stock market development?
- What is the relationship between financial intermediary and stock market development?
- What is the relationship between macroeconomic stability and stock market development?
- What is the relationship between foreign direct investment and stock market development?

1.4 Research Objectives

This study has following research objectives:

- To explore the relationship between real income and growth rate and stock market development.
- To measure the relationship between saving and investment and stock market development.
- To explore the relationship between financial intermediary development and stock market development.

- To investigate the relationship between macroeconomic stability and stock market development.
- To explore the relationship between foreign direct investment and stock market development.

1.5 Significance of the Study

The macroeconomic factors of security markets highlight the consequence of an established security market in improving the capability of investment projects. Stock exchange can improve domestic resource utilization by attract foreign portfolio capital accessible for speculation in emerging nations. The stock exchange is greatest vital cause for corporations to get capital. This permits companies to be easily trade, or raise extra investment for growth by trading stocks of possession of the firm in an open marketplace. The fluidity that an interchange offers gives stockholders the capability to simply and rapidly trade stocks. This is the attractive characteristic of capitalizing in security market as compare to other less fluid investment such as dealing real estate. Stock exchange is regularly deliberated the most key indicator of a state economic strength and improvement.

Furthermore, this study also helps to enhance the decision making process of different investors and fund's manager (i.e. individual and institutional) who are investing their funds in stock market. When stock markets are developed, it means those investors made definitely investment.

1.8 Limitation of the Study

The scope of this study to identify macroeconomic determinants of stock market development of South Asia, with limited data availability of countries. However, the results of study cannot be applied to other developing and developed countries. In addition to that, the sample and period of the study is kept limited due to no availability of comprehensive data relevant to macroeconomic factors and stock market.

1.7 Plan of Study

Organization of this thesis is done in a way that, Chapter 1 is about introduction to the study, Chapter 2 gives insight about the relevant literature, Chapter 3 has the discussion on the methodology and description of data, Chapter 4 presents and reviews the results and lastly Chapter 5 ends the study with conclusion and findings.

CHAPTER 2

LITERATURE REVIEW

The past two eras, provides the growth of stock market much attention, as a cause of economic development. The study of Gurley and Shaw (1955, 1960, & 1967) has been expressed as macroeconomic factors of stock exchange development. A progressive study among stock markets growth and banking sector development were studied by Demirguc-Kunt & Levine (1996). The results shown that stock markets are particularly connected with financial intermediary development. Similarly the results also indicated that the companies in states of developed stock market are expected to have a particularly developed financial intermediary. Subsequently, financial sector is considered one of the key elements of funding systems in developing and developed states.

The financial sector in any country plays a very important character in the country economic growth. The bond and equity market is the head organization of the financial intermediary that offers a place, where the debtor and the creditor can easily meet their monetary requirements. The security market execution is a like the truth of the economic performance of the country. Many investigators initiate in their study that stock market play a vital part in country progress (DemirgucKunt and Levine, 1996). World Bank Economic Analysis in May 1996 to the economic growth through stock market. Here are many issue influence on the performance of the stock exchange, the extension of financial actions in the state, and strength in the conversion rate, and a decrease in offering interest charges and upgrading in the repossession of owing loans, rescheduling and repayment of external liability, large unions and achievements on the scale, a better relationship with bordering nations, and strategies inspiring for stakeholders and a strong regulatory context. Pakistan's performance in the security markets is affected by the law, financial and governmental aspects. The oldest stock exchange of Pakistan is Karachi Stock Exchange (KSE). The establishment of Karachi Stock Exchange was at the September 18, 1947; subsequently two months when Pakistan became a self-governing country.

Similarly the study of Levine & Zervos (1996, 1998), & Singh (1997) argued that a direct relation among stock exchange development and economic development of country. They also discussed that there is a significant positive association among stock market liquidity and long term economic growth of the nations.

Pagano (1993) introduced effect of the institutional and administrative components in the securities exchanges. Furthermore Calderon-Rossell in 1990 gave a model to the clarification of the improvement of the stock market. In his model, the development of economy and liquidity of the security business sector is considered as key markers. Yartey (2008) extended Calderon-Rossell's model and examined economical and institutional factors simultaneously. Macroeconomic standards have contributed in this model, and the level of income, investment and savings, liquidity of the market, macro-economic constancy and private capital flows. The principles comprised the institutional and governmental risks, the quality of the government, law and order, corruption and democratic responsibility.

Stock markets permit more broad ownership between the people, thereby distributing risk and capital between small stockholders. For opportunists, it gives a real approach to make the stock selections to suit their own preference of the risk and profit for the premise of available information (McKinnon, 1973). Capital market helps the economy to generate extra saving and gainful investment. A key element of the capital market is the proceeding with liquidity competently, an easy mechanism for entry and way out by stockholders. This involves adequate capacity and dimension of contacts in the stock market (Tuladhar, 1996).

Stock exchange is considered the economic power of nations. Rising the price of share also increases the corporate speculation and vice versa. The costs of stock also affect consumption and the capital of household. Consequently, state bank keep an eye on the control and performance of the stock exchange and smooth action of the business system (Atje & Jovanovic., 1993). Every transaction security exchange commission act as the clearinghouse meaning that they collect and provide the shares and promise of payment to the seller. If the counterparty could default on the transaction, this removes the risk to a buyer or seller.

