

STOCK MARKET DEVELOPMENT AND ECONOMIC GROWTH IN NEPAL

A Thesis

By

Niruta Subedi

Central Department of Management

Exam Roll. No. 1189/2017

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CERTIFICATION OF AUTHORSHIP

I certify that the work in this thesis has not previously been submitted for a degree nor it has been submitted as part of requirements for a degree except as fully acknowledged within the text.

I also certify that the thesis has been written by me. Any help that I have received in my research work and the preparation of the thesis itself has been acknowledged. In addition, I certify that all information sources and literature used are indicated in the reference section of the thesis.

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Niruta Subedi

February, 2020

RECOMMENDATION LETTER

It is certified that thesis entitled "**Stock Market Development and Economic Growth in Nepal**". Niruta Subedi is an original piece of research work carried out by the candidate under my supervision. Literary presentation is satisfactory and the thesis is in a form suitable for publication. Work evinces the capacity of the candidate for critical examination and independent judgment. The thesis is forwarded for examination.

.....

Prof. Dr. Ramji Gautam

Supervisor,

Central Department of Management

Tribhuvan University, Kirtipur, Kathmandu

February, 2020

APPROVAL SHEET

We, the undersigned, have examined the thesis entitled "**Stock Market Development and Economic Growth in Nepal**" presented by Niruta Subedi, a candidate for the degree of **Master of Business Studies (MBS)** and conducted the viva voce examination of the candidate. We hereby certify that the thesis is worthy of acceptance.

.....

Prof. Dr. Ramji Gautam
Thesis Supervisor

.....

Prof. Dr. Gopi Nath Regmi
Internal Examiner

.....

Asso. Prof. Dr. Dhurba Lal Pandey
External Examiner

.....

Prof. Dr. Sanjay Kumar Shrestha
Chairperson, Research Committee

.....

Prof. Dr. Ramji Gautam
Head of Department

February, 2020

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ABBREVIATIONS

ARDL	=	Autoregressive Distributed Lag
CA	=	Constitution Assembly
CPS	=	Credit to the Private Sector
FDI	=	Foreign Direct Investment
GDP	=	Gross Domestic product
MC	=	Market Capitalization
NEPSE	=	Nepal Stock Exchange Limited
NI	=	NEPSE Index
NOLS	=	Number of Listed Securities
OLS	=	Ordinary Least Square
RGDP	=	Real Gross Domestic Product
SEBON	=	Securities Board of Nepal
SEC	=	Securities Exchange Center
SMC	=	Securities Marketing Center
TLE	=	Total Listed Equities
TNI	=	Total New Issue
TT	=	Trading turnover
VLT	=	Value of Transaction

ABSTRACT

This study aimed to examine the stock market development and economic growth in Nepal. The research analyzed of stock market factors like; stock market capitalization (MC), trading turnover (TT), number of listed securities (NOLS) and market index (MI) against the real gross domestic product (RGDP) which was used as a proxy for economic growth. Secondary data were used for the study collected from the Economic Bulletin of Nepal Rastra Bank and Economic Survey of the Ministry of Finance for 24 years from 1994/95 – 2017/18(Mid July). Data were analyzed by using appropriate the descriptive research design was used. The regression models were used to test significance of stock market performance and macroeconomic variable i.e. Real GDP.

From the results, it was revealed that there was a positive relationship between stock market indicators and economic growth in Nepal. Thus, the study lends support both to the financial intermediation literature as well as to the traditional growth literature. This study concludes that capital market development affects the growth of the financial sector. This study also revealed that market capitalization, change in stock market price and trading volume affect economic growth. The NEPSE plays an important role in the economic growth of Nepal and the study therefore recommends that the government needs to do much to attract and encourage active participation of stock markets sector. The study recommends that The Securities Board of Nepal has the responsibility of regulating the entire securities market in Nepal. To make the Board effective, the number of staff should be adequate and properly trained in all aspects of securities market. It should bring new and emerging stock market regulatory regimes to match international standards. Government should create favorable environment for the foreign investor. Market makers and investment bankers should be encouraged to participate in the stock market. The stability on the Nepalese political and economic system enhanced the investment environment for public sector, private sector and Multinational companies to invest in Nepal. This will definitely increase the market capitalization and in turn it increases the Real GDP. Timely and regular discourse of the information should be made necessary for the participating firms. Provisions should be made so as to necessitate the organizations to disclose their financial data at least quarterly.

CHAPTER – I

INTRODUCTION

1.1 Background of the Study

Stock market is an important tool for raising funds for their expansion. A pricing process rewards the well managed firms to have greater allocation of new investment resources from issuing new stock. This increase the level of capital formation and private investment and in aggregate enhance the economic growth.

A part from facilitating economic growth, the stock market act as an indispensable fulcrum for the growth of sectors, sub-sectors, industries, firms and commerce which eventually foster the growth of the economy of a country to a reasonable degree. This is why the managers of the economy, technocrats, policy advisers and the central banks of countries monitor and keenly regulate the activities of the stock market. The avenues through which the impacts of the stock market are transmitted to the economy are numerous. These avenues include stock market liquidity, real market capitalization, the value traded, and the turnover of stocks in the market amongst others.

These further observed that the size of stock markets are the excellent forecaster of accumulation of funds, level of output, and GDP growth (Yartey & Adjasi, 2007) Recognized occurrence of a link between GDP and performance of stocks (carlin & Mayer, 2003). Financial institutions provide a stage in exchange for financial tools like debentures. It assists to mobilize the capital from areas with excess capital to areas with deficient capital and is employed in profitable investment. It assists in the public segment and private sector to enlarge output by boosting investments and eventually boosting economy (Kumo, 2009).

Relationship between growth of GDP and performance of stocks has received a huge attention by various scholars, they conclude that the function played by the performance of stocks should in boosting the GDP cannot go unnoticed. Performance of stocks is critical in performance of GDP as it has a crucial component in the theory put forward to increased output (Nazir, Nawaz, & Gilani, 2010) .Stock market is believed to be a key area whereby accumulation of funds can ease performance of

GDP. Stocks in countries with low levels of income experts say, they are increasing at an increasing rate (Bhoyu, 2011). Nepal stock exchange (NPSE) is an institution regulation stock market in Nepal. It is normally believed that huge decrease in stock prices reflects recession in the future and rising securities prices are foremost factors for boosting the GDP (Siong & Thing, 2008). The improbability rooted especially during the 2009 economic recession was hugely prompted by a huge slump in the prices of stocks as it was evident in the various securities markets across the world (Fuentes & Pereira, 2010). The stock markets are usually linked to the growth of economy via their function as the resource for capital formation. Further, the growth of an economy is the medium for growth of securities market (Osamwony & Abudu, 2013).

The stock market is viewed as institution which offers a platform for efficient allocation of capital (Howells, P; Keith, B., 2000). They further observed that borrower's access to funds which they in turn use to finance long term projects, while the savers utilize the stock markets to invest their surplus funds. Stock market offers both private firms and the public owned ones, the opportunity for raising funds which are used to finance long-term investments in the country. The economic performance as measured by GDP increases when sufficient capital is available in the market which in turn can be borrowed by both private corporations and the government for investment hence boosting economic growth and development (Vakidais, 2009).

Giitobu (2000) observed that the stock market is the intermediary between borrowers and savers for economic growth and development. They further encouraged those with surplus funds to invest their funds in the stock market which provide a better rate of return compared to the commercial banks. The stock market also provides an attractive capital to borrowers as equity is preferred to loans which are repaid with higher interests.

Donwa & Odia (2010) argues that well developed stock markets boosts savings from a theoretical perspective. Savings have been established to be positively related to the growth of GDP (Mnuro, 2000), he reveals that stock market form a foundation for investment through savings. Savings are equal to investments, which leads to change in capital stock hence economic growth. Sustaining a stock market which is performing well drives growth in the economy by easing flow of finances from savers

to borrowers. This however, comes after addressing various issues which hinder stock market performance especially in developing countries like Nepal. Some of these challenges include; political instability, economic recession and frail corporate governance practices in some of the market intermediaries and outdated policies which hinder stock market performance.

The need to determine the relationship between growth in the economy and stock market performance in Nepal is addressed by this research. Reason behind this was that, to have a well performing stock market, there must be economic growth and thus, investors must be undertaking expansionary strategies requiring extra financing from the stock market whereas savers are believed to be having surplus capital for investment. Strong stock market performance especially in the periods of high economic growth is crucial in mending the allocation problem which ensures that borrowers access the available surplus funds from savers. The relationship between performance of stock market and growth in the economy in Nepal forms heart for this research.

Historically, the development of capital market dated back to 1936 with the flotation of share by Biratnagar Jute Mills Ltd. (NEPSE, 2009). Then government of Nepal announced industrial policy in 1974 and under this policy an institution named Securities Marketing Center (SMC) was established to deal in government securities-development bond, national saving bonds and corporate securities of few companies. In 1976 the Securities Marketing Center (SMC) was renamed by Securities Exchange Center (SEC). At that time SEC itself was doing the job of brokering, underwriting, and managing public issue because there was no capital market institution in Nepal other than SEC. Under the financial sector liberalization policy, Government of Nepal converted SEC into Nepal Stock Exchange Ltd. (NEPSE) in 1993 and assigned the responsibility of secondary market operation. Government of Nepal established Securities Board of Nepal (SEBON) in 1993 as a securities market regulatory authority. Within the short period of time since inception it has significantly moved ups and down. After the end of Maoist insurgency period and followed by the second Constitution Assembly (CA), NEPSE index took upward and reached upto 1036.1—the highest point in the last six years (Shrestha & Subedi, 2014). In this way, the daily ups and down of the NEPSE index surely plays a significant role on economic

activities and transactions. In this regard, an important query is raised that what is the statistical relationship between stock market development and economic growth in Nepal? This paper investigates the stock market contribution to the economic growth in Nepal. It greatly helps trading firms, researchers, academicians and mainly policy makers.

