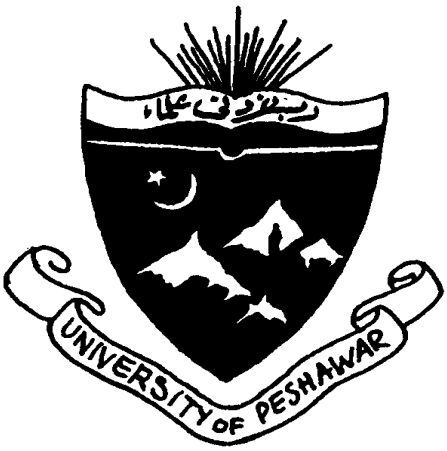
FOREIGN CAPITAL INFLOWS AND ITS IMPACT ON MACROECONOMIC VARIABLES IN PAKISTAN 1981-2010



BY

Safia Gul

Ph.D

To

Prof; Dr. Naeem-u-Rehman Khattak

Dean Faculty of Social Sciences

DEPARTMENT OF ECONOMICS

UNIVERSITY OF PESHAWAR

Session 2009-10

Dedic ation

TO

My Beloved Parents for Their Long Loving Support, Wishes, Patience, Understanding and Prayers,

Who

Candle Into My Soul the Flame of Truth

And Trustworthiness

And to

My Honorable Teachers

Who

Helped Me Wherever and Whenever I Faced Difficulty in My Study

And to

My Whole Family Who Encouraged/Supported me to Feel the Light of this Day.

Abstract

Foreign capital inflows (FCI) help under-developing countries to cover the gap of twin deficits in current and capital accounts by increasing the size of their Gross Domestic Products (GDP), improving the quality and quantity of technological domestic means of production, creation of employment, transformation of industrial base for exports orientation and imports substitution to gain favorable Terms of Trade (TOT) and Balance of Payments (BOP) position by changing the composition of current and capital accounts. Pakistan has strong potential if the determinants involved in the transformation of the agrarian structure of the economy to mechanized industrialization improve to induce more foreign investors in capital intensive projects by creating financial co-relation with domestic investors as the country has low access in the international resource markets of invisible items. Foreign Inflows of portfolio investments direct enhances foreign exchange reserves. Aim of this study to explain various factors involved to have more FCI and its impact on macroeconomic indicators like, Growth, Domestic Investment, Inflation and Trade Balance. Trend and Regression Analysis applied to evaluate thirty years secondary data collected from various sources. This Study focused on two Determinants of FCI i.e. 'Foreign Direct Investment' (FDI) and 'Foreign Portfolio Investment' (FPI). For checking interdependency of variables in six separate models are specified taking different macro-economic variables. Before analyzing the Time-Series data, Augmented Ducky Fuller test (ADFT) used to check stationarity of the data of those variables in models. For checking Non-Stationary data by Unit-Root showed that all the variables are not stationary at level but stationary at the first difference. For the analysis of variation in variables and finding long-run relationship, "Johansen's-Co-integration-Test" applied. For detection of short-run impacts of FCI on the selected variables in models "Vector-Error-Correction-Model" (VECM) used. Moreover, for examination of the inter relationship in the FCI with economic growth, domestic investment, consumption and inflation; Granger Causality Test

(GCT) applied. For deriving the results, SPSS and E-views utilized. Major findings of the study showed that GDP growth rate positively and significantly affects (0.147) FCI and negatively affected (-0.033) by the inflation rate in the country. FCI affected positively (0.195) by the interest rate. Exchange rate is positively related (0.027) to the FCI. Domestic investment affects positively (0.545) FCI. GDP growth rate positively affects (0.157) FDI. FDI negatively affected (-0.001) by the inflation rate of the country. FDI is affected positively (0.015) by the interest rate of the country. Exchange rate positively related (0.030) FDI. Domestic investment affects positively (0.295) FDI. Exports affect FCI positively (0.008). GDP growth rate positively affected (1.083) by FDI in the country. GDP growth rate positively affected (0.021) by the persistent rise in the general price level (inflation) of economy. Gross-Domestic-Product (GDP) growth rate affected negatively (-0.080) by the interest rate of the country. FDI positively affects (1.479) the domestic investment of the country. Domestic investment positively affected (0.284) by FCIs. Inflation rate is positively affected (0.157) by the foreign direct investment to the country. FCI affect the inflation rate positively (0.467). FCIs affect the balance of trade negatively (-0.127). The coefficient is significant at 5% levels of significance. Balance of trade positively affected (0.127) by the GDP growth rate of the country. The balance of trade affected positively (0.237) by the relative prices of imports. Balance of trade negatively affected (-0.132) by the relative prices of exports. Foreign exchange reserves and exchange rate affects the balance of trade negatively. Similarly, as the currency depreciates, the exports become less expensive and hence the demand for exports increases in the international markets. Increase in exports lead to improve balance of trade. Incentives should be given to domestic investors to boost GDP and exports. The study revealed that inflation rate; imports volume affects the FCI negatively and has insignificant impact. So the government should control inflation through monetary/fiscal policy and reduce the imports of un-necessary items through restrictions or imports substitution and export orientation.

Acknowledgements

First and the foremost, I am thankful to Allah, the Almighty, for bestowing upon me the potential for completing this research.

A collective effort of a great number of people belonging to various spheres of life rendered valuable support and facilitated my task considerably by the grace and considerateness of their friendly cooperation. I feel pleasure to place on record my deep sense of gratitude and indebtedness to my honorable supervisor, Prof. Dr. Naeem-ur-Rehman Khattak Department of Economics, University of Peshawar and Dean Faculty of Social Sciences for his critical insight, consistent advice, technical guidance, personal interest and supervision despite his tight schedule of engagements.

My debt to my family is immeasurable, who helped me out at every step of this study from data collection to its completion. Indispensable to the entire study was the support of Dr. Amjad Amin, Assistant Professor, Department of Economics, University of Peshawar, who has been unfailingly helpful to me at all the times. In addition, I am thankful to the Chairman Prof. Dr. Mohammad Naeem, of Economics Department and Dr. Zilakat for their valuable guidance and support. I must not forget my friends who have always been very supportive and encouraging throughout my study.

Safia Gul

List of Contents

List of Tables

List of Graphs

ACRONMYS

FCI	Foreign Capital Inflow
GOP	Government of Pakistan
GDP	Gross Domestic Product
FDI	Foreign Direct Investment
FPI	Foreign Port Folios Investments
VECM	Vector Error Correction Model
LDC	Least developed Countries
BOP	Balance of Payments
ODA	Official Development Assistance
JCT	Johansen Co-Integration Test
GCT	Granger Causality Test
GMM	Generalized Method of Moments
OLS	Ordinary-Least-Square
ARDL	Auto-Regressive-Distribution-Lag
MNC	Multi-National Corporations
GDS	Gross Domestic Savings
GNP	Gross National Product
FII's	Foreign Intermediaries Investments
FIML	Forecasting-Identification-Maximum-Likely-Hood"
2SLS	Two-Stage-Least-Square
3SLS	Three-Stage-Least-Square
TOT	Terms of Trade
ADFT	Augmented Dickey Fuller Test
ECM	Error Correction Mechanism
INF	Inflation
GDPG	Gross Domestic Product Growth Rate
M	Money Supply
DI	Domestic Investments
DS	Domestic Savings