Levine & Zervos (1998) suggested that stock market improvement definitely effect long-run economic development. The relationship among stock exchange improvement and macroeconomic determinants (turnover ratio, financial development, foreign direct investment) for 21 developing nations over time frame of (1977-1997) utilizing a dynamic panel technique. They initiate that monetary development, foreign direct investment along with secondary school enrolling and venture are vital reasons of stock exchange development (Mohtadi & Agarwal, 2004).

Garcia & Liu (1999) investigated the macroeconomic factors (real income, saving and investment, banking sector development, liquidity of stock exchange and inflation of stock exchange development on fifteen manufacturing and emerging nations and time period from 1980 to 1995. They presented that level of income, saving rate, banking sector effectiveness and liquidity of stock exchange are important indications of stock exchange development. Results confirmed that level of income, saving rate, financial intermediary development and liquidness of stock market are critical indicators of stock exchange development. Economic stability was found to have no impact. Additionally, delegate banks and stock market were found move together, instead of supplement in the growth process.

Yartey & Adjasi (2007) investigated that relationship among macro-economic factors and stock market development. Past studies stated that capital markets tend to progress the financial development and growth of an economy. Singh (1997) initiate optimistic relationship between economic development and stock exchange development. A practical studies with respect to foreign direct investment in domestic nation suggested that foreign direct investment is a significant funds source, host private investment, is generally connected with new career prospects and redesign the innovation exchange, and supports general financial development in host nations.

Levine Demirguc-Kunt (1996) initiated that stock market indices are connected to a large measurement with the intermediary financial development. With worldly financial markets, countries tend to be worldly financial intermediaries. Then in addition, we propose to examine the case of a significant association between the development of financial intermediary and the development of the security market in the representation. It is by now greatly recognized to a large measurement that the financial system works well is very essential for country economic growth.

Adam and Tweneboah (2009) investigated a three-sided causal relationship that foreign direct investment encourages economic growth, economic growth promote stock exchange development; and foreign direct speculation also encourage stock exchange development. Errunza (1983) stated that foreign capital inflow have long term impact on the development of stock exchange and increase investor’s commitment. Foreign capital inflow is linked with formal and supervisory modification, appropriate listing and disclosure necessities and reasonable transaction performs which motivate better self-confidence in host country stock markets.

Stock market is important for economic development as they simplify the movement of assets to the greatest beneficial investment scenarios at the end of the day; they help regarding effective circulation of credit in the economy. Singh (1997) and Levine & Zervos (1998) stated that stock exchange development assumes an imperative part in economic development in circumstances where the stock market is active. The contributions of Demirguc-Kunt et al. (1996) shows that countries without well-working stock exchange could experience the harsh effects of three sorts of limitations: open doors for risk variation are constrained for investors and business persons, another, companies cannot ideally meeting their funding requirement, nations without well-working stock market need information about the possibilities of companies whose stakes are exchanged, in this way limiting development of investment and its‟ efficiency.

Yartey (2010) demonstrated that level of income, gross national investment, financial intermediary development, private investment flow and stock market liquidity are critical factor of stock exchange development. Cherif & Gazdar (2010) evaluated the effect of macro-economic determinants of stock exchange development. The research utilized 18 years data of 14 MENA nations. He found a large effect of level of income, and gives liquidness to the share trading system and the financing cost on the stock exchange development. Abdelbaki (2013) found that level of income; foreign direct investment and liquidity of the stock exchange and financial intermediary are significant factors of development of Bahraini stock exchange.

The study of Caporale et al. (2009) investigated the relationship between stock exchange development and financial development in ten European Union countries and utilizing Grangertype causality experiments over the time frame 1994–2007. They utilized Granger causality test from stock exchange to financial intermediary development. Duca (2007) examined the causality among stock exchange capitalization and economic development in US, UK, France, Germany and Japan for various ages. He initiated that the unidirectional causality among stock exchange capitalization and economic development for those states.

Pradhan et al. (2013) investigated the causal relationship between inflation, economic growth and stock exchange development in sixteen Asian nations for the period 1988–2012. The outcomes confirmed that presence of a large number of causal relationships between stock exchange development, inflation and economic development.

The stock exchanges in developing countries have seen constant improvement since the mid-1990s. The business sector capitalization of developing business sector nations has dramatically increased over the previous period developing in 1995 about $2 trillion to about $5 trillion in 2005. As a rate of world business sector capitalization, developing markets are presently more than 12 percent and logically developing (Standard & Poor, 2005). In most stock markets, transaction happens in just a little number of shares, which express to a vast part of the aggregate business sector capitalization. Away from these stocks traded, there are considerate weaknesses and disclosure of information on different securities. There are serious deficiencies in the reliability of trades in these stock exchanges.

Claessens et al. (2000) stated that stock market development facing significant change in economies. They used panel data and found that there was low inflation, shareholder safety and the size of institutional investor resources are critical in clarifying business sector investment, even after control over income and farewell. They agree that business sector capitalization is emphatically related with private credit to GDP ratio. Catalan et al. (2000) stated that determinant of stock exchange development for OECD and some developing markets and bring up that the nations with more developed saving sectors have more developed stock markets both as far as business sector capitalization and quality exchanged.