The stock market is momentous from both the investors' point of view as well as the industry's point of view. According to Levine and Zervos (1998), there are certain factors that can be used as a measurement of stock markets' development and as such, they have direct relation with the economic growth of the country as well. Some of these factors include liquidity and stock market capitalization as well the turnover of stocks in the market.

1.2 Statement of the Problems

The Long-term sustainability of economic growth of a country depends on the ability to raise the rates of accumulation of physical and human capital, to use the resulting productive assets more efficiently, and to ensure the access of the whole population to financial assets. Various researches & policy makers alike have focused a high rate of economic growth leads to a high demand for particular financial agreement or arrangement, and the well-developed financial sector will automatically respond to these types of demand. Since the introduction of both finance-led growth and growth-led finance hypothesis, the relationship between financial development and economic growth has been subject to the considerable debate in the literature of development and growth. Therefore, there exists a gap which this research study will address especially on how financial development relates on economic growth in Nepal. Due to lack of appropriate government policy & political uncertainty the Nepalese Stock Market has gone through fluctuation condition (Shrestha &Subedi, 2014). During this research study period, there is lack of enough institutional investors in the market & more individual's investors are found in the Market; this is major drawback of the Nepalese Stock Market. This study is taken to examine the contribution of the Stock Market in the Nepalese economic growth. The previous studies have not viewed the stock's performance as the engine for the growth of GDP which would cause policy makers to turn their focus on the stock market performance as many past studies have mainly concentrated on the banking sector. There has been little study on the subject

to specifically underpin the relationship thus; this study sought to fill that literature gap; Relationship between stock performance and GDP performance in Nepal.

This present study is carried out to answer the following research questions:

- i. What is current position of stock market development and economic growth in Nepal?
- ii. What is the relationship between stock market development and economic growth in Nepal?

1.3 Purposes of the Study

The main purposes of the study are

- i. To analyze the current position of stock market development and economic growth.
- ii. To examine the relationship between stock market development and economics growth in Nepal.

Hypothesis of the Study

These objectives are tested with the following alternative hypotheses:

- i. H1: There is positive relationship between MC and Real GDP in Nepal.
- ii. H2: There is positive relationship between TT and Real GDP in Nepal.
- iii. H3: There is positive relationship between NOLS and Real GDP in Nepal.
- iv. H4: There is positive relationship between NI and Real GDP in Nepal.

1.4 Significance of the Study

Stock market recognizes the situation of economy. When stock market is booming the economy is good and when stock market is declining the economy is bad. Stock markets have direct relation with the economic growth. Economic growths come with more earning capacity, opportunities to save and also the opportunity to invest. It must be noted that economic growth is, to a great extent, dependent on the industrialization in a country. It represents the need of study to find out the problem, prospects and growth in the near future. What policies can be formulated, what

regulatory acts are needed and necessity of amendments regarding the rules and regulation to develop it and make the market perfect functioning. This study is also of great significance to economists who can use this to forecast economic performance by looking at the performance of the NEPSE index with an intention of determining the per capita income of Nepal in the future which can be used as proxy to a level of living standards of the citizens. Finally, the Study will be of huge importance to empirical work on the topic as not many scholars have concentrated on the relation between stocks performance and growth in GDP in Nepal. Financial statement should be maintained accordingly to fulfill the requirement of related parties' needed information. This study will be useful to the university students who are curious to know about the current status of Nepalese stock market, its growth, issues and challenges for the development of stock market. Similarly, the recommendations that this study intends to propose on the basis of its findings are expected to be useful for the policy makers associated with the development of capital market

1.5. Limitations of the Study

The main limitations of the study: -

- i. Finding and suggestion may not be applicable exactly to other private and public sector.
- ii. This study is fully base on secondary data to finding depend upon the trust worthiness of source of data.
- iii. The study covers the period 1994\1995to 2017\20018
- iv. Only market capitalization, trading turnover, number of listed securities, NEPSE index variables are taken as independent variable and only real GDP is taken as dependent variable.
- v. Only selected statistical tool is used.

1.6 Chapter Plan

This study will be comprised of five chapters, each devoted to some aspects of financial performance. The title of each of these chapters are summarized and the contents of each of these chapters of this study are briefly mentioned here.

Chapter-I: Introduction

This chapter will consist the study about introduction of the subject matter which include the basic information of the research area, various problems, objectives, limitations and organization of the study consisting of historical development of stock market in Nepal, a brief profile of the cited stock market is also included in this chapter.

Chapter-II: Review of Literature

This chapter deals with the review of available literature. It Includes review of previous unpublished master degree thesis, books, journal and articles etc.

Chapter-III: Research Methodology

The third chapter describes the research methodology adopted in carrying out the present research. It deals with research design, sources of data, data processing procedures, population and sample, period of the study, method of analysis and financial and statistical tools.

Chapter-IV: Results

The fourth chapter is concerned with presentation, analysis and interpretation of data. The segment where the data required for the study are presented analyzed and interpreted by using the tools and technique of financial management such as statistical tools i.e. coefficient of variation, correlation coefficient and regression analysis in specified form to meet the stated objectives of the study.

Chapter-V: Conclusion

The last chapter summarizes the main conclusion that flows from the Study and offers suggestion for further improvement and conclusion of the study. At the end of the chapter's reference and appendix has been incorporated.

CHAPTER - II

REVIEW OF LITERATURE

2.1 Introduction

In term of a literature review, 'the literature means the works consulted in order to understand and investigation research problem. Review (or look and again) is a process of systematic, meticulous and critical summary of the published literature in field of research. How others have dealt with topics in research subject and of what knowledge they have acquired? Literature review also indicates that should summarize the broad contents of the research articles or studies and indicate clearly any linkages with other studies in the field. Therefore this chapter is divided into two parts, Viz.

- i. Theoretical Review
- ii. Empirical Review

2.2 Theoretical Review

The theoretical literature review help establish what theories already exist, the relationships between them, to what degree the existing theories have been investigated and to develop new hypotheses to be tested. The unit of analysis can focus on a theoretical concept or a whole theory or framework.

2.2.1 Endogenous Growth Framework and Finance

The emergence of the endogenous growth literature in the nineties further buttressed the finance-growth nexus. The endogenous growth theories allowed for various policy influences on economic growth such as human capital and education (Lucas, 1988), (Schultz, 1991), international trade (Romar & Rivera, 1989), and financial markets (Greenwood & Boyan, 1990). Empirical works in the endogenous growth framework emphasized the influence of financial markets in promoting economic growth by raising the productivity of capital, lowering of intermediation cost and by enhancing the saving rate. However, all these studies focused on the role of banking system in the intermediation process. The focus shifted to capital markets, especially stock markets, thanks to the universal enthusiasm for stock markets in the 1990s. The failure of the existing style of financial intermediation through Development Finance

Institutions (DFIs) and the bank-based interventionist systems in many developing countries, resulted in a restructuring of these systems in favor of capital market based financial intermediation. Also the urge of countries to attract foreign capital in non-debt creating forms provided an extra impetus to the development equity markets worldwide. All these inspired academic interest in the various aspects of stock market development. Serious empirical investigations in this line have begun only in 1995, with the efforts of the World Bank³ to study of the linkages between the functioning of stock market and economic development in detail.

2.2.2 Post-Keynesian Perspective

The pessimistic aspect of the Keynesian analysis became popular among the post Keynesians, especially since the 1980s when the financial markets showed signs of speculative practices. The ‘crowding out hypothesis’ framed by (Tobin, 1965), stated that at times when financial assets offer higher returns than real investment projects more money will be invested in financial capital, which will reduce the money available for real investment in plant and equipment. This will hurt the real economy by negative multiplier effects. Yet another possibility of negative impact of financial market (mainly stock market) is presented in the ‘casino’ hypotheses. When speculative bubbles emerge on stock markets, the prices fail to accurately reflect the underlying real variables. In such cases, speculative growth dynamics guided by irrational behavior develops, which may harm the real economy, as it is in danger of becoming the by-product of a casino. Keynes himself was worried about the short-termism of financial markets. Financial market often attracts short-horizon speculative traders as these markets allow for sequential trading. Prices react very quickly to a variety of information influencing expectations on financial markets. Therefore, prices on financial markets tend to be volatile and enable profits or losses within very short time periods. Due to the increasing importance of financial markets, managers also take the short horizon of financial markets as their guideline for decision making, because financial markets only value short-term success. If financial markets undervalue long-term investments, managers will undervalue them too, which may harm the long-term perspectives of companies (Biswanger, 1999) .

A more carefully formulated argument regarding the source of financial instability was given by (Minsky, 1986). According to him during economic booms, as full

employment is approached, debt commitments start to outstrip the income flows necessary to service them. This happens because expectations become too euphoric in terms of real profit opportunities, which are constrained by the growth of productivity, while the extension of credit is not. Therefore, credits are increasingly used for speculative and compensatory spending and not for financing real investment projects. The financial structure hence becomes increasingly fragile and the business cycle culminates in a debt deflation that induces a downturn. All these hypotheses tend to establish a negative correlation between financial sector development and real economic growth. However, this negative correlation is not supposed to hold under all economic conditions, but they describe a period in economic development when the financial sector is supposed to grow at the cost of the real sector.