XD	Demand for Exports
MD	Demand for Imports
IADB	Inter-American Development Bank
IMF	International Monetary Fund
WB	World Bank
RPM	Relative Price of Import
RPX	Relative Price of Exports
SIZ's	Special industrial Zones
NIE's	Newly Industrialized Economies
PPP	Pakistan Perspective Plane
EPZs	Export Promotion Zones
IFC	International Financial Corporation
FER	Foreign Exchange Reserves
ER	Exchange Rate of Rupee against per unit of $
KYE	Know Your Clients
IBFT	Inter Bank Fund Transfer
NCCPL	National Clearing Company of Pakistan Limited
TFC	Term Finance Certificate
PMEX	Pakistan Mercantile Exchange Limited
S&ECP	Security & Exchange Commission of Pakistan
IFIs	International Financial Institutions
AMCs	Asset Management Companies
BATS	Bonds Automated Trading System
BPA	Bonds Pricing Agencies
CVT	Capital Value Tax
CGT	Capital Gain Tax
IFIs	International Financial Institutions
PSDP	Public Sector Development Program

CHAPTER 1

INTRODUCTION

1.1 Background of the study

Domestic saving potential of the economy is key indicator for capital formation and creating employment opportunities, increasing per capita income, saving/investment ratios and consumption level. Most of the developing countries are short of domestic savings, low investments and capital formation process and intern these countries have the shortage of foreign capital inflow due to low productivity level, orthodox industrial base, wide gap between export and imports and deficits in their current and capital accounts. They even have failed to meet their domestic demand for consumption and capital goods. Various forms of Foreign financial assets inflow helps them to fill the wide bridge between host economy potential savings and investments to enhance their own means to produced best quality of exportable surplus in all sectors of the economy. All under developing economies doing utmost struggle to divert the channels of most favorable forms of foreign capital to get the benefits of financial globalization for their sustainable economic developmental growth (Fatima et.al, 2012). In the previous studies, it concluded that FCI enhances growth of under developed countries (Raza, 2011, Mottaleb, D. K. A. (2007), Ayanwale, A. B. (2007). FCI inflows enable the countries to achieve the desired investment even more contribution to buy and transfer advanced modern technological implements to innovate domestic state of the main sectors of agriculture and industry of the under developing countries. It evident from some literature studies that the effect of international financial movement across the boundaries in all less developing countries is not similar in its various dimensions (characteristics wise, and various determining factors wise). It differs from country to country, in some countries its effect is negative and adversely affected various macro-economic indicators. The main two forms of foreign financial capital inflow for the host economy are 'Public Foreign Investment' (PFI), and 'Private Foreign Investment'. 'Public Foreign

Investment' (PFI) further divided in to 'Foreign Direct Investment' (FDI) and 'Foreign Portfolio Investment' (FPI). Foreign Direct Investment (FDI) is the government financial resources inflow with the transfer of technical know-how, advanced capital equipment to the residents countries eventually help, to enhance domestic production to fulfill not only domestic demand but also enable them to produce exportable surplus as well and contribute to the process of economic development. Foreign Portfolios flow of investment which consists of the Foreign Investor's Purchases of Non-controlling Shares in the Foreign Companies, Government Bonds and Short-Term Securities for speculative motives due to the various responsible factors in its determination process. But the exact factors required for the increasing inflow of public and private foreign investment are difficult to be known. Similarly, it is also debatable in some studies that which factors clearly involved to determine the exact relationship between the Foreign Capital Inflow (FCI) and economic growth of under develop countries. Thus the role of FCIs is an ambiguous and debatable topic in the literature of growth and economic development (Mohey-ud-Din, 2006). The endogenous growth theories and the neoclassical growth theories emphasizes that Foreign Capital Inflow is the main promoter of the modernization hypothesis of economic growth in the host country which finance the gap between the domestic savings and investment in turn create competitive environment by transferring new modern implements and technological equipment which is called an engine of growth to cure all the failures on national and international front of the domestic economies. Overcoming the failures of developmental process to accelerate the speed of macro-economic indicators and putting the economy on the long term track of growth and development (Raza, 2011). Proper utilization of FCI for establishing the high level technology industrial base to extract valuable minerals, power-generation to overcome the shortage of energy crises and construction of infrastructure especially highways, motorways, dry-ports, airports, Dams, and installation of Tub-wells to supplement scanty rain falls for the development of agricultural and services. Now-a-days, least developed economies have stiff competition in the efforts to divert maximum amount of the international flow of different forms of physical and financial resources

and for this purpose they try various measures and adopt attractive promotional policies like establishing liberal trade zones, providing cheap labor and tax free regimes. Offering different strong incentives to the foreign investors to accelerate GDP growth rates above 6% (as Harrod-Domar model suggest) in the country, saving and investment rates must be 18% to 20%, for which FCI inflow is indispensable. Due to low per capita income of Pakistan large number of population are living below 30% poverty line and they have no access even to basic necessities of life due to unemployment. This leads to low ratio of savings/investment in Pakistan and like other low developing countries its economic growth decreases rapidly. So as the country is facing internal and external debt crises especially it augmented in the last decades. Different Studies defend the requirement of Foreign Capital Inflows (FCI) referencing the "Two-Gap Model", which targeting low saving and investment responsible for that twin deficit in the Balance of Payment current/capital accounts (the major argument in favor of FCI). Thus, foreign financial assets flow is now consider the basic player to gain sustainable progress of the county and expediting the process of growth and development by enabling the domestic economy to generate more additional savings and flourish its main macro-economic indicators in the result of that high growth rate. With the passage of time continues flow of foreign physical and financial assets cover the gap in its deficits. The country gains self-sustainability and pace of growth and development accelerated. Eventually, the financial assistance accompanied by the technical assistance like transferring highly skilled workers for the economic utilization of FCI's, which are indispensable in Labor-Gap-Filling accompanied to fill the gap in the process of foreign financial capital formation and further to cover saving investment gap in the under develop economies. Determination of Foreign Capital Inflow would be completely depending by the absorptive capacity of the size of host economy and conditionality's offered by that recipient country. The largest recipient of the Foreign Direct Investment (FDI) in Least Developed Countries, are East-Asian countries and Africa because of their high absorptive capacity. Turkey received 6.9 % of its total GDP in 2010, South Africa 6.6 %, 6.2 % received by Brazil, 2.6 % Indonesia, and 1.9 % in South Korea. Economics

development of the country requires more technical human capital, financial and other physical assistance in the form of Foreign Capital Inflow as it facing terrorism problem damaging the investment environment of all sectors and other infrastructure of the economy. Pakistan have some other serious problems also, which affected Foreign Capital Inflow to the economy in the past like bad governance, shake confidence of the foreign investors, political instability corrupt democratic governments. Foreign direct investment from Russia and China played a vital role to develop the sector of Telecommunications, Automobile, and Heavy Mechanical Complex (HMC). But it fell down from $5.6 billion to $1.2 billion from International Monetary Fund, WB, Asian Development Bank and Islamic Development Bank (Shah, 2012). Flow of foreign financial assets some time affect general price level and surge inflation in the host economy by increasing employment opportunities, per-capita-income, saving /investment/ capital formation and consumption levels, enhancing domestic demands for goods/services, crowding out domestic investment via Foreign Capital Inflows. It again generates inflation via the channels of importable determinants also. Contrary to it, crowding in domestic investment affects foreign capital inflow increase exports in turn lead to reduce rate of inflation. Balance of payments can be improved by the flow of foreign capital by transformation of industrial base and improving terms of trade from agrarian to manufactured goods and balances of current and capital accounts could be improved to make it surplus. Some studies revealed that if foreign financial and physical resources are used in the industries for import substitution, balance of trade of a country will deteriorate as the host country's resources will be held by the foreign investors and in future, the absence of proper policy implementation will shake the macro-economic indicators, but still there is wide gap between the domestic savings /investment created down ward trend in Gross Domestic Product by variation in growth rates from 3% to 6% with high gap in the accounts balances and budgetary deficit. Benefits of FCI are consists of transfer of modern technology, technical know-how and skilled personals, training facilities, and FPI improves direct financing of capital inturn improve stock market indicators. FDI and FPI were Rs.91180.92 million and Rs.9130.05 million