Rousseau & Wachtel (2000) investigated the effect of 47 money markets on its financial development on panel data by utilizing the GMM approach to annually data time frame of 1980–1995. They demonstrated that liquid stock market had a positive and critical effect on economic development.

Franck and Young (1972) Using six distinctive exchange rate there is no relationship between the improvement of the securities market and exchange rates. Dimitrova (2005) investigated the United Kingdom and the United States for the period 1990-2004 utilizing an open multi-model economy in the short term variables to demonstrate the relationship between the exchange rate and stock exchanges. Results may reveal that the troubled securities exchanges might be because of the downgrading of the currency, while reinforcing the equity markets might be a consequence of the exchange rate thankfulness for this nation. Adjasi and Biekpe (2005) guaranteed that exchange rate devaluation diminishes the return of the money markets to foreign investor, bringing about any improvement in the securities exchanges.

Boyd et al. (2001) investigated the result of inflation on bank based (liabilities for GDP, bank assets for GDP, credits to private sector and to GDP) and stock market based (value exchanged, market capitalization to GDP, turnover, instability, equity returns) change indicators for the monetary sector. Results show that there is a considerable key adverse relationship between inflation and both financial intermediary and stock exchange development. The high inflation, a little impact of inflation in bank developing and the development of the share trading system quickly declines. They demonstrate that high inflation is connected, less dynamic and less proficient stock markets.

Naceur & Ghazouani (2005) extended the study of Boyd et al. (2001) to the MENA nations and find that inflation has an unfavorable and large effect on the financial intermediary development. However, they don't determine proof of lower levels inflation impact on financial intermediary. High inflation is insignificant to the performance of the stock trading system and financial intermediary development.

The importance of foreign direct investment for stock exchange development has been discussed by Claessens et al. (2001) found that foreign capital flow is positively related with the capitalization of markets and the value of stocks traded. They stated that foreign capital flow or foreign direct investment is a supplement not a substitute for stock exchange development. In this way labors remittances in emerging nations have turned into the second significant flow after foreign direct investment.

Aggarwal et al. (2006) investigated whether remittances add to expanding the cumulative level of deposits and credit inter mediated by the domestic financial sector of 99 emerging nations utilizing data for the period from 1975 to 2003 and determine solid provision for the perspective that remittances encourage stock market improvement in developing nations. Billmeier & Massa (2007) investigated the macro-economic elements of stock exchange capitalization in a panel data of 17 states in the Middle East and Central Asia, containing an institutional variable, remittances, gross domestic products, gross fixed capital development to GDP, inflation, local credit to private sector and to gross domestic product, share quality exchanged to GDP and oil value index among expressive variables. Results indicated that both the financial intermediary and remittances affect stock exchange development.

Naceur & Ghazouani (2007) inspected the macroeconomic factors of stock exchange development, utilizing panel random and fixed effect model. Results stated that stock market liquidness, banking sector development, saving and investment rate, and stable economy are very important causes of stock exchange development.

Theoretical past study of Akinlo & Olufisayo (2009), Caporale et al. (2004), Henry (2003), Arestis & Luintel (2001), Obstfeld (1994), and Atje & Javanovic (1993) they investigated the impact of macroeconomic determinant on stock exchange development. While some of these literatures support those macroeconomic elements such as income level and growth rate, saving and investment, banking sector development, macroeconomic stability and foreign capital flow effect stock exchange development. Others have found a relationship among macroeconomics factors and stock market both in short run as well as long run.

The stock trading system generally tend to expand liquidity and delivers a situation where the companies are easily raising capital, which in turn increases stock market development (Bencivenga & Smith, 1996; Levine & Zervos, 1998; Rousseau & Wachtel, 2000), utilizing Greece secondary data that financial intermediary and macroeconomic stability significant positive relationship with stock market development. The study of Van Nieuwerburgh et al. (2006) conducted on the data of Belgium solid confirmation the stock market development causes economic development.

A few studies indicate that foreign direct investment does not directly affect economic development (Carkovic and Levine, 2002). Subsequently, the speculations yield equivocal expectations about the impacts of foreign direct investment on growth. Adam and Tweneboah (2009) guaranteed that there is a causal relationship three on one side and foreign direct investment and the advancement of the stock exchange (I) prompt foreign direct investment and economic development (II) inspire economic development and improvement of the stock exchange (the third), so we make the interpretation that foreign direct investment advances the improvement of stock exchange.

The effective stock market welcomes more speculations by financing beneficial tasks that lead to economic development and the use of domestic investment funds, and capital earning proficiency and decrease risk through development, and rearrange the trading of stocks and administrations (Mishkin 2001; & Caporale et al., 2004). The outcome of Filer et al. (1999) demonstrates definite causal relationship among stock market development and financial movement.

Numerous different researchers guarantee that there is a positive relationship among financial intermediary development and stock market development (Goldsmith, 1969; Shaw, 1973; McKinnon, 1973 and King & Levine, 1993). Their study indicated that banking sector development is an essential element of stock market development of a nation. The study of Atje & Jovanovic (1989) investigated the effect of financial intermediary development and stock exchange development. A result shows that financial intermediary has significant positive connection with stock exchange development.