2.2.3 The Gurley and Shaw Propositions

Gurley & Shaw, (1960) analyzed the relation between growth of financial market and activities real economic growth and concluded that financial innovation is dynamic process which causes, and being caused by, the development of the real sector. They observed that in poor and primitive environment, capital formation is accomplished primarily with entrepreneurs' savings. As economy develops, self-financed capital investment first gives way to bank-intermediated debt finance and later to the emergence of equity markets as an additional instrument for raising external funds. Thus at low levels of development, commercial banks are the dominant financial institutions. As the economy grows, specialized financial intermediaries and equity markets develop and prosper, contributing to higher industrial and economic growth. Gurley and Shaw Proposition state the co-movement of financial market development and economic development

2.2.4 The Keynesian Perspectives on Finance and Growth

In current macroeconomics, there exist different versions of Keynesian tradition, ranging from post-Keynesians to more mainstream oriented new Keynesians. Keynes himself was ambiguous as far as the influence of financial development on the real economy is concerned. On the one hand he stressed the importance of finance process in enhancing the level of development and on the other hand he was worried about the malign influence of speculative activities in the financial markets on enterprise.

2.2.5 The Neo-classical Economic Perspectives

The liberalization of the capital market will lead to economic growth, as a result of the inflows of investments from outside the liberalized economy to test the impact of stock market development on economic growth, therefore, real GDP, a measure of economic development and growth indicator is modeled as a function of stock market development indicators and macroeconomics factor.

The credit to the private sector (cps), as the ratio of total credit extended to the public sector by the banks to the GDP, measures the level of activities and efficiency of the financial intermediation. An increase in the financial resources, especially credits, to the private sector is expected to increase private sector efficiency and production, consequently leading to economic growth (owusu and odhiambo, 2012). The other control variable used is the foreign direct investment (FDI), which serves as an effective means of transferring technology across countries. FDI inflow tends to foster economic growth through its effect on the amount of GDP as well as its growth.

2.2.6 The Modigliani-Miller Irrelevance Theory

Modigliani-Miller theorems justified the neo- Classical perspective of triviality of finance to real growth on a microeconomic level, which led to the conclusion that firm's investment decisions are independent from the finance process. Modigliani and Miller put forward two central propositions about the theory of finance. They showed that in fully developed capital markets under neo-Classical assumptions of perfect competition, absence of transaction costs and taxation, with full and symmetric information among all investors, the stock market valuation of the firm is independent of its financing decisions. The market value of a firm will be determined by earnings prospects and risk of its underlying real assets and would be invariant to its capital structure or the division between internal or external sources for financing its investment plans. It was also established that corporate growth and investment decisions are dictated completely by real variables such as productivity, demand for output, technical progress and relative factor prices of capital and labor. Finance in this framework simply facilitates the investment process and financial sector development simply enhances the efficiency of the intermediation process by

removing imperfections, if any. The M-M theorem represents the neo-classical version of investment theory of corporate finance.

The M-M theorem also contrasted with the pecking order theorem or hierarchy hypothesis (Mayers & Majluf, 1984), one of the most prominent theorems of corporate finance. It suggested that firms always prefer internal to external finance, and if they had to use external finance, they would start with debt, then possibly hybrid securities like convertible debentures, and then equity as a last resort. The firm's capital structure and its dividend payout decisions, in this analysis are important variables, which has an independent influence on its share price.

New theoretical developments have been supported the pecking order view and invalidated the M-M theorems. When the restrictive assumptions like absence of taxation and financial distress are relaxed, it has been shown that, firm's capital structure becomes relevant. When corporate tax incentives those allow interest to be deducted as costs, firms seem to prefer debt finance. However, a high level of debt finance may increase bankruptcy and financial distress during recession. This trade off leads to the necessity of an optimal debt-equity ratio to maximize a firms' stock market valuation. More complex considerations and new theoretical developments involving asymmetric information between insiders (managers) and outsiders (creditors or shareholders), problems of adverse selection, moral hazard, agency costs, signaling and transaction costs point to the significance of corporate capital structures and financial decisions for the real economy.

2.2.7 Stock Market and Macro Economic Variable

The link between stock market and macro economy is far from being straight forward. Traditional models focused on correlation studies to find the nature of relationship between stock prices and macro-economic variables. Studies aimed to find out the direction of causal relationships between stock prices and macro variable emerged recently with the emergence of econometric tools like co-integration, causality and error correction models.

2.2.8 Stock Prices and Money Supply

There are two theoretical explanations on the relationship between stock prices and changes in money supply: The Central Bank Intervention Hypothesis and The Portfolio Disequilibrium Hypothesis. Central Bank Intervention Hypothesis (Pearce & Roley, 1983) states that central bank often react to unexpected increases in money supply to suck the excess liquidity from the market. This anticipated intervention of the central bank, which results in higher expected short term interest rates in the future, because longer term yields to rise immediately with a subsequent negative impact on stock prices. This is generally due to the increase in discount rates as a result of the rise in interest rates, since, stock prices are assumed as the discounted present value of future benefits which accrue to the stockholders. Hence, share prices decline in response to the rise in discount rates and in the absence of corresponding rise in future earnings of the firm. A positive relationship between stock prices and money supply is stated by the Portfolio Disequilibrium Hypothesis (Cooper, 1983). Stock prices will rise due to disequilibrium in the public's portfolio of cash, financial and other assets triggered by unexpected increase in money supply. This portfolio disequilibrium causes investors to shift out of money holdings to financial and other assets thus pushing up their prices in the process.

2.2.9 Stock Price and Inflation

The Classical economic theory regarded the real value of equity as being invariant to inflationary or deflationary changes in the price level, so that in principle its current money value changes in proportion to relative changes in the general price level of the economy. This conclusion rested essentially on three basic proportions- first, the real returns from ownership of capital goods will be invariant to general price level, since these returns depend fundamentally on production functions or input-output relations and factor proportions that are invariant to the general level of prices, Second, the real market value of these ownership claims would be equal to these real returns on capital goods capitalized at the real rate of interest. Third, the real rate of interest is invariant to the price level. The basic conclusion of the Classical position that the nominal prices of common stocks will vary directly with changes in the index of general price level is retained and found in many studies. However theoretical changes occurred in the 1980's after the seminal work of (Lintner, 1978). Many empirical studies revealed a

negative association between stock prices and both expected and unexpected components of inflation. One of the explanations for this negative relationship is the information effect (Jaffe & Mandelker). Unexpected increase in inflation often provokes government or central bank reaction in the form of changes in fiscal or monetary policy or both. For instance, the central bank may resort to open market operations to contain the expansion of money supply, pushing up the interest rate in the process. The rise in interest rates may increase the interest cost of capital in the short run and adversely affect the cash flows in the long run as firms resort to cuts in interest sensitive capital expenditures. Portfolio Adjustment Hypothesis of (Summers, 1981) states that increased inflation raises the expected return on alternative assets such as real physical assets. Investors, therefore, make changes in their portfolios by shifting out of equity holdings and investing the funds released in the process in other assets. This portfolio adjustment results in a decline in share prices. The proxy hypothesis of (Fama, 1970) states that the negative relation between stock returns and inflation proxy for the positive relation between stock returns and real variables, which are more fundamental determinants of equity values.

2.2.10 Determinants of Economic Growth

According to (Rodrik, 2003) the neoclassical model is often preferred by many scholars because of its ease in finding the key factors for growth in GDP. Moreover, those advocating for the endogenous growth models commend them for their ability to incorporate policy, institutional factors and technological progress as the main determinants of economic growth (Barrow, 1996).

The classical economists also insist on the importance of savings to the country according to (Levine & Renelt, 1992) and (Sala-i-Martin, 1997) recognize savings and investment as major factors. Private venture is often seen as the driver of economic progress, while public investment provides the required infrastructure for the economy to grow. (Howells & Keith 2000) noted both private and public investment have been close relationship, as public venture may case provision of infrastructure for the private sector or crowd out by increasing capital cost to the private investors. Public investment has either positive or negative affects private investment (Sala-i-Martin, 2003). Communal savings in human capital lead to formation of positive spill overs which develop the performance of individual firms.

As a result, it clearly reveals that there exists a positive correlation linking savings and growth in GDP (Barro, 1991, 1996, 2003; Artadi and Sala-i-Martin, 2003).

Foreign aid is also an aspect believed to have a positive relation with economic growth. It relaxes any constraint that may arise on the economy (Bachha, 1990). The limitation on savings occur as is the probable scenario in countries with low GDP per capita, these countries have low savings which deficient to congregate investments in the public sector; it plays a significant role as it relaxes the domestic savings constraint. (Kathurimn, 2010) Revealed that constraints arising from the foreign exchange due to the need for imported capital goods or services and earnings from foreign exchange may be too low; aid falls in this category of foreign exchange whereby high levels of imports are allowed into the country. The constraints arising from fiscal decisions have impact on savings; foreign aid helps in financing public investment thus discouraging the government from raising revenue to finance a deficit budget thus aid comes in handy to relax this constraint. However, (Chenery & Strout, 1966) point out that in less developed countries, foreign aid of technological support can calm down this limitation and boost economic performance. Thus from the above discussion, we can conclude that aid has a direct relation to investment which leads to economic growth (Hjertholm, P., Laursen, J., and White, H, 2000). (Gomanee, Morrissey, Mosley, & Verschoor, 2005) In their study revealed foreign aid has positive impact on GDP growth especially in developing countries through providing funds to public investments. (Elbadawi, 1999) Argues that foreign aid in East African countries has a negative effect on exchange rate as it leads to its appreciation making the exports more expensive and thus hampering growth of GDP.

Export is also a factor that has impact private investment hence growth in GDP. Endogenous theory, countries with open trade experience many advantages compared to closed trade in terms of efficiency gains due to labor specialization and increased competition from international companies; there is also technological transfer; economies of scale also due to business expansion, and also gain of knowledge through globalization (Piazolo, 1995; Zhang and Zou, 1995; Harrison, 1996; Frankel and Romer, 1999). Furthermore, increased competitiveness which occurs due to this openness may negatively affect performance of domestic companies or even kill them (Harrison, 1996). A lot of research has been done on this field tends to concentrate on

exports, imports represent imported technology and acts as an intermediary goods and even at times used for investment purposes thus boosting economic growth.