respectively in 2004-05. It decreased to Rs.32307.64 million and Rs.1207.21 million respectively during 2007-08. Size of the market economy was 5.6% during 1990-91 fell down to 1.8% during 2000-2001.The general price level in that period was 12.66% came down to 4.41 % and again rose to 12% during 2007-08. In the same manner gap in trade balances raised to Rs.1315434 million during 2007-08 (Pakistan Economic Survey 2009-2010). In April, 2013 FDI increased to59.6 million US$ with 29.7% growth rate, while FPI was the main contributor (80.4%) of FDI (Pakistan Economic Survey 2012-13). Financial globalization diverted international capital flow towards the developing countries in the last decade. Still no remarkable sustainable growth rate has been achieved in the history of FCI and downward trend has been exhibited in the Socio-economic indicators of Pakistan as result of facing tough competition in the international financial market ballooning foreign debt crises and gap in current balances.

1.2 Problem Statement

Having the problem of twin deficit in current/capital accounts, mainly due to high imports and low exports, it is the dire need of the day to have more access to international invisible financial resources markets. Country has strong potential if the determinants factors involved in the transformation of the agrarian structure of the economy to mechanized industrialization improved to induce foreign investors to tackle initiatives for comprehensive efforts to do investments in major capital intensive projects. It creates financial co-relation, diversifying the flow of financial assets towards that countries having more absorptive capacity with the prospects of high Marginal Efficiency of Capital (MEC) and making the world global financial village by reaping its benefits. Foreign Inflow of portfolios investment direct and indirect to Least Developed Countries enables their economies highly more absorptive with the passage of time by improving its determining factors. Thus aim of this study is to explain various factors involved to have more of Foreign Capital Inflows in the global world competition and its possible impact on some macroeconomic indicators like, Growth, Domestic Investment, Inflation and Trade Balance in the economy. The study will help researchers and government's policy makers.

1.3 Objectives of the Study

Broad objectives of the present ascertain are the following:

- To examine the nature and trend of Foreign financial Capital Inflow (FCI) in Pakistan during the period of thirty years (1981 to 2010);
- To explain the determinants of Foreign Capital Inflow in Pakistan for that period.
- To evaluate the effects of the assets of international financial inflows (FCI) on macro-economic indicators like growth, domestic investment, inflation and trade balance in Pakistan.
- To analyze FCI causal relationship with economic growth, domestic investment, inflation and trade balance in Pakistan during the above mentioned period.

1.4 Research Hypothesis

The hypotheses to be tested are given as under:

- Growth rate of gross domestic product, general price level, interest rate, foreign exchange rate, investment and trade balance can be affected by the Inflows of foreign financial capital in the country.
- Financial inflow of capital has effect on economic growth, investment, inflationary trend and trade balances in Pakistan.

1.5 Methodology for the Research

In this Study quantitative and qualitative methods of research has been used, applying Secondary data collected from different national and international sources to obtain different objectives of the study and to test its hypothesis. Econometrics Models of Regression and Trend analysis are formulated to estimate and analyze the data. Using Time Series Data for analysis, Augmented Ducky Fuller test is used to check the stationary data of the variables in models. For checking Non-Stationary data, Unit-Root is used. The unit root shows that all the variables are not stationary at level but stationary at the first difference. For the analysis of variation in variables and to find their long-run relationship established among them "Johansen's-Co-integration-Test" is applied. Whereas, for the detection of short-run impacts of FCI on the selected variables in models "Vector-Error-Correction-Model" (VECM) is used. Moreover, for examination of

the inter relationship in the foreign capital inflow with economic growth, domestic investment, consumption and inflation; Granger Causality Test is applied. For deriving the results, statistical packages SPSS and E-views have used. These are dynamics Models using all techniques for Econometrics Diagnostic checking through ADFT & JCT by SPSS/E-Views. Chapter Three is based on the composition of detail methodology of the study and specification of the Models.

1.6 Scope of the Study

Significance of the Study is to analyze the impact of the two main forms of foreign financial capital inflow FDI (i.e. 'Public Foreign Investment' (PFI) and 'Private Foreign Investment'). This 'Public Foreign investment' is further divided in to 'Foreign Direct Investment' (FDI) and 'Foreign Portfolio Investment' (FPI) and its impact on the macroeconomic variables on the basis of data from 1981-2010. The economy of Pakistan facing twin deficits in its capital /current accounts, problem of unemployment (labor intensive county), low per capita income and unsuitable foreign trade policy for diverting FCIs in the country. Finding solution of the above problems and clarifying suitable factors for the determinants of FCI, this Study conducted to help out policy makers, researcher's, students and enable the government to formulate proper conducive and distinctive policies to increase efforts for its implementation with proper utilization of FCIs and make Pakistan's an interesting laboratory for doing businesses of financial assets and increase investors' confidence. It is the dire need to evaluate the flow of financial assets to increase investment for expediting growth rates of macro-economic indicators. Lots of work has been done with in the country and across the world on the causal relationship of FCI and growth taking its determinants FDI, Grants, remittances and foreign debts etc. individually. This study analyzed foreign public investment and foreign private investment and its impact on Pakistan's economy during the last three decades (i.e. from 1981-2010) and provided suggestions and recommendations.

1.7 Limitations of the study

Like other under developing countries the economic development of Pakistan depends on the flow of various forms of the Foreign Capital Inflow due to low foreign exchange

reserves, meager exports (despite of the facts that it is labor intensive economy but unskilled working force because of the low standard of technical education) and high value imports. Many Studies has been carried out to enquire the characteristics and nature of physical infrastructure, internal and external flow of financial investments & index of human capital assets as well as the political & macroeconomic condition of the economy of Pakistan. Availability of reliable data on these variables is another limitation of this study. The impact of these factors is ignored in this research because they are qualitative in nature.

There are many sources like Annual Reports of State Bank of Pakistan, World Bank, IMF, Federal Bureau of Statistics and Pakistan Economics Survey various Issues etc. from which the same data can be obtained. To use reliable data it was difficult to decide which report data to be used. The study is limited to certain macroeconomic variables. But lack of the proper data on some of the variables due to the time constraint could not produce exact recommendations. So time and monetary constraints limited this research only to Pakistan's economy. Further researches can be carried out and use long term data to find the trends between the macroeconomic variables and foreign capital inflows.

1.8 Organization of the Study

The study is organized in to six chapters in the following manner;

Chapter one presents brief introduction of the study, statement of the problem, objectives of the study, hypotheses sets for the research, methodology of the thesis, its scope significance and limitations involved. Chapter two is based on a detailed literature review of some of the previous theoretical and empirical research work done relevant to the study. Chapter three comprises of the research methodology and formulation of six models to analyze the impact of the determinants of FCI. Chapter four shows historical background to evaluate the impact of various factors on macroeconomic indicators briefly during the last thirty years in Pakistan. Chapter five provides analysis of the data (estimation of the six models) and Chapter 6 highlights conclusions and recommendations based on the analysis along with guidelines for the future research works.