Recent research suggests that expansion in stock trading system on the earth has seen in the recent periods, and build up the biggest developing markets (Yartey and Adjasi, 2007). A few issues have been recognized to this growth, enhanced macroeconomic fundamentals, for example, money related stocks, and greater economic development (Claessens et al., 2006). Past study confirms the part of the monetary division, mostly money markets permitting economic development. In this study, we investigated the macro-economic factors of stock exchange development in south Asian countries.

Yartey (2008) examined the macro-economic variables that enhance stock market development. The study used panel data of 42 developing countries the period of 1990 and 2004. The income level and local speculation (GDP), and the improvement of the financial intermediary and foreign direct investment and stock exchange liquidness are imperative variables of the stock exchange development. He supports that administrative risk, peace, and bureaucratic quality are crucial reasons of stock exchange development.

Stock market and foreign direct investment provide better limit of foreign direct investment flow into Malaysia, offer portfolio expansion and license singular firms to include specifically generation with capability (Mun et al, 2008). They underline the requirement for the Malaysian administration to develop the local capital market and results indicated a more developed capital markets may offer liquidness that brings down the value of the foreign capital, therefore, country with more prominent developed equity markets rises to produce more local investment for stock market development. They expected that the end goal to enhance the confidence of investors to put resources into the stock market; the government Malaysia confirm that all available information which is given to investors must be carefully and perfectly managed.

The study of Kurach (2010) investigated panel data estimation for the period 1996–2006 in 13 CEE nations (Bulgaria, Croatia, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Russian Federation, Slovak Republic, Slovenia and Ukraine). Formal and macroeconomic elements (GDP, financial intermediary development, securities exchange liquidity, spending plan equalization and European Union enrollment) have been vital variables for the development of stock exchange.

The less developed of the securities exchanges experience the ill effects of a far more extensive scope of such shortfalls. Connected with the very arranged and appropriately directed securities exchange movement in the US and the UK, most developing markets don't have such a well-working business sector. Not just for absence of government regulation, and gathering data and distributed organizations as found in the most exceptional securities exchanges is not adequate. Additionally, youthful firms in rising securities exchanges don't have a sufficiently long reputation to shape a character. Subsequently, one expects offer costs in developing markets to be arbitrary and volatile. Exploratory confirmation indicates that offer costs in developing markets are altogether more unstable than in developed markets. In spite of these varieties, the real organizations have made incredible advantage for the share trading system

The current study completed by El-Nader & Alraimony (2011) inspected the relationship among the economic growth and major business sector development in Jordan, by utilizing vector error correction (VECM) technique for the period 1990 and 2011. Outcomes demonstrated that growing rate of GDP had an insignificant part on stock exchange development. The cash stream, liquidity of stock market, gross capital arrangement, inflation and domestic credit to private sector has positive and critical impacts on stock exchange development.

Current research suggests that "the share trading system on the planet has seen an expansion in the course of recent decades, and build up the biggest developing markets arrangement of accomplishment (Yartey and Adjasi, 2007). A few issues have been credited to this increment, for case, enhanced macroeconomic essentials, for example, money related security, and higher economic development (Claessens et al., 2006). Prior study affirms the part of the monetary division, chiefly money markets in empowering financial development. Because of the experience it well known broadly parts of the stock exchange in economic development and the vital inquiry those requirements to additionally preparing is the thing that decides the improvement of money markets.

A recent study evaluated the effect of macro-economic factors and institutional value on stock exchange development (Cherif & Gazdar, 2010). They employed both panel data and causal variable approaches from 14 MENA nations over the period of 1990-2007. Their results indicated that stock market is affected by level of income, saving & investment rate, stock market liquidity, and loan cost. Also, they found that the institutional environment did not affect stock market. Stock markets can improve domestic investment by attract foreign capital portfolio accessible for investment in developing countries.

Mishal (2011) investigated the relationship among the economic development and banking sector development in Jordan, by utilizing a multivariate vector error model. The outcomes demonstrated an authoritative stable long run stability connection among banking sector development and economic growth. The Results showed double directional causality among financial intermediary development and economic growth in long run, and a bi-directional causality between the financial intermediary and stock exchange development. Therefore, the causality has running from gross domestic product development to the stock exchange development.

Kemboi & Tarus (2012) studied the macro-economic aspects that affect stock exchange development in Kenya for the time frame 2000 to 2009, using quarterly secondary data. The error correction model was utilized to estimate the relationship among the macro-economic determinants and stock exchange development. Outcomes stated that level of income; financial intermediary development and stock exchange liquidness are important factors for the development of Nairobi stock exchange. Moreover, the findings demonstrated that macro-economic stability is not a good predictor of the stock market development.

Khadraoui (2012) stated that stock exchange is an essential part in the economic development of any nation. Stock exchanges help to increase the movement of assets from borrowers to financial specialists. By giving an institutional instrument to accumulate domestic funds and channel them towards beneficial investment, this decreases the cost of capital to financial specialists and quickly economic development of the state. Money related intermediation among borrowers and investors is finished by business intermediary. This credit market grants obligation financing for investment.

Girma and Shortland (2008) Study the outcome of the components of vote based system in the nation and change the framework on budgetary improvement, by utilizing the panel data on the emerging and developed nations somewhere around 1975 and 2000. The outcomes exhibited that majority rules system and political soundness degree are significant variables in persuasive the rate of budgetary improvement.