2.3 Review of Empirical Works

Several empirical studies have been conducted on the relationship between stock market development and economic growth with varying results.

2.3.1 International Context

Owusu (2018), examined the relationship between stock market development and economic Growth in South Africa. It employs Auto regression distributed Lags (ARDL) Bound testing approach and multi-dimensional stock market development proxies. It finds the long run stock market development had minimal impact on economic growth. However, stock market development has some short run impact on economic growth in the South Africa Therefore concluded that it was rather the increase in credit to the private sector and an increase in the gross national expenditure that drives the real sector development and economics growth in South Africa.

Silva (2017), identified the relationship between stock market performance and economic growth and to analyze how stock market performance affect to the economic growth. Econometric technique of simple regression model and correlation analysis was used to analyze the data using SPSS software with companies listed in the Colombo stock exchange for a period of sixteen years from year 2000 to 2015. Findings of the study are parallel with the previous literature that discloses a strong positive relationship between stock market performance and economic growth of Sri Lanka. This study lengthens the literature, providing valued information to economists in developing countries and to the academia.

Ngugen and Pham (2014), examined the causality relationship between stock market development and economics growth in Canada and Australia based on the time series data for the period of 1981Q3 to 2012Q3. It indicate that stock market and economic growth had long run relationship and that the stock market development does helped improve the future growth in some in Canada but it was not the case in Australia.

Laokulrach (2014), examined the impact of the whole stock market and each industry in the stock exchange of Thailand (SET) on the economy. It was hypothesized that there was positive causal relationship between the stock market and economic development in Thailand. The regression analysis method was utilized in the study. It showed that there was positive bi directional relationship between stock market development and economics growth through gross capital formation .At the industry level ,the service technology industries had significant positive effect to economic growth while the other six industries was not found to had significant impact on the national economic growth .The support should be more provided to the small and medium size firms providing them opportunity to expand their operation bring higher capital formation and economic development .Government should also support public companies to benefits for the ASEAN exchange to be fund raising alternative leading to the stock market and economic development.

Bayar (2014), examined the relationship between Stock Market Development & Economic Growth in Turkey during the period 1999-2013, by using Johansen Juselius Co integration Test & Granger Causality Test. They used to measure the Growth variable namely, Real Gross Domestic Product (RGDP) & Stock Market Development variables namely, Stock Market Capitalization, Total value of Stock Traded & Turnover Ratio. These empirical results indicate that there is a long run relationship between economic growth & stock market capitalization, total value of stock traded, turnover ratio of stocks traded & also there is unidirectional causality from stock market capitalization, total value of stocks traded & turnover ratio of stock traded to Economic Growth.

Bernard & Austin (2012), examined the Role of Stock Market Development on Economic Growth in Nigeria with the objective to measure the relationship between Stock Market Development indices & Economic Growth. The method of analysis used is Ordinary Least Square (OLS) technique. Using the variables Stock Market Capitalization Ratio, Value Traded Ratio, Turnover Ratio & Growth variable used Gross Domestic Product. This empirical results indicates that Market Capitalization & Value Traded Ratio have very weak negative correlation with economic growth. Also, Stock Market Capitalization has a strong positive correlation with Stock Turnover

Ratio. This result implies that liquidity has propensity to spur economic growth in Nigeria & that market capitalization influences market liquidity.

Kolapo & Adaramola (2012), investigated the capital market on economic growth relationship in Nigeria from 1990 to 2012 using time series analysis. Used to measure the capital market variables namely, Market Capitalization (MCAP), Total New Issue (TNI), Value of Transactions (VLT), Total Listed equities (TLE), & Government Stocks (LEGS). The Economic Growth proxies by Gross Domestic product (GDP). They used the Johansen co-integration & Granger Causality Tests in the analysis. The result showed that the Nigerian capital market & economic growth are co-integrated. This finding also showed that positive impact; the capital market plays on the economic growth of the country.

Sahu & Dhiman (2011), made an attempted to explore the causal relationship between stock market indicators and macro-economic variables of India by using both correlation and Ganger Causality regression techniques for the period 1981 to 2006. The findings of this study reveal that there is no causal relationship between stock market indicator i.e. SENSEX of Bombay stock exchange and real gross domestic product of India despite they being highly correlated. Therefore, it is concluded that BSE SENSEX cannot yet be called as an “indicator” of India’s growth and development. Rye and should therefore be integrated in the whole economic system.

Ake and Ognaligui (2010), investigated relationship between Douala stock exchange and Cameroonian economic growth, using Granger-Causality tests for 2006-2010. Their findings suggest that there was no relationship between Douala stock exchange and economic growth for Cameroon. Their results do not match with the other research findings confirming a positive relationship between stock market development and economic growth.

Oskooe (2010), investigated the relationship between stock market performance and economic growth in Iran by conducting causality tests. Findings imply the causality link between economic growth and stock price fluctuations in the long run and bilateral causality running between share prices and economic growth in the short run. Therefore, it can be inferred that the level of real economic activity is the main factor

in the movement of stock prices in the long run and stock market plays a role as a leading economic indicator of future economic growth in Iran in the short run.

Vazakidis and Adamopoulos (2010), explored the causal relationship between stock market development and economic growth of France for the period 1965- 2007, using a VECM. The estimated coefficient of error correction term found statistically significant with a negative sign, which confirmed that the economic growth caused stock market development in France. Therefore, the inference of it was that economic growth had a positive effect on stock market development while interest rate had a negative effect on stock market development.

Nowbutsing and Odit (2009), examined the impact of stock market development on growth in Mauritius utilizing a time series econometric investigation over the period 1989 -20067. They analyzed both the short run and long run relationship by constructing an Error Correction Model. They found that stock market development positively affected economic growth in Mauritius both in the short run and longrun.

Ezeoha (2009), investigated the nature of the relationship that exists between stock market development and the level of investment (domestic private investment and foreign private investment) flows in Nigeria. The authors discovered that stock market development promotes domestic private investment flows, thus suggesting the enhancement of the economy's production capacity as well as promotion of the growth of national output

Shahbaz (2008), suggested that there is a long run relationship between stock market development and economic growth for Pakistan. Stock market development was found to be an important factor that enhances economic growth. The authors also discovered a feedback relationship between stock market development and economic growth in the long run. However, in the short run, the causality runs only from stock market development to economic growth.

Gevit (2007), a casual inspection of stock market prices and GDP in developed market economies reveals that these tend to move together over time. This raises the question as to what is the reason for such a relationship. Explaining such a relationship involves assessing the underlying direction of causality. Does the stock market affect GDP, or is the causality in the opposite direction, such that GDP

triggers fluctuations in the stock market? This paper employs the Granger causality test in order to examine causality direction. The focus of the paper is on long-term trends and the evidence presented is garnered from five of the top ten stock markets in the world in terms of market capitalization.

Agarwal (2001), examined the relationship between stock market development and economic growth using a time series cross section data for nine Africa country from 1992-1997. The study used a simple correlation test on stock market indicators (market capitalization/GDP, total value traded/GDP, and turnover ratio), and macroeconomic variable; economic growth and control variables (investment as a proportion of GDP, FDI and primary school enrolment). The correlation results find that the stock market capitalization/GDP and value traded/GDP are correlated to investment. Due to the direct correlation between investment and economic growth, stock market development is correlated with investment and in turn with economic growth. It recommended that the government should play a more positive role in order to foster stock markets. Even though, having recognized the importance of financial markets for economic growth many developing countries have increased their efforts towards improving the financial systems of their countries to stimulate economic growth, they have mainly focused on banking systems reforms -removing interest rate controls, reducing government involvement in credit allocation, minimizing taxation of financial intermediaries, managing bank insolvency, now they need to focus on stock markets. Policymakers should encourage stock market development.

Demirguc, Asli & Vojislar (1996), investigated the relationship between stock market development and financing choices of firms, using data from thirty developed and developing countries from 1980-1991. They discovered that initial improvements in the functioning of a developing stock market produce a higher debt-equity ratio for firms and thus more business for banks, while for stock market that are already developed, further development leads to a substitution of equity for debt financing

Levine and Zervos (1996), examined empirical association between stock market development and long-run economic growth, using pooled cross country time-series regression of forty-one countries from the period of 1976 to 1993. The finding

revealed a strong correlation between overall stock market development and long-run economic growth, implying a positive relationship between stock market development and economic growth. The results suggest a comparatively strong link between the functioning of stock markets and economic growth.

2.3.2 Nepalese Context

Bist (2017), examined the empirical relation between stock market development and economics growth in Nepal over the period of 22years from 1993 to 2014. The long run and short run elasticities were estimated by the use of autoregressive distributed lag (ARDL) bounding testing approach for co –integration analysis. It is measured by real GDP per capital and stock market development had been measured by market capitalization of Nepal stock exchange (NEPSE). It finds that market capitalization had a significant positive impact on the economic growth in long as well as the short run and inflation had negative significant impact on GDP per capital in long as well as short run. There was unidirectional causality and that run from stock market development to economic growth. It concluded that long run policies should be formulated in such way that they facilitate the development of stock market. So as to increase the economic growth.

Shah (2017), examined the relation between stock market development and economic growth in Nepal for period to mid-July 2001 to mid-July2015 by using karl person correlation. The whole studied period is divided into two parts, first stage and second stage of stock market development the first stage mid –July 2001 to mid-July 2007, stock market development was not significantly associated with economic growth. In second stage mid-July 2008 to mid –July 2015 there was positive relation between stock market development and economic growth. It indicated that stock market had positive contributed on economic growth in Nepal.