CHAPTER 2
LITERATURE REVIEVEW

2.1 Introduction

The relation of foreign financial capital assets inflow (FCI) in the form of international aid, foreign direct (Public) investment, portfolios investment, etc. remains controversial in the literature with economic growth and development. Significant direct positive and negative relation both are the matter of concern. Intensive research has been carried out on this topic to find the exact relationship among macro-economic indicators and FCI. Review of that theoretical and empirical studies have been undertaken in this chapter to investigate the determinants of foreign financial capital assets inflows and their positive and negative significant impacts (of various factors) globally on economic growth, their role in enhancing the economic performances of different macro-economic variables in Pakistan with reference to various empirical studies. The details are given as under.

2.2 Literature Review

2.2.1 Determinants of Foreign Capital Inflows

2.2.1.1 Worldwide studies

Mosely (1980) study explained the impact of some external factors responsible for the insignificant relation in growth in under developing countries. Effective aid is linked with the hypothesis of 'good policies'.

Ali, S. and Guo, W. (1993) analyzed the determinants of Foreign Direct Inflow to China and tried to locate advantages in the process of foreign investment. Large size potential markets, population, fast growing economy, World Trade Organization's membership, prudent policies and incentives, cheap skilled labor force, hi-rate of returns, Global world integration founded the most favorable determinants of FCI flow to China. Thus China

has competing reasons and became an effective hub for investment. In conclusion, foreign investors lead by “global strategy firms” diverting flows to China.

Moosa and Cardack (2006) carried out an extreme bound analysis for examining the main factors involved in determining 'FDI' (foreign direct investment) in one hundred and thirty six (136) countries concluded that high degree of trade openness and low country's risk have basic role that play as a vital determinant of FDI. However, the role of the real GDP, its growth rate, domestic gross fixed capital formation and energy consumption were found in the study insignificant.

Chukwuemeka (2008) examined the long run determinants of foreign portfolio investment in Nigeria by using quarterly data for the period 1986 to 2006. The results of the study showed a long run relationship of the foreign portfolio investment with real rate of return on investment, interest rate and investment, real exchange rate and trade openness. However, it is found that real rate of return; real interest rate and investment are positively correlated with foreign portfolio investment. In contrast, foreign portfolio investment is negatively related to real exchange rate, market capitalization and trade liberalization.

Via and Kyaw (2008) conducted a 'Panel Data' analysis for 32 least-developing countries during the period of 1990-2004. The study examines the determinants of the direct foreign investment (FDI) and portfolio foreign investment (FPI) inflows used co integration test. The results of the study revealed that foreign direct investment is determined by domestic productivity growth. Whereas, foreign portfolio investment (FPI) is the major pull factor influencing its inflows in these thirty two countries.

2.2.1.2 Studies in Pakistan

Aslam (1987) Public and Private Foreign Capital form of Investment has been analyzed in this study and concluded domestic investment insignificantly related with the Public Foreign Capital Inflow and Private Foreign Capital Inflow have significant relationship covering the gap of domestic saving and investment.

Collins and Reinhart (1999) study focused on the econometric model "Regression Analysis" on the sample size of less-developing countries to analyze the effectiveness of various forms of FCI and they found that FDI has a strong direct correlation with local savings and also greatly affected investments than other form of FCI like external debts as compared to foreign public and private investments flows, portfolio investment. Thus foreign borrowings and some of the other forms of FCI have negative impact on domestic savings and investment.

Yasmin, B. (2005) studied that the developing countries saving/investment ratio is low, so they mainly depend on Foreign Capital Inflow to have enough savings to increase economic growth. According to her studies, direct relation found in the rate of economic growth with Foreign Capital Inflows. Beside that foreign direct investment (FDI) is considered. So it is known that FDI in Foreign Capital Investment has highly important role and significantly positive effect on the developing country's economies. The policy regarding the composition of FCI should be changed and Foreign Direct Investment should be focused more because of its long term affect.

Yasmin (2013) study revealed low potential level of savings and investments in least developed economies. As a result most 'least-developing-nations' are highly depending on external financial resources (FCI) to create additional savings to stimulate rate of high growth. So as the case of Pakistan, heavily depends on foreign financial resources for enhancing domestic potential of savings for the development of macroeconomic indicators. Mainly objectives' of the study to evaluate impact of FCI on the growth of Pakistan's economy and vice versa. Simultaneously effects of growth rate and FCI proposed the "Simultaneous Equation-Model" to incorporate in the aggregate "Time-Series-Data" for the selected period from 1970–1971 to 2000–2001 taking variables FCI, GNP and Savings concluded direct positive relationship with rate of growth. This attempt found significantly direct positive response of direct foreign investments (the main component of foreign capital inflows) with economic development and growth rate of the country. Policy recommendations (on the basis of the study's findings) are to

concentrates on those determinants (FDI's) of foreign financial capital assets which are more conducive for the plans (strategically optimal for) accelerating growth rate.

2.2.2 Foreign Capital Inflows and Economic Growth

2.2.2.1 Worldwide Studies

North (1956) study revealed that foreign capital has an eminent role to transform the real resources of the host economy into the required socio-economic indicators and increase the value of export and import multiplier, consumer goods and capital goods.

Chenery and Strout. (1966) studied empirical evidences and revealed direct and positive relation of foreign capital inflows and economic growth. Onwards this some other studies also found in their empirical analysis, exact positive relation between foreign aid and these macro-economic variables stimulating growth. However, the analysis of Leff (1969) and Griffin (1970) have revealed that foreign inflow of financial assets negatively affect the process of economic development and growth of a country. They gave strong argument in favor of the adverse impact of Official Foreign Aid by substituting the domestic savings has negative relation with growth. Till 1970's the review of literature conclude mix findings of foreign aid and growth relation

Papanek (1972) analyzed the relation of foreign aid with growth and development concentrated to find out its effects on macro-economic variables contributing to economic growth. The results provide evidence of negative co-relation, the causes may be the replacement of aid, too much dependency on aid due to mismanagement, increased corruption menace in under developing countries, less coordination and cooperation among the aid providing agencies etc. Secondly, that study addressed variation in relationship of aid and growth across the countries of the regions. Sub-Sahara Countries are major aid recipients in the region for various donor organizations and countries. However performances of macro- economic indicators remained unsatisfactory and financial aid put negative impact on that Sub-Sahara under developing countries. The results exhibit that excessive flow of aid is not the guarantee for growth and

development. The real matter for the Foreign Donors, require the designing of the appropriate program, timely and sufficient disbursement of the flow of foreign aid to support the host country and enable, to manage training, enhance the capacity of policymakers to increase in the investment of human physical asset, capital formation and create good partnership. The problem of mismanagement is also to be resolved on the part of the government to formulate proper policies like conditionality's or any penalty if aid recipient country deviate or violate from projected aid.

Balasubramanyan (1996) revealed that that government who formulate export promotion policies and does not pay attention to import substitute industrialization strategy FDI inflow is more beneficial. The examinations of FDI with in the frame work of newly formulated growth models presented in the study of Jagdish Bhagwati based on the Cross-Sectional-Data taken out from forty six less developing economies concluded that the individual growth process of each country in context of FDI is conditional with different "Policy Regime". (Tested hypothesis of that study) Public foreign flow of investments have positive impact on development and growth and accelerate the process in those economies pursuing "Inwardly-Oriented-Trade-Policy-Regime" for attracting f oreign investment, b) and following an "Outwardly-Oriented-Trade-Policy-Regime" put negative effect instead of enhancing economic growth.