A recent study of Aisen (2013) stated that political instability harmfully element of growth. Stability in a country has also willingness of privatization and foreign direct investment. Zhao et al. (2013) found evidence statistically significant to support their hypothesis that privatization and FDI inflow encourages stock exchange development.

Abdelbaki (2013) investigated that level of income, investment; financial intermediary development; private capital flow and stock exchange liquidity are critical determinant of

Bahraini stock exchange development by assessing the model of Autoregressive Distributed Lag (ADL). Pradhan et al. (2013) utilized the model of panel vector auto regression to investigate the causal relationship between securities exchange development, expansion and financial advancement in sixteen Asian nations for the period 1988–2012. Results showed that large number of causal relationship between stock exchange development, inflation and economic development.

2.1 Financial intermediary Development and stock market development

The study of Berthelemy & Varoudakis (1996) stated the association among financial intermediary development and economic growth. An outcome shows that financial intermediary development positively affects the economic growth. Banking sector development is vital for economic development and the advancement of stock market since it allows investors with liquidity by advancing loans, and allowing saving. The study of Nacuer et al. (2007) & Garcia and Liu (1999) stated positive association among financial intermediary development and stock exchange development. Yartey (2008) found a positive connection among banking sector development and stock exchange development.

Atje & Jovanovic (1989) stated that an important effect of banking sector development and stock exchange development. A result shows that significant positive connection among banking sector development and stock exchange development. Abdelbaki (2013) investigated macroeconomic factors of stock exchange development. A result shows that financial intermediary development has significant relationship with stock exchange development.

H1: There is significant relationship between financial intermediary development and stock market development.

2.2 Income level and stock market development

According to the demand determined assumptions, the rise in income level of individuals will make new interest for stock exchange services. In support to hypothesis, Garcia and Liu (1999) stated that level of income have beneficial outcome on stock exchange development in Latin America and Asian nations. The study of Yartey (2008) utilizing panel data of 42 developing market nations for the period 1990-2004 observed that income level has a greater influence on stock exchange development in developing markets.

Cherif and Gazdar (2010) investigated macroeconomic factors of stock exchange development. Result indicated that income has significant impact on stock exchange development. Higher income encourages stock market development in developing markets. As income rises, it will make the interest of investors to do investment in stock markets. The outcomes of study stated that income level has significant effect on stock market development (La Porta et al., 1996).

H2: *There is significant relationship between real income and growth rate and stock market development.*

2.3 Macroeconomic Stability and stock market development

Similar to past research inflation has been utilized as a measure of macro-economic stability (Nacuer et al., 2007; Garcia & Liu., 1999). Macro-economic stability has important effects on stock exchange development. Nacuer et al. (2007) investigated macro-economic factors of stock exchange development. Results indicated that macroeconomic stability has significant positive association with stock exchange development. Boyd et al. (2001) investigate a nonlinear association amongst inflation and stock market development, when inflation rise, the negligible effect on stock exchange development decreases quickly.

Garcia & Liu (1999) utilizing a pooled data of 15 manufacturing and emerging countries and utilizing three measures of macroeconomic stability: variation in inflation; present and last year variation in inflation; and standard deviation of present and last year , 12 months inflation frequency found no significant impact on stock exchange development. In a practically identical study by Yartey (2008) no considerable association among inflation and stock exchange development was found.

H3: *There is a significant relationship between macroeconomic stability and stock market development.*

2.4 Saving and investment and stock market development

Kalim and Shahbaz (2009) investigated macroeconomic elements of stock exchange development such as income level, saving rate, remittance, stock exchange liquidity. A result confirmed that positive relationship among saving rate and the stock market development.

Garcia and Liu (1999) studied the macroeconomic factors of stock exchange improvement. They utilize 15 country data in both developed and emerging nations for the time period of 1980 and 1995. The outcomes affirmed that the income and growth rate, saving rate, and liquidity in the financial sector are significant factors of stock exchange. Economic stability was result to have no influence. Ben Naceur, Ghazouani & Omran (2009) analyzed the macroeconomic effect of stock market development in Middle East, utilizing a stationary random model. They liquidity of stock market, brokerage, saving, economic constancy are essential reasons of stock market development.

A late study performed by Cherif & Gazdar (2010) watched the effect of macro-economic and formal nature of the environment on the development of the stock exchange. They utilized panel data and instrumental variable techniques from fourteen MENA states over the time of 1990-2007. They observed that income level, the saving rate, liquidity, the share trading system, and interest rate influence stock market development. They also demonstrated that financial intermediary is a supplement instead of an alternative.

H4: There is significant relationship between saving and investment and stock market development.

2.5 Foreign direct investment and stock market development

The key source of investment for developing nations is foreign direct capital flow. Foreign direct investment effects growth of expertise and organization skills, and human capital and inside the host nation. The study of Mohtadi & Agarwal, (2004) investigated the connection among foreign direct investment and stock exchange development. Result confirms that foreign direct. However foreign direct investment positive effect on stock development, the general effect on economic development may not be as imperative essentials and make foreign direct investment a positive commitment (Ayanwale, 2007).

A few studies indicate that foreign direct investment does not directly affect economic development (Carkovic & Levine., 2002). Subsequently, the speculations yield equivocal expectations about the impacts of foreign direct investment on growth. Adam and Tweneboah (2009) guaranteed that there is a causal relationship three on one side and foreign direct investment and the advancement of the stock market (I) prompt foreign direct investment and economic development (II) inspire economic development and improvement of the stock market (the third), so foreign direct investment causes the stock exchange development.