Shrestha & Subedi (2014), examined the determinants of the stock index (NEPSE) in Nepal using monthly data for the period of mid-August 2000 to mid-July 2014. In order to incorporate the major changes in politics and NRB's policy on lending against collateral of shares, two dummy variables have also been used. The correlation analysis shows the existence of the significant relationship between the NEPSE index and macro variables chosen for the study such as Consumer Price

Index, Broad Money and Treasury Bill Rate. Time series properties of selected variables have been examined. Moreover, empirical results obtained from OLS estimations of behavioral equations reveal that the NEPSE index is found to respond positively to inflation and broad money growth, and negatively to treasury bills rate. This suggests that, in Nepal, share investors seem to take equities as a hedge against inflation and consider stock as an alternative financial instrument. More importantly, stock market has been found to respond significantly to changes in political environment and the policy of NRB.

Regmi (2012), examined causal relationship between stock market development and economics growth in Nepal for the period 1994-2011, using unit root test, co-integration and vector error correction model and developing NEPSE composite index as an indicator of stock market development. The finding suggested that stock market development had significantly contributed to the economics growth in Nepal. In this perspective a refined policy measured should be adopted to strengthen and improve the role of stock market in order to expedite and maintain the strong growth of the economy.

G.C. & Neupane (2006), examined the existence of causality relationship between stock market and economic growth in Nepal based on the time series data for the year 1988 to 2005, employing Granger causality test and using an equally weighted single indicator of three stock market development indicators; the average of ratios of market capitalization to GDP, annual turnover to GDP and the annual turnover to market capitalization. The study finds the long-run integration and causality of macroeconomic variables and stock market indicators even in a small capital market of Nepal, implying that the stock market plays significant role in determining economic growth and vice versa.

Sindurkar (2004), investigated the relationship between stock market and economic growth, particularly at the role of stock market in economic growth. He used only correlation analysis and time series analysis in the study. It concludes that the significant relationship does not exist between GDP and NEPSE index. However, the relationship of GDP with market capitalization and number of listed companies is significant. The correlation between economic growth rate and turnover velocity is unexpected and insignificant

2.4 Research Gap

Despite some valuable studies on stock market and economic growth of Nepal, there remains a large scope for research on various areas related to the Nepalese stock market and economic growth in Nepal. Especially regarding the movements in the stock market with economic variables, very few studies have been done in the past. There is a gap of time period which is fulfilled by this study. The economic scenario is also changes through time. The using tools of this study are also different from other previous studies. The study incorporates the relationship between stock market and economic growth in Nepal. Also Nepal's stock market has been undergoing significant changes in the last few years with the introduction of new rules and bylaws, improvement in the infrastructure of trading and entry of mutual funds and market makers. This research will attempt to fill the research gap by exploring the relationship of the NEPSE index with economic variable using the updated stock market data of Nepal.

2.5 Theoretical Framework

A theoretical framework consists of concept and together with their definition and reference to relevant scholarly literature, existing theory that is used for particular study. The theoretical framework must demonstrate an understanding of theories and concept that are relevant to the topic of research paper and that related to the border areas of knowledge being consider.

The theoretical framework is most often not something readily found within the literature review course reading and pertinent research studies for theories and analytic models that are relevant to the research problem are investigation. The selection of a theory should depend on its appropriateness, ease of application, and explanatory power.

The variables of secondary interest in this research is the dependent variables of Real GDP. Four independent variables are used in an attempt to explain the variance Real GDP in stock market development. These four variables are market capitalization, Trading turnover, number of listed securities and NEPSE index.

The market capitalization to Real GDP used to determine whether an overall market undervaluing or overvalued compared to the historical average. The increased in the size of the market as measured by market capitalization, the size of the economy as measured by Real GDP also increased.

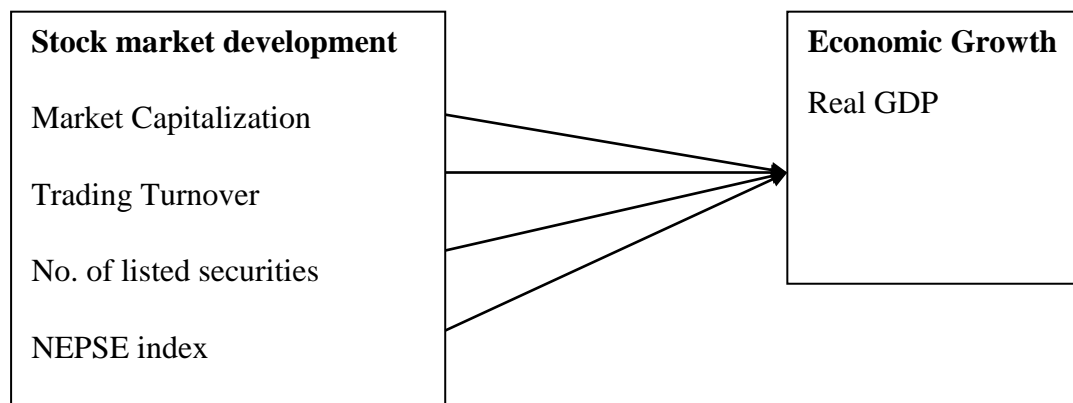
The trading turnover and Real GDP would be negatively related. Average inventory is used in instead of ending inventory because many companies merchandise fluctuated greatly throughout the year. They would, therefore like to remain with the same companies for a longer time with low Real GDP.

The greater number of listed securities, the higher is likely to be there Real GDP. It has a positive relationship between Real GDP.

NEPSE and Real GDP has a direct relationship. If NEPSE increased than Real GDP also increased.

Independent variables

Dependent variable



Source: Machuki, (2016)

The study proposed that economic growth in Nepal is determined by stock market performance; market capitalization (X1), trading turnover (X2), number of listed securities (X3) and NEPSE index (X4)

CHAPTER – III

RESEARCH METHODOLOGY

Research methodology is a systematic to finding solution to a problem that is systematic collection, recording, analysis interpretation and reporting of information about various facts of a phenomenon under study. In this study research methodology describe the methods and processes applied in the entire aspect of the study. This chapter describes research design, population, sampling procedures nature and sources of data, data collection technique and analysis of data what we are doing at present.

Both descriptive and analytical types of research are employed to fulfill the objective of research work.

3.1 Research Design

Research design refers to the entire process of planning and carrying out a research study. To carry out the study descriptive, co-relational and analytical research design has been employed. For the purpose of description and conceptualization descriptive and analytical research design is used. However, for the purpose of analyzing the between the variables of stock market development and economic growth, co-relational research design is used. It is also chosen to investigate the causality between stock market indicators and growth indicators.

The study adopted a test of cause in order to analyze the existence of the between Stock market performance and economic growth in Nepal over a twenty-four-year period from the year 1994\95 to2017/18. The reason for this method is that in business, the relationship is often ambiguous and there is therefore, a need to develop some understanding on the relationship under the study so as to better explain, predict and control the variables under study (Cooper & Pamela, 2003)The significance of the study is to assist investors, government and all other stakeholders involved in making decisions on policy directions and predictions on both the stock market and economy using the variables under study.

3.2 Population and Sample

All the units under the scope of research defined by the researcher is population. Population is defined at first but if population is large then researcher is selected the sample to undertake the study. There are many listed companies in Nepal Stock exchange that affect the growth of stock market. Also the increasing number of listed companies will define the major possibilities of Nepalese stock market. Economic indicators like GDP, market capitalization, trading turnover number of listed securities NEPSE index is used as population and companies that are trading its share on NEPSE floor as a sample study. As this study is about the contribution made by the stock market in the economy time period of the study from 1994\1995 to 20017/20018 different companies listed in NEPSE. Judgmental sampling is used for the research because it occurs when element selected the sample are chosen by the judgment of the researcher.

3.3 Sources of Data

The study is based on the secondary data only. As the study is related to the aggregate values of the economy as well as the aggregate values of stock market activities no need for primary data has been felt. The required data are collected on the variables such as Real GDP, market capitalization, trading turnover number of listed securities NEPSE index. The data on the variables such as stock market volatility has been derived by using appropriate relationship. The supplementary data and information have been acquired from various sources like;

- i. Trading reports of NEPSE.
- ii. Annual reports of SEBO/N.
- iii. Economic survey, Fiscal Year 2017/18(Government of Nepal, Ministry of Finance 2019)
- iv. Nepal Rasta Bank's Economic Report.

3.4 Method of Analysis

In order to analyze the correlations between GDP performance and stock performance, we used SPSS software. Quantitative data analysis methods were used in the analysis of this study which included descriptive statistics and inferential statistics. Descriptive statistics included frequencies, measures of central tendencies (mean, median or mode) and measures of dispersion (standard deviation, range and variance. Inferential statistics included correlation, regression and analysis of variance to find out the relationship of the variables. The data was presented by utilizing pie-charts, figures and tables which were not only useful but also effective in exhibiting the results of the research. Graphs and tables were utilized to present the data analysis.

3.4.1 Conceptual Model

Econometrics is a discipline of statistics, specialized for using and developing mathematical and statistical tools for empirical estimation of economic relationships, testing economic theories, making economic predictions, and evaluating government and Business policy. The first known use of the term "econometrics" (in cognate form) was by Polish economist Paweł Ciompa in 1910. Jan Tinbergen is considered by many to be one of the founding fathers of econometrics.