Kokko (1996) study revealed that foreign direct investment stimulated to have a large market share outside the home country and to extract the growth benefits by producing at large scales. The prospective side of the recipient country based on the argument that foreign direct investment is needed due to various benefits ranging from economic growth through the capital inflow to the transfer of updated physical technology. FDI may be the great promoter in the process to accelerate economic growth by producing exportable surplus by the "Multi-Nationals Companies" established in the recipient economies. Afterward this also concluded by Blomstrom (1996) in his study. The analysis of the different empirical evidences concludes that, it is very difficult to find the exact relationship of foreign "Multi-National Corporations (MNC) and their host countries as the effects of FCI vary in industries and countries. Often Multi-National

Corporations do investments in that sector where barriers to entry exist and has relatively less high concentration of firms by establishing their own firms to capture the whole market of the host economy. By improving their firm's potential efficiency in the long run they become able to capture more markets of different consumer's and producer's goods, if proper protection is guaranteed by the "Multi-National" affiliates. Most evidences found the fact that some time "Multi-Nationals-Corporations" put an adverse effect on the industrial sector of the host economies. And a great risk involved in this regards as that MNCs replace local industrial productions by monopolizing the product market and in future they force them to leave the market. They may not be able any more to compete with that standardized product in contrast to enable that sector of host countries more efficient for competition in the international markets.

Lensik (1999) study analyzed uncertain inflows of foreign capital and its significance on the developmental growth of sixty economies which differentiate "Total Capital Inflow Receipts" in between Official Capital Inflows and Private Foreign Capital Inflow. For measuring that uncertain factors involved in these three types of capital inflows, the study based on year wise uncertainty factors in the formulation of "Ordinary-Least-Square" (OLS) as well as "Generalized Method of Moments" (GMM) estimates to analyze effectiveness of foreign capital flows on the rate of development. Conclusion of the estimates of the above models significantly showed non-positive relationship between uncertain capital flows and that of economic growth and development in the study period.

Rangrajan (2000) study evaluates the flow of the various forms of foreign capital and examined how the process of foreign capital formation and economic growth are interrelated negatively or positively. Concentrating focus on the flows of the component of FCI i.e. private investors net financial capital assets, public net direct Investment, (official net inflows), portfolios net investments " in twenty-two countries during the years 1992 to 2000. These countries real and financial resources markets would have go through an adjustment process with that flow either volatile or temporary and considered FDI (foreign direct investment) utmost vital foreign factor if induced properly can strengthen more permanently the developmental process as compared to other less

sustainable factors in character of the domestic economies. The capital inflows and outflows both (some time) when large and sudden have remarkable implications positive and negative as well on the host countries which in turn appreciate or depreciate foreign real-exchange-rates. The study concluded that the liberalization policy of the capital account is not a discrete phenomenon.

Hansen and Tarp, (2000) study applied an econometric model (Regression Technique) and the results shown positive relationship among the determinants of growth (macroeconomic indicators) and FCI component (foreign assistance). Study further concluded that “good policy" is not the prerequisite for this positive relation of foreign aid and the economic growth in the recipient country and sometime aid produced decreasing returns, therefore, its estimations effectiveness is very much dependent on the responsiveness of the variables set in the model as by the choice of the estimator. As financial and physical flow of assets is kept in control no significant direct positive relation of official assistance and variables is revealed. However, assistance affects continuously growth via investment. Conclusion stressed the analysis of empirical work so as to concentrate on the formulations of the policy frame-work more valid theoretically than before. Regression analysis run on the comparative data across the countries is very suitable for chalking out conducive policy. Taking three macro-economic variables (for making suitable policy) i.e. surplus of fiscal revenue, rate of inflation and free international trade to run "Cross-Country-Regressions" by 'Burnside and Dollar' have, in relation with financial foreign assistance, and an important component for the interaction of aid with different macroeconomic policies. Thus, the study concluded direct positive relation in aid and growth in under-developing countries if proper fiscal policy, suitable monetary structure, and prudent commercial trade policies are designed to apply. In the absence of the above mentioned policies positive impact of aid and growth converted in to insignificant relationship almost negative in nature.

Kiong, Jomo, K.S. (2001) study investigated that both potential savings and foreign financial and physical resources have positive impact on the development of Malaysia. The study concluded several policy implications for Malaysian economy out of which the

most important implication if the country wish to have steady growth must continue struggle for FCI to strengthen its internal macro-economic variable, including productivity of manufacturing sector , human physical resources, mobilizing host economy resources, to improve propensity to save/invest/consume development of appropriate financial institutions, maintaining financial stability as well as an 'efficient tax structural regime'. More effective Policies to accelerate export potentialities, prerequisites of new developmental technology, induced more proper incentives to create potential comparative advantage in new areas. Thus focus needs to improve domestic economic fundamentals of the financial system to overcome on the structural drawbacks of an economy. Direct positive impacts and the indirect negative impacts of FCI on growth exhibit dependency on the inflow of foreign capital to finance domestic investment not necessarily to guarantee for steady continues economic growth in the host economy. If Malaysian government desire to divert the flow of Foreign Direct Investment in to those sectors where domestic investment is scanty and not been able to flourish by own resources substitute government should be careful in deciding what type of economic policies has to adopt in order to ensure sustainable economic development to enhance potential capacity and capabilities rather than to replace means of the recipient countries which are not been able to compete in foreign markets. So FDI ensure focus on complementarity, high-rate of returns, technological skilled laborer, managerial skills also not simply to increase domestic savings, capacities and capabilities. It would be better to attract more FDI to ensure enterprise profitability, technology, managerial skills, and international technical market access.

Chakra borty (2001) explains the impact of the flow of foreign private capital investment on the important indicators of Indianan economy applying "Quarterly-Data" for six years i.e. (1993-99) to investigate fluctuation in the trends of private foreign capital asset flows and did the analysis of indicating instability factor with other determinants. Net inflows of private foreign capital has taken in relation with macro-economic indicators like foreign exchange reserves, prices of whole-sale-indices, real-money-supply, effective nominal-exchange-rates and exports. "Co-integration Techniques" applied and found

relationships of few variables and 'long-run equilibrium'. Each variable showed little dependency on private foreign capital inflow and invalidating the results of that Co-integration models except in that two cases: 'co-integration' exists between the variables money supply/international currency exchange rates and exports/effective nominal foreign currency rate of exchange, keeping in tight control the inflows of foreign private financial assets. The application of ‘Granger Causality Test' exhibits the causality of uni-directional relationship from the inflows of foreign financial private assets towards effective nominal rate of exchange depended on trade and export both in turn increases in the foreign exchange market concentration related to "RBI" strategy in the foreign exchange currency market. Eventually, discontinuity in the direction of the determinants of international currency exchange reserves may be responsible for instability in the inflows of foreign private financial assets with some lagged impact.

Zhang (2001) examined the impact of the flow of FDI on the economic growth rate of least-developing-nations; the link between the flows of FDI and the rate of economic development based on 'causal patterns' of the two variables not yet have been analyzed by applying any imminent technical process. Ascertains exhibits empirical evaluation of eleven countries of ‘East Asian’ along 'Latin American's Data to assist and found the accelerating factors of growth and FDI relation. In the recipient country is clearly conditional with country-specific-characteristics showing the extent of its policies liberalization to widen trade regime, promulgation of standardized technical education for enhancing physical human capital and pursue to attract more FDI to use in export oriented sectors and improve macro-economic indicators.