H5: There is significant relationship between foreign direct investment and stock market development.

CHAPTER 3

METHODOLOGY AND DISCRIPTION

3.1 Data collection and sampling

The study utilized secondary data to display the effect of macroeconomic elements of the stock exchange development of South Asian nations. This study use fixed effect model on panel data from seven countries over a time period of 1995 to 2014. These seven countries include Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, and Sri lanka. We select these nations since they are the significant emerging nations, and data are accessible for them. The data was gathered from World Bank, IMF, and global economy. Macroeconomic variables included income level, saving, financial intermediary development, macroeconomic stability and foreign direct investment.

3.2 Data Analysis

The study utilized fixed effect model on panel data to investigate the relationship between macroeconomic determinants and stock exchange development. Selection between fixed effect model and random effect model are on the basis of hausman test. Hausman test are used to decide which one are appropriate model. The general equation for the panel linear regression is given as follow.

$$\mathbf{V_{it} = ß_0 + ß_1 (IG)_{it} + ß_2 (SI)_{it} + ß_3 (MES)_{it} + ß_4 (FID)_{it} + ß_5 (FDI)_{it} + \varepsilon_{it}}$$

Where:

Stock market development (V), Real income and growth Rate (IGR), Saving and investment (SI), Macroeconomic stability (MES), Financial intermediary development (FID), Foreign direct investment (FDI).

The coefficients $ß_{0,}$ $ß_{1,}$ $ß_{2,}$ $ß_{3,}$ $ß_4$ and $ß_5$ represent the constants to the particular independent variables and demonstrate the sort of association among each of the independent variables and the dependent variable. With the model, the study could distinguish the estimations of the independent variables and anticipate the future qualities. The data was analyzed utilizing a statistical package: Eviews 8. Eviews was utilized to run fixed effect model examines relationship of stock exchange development and macroeconomic variable such as, financial intermediary development, income level, macroeconomic stability, foreign direct investment saving.

3.3 Description of the Variables

3.3.1 Income level (Independent Variable)

Higher income supports stock market development. As income rises, its repetitive factor should affect the size of stock exchange and its price index. This research utilizes a last year income rate in the regression (Garcia and Liu, 1999).

3.3.2 Saving (Independent Variable)

According to the study of Garcia and Liu (1999) that defines macroeconomic factors. Typically the higher the saving, the greater the sum of capital moves through stock exchanges. In this way, we imagine saving and investment to be imperative factors of stock exchange development. This study utilizes a last year saving rate in the regression.

3.3.3 Macroeconomic stability (Independent Variable)

To investigated the effect of macroeconomic factors on stock exchange development. There are different proxies to measure macroeconomic stability. This study uses the current inflation rate to measure macroeconomic stability because of their presence in earlier studies (Garcia and Liu, 1999).

3.3.4 Financial intermediary development (Independent Variable)

Garcia (1986) investigated that stock market improvement is fundamentally connected with banking sector development; we include the measures of banking sector advancement in the regressions. This study used domestic credit to the private sector divided by GDP to measure banking sector development.

3.3.5 Foreign direct investment (Independent Variable)

The statement describes that Foreign Direct Investment (FDI) shows significant role in the emerging nations. Strong host country investment performance is a sign of high earnings to capital, which in turn will invite extra foreign investment. Foreign direct investment has probable to increase growing of local companies through complementarily in manufacture and efficiency. Private capital flows as percent of GDP were used to measure foreign direct investment (Yartey, 2008).

3.3.6 Stock market development (Dependent Variable)

Reliable with past research, Levine and zervos, (1998); Yartey, (2008) Stock exchange development is measured utilizing market capitalization as a proportion of GDP. In further arguments, market capitalization equals the value of listed shares divided by GDP. The key character of a stock exchange is to deliver a platform where securities can be transacted. Glen et al., (1995) stated stock market is an important part of any economic system in which ownership can be bought or sold.

CHAPTER 4

Results and Discussion

4.1 Descriptive Statistics:

Table 4.1 exhibits the statistical manners of the data for the period of 1995-2014. In table SMD represent stock market development, FID represent financial intermediary development, IL represent income level, MES represent macroeconomic stability, FDI represent foreign direct investment and SVG represent saving. The mean is range from 2.08 (Saving) to 1408.2 (Foreign direct investment). Standard deviation which is the measure of dispersion or deviation from mean is range from 3.17 (Saving) to 1520 (Foreign direct investment). Skewness indicates that most of the values are positively skewed. In case of Kurtosis, if the value is equal to 3 then normal distribution and pattern is called mesokurtic. If the value is > 3 then pattern is called leptokurtic that are associated with simultaneously peaked and fat tail. But when value of kurtosis is less than 3 it is called platykurtic and is associated with simultaneously less peaked and have thinner tail. The values in the table 4.1 are showing the leptokurtic as well as platykurtic behavior because more of the values are greater than 3 while one of the value less than 3 with the maximum value of 7635.4 and minimum value of 19.58.