The general econometric model used in the study is as follows: $Y = f(x)$

Where:

$$Y = f(X_1, X_2, X_3, X_4)$$

Y - Gross Domestic Product

X₁- Market capitalization

X₂- Trading turnover

X₃- Number of Listed Securities

X₄- NEPSE index

3.4.2 Empirical Model

An empirical model is based only on data and is used to predict, not explain a system. An empirical model consists of a function that captures the trend of the data. Thus the general econometric model:

$$y = \alpha_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4$$

Where:

Y – Real Gross Domestic Product

α_0 - constant

β_1 - β_4 - Co-efficient

X_1 - Market capitalization

X_2 - Trading turnover

X_3 - Number of Listed Securities

X_4 - NEPSE index

Definition of Variables

Real GDP

Real gross domestic product is a macroeconomic measure of the value of economic output adjusted for price change. This adjustment transfers the money value measure, nominal GDP, into index for quantity of total output.

Market Capitalization

The method of supplying a new company with capital or investment funds is therefore capitalization. Capital means money so capitalization is getting money into a business.

Trading Turnover

The inventory turnover ratio is calculated by dividing the cost of goods sold for a period by the average inventory for that period. Average inventory is used instead of ending inventory because many companies merchandise fluctuated greatly throughout the year

Number of Listed Securities

A listed security is a financial instrument that is traded through NEPSE listing requirements vary by exchange and include minimum stockholder's equity, a minimum share price and a minimum number of shareholders

NEPSE Index

NEPSE represent the short form of Nepal stock exchange and NEPSE index indicates the increase or decrease of total market capitalization of companies' transaction that are listed Nepal stock exchange. This indicates the increase or decrease of overall market activities.

CHAPTER-IV

RESULTS

The main objective of the study is to determine whether stock market performance leads to economic growth in Nepal. To respond to this objective, the study makes the analysis of market capitalization, trading turnover, number of listed securities and NEPSE index with Real Gross domestic product (Real GDP). The collected data are presented in systematic manner and analyzed by using different appropriate tools and techniques.

4.1 Data Presentation and Analysis

Data presentation and analysis forms an integral part of all academic studies, commercial, industrial and marketing activities as well as professional practices. Presentation of data required skill and understanding of data.

Table 4.1.1 Year wise Real GDP, MC, TT, NOLS and NI

Year (Mid July)	Real GDP	Market Capitalization	Trading Turnover	NEPSE Index*	No. of Listed Securities
1994/95	209974	13,872.00	441.6	226	66
1995/96	239388	12,963.00	1,054.30	195.5	79
1996/97	269570	12,295.00	209.9	185.6	89
1997/98	289798	12,698.00	416.2	176.3	95
1998/99	330018	14,289.00	202.6	163.4	101
1999/00	366251	23,508.00	73.8	216.9	107
2000/01	413428	43,123.30	283.7	360.7	110
2001/02	414092	46,349.40	128	348.4	115
2002/03	429699	34,704.00	80.9	227.5	96
2003/04	448654	35,240.00	64.7	204.9	108
2004/05	463165	41,425.00	255.5	222	114
2005/06	480435	61,365.90	198	286.7	125
2006/07	493651	96,763.80	327.9	386.8	134
2007/08	522260	186,301.30	1,432.10	683.9	135
2008/09	542652	366,247.60	2,648.20	963.4	142
2009/10	565759	512,939.10	1,475.20	749.1	159
2010/11	587534	376,871.40	586.4	477.7	176
2011/12	614637	323,484.30	913	362.9	209
2012/13	637771	368,262.10	1,258.50	389.7	216
2013/14	674227	368,262.10	1,258.50	389.7	216
2014/15	694269	1,057,165.80	7,729.20	1,036.10	237
2015/16	695688	989,404.00	5,845.10	961.2	232
2016/17	747107	1,890,130.00	31,655.80	1,718.20	230
2017/18	791144	1,856,829.40	12331.40	158270	208
N	24	24	24	24	24
Mean	496715.46	364353.89	2952.94	521.47	145.79
Standard deviation	164013.97	547858.49	6776.74	437.57	55.02

Source Appendix: I

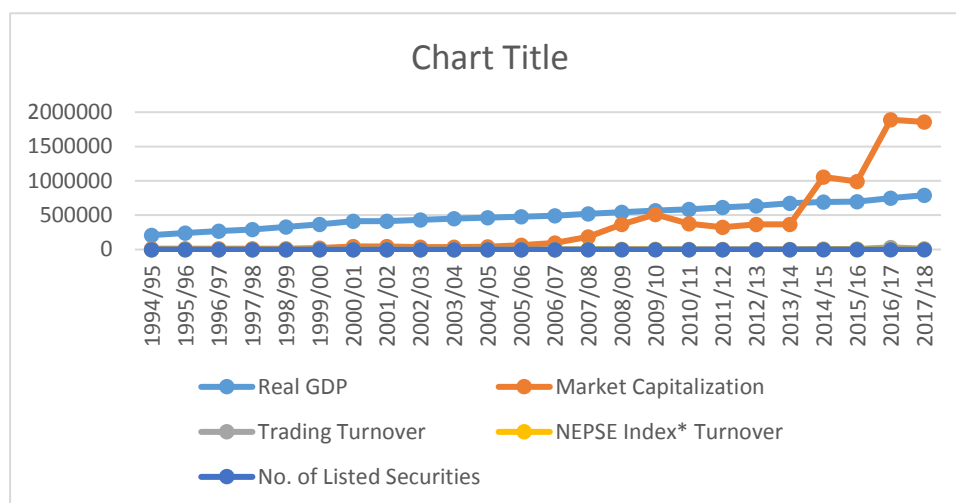
Table 4.1.1 shows that that Real GDP was increased from starting period to ending period of study i.e. Real GDP with 209,974 in 1994/95 to 2017/18 is 791,144. In 2000/01 and 2001/02 Real GDP remained constant and then after it smoothly increased. So the trend of Real GDP in Nepal is growing at satisfactory level.

The market capitalization (MC) is constant throughout 1994/95 to 2005/06 then it slightly increased from the fiscal year 2006/07. MC reached at level of 512,939.10 on 2009/10 then declined for some fiscal years. Again from 2014/15, MC increased in increasing rate and reached at highest point of MC 1,890,130 in 2016/17 with some static position on year 2014/15 to 2015/16. It shows MC is in increasing trend in recent year but remain constant on year 2017/18.

The Trading Turnover Ratio (TT) remains constant throughout 1994/95 to 2007/08 then it is slightly increased from the fiscal year 2008/09. There are some fluctuations on TT until 2016/17. In 2016/17 TT reached at highest point of graph with TT 31,656 but it drastically decreased in 2017/18 with 12,331.40. So it presents a positive sign during study period through the stock market in Nepal except in the year 2017/18.

The No. of Listed securities (NOLS) is slowly increasing regularly from the starting point of the study over the study period. But from 2001/02 to 2002/03, it is decreasing and thereafter it is slightly increasing in increasing rate until 2014/15 reaching highest point of 237. After that it is slightly decreasing in increasing trend. So NOLS presents that the no of companies listed in NEPSE are in increasing rate except from the year 2015/16 to 2017/18.

The NEPSE Index (NI) is slightly decreasing from the year 1994/95 through 1998/99. After that, it is slowly increasing over the study period with some fluctuation in between. From 2001/02 to 2003/04 it is decreasing and thereafter it is slightly increasing until 2008/09. After that it is decreasing in increasing trend until 2011/12. Again after that, it is constant in the period 2012/13 to 2014/15. NEPSE index increased and reached the highest point to 1800 in 2016/17. In the ending period it is slightly decreased. So NI presents a positive sign for the stock market.

Figure 4.1-linegraph showing the Real GDP, MC, TT, NI and NOLS

To clarify the trend of Real GDP, MC, TT, NI and NOLS trend line was drawn. From the figure 4.1 shows that Real GDP is in increasing trends and MC, TT, NI and NOLS is in fluctuation trend.

4.2 Descriptive Statistics

Descriptive statistics, in short, help describe and understand the feature of a specific data set by giving short summaries about the sample and measure of the data. The most recognized types of descriptive statistics are measure of center: the mean, median, and mode, while measures of variability include the standard deviation, variance, and the minimum and maximum variables. These two measures use graphs, table and general discussion to help people understand the meaning of the analyzed data.

Presentation of Minimum value, Maximum Value, mean, Standard Deviation and Coefficient of Variation of the selected indicators of stock market development and economic growth are presented on table 4.1.

Table 4.2.1 Descriptive Statistics

	N	Minimum	Maximum	Mean	Standard Deviation
Real GDP	24	5.32	5.90	5.67	0.16
MC	24	4.09	6.28	5.05	0.74
TT	24	1.81	4.50	2.84	0.72
NOLS	24	1.82	2.37	2.13	0.16
NI	24	2.21	3.24	2.60	0.31

Where,

MC=Market Capitalization

TT=Trading Turnover

NOLS=Number of listed Securities

NI= NEPSE index

Table 4.2.1 present the clear picture of summary statistics on economic growth and stock market development indicator. The data include the period from 1994 to 2018 of Nepal. The table shows that minimum value of Real GDP, Market capitalization, trading turnover, Number of listed securities and NEPSE index are 5.32, 4.09, 1.81, 1.82 and 2.21 respectively and maximum of GDP, MC, TT, NOLC and NI are 5.90, 6.28, 4.50, 2.37 and 3.24 respectively.

The arithmetic mean of Real gross domestic product, Market capitalization, Trading Turnover, No. of listed securities, and NEPSE index are 5.67, 5.05, 2.84, 2.13 and 2.60 respectively. All the data are presented in rupees, NEPSE index in points and NOLC is in number.

The standard deviation of gross domestic product, Market capitalization, Trading Turnover, No. of listed companies, and NEPSE index are 0.16, .74, 0.72, 0.16 and 0.31 respectively. Market capitalizations have higher standard deviation than other. There is high risk in stock market.