Kohli (2003) study evaluates the impact of foreign financial capital flows in relation to a set range of macro-economic factors like foreign -exchange-rates, interest rate on returns, rate of foreign currency reserves, internal value of money supply, financial structure composition of Indian economy, inflow of capital inducing currency external value in relation to its domestic value (appreciation/depreciation), coordination of corporate and stock market, boom in the transaction of real estate, increase in monetary instruments and impact on production/ consumption as well as during the period of 1986 to 2001.

Significant impact of Inflows of foreign capital with positive relationship on domestic monetary variables, growth of liquid-stock-market, volatility, and capital net flows with deficit current account found significant direct relation to the economy. The study concluded Indian's-capital-market vulnerability to external financial shocks due to domestic and foreign financial market Correlation. Indian stock market relationship with foreign portfolios inflows remained positively affected side by side with some indicators putting negative impact on the prices of stocks that are unaffected by capital inflows.

Radelet and Bhavani (2004) studied that aid supplement the budget and Balance of Payment obligations, investment in transportation, agriculture, and other industry. The author assign aid to all deserving areas which have found considerable great impact on the economic development and growth of an economy in short run, for example $1.0 of aid raises the average income to $1.64 in short run while democracy is highly promoted by these aids along with improvement in health education environment in long run but it is difficult to quantify it. Some authors consider aid to be unproductive to encourage the growth of the economy.

Akinlo (2004) study examined the influence of direct foreign investment on the development of economic growth rate in Nigeria by applying annual data for a period of 1970 to 2001. The study used 'Error-Correction-Model' for the estimation of the results. It concluded that private capital inflow has insignificant and little influence on the economic growth in Nigeria.

Sethi and Patnaik (2005) in their studies used monthly data over the period from 1995 to 2004 to investigate the relationship of economic growth in India with foreign portfolio investment and foreign direct investment. Quantitative results showed significant and direct positive correlation between the rate of economic growth and that of foreign direct investment where as in contrary to this positive influence, a negative relationship of foreign portfolio investment and growth is found in that study period.

Baharumshah and Thanoon (2006) carried out a quantitative assessment of the impact of distinct forms of the inflows of foreign financial capital on development and economic growth in East Asian countries. The study concludes that direct foreign investment

showed significantly direct impact on the development of short term as well as long term economic growth. Negative influenced on the development of economic growth with portfolios foreign investment was also exhibited in all that Asian countries. This ascertains recommended those countries which attracted more foreign direct investment grew faster than the other economies who fail to attract FDI.

Johnson (2006) argued that FDI should increase recipient economy base of technology and the spillover effect of it accelerate the rate of economic growth through quantifying physical capital asset. Models that affected FDI inflows on host country economic growth through these two channels. The empirical part of the paper attempts to verify FDI inflows affect. Performing analysis on 'cross-sectional' and 'panel data' on the set of the data taken from ninety countries, the study findings added to the earlier empirical studies mixed results on the macro level by the finding that the flow of Foreign Direct Public Investment has direct significant impact on recipient developing economies but impact is not positive for developed countries. A mature market economy reflects no difference between domestic and Tran's border investment. In the panel data analysis, domestic investments also have direct effect on development in both developed and developing economies. The causality assumption of positive relation between the recipient economy's economic growth and Public Foreign Direct investment flows. Moreover, the increases in macro-economic indicators induce foreigners and cause an increase in FDI inflows. The recipient economy's market size become strengthens which is important determinant and a great incentive for FDI attracting and both these variables become indispensable complementary supporting factors. Under-developed countries having low level of income unable to get sustainable economic growth could not attract that market-seeking FDI. Primary expectation is causality to run from the inflows of FDI towards growth of those countries.

Fleck and Kilby (2006) examined that the hypothesis of foreign capital influence on fiscal performance in recipient countries by promoting lower taxation efforts, which eventually lead to lower public savings. The radical view criticizes aid on grounds that it replaces domestic resources and aggravates income.

Rajan and Subramanian (2008) study proved that aid is unproductive to support economic growth and tried to differentiate between bilateral and multi-lateral aid. Thus, in short run aid affects the economic growth mostly used to support the bilateral friendship. Fluctuation in aid is due to its geographical political issues but it does not suggest the variation in developmental aid. This study gave due importance to geopolitical factors but it does not have any considerable impact on economic growth because political factors are equipped for the purpose of aid and hence this objection will affect the influence of aid on the economic growth.

Amadou (2011) study collected annual data during the period of 1970 to 2008 to examine whether foreign capital inflow has positive or negative impact on domestic investment in Togo. It is found that the overall influence of the foreign capital inflows on domestic investment was positive. The study further added that most of the positive effects of foreign capital inflow come through the foreign direct investment inflow channels and the impact of foreign portfolios investment was negative and insignificant during the study periods.

Badeji and Abayomi (2011) investigated the possible effects of the flows of direct foreign investment on developmental growth rate in Nigeria. The results of the study revealed that direct foreign investment inflows are negatively correlated with developmental growth rate and suggested for the government of Nigeria should take measures for encouraging domestic investment, ensuring political stability in order to increase the inflow of foreign direct investment inflow. These results were also supported by Macaulay (2011) who also found positive impact of the direct flow of foreign investment on the economic growth in Nigeria.

Kumar, A. Mutascu (2011) studies examined the arguments of long history debate between government policy makers and economists based on the national and international levels that how the FDI enhances growth in the host countries. Further analysis to investigate export-led growth depended on FDI, or FDI-led-growth is convincible and to test the validity of 'non-linearity's' accompanied with FDI and exports in economic growth and development. The study conducted to resolves these three

questions by empirical analysis in the framework of a 'Panel-Data' for twenty three Asian countries for the period 1986 to 2008. The study applied 'Two-Way-Effect-Model' to analyze the data, on the assumptions of extreme plausibility fixed and random effects across those nations and over time period. The results exhibited 'non-linearity's' accompanied in relation of exports and FDI in the economic growth of Asian countries. Furthermore, as the study used wide-range sample data of those (Asian) countries, they did attempt to minimize heterogeneity specific to each country by incorporating 'Two-Way Dummies' i.e. in case of 'Two-Way-Fixed and 'Random-Effect-Models' by using 'Time-Country-Dummies'. The study analyzed the results by applying different models. However, by incorporating cultural/religion 'dummies' they have gotten more significant, strong and healthy results for that countries and recommended applications of these issues in further studies. The results showed positive relation of FDI and exports in enhancing the growth of Asian countries with the help of labor and capital in that process and Asian countries are moving ahead on the path of globalization and economic development of the panel selected economies. Achieving high growth path, particularly for countries, not having sufficient resources to buy modern technological implements FCI is indispensable.

2.2.2.2 Studies in Pakistan

Rana (1987) study found insignificant role of foreign aid and foreign investment with the development of Asian countries. Shabbir and Mahmood (1992) and Khan, Rahim (1993) studies concluded insignificant effect of foreign aid and savings. There are two causes of replacing domestic investment by Foreign Capital Inflows (a) as Foreign Capital Inflow supplement revenue of the host economy, enthusiasm and struggle of the local government for development slow down, surge in non-developmental expenditures of the domestic economy lead to increase imports. (b) More focus on foreign investment either private /public vanished the opportunities for the domestic investors it lead to decreased in savings. Furthermore the transfer of improper physical form of technological implements and miss management leave negative impact on the country.