Table 4.1

Descriptive Statistics

	Observations	Mean	Median	Std Dev	Maximum	Minimum	Skewness	Kutosis
SMD	140	21.05	15.26	20.27	146.86	0.00	2.90	14.57
FID	140	30.22	30.22	12.52	62.77	6.68	0.58	2.77
IL	140	7.21	7.21	4.12	22.60	-18.10	-0.89	13.30
MES	140	28.55	28.55	11.58	62.00	11.00	1.11	3.80
FDI	140	1408.2	829.6	1520.1	7635.4	205.7	2.26	7.90
SVG	140	2.03	1.08	3.17	19.58	-0.19	3.21	14.38

4.2 Panel Data Regression Analysis

4.2.1 Panel Analysis Model:

Panel data analysis is taken to see different effects as panel data analysis with fixed effects, without fixed effects or with random effects. Redundant Fixed Effect test is used to determine whether panel analysis is effective with or without fixed effect. The determination between fixed and random effects for effectiveness of panel analysis, Hausman test is used. Table 4.2 indicates the result of Redundant Fixed Effect test that is significant. It means the model is better with fixed effect rather than pooled effects.

Table 4.2

Redundant Fixed Effect

Effects Test	Statistic	d.f.	Prob.
Cross-section F	32.712303	(6,128)	0.0000
Cross-section Chi-square	130.138121	6	0.0000

Hausman test is used to determine whether model with fixed effects is suitable or model with random effects is more appropriate. Table 4.3 shows the results of Hausman test. Hausman test is significant which means that the model with fixed effects is appropriate.

Table 4.3

Hausman Test

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	36.824013	5	0.0000

The test for hypothesis is done by using its supposed Model that is;

$$SMDit = \beta_0 + \beta_1 FID_{it} + \beta 2ILit + \beta_3\ MES_{it} + \beta_4 FDI_{it} + \beta_5 SVG_{it+}\ \epsilon_{it}$$

The results by using fixed effect panel data model shows that the probability of significant of F – statistics is 0.0000 which means that the model statistically significant. The coefficient of determination is 0.65 which means that the variable in this model are explaining the model efficiently. The t-statistics for financial intermediary development is 3.83 (positive and meaningful), for income level is equal to –0.0088 (negative and meaningful), for macroeconomic stability is equal to 5.03 (positive and meaningful), for foreign direct investment is equal to -2.55 (positive and meaningful) and for saving is equal to -.504 (negative and meaningless). Table 4.4 shows the results.

Table 4.4

Fixed Effect Model

	Constant	FID	IL	MES	FDI	SVG
B	4.22884	0.433857	-0.002369	0.749434	0.004507	0.277651
t-Statistic	-3.221259	3.836047	-0.008826	5.039873	2.550211	-0.504552
p-Value	0.0016	0.0002	0.9930	0.0000	0.0119	0.6147
Std Error	5.969356	0.113100	0.268446	0.148701	0.001767	0.550292
Prob (F-State)	0.0000					
R-Square	0.68					
Adj. R-Square	0.65					
Observations	140					

The above table 4.4 shows the results of fixed effect model. The common average stock market development for whole South Asia is 4.22. Intercept of Pakistan, Bhutan, Bangladesh, Maldives, Nepal, India and Srilanka will be a common intercept. Financial intermediary development (FID) is significant with p-value of 0.0002 and positive coefficient which show increase in the financial intermediary development will increase the stock market development for whole South Asia by 0.43. Macroeconomic stability (MES) is highly significant with a p-value of 0.0000 and positive coefficient which shows macroeconomic stability directly affects for whole South Asia stock market. Foreign direct investment is significant with p-value of

0.0119 which shows that foreign direct investment is an important determinant for whole South Asia stock market. Other macroeconomic determinant such as income level is insignificant and do not affect stock market of South Asia. Saving is insignificant which shows that saving do not affect stock market development of South Asia.

Table 4.5

Fixed Effect Model with Fixed Period

1995--C	-5.980648
1996--C	-3.240187
1997--C	-5.020284
1998--C	-7.722534
1999--C	-4.853281
2000--C	-6.313489
2001--C	-6.007686
2002--C	-5.878686
2003--C	-2.272555
2004--C	-0.744141
2005--C	3.687755
2006--C	5.888715
2007--C	21.30278
2008--C	0.025374
2009--C	5.330901
2010--C	8.488178
2011--C	1.337278
2012--C	1.905417
2013--C	1.793335
2014--C	-1.726243

Stock market development was less in south Asian countries during 1995 to 2004 and 2014, stock market development was observed positive in south Asian countries during 2005 to 2013.

Discussion:

The results of model are consistent with our hypothesis and confirmed that; macro-economic financial intermediary has significant positive relationship with stock exchange of South Asia. Results indicated that macroeconomic stability has significant positive effect on Stock market development of South Asia. Our result confirms that saving has significant positive relationship with stock market development of these South Asian countries. Therefore we can say that an increase in saving will lead to stock market development. Cherify and Gazdar (2010) investigated macroeconomic determinants of stock market development. Their finding shows that saving has significant positive relationship with stock market.

Yartey (2010) investigated the macroeconomic determinants of stock exchange development of emerging nations. Results of study show that financial intermediary development has significant factor of stock market development. The Study of Naceur et al. (2007) investigated macroeconomic determinants of stock market for middle MENA countries. Results demonstrated that saving, financial intermediary, and macroeconomic stability has significant positive relationship with stock exchange of middle MENA countries.