4.3 Correlation Analysis

Correlation is a statistical measure that indicates the extent to which two or more variables fluctuate together. A positive correlation indicates the extent to which those variables increase or decrease in parallel, a negative correlation indicates the extent to which one variable increase as other decrease.

The dependent variables Real GDP, Market capitalization, trading turnover, number of listed securities and NEPSE index for the of twenty-four from 1994\1995 to 2017\2018.

Table 4.3.1 Pearson's correlation matrix for the dependent and independent variables during the period 1994 to 2017

		Real GDP	MC	TT	NOLS	NI
Real GDP	Correlation	1	0.930**	0.609**	0.945**	0.790**
	Sig. (2-tailed)		0.000	0.002	0.000	0.000
	N	24	24	24	24	24
MC	Correlation	0.930**	1	0.821**	0.938**	0.927**
	Sig. (2-tailed)	0.000		0.000	0.000	0.000
	N	24	24	24	24	24
Trading Turnover	Correlation	0.609**	0.821**	1	0.712**	0.870**
	Sig. (2-tailed)	0.002	0.000		0.000	0.000
	N	24	24	24	24	24
No. of Listed Companies	Correlation	0.945**	0.938**	0.712**	1	.774**
	Sig. (2-tailed)	0.000	0.000	0.000		0.000
	N	24	24	24	24	24
NEPSE Index	Correlation	0.790**	.0927**	0.870**	0.774**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	24	24	24	24	24

** . Correlation is significant at the 0.01 level (2-tailed).

Source: Appendix III

Table 4.3.1 shows that Pearson correlation coefficient between different dependent and independent variables. Real GDP, Market capitalization, trading turnover, Number of listed of securities and NEPSE index are defined in table 4.3.1.the observation form the period 1994 to 2018.

The correlation coefficient between MC and Real GDP is 0.930. The correlation of MC with Real GDP is meaningful. In the context of this significant relationship, few inferences can be made. First, as the MC is the product of market prices of shares multiplied by the outstanding number of shares and if the firms are performing strongly in a bull market, it passes an optimistic message to the general investors who tend to invest more in the stock market firms. Though the correlations of stock market indicator MC with the Real GDP is high degree of positive correlation. The result of

this is that market capitalization is significantly and positively correlated with gross domestic product.

Another indicator of stock market development is trading turnover (TT) which equals to the trading value of the stocks in domestic share market divided by market capitalization. It measures trading relative to the size of the market. A high turnover is the indicator of the more liquid market. The correlation coefficient between TT and Real GDP is 0.609, though the correlations of stock market liquidity indicator TT with Real GDP is positive correlated. Which shows both variable changes in same direction an over the period.

Some other indicators of stock market are also related to the economic growth indicator. The No of Listed Securities (NOLS), which is equal to the number of companies listing into the stock market (NEPSE) for trading their securities through the market, has significant correlations with Real GDP. The correlation coefficient between NOLS and Real GDP is 0.945. This relation shows higher NOLS is regarded as the good indicator of stock market that contributes positively towards the economy. If more companies are involved in the stock market, then Real GDP will also increase. Therefore, there is high degree of positive correlation.

The relationship between the NEPSE Index (NI) and Real GDP is positive and significant which indicates towards the high positive relation between stock market index and growth. For instance, the coefficient of correlation between NI and Real GDP is 0.790. This relation shows that higher NI is regarded as the good indicator of stock market that contributes positively towards the economy. So, higher the NI in the stock market, higher will be the Real GDP. Therefore, high positive correlation is certain.

So stock market efficiency is closely related to the efficiency of the economy. Therefore, the strong and positive relationship exist between the stock market indicators and the indicators of economic growth is just as respectable and acceptable because they are all positively related with Real GDP.

4.4 Regression Analysis

For the purpose of investigating the relation between stock market indicators and economics growth indicator have been run. The variables that enter into the regression are Real GDP, Market capitalization, trading turnover, Number of listed securities and NEPSE index.

Regression results are found through the Ordinary Least Square (OLS) technique. Results presented regression analysis of economic growth on stock market development in Nepal.

Table 4.4.1: Analysis of Regression

Model		Coefficients	Standard Error	t stat	P-value
1	(Constant)	3.88	0.27	14.46	0.00
	MC	0.12	0.07	1.70	0.11
	TT	-0.10	0.02	-9.42	0.00
	NOLC	0.54	0.19	2.84	0.01
	NI	0.11	0.10	1.08	0.29

Source: Appendix III

It shows the coefficients of the independent variables. The regression model can be written mathematically as:

$$\text{Real GDP} = 3.88 + 0.12X_1 + (-0.10X_2) + 0.54X_3 + 0.11X_4$$

Coefficient of regression of Real GDP on MC is positive i.e. 0.12. While determining Real GDP, the impact of MC is positive that shows increase in MC leads to increase in Real GDP. This regression of coefficient has 0.07 as SE, which measures the variability of the observed values around the fitted line of regression. This coefficient's t-statistic is 1.7 and p-value is 0.11. So, t-statistic is significant and p-value is not significant at 5% significance level.

Coefficient of regression Real GDP on TT is negative with -0.10. While determining Real GDP, the impact of TT is negative that shows that the increase in TT leads to decrease in Real GDP. This regression coefficient has 0.02 as SE, which measures the variability of the observed values around the fitted line of regression. This coefficient t-statistic is -9.42 and p-value is 0.00. So, t-statistic is not significant and p-value is significant at 5% significance level.

Coefficient of regression Real GDP on NOLS is positive i.e. 0.54 while determining Real GDP its impact is positive that shows increase in NOLS leads to increase in

Real GDP. This regression of coefficient has 0.19 as SE, which measures the variability of the observed values around the fitted line of regression. This coefficient's t-statistic is 2.84 and p-value is 0.01. So, t-statistic is not significant and p-value is significant at 5% significance level.

Coefficient of regression Real GDP on NI is positive i.e. 0.11. NI has positive impact on Real GDP that shows increase in NOLS leads to increase in Real GDP. This regression of Coefficient has 0.10 as SE, which measures the variability of the observed values around the fitted line of regression. This coefficient's t-statistic is 1.08 and p-value is 0.29. So, t-statistic is significant and p-value is not significant at 5% significance level.

Table 4.4.2 Significance of the Model

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.979	0.96	0.95	0.04

Source Appendix: III

Table 4.4.2 shows $R^2 = 0.95$. This means that the model using stock market variable explain 95% of the variability of economic growth. We can therefore say that Stock market variable has a large bearing on economic growth.

Table 4.4.3: ANOVA Table

Model	Sum of Squares	df	Mean Square	F	Sig.	
1	Regression	0.56	4.00	0.14	111.9	0.000 ^b
	n				2	
	Residual	0.02	19.0	0.00		
			0			
	Total	0.58	23.0			
			0			

a. Dependent Variable: Real GDP

b. Predictors: (Constant), NEPSE Index, No. of Listed securities, Trading Turnover, Market Capitalization.

Source: Appendix III

ANOVA (analysis of variance) is used to report quantities related to the overall explanatory power and significance of the regression model. Since p-value is less than 0.05 (critical level of significance) it is concluded that there is significant relationship between economic growth and stock market.

Table 4.4.3 shows F- value of 111.9, with a corresponding p-value of 0.000, which means that the overall fitness of the model is well justified. This means that the model using stock markets to measure economic growth can be relied on to explain the variability in economic growth. This drives to the call on the stakeholders to increase their attempts to develop the stock market performance. In general, the regression analysis results revealed that the stock market performance have relation to economic growth

4.5 Major Finding of the Study

In this study, all the research data are secondary with the help of the secondary with the help of the secondary data; the researcher calculated the value related ship between stock market and economic growth.

- i. The mean of Real GDP, MC, TT, NOLS, NI are 5.67, 5.05, 2.84, 2.13 and 2.60 respectively. The standard deviation 0.16, 0.74, 0.72, 0.16 and 0.31 respectively. Mc have higher standard deviation which indicated there is higher risk than other dependent variable.
- ii. The trend of Real GDP in Nepal is growing at satisfactory level in period of study. MC and TT remain constant and some fluctuation seen starting period of study. Then MC and TT both are on increasing trend in recent years.
- iii. The correlation coefficient of market capitalization (MC) with GDP is 0.930. The coefficient is positive and significant.
- iv. The correlation coefficient of Trading Turnover (TT) with GDP is 0.609. The coefficient is positive and significant.
- v. The correlation coefficient of No. of Listed Companies (NOLS), the major indicator of stock market with GDP is 0.945. The coefficient is positive and significant.

- vi. The correlation coefficient of NEPSE Index (NI), the composite indicator of secondary stock market with Real GDP is 0.790. The coefficient is positive and significant.
- vii. The estimated coefficients of Real GDP on TT have negative and unexpected signs. This is -0.10. The value of t-statistics for MC is insignificant at 5% level of significance which is unexpected part of the study.
- viii. The estimated coefficients of MC, NOLS and NI on Real GDP have positive and expected signs. Which are 0.12, 0.54 and 0.11 respectively. The values of t-statistics of MC and NI are significant at 5% level of significance. While NOLS is insignificant

CHAPTER V

CONCLUSION

This chapter is divided into three parts. The first parts deal the discussion of the discussion of the research, second part deals the conclusion of the research and third with the implication of the research.

5.1 Discussion

The study aimed to determine of stock market development and growth of the economy in Nepal as measured by the Real GDP. Out of stock market variables, the selected variables are Market capitalization, trading turnover, No. of listed securities and NEPSE are used for the study. The trading of shares of stocks take places in the stock market, on one hand, it directly provides liquidity to the investors who provide funds for the establishment of the productive enterprises, and on the other hand, encourage savers to save more and enterprise economic units to start productive ventures. To carry out the study descriptive and co-relational research design has been employed. Only Secondary data are used for the study as a period of 1994/95 to 2017/18 (Mid July). The study was carried out using the regression analysis technique.