Khan (1993) study explained ineffective relationship of FCI with that of economic growth of under developing economies and insignificantly change the performance of macroeconomics variables. Thus FCIs led to the importance of foreign aid affecting the developmental process of an economy by its main determinants domestic saving, investments and import was a matter of great concern. However, dependency on foreign aid aggravated external debt burden. Theoretical and empirical studies on foreign aid suggest multi-dimensional impacts of aids. Clemens (1994) study found negative and insignificant impact of international financial aid on the economics development of the leas developing economies.

Adnan, Q. (1999) studied the effects of foreign financial capital assets in relation the economic growth process of the developing countries by utilizing co-integration models (of different techniques) such as the "Auto-Regressive-Distribution-Lag" (ARDL) model. The results exhibited the long run direct positive relation of the stages of development and economic growth with FCIs. International aid also activates real basic economic activities involved in the stages of growth and, shows lagged effect. During short period Public Foreign Direct Investment positively related to economic growth and FDI significantly recommended as a positive contributor, while foreign aid reduces economic growth at a lag. Economic growth earnestly required to concentrate on the national economic policies (considering both short and long term as well) namely appropriate formulation of monetary structure, conducive base of the fiscal policy and external commercial trade formulation. On the other side, Official Development Assistance (ODA) in the form of different aid significantly related with economic growth in a positive manner in the long run. So as Pakistan's endeavors are concerned it has also to focus on the diversion of the flow of Official Development Assistance to various sectors of the economy where local investment is scanty for the sake of economic growth following more beneficial pursuits of the required mechanism.

Hasnain and Masood, Q. A. (2000) study found that domestic resource mobilization is the most eminent determining factor among the others vital variables contribute to development. Saving potential of Pakistan is very low as compared to other economies in

that region and experienced sustainable increase in GDP rate. To achieve high growth rate, no option left for Pakistan except to rely on foreign financial capital inflows to bridge that widen gap between potential saving and investment of its economy. In every case of this paper, significantly positive long term relation was concluded among the variables. Co-integration technique applied (using three variants) on the basis of Time-Series-Data during 1972-2000 (for thirty-two years) and found an inverse co-relationship between saving potential rate and flow of foreign financial capital asset and negative short term relationship among the two variables was concluded. The study concluded "Substitution thesis" hypothesis for domestic saving. One explanation got attraction that if various relevant means are accessible, international finance enhance domestic savings potentialities further give boost to investment and consumption there by increase in employment and per capita income. Absence of the flow of FCI impedes public as well as private savings.

Khanna (2002) study investigates the economic influences of FCI on Indian Capital Market and Corporate Sector on macro level side by side examining its impact on Micro-level on both, the Corporate Sector and Capital Market in the period of 1989 to 2002. The study selected macro-economic variable like Foreign Direct Investment, Foreign Portfolios Investment, NRI deposits, foreign aid and Gross Domestic Product (GDP), Gross Domestic Savings (GDS), Gross National Product (GNP). And explained the transfer of foreign financial assets give great push to the 'domestic-capital-market' with greater liberalized depth, getting down risk factor from the country. Financial helps needed to reduce systematic risk of the economy by providing it great financial depth. Further the efforts needs for advance liberalized capital/money markets open for foreign investors to ensure the smooth flow of the required human/capital assets in to the industrial sector and business entrepreneur. Stock Markets of Indian Economy ruled by little group of Foreign Intermediaries Investments (FII's) who have the strength to shake/move the market to large extents. The study not suggested micro-analysis of stock-market for India, because it failed to show favorable conclusions (theoretical or

empirical) to give way to FII (Foreign Intermediaries Investments Inflow) to reduce the cost of Corporate-Sector of the Indian's Economy.

Marwah and Tawakuli, (2004) study analyzed techniques that affects the flow of direct foreign investment on imports, economic growth, productivity of four individual countries of Southeast Asian Nations (ASEAN), these are Indonesia, Malaysia, the Philippines, and Thailand briefly reviewing their economic patterns, they estimates, for each of the four countries, a separate production functions by using foreign capital and imports two different determinants among the other factors in the process of production. Testing, Time-Series-Annual-Data from 1970 till 1998 to analyze the relationship of variables, the estimated production elasticity of financial assets, varies from 0.044 for Thailand to 0.086 for Malaysia round about 1:5 to 1:4 of stock of capital assets production enhanced by the diversion of flows of FDI: 21.4% in the Philippines, 25.8% in Malaysia, 24.5% in Indonesia, and in Thailand 20.3%. Similarly, elasticity of imports production varies from 0.226 for Indonesia to 0.428 for Thailand. Results shows that, net flows of FDI and total quantity of imports contribute each 0.292 point of growth together in Indonesia, 0.472 in Thailand, 0.353 in the Philippines and 0.529 in Malaysia.

Lemi (2004) foreign direct investment is considered the most important source of capital inflow for the developing country like Pakistan to fulfill needs regarding the gap between resources and development, but it is not easy to figure out the calculation of these impacts on economy. Different empirical analysis have used by researchers to determine the importance of FDI on development through sharing of human capital, capital structure, improvement in skills of the host country employees, shift of modern technology, supporting imports and exports and the increase in marketing activities. With the introduction of foreign firms the infrastructure facilities improved so in turn the domestic firms also avail this facility.

Adnan (2005) suggested the inflow ODA out of foreign financial capital assets for the under developed economies growth and developmental process including Pakistan, foreign direct investment has more significant and direct effect on the process of development, taken in to account long as well as short term both while the ODA (Official

Development Assistance) has a long run impact only, so therefore Pakistan needs to concentrate on the international Official Development Assistance in long run.

Rahman (1968**)** study discussed the problem of dependence on foreign capital for economic growth of Pakistan and relying rather heavily on foreign assistance without a sufficiently spelled-out analysis of the economic and political consequences of such a policy for the country's future. The discussion starts with an analysis of the implications of Pakistan's Perspective Plan (1965-85) for terminal external indebtedness of the country (Section II). Need for careful rationalization of a terminal bequest of the liability of this magnitude to its future society is stressed. This is followed by a discussion (Section III) of the alternatives measures, if the country would have to service the external indebtedness, it will lead to the termination of its Perspective Plan. It is pointed out that these alternatives have political implications for the country's future, and one may question the ethics of restricting choice of policies for future generations.

Mohey-ud-din (2007) study concluded that 'FCIs' and development of economic growth are conducive factors and positively correlated tested on the empirical analysis using 'Time-Series-Data' for twenty 20 years, which is invalid for 'Time Series Analysis'. The "Two-Gap Model" suggests that as great dependency found in Poor countries on the Foreign Financial Capital Inflows because of low reserves of foreign exchange flows of financial resources (FCI) needed to bridge the Gaps between export/import and the investment/saving. Various components of the inflows of international financial capital like direct foreign investment, foreign debts/loans, technological aid, tied & untied assistance etc. All under developing countries depended on foreign financial and technical assistance. The study analyze its relationship with FCI and GDP rate of growth and its possible impact in Pakistan from 1975to 2004.

Mottaleb (2007) studied that the flow of Foreign Direct Investment (FDI) fill the gap arise in the saving potentialities and investment capacity by transferring latest modern technology and managerial skills enhancing know-how from developed countries to under developing countries and more vital for steady economic growth. Some literature review shows that the rate of the flows of FDI towards the developed countries is higher

than that of under-developed economies. This low potential level undermines them to change direction of the flow of FCI. The study collected data from the panel of sixty (60) some middle income and some low income countries to analyze the most imminent determining factors of FCI in that economies. The second aim is the empirical analysis showing its significant direct relation of FCI component FDI and growth rate and concluded the fact that, those economies having large size of Gross Domestic Product and its high growth rate by maintenance of friendly business environment, profound modern infrastructure in all sectors, such as broad-band internet, can successfully induced FDI and significantly affect economic growth of a country.