The findings of the current study are also consistent with previous studies. Nacuer et al. (2009) findings are consistent with our hypothesis. A result shows that macroeconomic stability has a significant positive relationship with stock market development. We can say that if inflation is stable will lead to stock market development. The findings of Yartey (2010) are consistent with our results. The finding of Garcia and Liu (1999) are consistent with our study. The previous study conducted by Boyd *et al.* (2001) and finding of their study are consistent to our study.

The previous study on macroeconomic determinants of stock market development has conducted by Claessens *et al.* (2001) results of his study are consistent with our empirical results. Garcia and Liu (1999) investigated macroeconomic factors of stock market of ASEAN and Latin America. Results of their study indicated that saving rate and financial intermediary development has significant relationship with stock exchange. Kurach (2010) and Cherif and Gazdar (2010) investigated the macroeconomic determinants of stock market development. Findings of their study are same with our study. Saving and investment has significant positive relationship with stock market development. Saving is directly related to investment. We can say that more saving lead to investment and also lead to stock market development. Recent studies conducted by Zhao et al. (2013) results of his study are similar with our study.

The findings of Abdelbaki (2013) are also consistent with the current results. The findings of income level and saving and investment are inconsistent with our hypothesis but consistent with the recent studies have been done in various markets of the world. The findings of Billmeier and Massa (2007) are consistent with our study. Similar study conducted by Yartey (2008) and findings are consistent with our results. As in old studies it was seen an influence of foreign direct investment, macroeconomic stability, financial intermediary growth on stock exchanges development but the recent studies have positive results and show significant influence of foreign direct investment, macroeconomic stability, banking sectors advancement on stock market development.

The outcomes of model are reliable, with the findings of, Hossein, Dadbeh and Hashemloo (2014), Marinelli (2011), Sayrak and Martin (2003), Schoar (2002), Pandya and Rao (1998). The results of this study, has been taken on the data of World Bank, the global economy, also consistent with the result of study Nairobi stock Exchange. It means that the behavior of Asian markets is the same. Pakistan stock market is characterized by high information asymmetry because of inefficient disclosure system. This is the common characteristic of underdeveloped stock markets of South Asian countries. The same is confirmed by the results of this study. The income level and saving has not influencing stock exchange of South Asian countries.

CHAPTER 5

Conclusion and Policy Recommendations

5.1 Conclusion

This study examine the association between the financial intermediary development, foreign direct investment, income level, macroeconomic stability, and saving for the period 1995 to 2014 by utilizing panel data estimation technique such as, Fixed effect model and Random effect model. There are two estimation technique widely used, the fixed effect model and random effect model. These models are select on the basis of Hausman test. Results of Hausam test demonstrated that fixed effect model is more appropriate.

The panel data approach use to investigate association between macroeconomic variables and stock exchange development. Outcomes indicated that the econometric problems such as, auto-correlation, serial to normal distribution has not been observed. Unit root test are separately use for each variable. The results of unit root test indicated that the foreign direct invest, macro-economic stability, income level, saving and financial intermediary are stationary at level. The presence of heteroscediscity does not influence the estimation (Shrestha, 2005).

In panel data approach deal with data that variables are integrated at level. Consequences of fixed effect model demonstrated that macroeconomic variable of stock exchange development such as financial intermediary development (FID), macroeconomic stability (MES) and foreign direct investment are statistically significant in determining stock market development of South Asia. The results of other two macroeconomic variables such as Income level and saving are insignificant its means that income level and saving does not causes stock market development of South Asia countries.

The result shows that there is long term association among stock exchange development, foreign direct investment, and macroeconomic stability and saving and investment. However, result reported that financial intermediary, foreign direct investment, and macroeconomic stability causes of stock market development of South Asia countries.

Stock market is an essential part of financial framework, which is connected with economic development. This study found that there significant positive relationship between stock market development and macroeconomic variables such as financial intermediary development, foreign direct investment, and macroeconomic stability. The previous study of Garcia and Liu (1996) stated that financial intermediary development, foreign direct investment, and macroeconomic stability are important determinants of stock exchange development.

Our findings have vital policy implications for south Asian countries. Fiscal growth plays a critical part in the stock market development. Legislators in south Asian countries may initiate strategies to notice progress and growth as country relax their economic method. First a settled financial intermediary development is vital for stock market development in south Asian countries. Second Macroeconomic stability is statistically significant for stock market development in south Asian countries. Thirdly foreign direct investment is an important for stock market development. Therefore stock market liquidity can be alternative instrument for encouraging security exchange advancement. Our empirical results show that financial intermediary development, macroeconomic stability, and foreign direct investment are vital determinants of stock market development. Income level and saving is not significant relationship with a stock market development, its means that income level and saving not causes stock exchange development, but macro-economic stability, financial intermediary development, foreign direct investment and macroeconomic stability display statistically significant influence on stock market development in South Asian states.

Finally, to the best of the authors' information, this is the primary study that analyzes the relationship among macro-economic variables and stock market development by utilizing panel data technique, for example fixed effect model, for the studies in academic literature concentrate on the relationship among macro-economic variables and economic growth. That is the reason, panel data regression are used in this studies. Hence, we trust that this study may be helpful for future experimental exploration on the relationship between macroeconomic variables and stock market development of South Asia.

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