The correlation coefficient of all explanatory variables: market capitalization (MC), Trading Turnover (TT), No. of Listed securities (NOLS) and NEPSE Index (NI) are all significant and positive with 0.930,0.609, 0.945,0.790 respectively on Dependent variable –Real GDP. The findings from the OLS regression, one variable TT was negatively signed with -0.10 respectively. This proves that there is negative impact on the growth of the economy with TT. Conversely, the variables MC, NOLS& NI were positively signed with 0.12, 0.54 and 0.11 respectively. Implying positive effects & statistically significant at 5% level with the growth of the economy

In Nepalese's economy, there is significant relation between performance of Real GDP and the stock market indicators with existing relation between Real GDP growth and performance of the stock market. This drives to the call on the stakeholders to increase their attempts to develop the stock market performance. In general, the regression analysis results revealed that the stock market performance have significant relation with economic growth as measured by Real GDP.

The estimated coefficient of Real GDP on MC has positive with expected signs. The casual relation tells us that, with the increase in the size of the market as measured by MC, the size of the economy as measured by Real GDP also increases. This result supports by the study(Bayar, Kaya, & Yildrlm, 2014) which concluded there is significant relationship between Real GDP and MC

The estimated coefficient of Real GDP on TT also has negative with unexpected signs. The casual relation tells that with the increase in the size of the market as measured by TT, the size of the economy as measured by Real GDP also decreases. This result is supported by the study of (Sindurakar, 2004) which concluded correlation between economic growths and trading turnover is unexpected and insignificant.

The estimated coefficient of Real GDP on NOLS has positive sign. The casual relation tells that with the increase in the size of the market as measured by NOLS, the size of the economy as measured by Real GDP also increases. This result supported by study of (Kolapo & Adaramola, 2012) which showed us that the positive impact; the capital market plays on the economic growth of the country.

The estimated coefficients of Real GDP on NI have positive and expected signs. The casual relation tells that with the increase in the size of the market as measured by NI, the size of the economy as measured by Real GDP, also increases. This result supports by study of (Levine & Zervos, 1996). The result suggests a comparatively strong link between the functioning of share index and economic growth.

5.2 Conclusion

In this research it investigates the stock market development and economics growth in Nepal using data for the period 1994\95 to 2017\18and the objective of this study is trend of stock market development of Nepal trend of Real GDP, MC, TT, NOLS and NI macro-economic variables and effect of economic growth of Nepal. The research found that Nepalese economy is in fluctuating stitution.MC is decreased in 2017/18. It is the negative sign for the stock market development.

In the study some of the coefficients are only negative and most of the coefficient are positive, so the relationship between stock market and economic growth in Nepal is

satisfactory. In Regression analysis most of the values are positive, which signs are expected and some of the values have negative sign which is unexpected part of the study. From the result of the analysis conducted by the study and hypothesis tested, it was concluded that stock market development has a positive relationship on economic development in Nepal. This also means that stock market has a direct relationship in economic development in Nepal.

At last but not least a few very interesting inferences can be made from this research.

5.3 Implications

The study has examined the stock market development and economic growth in Nepal. There remains enough ground scope in terms of data, model and methodology for studies in days to come. The study remains enough ground for further studies. On the basis of above findings of the study, following implications can be drawn out:

- i. The Securities Board of Nepal has the responsibility of regulating the entire securities market in Nepal. To make the Board effective, the number of staff should be adequate and properly trained in all aspects of securities market. It should bring new and emerging stock market regulatory regimes to match international standards.
- ii. Government should create a favorable environment for the foreign investor.
- iii. Market makers and investment bankers should be encouraged to participate in the stock market.
- iv. The stability of the Nepalese political and economic system enhanced the investment environment for public sector, private sector and Multinational companies to invest in Nepal. This will definitely increase the market capitalization and in turn it increases the Real GDP.
- v. Timely and regular disclosure of the information should be made necessary for the participating firms. Provisions should be made so as to necessitate the organizations to disclose their financial data at least quarterly.
- vi. Further study can be conducted in the area to explore more about stock market development and economic growth in Nepal by adding more variables like saving, inflation and fixed capital formation by the employee and other statistical tools and by increasing the period of the study.

- vii. This study is based only secondary data. Thus, the further study can make much more comprehensive by using primary source such as, survey, questionnaire, special group discussion etc. The qualitative phenomena can be considered for the research in future.

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APPENDIX -I

Indicators of Stock Market & Economic Growth

In Million Rupees

Year(Mid July)	Real GDP	Market Capitalization	Trading Turnover	NEPSE Index*	No. of Listed Securities
1994/95	209974	13,872.00	441.6	226	66
1995/96	239388	12,963.00	1,054.30	195.5	79
1996/97	269570	12,295.00	209.9	185.6	89
1997/98	289798	12,698.00	416.2	176.3	95
1998/99	330018	14,289.00	202.6	163.4	101
1999/00	366251	23,508.00	73.8	216.9	107
2000/01	413428	43,123.30	283.7	360.7	110
2001/02	414092	46,349.40	128	348.4	115
2002/03	429699	34,704.00	80.9	227.5	96
2003/04	448654	35,240.00	64.7	204.9	108
2004/05	463165	41,425.00	255.5	222	114
2005/06	480435	61,365.90	198	286.7	125
2006/07	493651	96,763.80	327.9	386.8	134
2007/08	522260	186,301.30	1,432.10	683.9	135
2008/09	542652	366,247.60	2,648.20	963.4	142
2009/10	565759	512,939.10	1,475.20	749.1	159
2010/11	587534	376,871.40	586.4	477.7	176
2011/12	614637	323,484.30	913	362.9	209
2012/13	637771	368,262.10	1,258.50	389.7	216
2013/14	674227	368,262.10	1,258.50	389.7	216
2014/15	694269	1,057,165.80	7,729.20	1,036.10	237
2015/16	695688	989,404.00	5,845.10	961.2	232
2016/17	747107	1,890,130.00	31,655.80	1,718.20	230
2017/18	791144	1,856,829.40	12,331.40	1,582.70	208

Source: NEPSE, Nepal Rasta bank, Macroeconomic Indicators of Nepal

APPENDIX – II

Log Values of Real GDP and Stock Market Indicators

Year (Mid July)	Real GDP	Market Capitalization	Trading Turnover	No. of listed Securities	NEPSE Index
1994/95	5.32	4.14	2.65	1.82	2.35
1995/96	5.38	4.11	3.02	1.9	2.29
1996/97	5.43	4.09	2.32	1.95	2.27
1997/98	5.46	4.1	2.62	1.98	2.25
1998/99	5.52	4.16	2.31	2	2.21
1999/00	5.56	4.37	1.87	2.03	2.34
2000/01	5.62	4.63	2.45	2.04	2.56
2001/02	5.62	4.67	2.11	2.06	2.54
2002/03	5.63	4.54	1.91	1.98	2.36
2003/04	5.65	4.55	1.81	2.03	2.31
2004/05	5.67	4.62	2.41	2.06	2.35
2005/06	5.68	4.79	2.3	2.1	2.46
2006/07	5.69	4.99	2.52	2.13	2.59
2007/08	5.72	5.27	3.16	2.13	2.84
2008/09	5.73	5.56	3.42	2.15	2.98
2009/10	5.75	5.71	3.17	2.2	2.87
2010/11	5.77	5.58	2.77	2.25	2.68
2011/12	5.79	5.51	2.96	2.32	2.56
2012/13	5.8	5.57	3.1	2.33	2.59
2013/14	5.83	5.57	3.1	2.33	2.59
2014/15	5.84	6.02	3.89	2.37	3.02
2015/16	5.84	6	3.77	2.37	2.98
2016/17	5.87	6.28	4.5	2.36	3.24
2017/18	5.9	6.27	4.09	2.32	3.2

APPENDIX III

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Real_GDP	24	5.32	5.90	5.6696	.15887
MC	24	4.09	6.28	5.0458	.73718
TT	24	1.81	4.50	2.8429	.71585
NOLS	24	1.82	2.37	2.1338	.16442
NI	24	2.21	3.24	2.6013	.31014

Correlations

		Real_GDP	MC	TT	NOLS	NI
Real_GDP	Pearson Correlation	1	.929**	.608**	.944**	.790**
	Sig. (2-tailed)		.000	.002	.000	.000
	N	24	24	24	24	24
MC	Pearson Correlation	.929**	1	.821**	.939**	.926**
	Sig. (2-tailed)	.000		.000	.000	.000
	N	24	24	24	24	24
TT	Pearson Correlation	.608**	.821**	1	.714**	.870**
	Sig. (2-tailed)	.002	.000		.000	.000
	N	24	24	24	24	24
NOLS	Pearson Correlation	.944**	.939**	.714**	1	.775**
	Sig. (2-tailed)	.000	.000	.000		.000
	N	24	24	24	24	24
NI	Pearson Correlation	.790**	.926**	.870**	.775**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	24	24	24	24	24

** . Correlation is significant at the 0.01 level (2-tailed).

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.979 ^a	.957	.949	.03604

a. Predictors: (Constant), NI, NOLS, TT, MC

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.556	4	.139	106.973	.000 ^b
	Residual	.025	19	.001		
	Total	.580	23			

a. Dependent Variable: Real_GDP

b. Predictors: (Constant), NI, NOLS, TT, MC

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
	(Constant)	3.870	.272		14.207	.000
1	MC	.118	.072	.548	1.636	.118
	TT	-.100	.022	-.452	-4.648	.000
	NOLS	.553	.194	.572	2.846	.010
	NI	.119	.105	.232	1.133	.271

a. Dependent Variable: Real_GDP