Rashid, A. Hussain (2010) study investigates how foreign capital inflows affects inflation by taking period from Jan. 1990 to Dec.2007 for data collection (on monthly basis) and techniques applied on the basis of equilibrium levels of prices to test the empirical evidences of the (classical) quantity theory demand for money conditional to the flows of FCI. The results shown on the basis of non-linear test, a positive significant relationship as total quantity of money supply increases with increase in the flows of FCI in the study period. Application of the test of non-linear causality change existence causal links in price and variables of the model. While country rate of interest and currency exchange rate has no cause to the general price level (inflation). From 1990 to 2000 no causal relationship revealed in the host economy's general price level and flows of FCI. During 2001 to 2007, confirmed linear and nonlinear causality brought changes in the price level of recipient country by the flows of foreign capital. The findings of the study are a matter of great concern for makers of perspective plan, State Bank and govt. Since flows of foreign assets have played significant role to pull the domestic price, particularly during the second-sub, the foreign exchange management policy of State Bank of Pakistan is questionable. Findings also suggest measures to absorb flows of FCI in a manner neither should create surge in general price level nor depreciate the external value of domestic currency. The limits imposed by SBP to arbitrate in the foreign exchange market and should allow private sector to use the foreign capital productively to increase the production level in the economy rather than just to add to government foreign exchange

reserves. The ways to deal with capital inflows to organize the financial markets, strengthen financial system supervision, regulation and improve the capacity to design and implement sound macroeconomics financial sector policies. These actions will help in increasing absorptive capacity of the economies financial systems to compete with the risks associated with that foreign inflow. The analysis established useful base for future empirical work and suggest considering non-linearity in modeling of that research.

Mohey-ud-Din, G (2011) study emphasized on the importance Foreign Capital Inflows (FCI) in the new emerging scenario, as the topic of FCI in Pakistan got concentration in empirical studies, but the review of that literature of FCI to Pakistan exhibits that most have used in their empirical analysis, the 'customary-econometric-tools' like "Ordinary Least-Square" (OLS) estimate ,"Forecasting-Identification-Maximum-Likely-Hood" (FIML), "Two-Stage-Least-Square" (2SLS) estimate, and "Three-Stage-Least-square" (3SLS) estimates for analysis. However, the "non-stationary factor", involved in most of the macro-economic variables are mandatory to re-examine previous ascertains applying "Co-Integration" and "Error-Correction-Model" (ECM). This attempt presented to re-evaluate the relationship among macro-economic variables and foreign assets flows towards Pakistan by using "Vector-Error-Correction-Model" on the annual "Time-Series-Data" i.e. from 1972 to 2006.This model found no evidence for significant effect of total flows of foreign financial assets on the rate of growth of domestically produced goods in a year and the process of capital accumulation through investment. On other hand, complementary positive relationship of host economy savings and components of FCI revealed by the study and suggested supplementary direct effect of the flows of foreign capital on annually produced goods and services by enhancing the quality of its own means. Contradiction found in the above results directly affecting host economy savings indirectly related with the country investment and growth rate of development. The interpretation of FCI as supplementary factor for growing domestic resources is more correct and need more inducement for FCI in Pakistan because of the meager domestic savings. No clear indication of macro-economic variables boost found, because there is no proper utilization of the flows of foreign capital investment. Further the study shown

that some forms of the flows are not used for investment (non FDI) and focused on capital-intensive and labor-extensive industries of the economy. FCI causes exchange rate depreciation and create deficit in the current accounts. The study recommended to: (i) target potential sectors, the nature of the composite factors of present forms of Foreign Capital (ii) diverting flow of present FCI to the tradable areas (export-oriented) especially in agro-based industries (iii) decreasing extensive dependency on foreign aid (assistance), domestic resources mobilization (v) check on the current accounts deficits in the balance of payments to stabilize domestic currency foreign exchange rates and foreign currencies reserves also. Two-Stage-Least-Square Model (2SLS) and "Three-Stage-Least-square" are applied to investigate. Non-stationary characteristic of the variables is the matter of concern for investigators to re-examine the previous studies by the techniques of co integration and Error Correction Model that presented to re-analyze its role in Pakistan.

Javed (2012) examined the relationship among the three variables direct foreign investment, trade and economic growth in four Asian under developing countries namely India, Sri Lanka Pakistan and Bangladesh. The study analyzed the annual data for a period of 1973 to 2010. Technique of "Generalized Method of Moments" (GMM) was used for computation of the regression results. The results showed that foreign direct investment inflows had mix impacts on the development of economic growth in all the above mentioned economies. While positive relation found with growth, trade and direct foreign investment.

Shumaila, N. (2012) examined to investigate the influence of the flows of foreign capital on the general price level of host country (inflation). Selected macro-economic variables for the models are foreign remittances, domestic inflation, domestic export, direct foreign investment. Selected period for data collection is from 1980-2010 using ‘unit root test’ to check stationary of the variables, techniques of "Co-integration" along with "Error Correction Mechanism" (ECM) formulated for the examination of the short and long term relationship with direct foreign investment, remittances (REM), export (EXP) and general price level of goods and services (inflation). Conclusions revealed stationary in relationship among the selected variables at 1st stage significant direct correspondence

among FDI, REM, EXP and inflation. "Co-Integrating-Equation" showed significant relationship in the long run. So consumption replacing investment oriented strategy to control surge in inflation should be followed to utilize (the FCI component) foreign remittances flows for investment purposes to promote growth not consumptions.

Salma (2013) study analyze the effect of foreign financial capital assets inflows on host economy saving along with other selected variables by using "Time-Series-Techniques like "Co-integration" and "Error Correction Mechanism" ECM using the data selected from 1980 to 2010. The results identifies positive relationship between saving and direct flow of foreign investment and also the variables; Trade openness and GDP per capita found positively related with gross domestic saving. Negative relationship of remittances with gross domestic saving was the result of some part of remittances utilized for consumption in case of Pakistan. Recommendations of the study to focus on proper economic policies, as FDI is helpful in enhancing domestic saving potential if suitable national economic policies follows regarding to money, taxation and trade. Key macro variable saving based on micro foundations could play a prominent role in curbing inflation, generating jobs if seen with reference to the under developing country but the role of Pakistan performance to mobilizes its own resources is non-satisfactory. Strong support of 'good-governance-mechanism' to monitor the whole process of FCI is highly imperative which is very urgently required to be formulated and needed to implemented effectively in order to build foreign investors' confidence. The study finally concluded that if proper utilization of remittances is ensured for expanding domestic saving in turn enhancing domestic investment in certain fields to accelerate the process of economic development and growth.

Sethi (2013) analyzed the effect of foreign private capital inflows on growth using pair wise "Granger-Causality-Test" and suggested a short run equilibrium and a long relationship among the variables of economic growth and 'foreign direct investment' side by side with economic growth and 'portfolio foreign investment' and vice-versa. However, the empirical findings strongly identified the dynamic relationship in short and long equilibrium among the variables during the study period from 1995 to 2011. The

study also finds that a ‘private foreign capital’ inflow has significantly positive relation and direct impact on economic growth. In other words, for the sound economic growth of a country attracts additional private foreign capital inflows.

Yasmin (2013) study revealed that low potential level of savings and investments in least developed economies. As a result most 'least-developing-nations' are highly depending on external financial resources (FCI) to create additional savings to stimulate rate of high growth. So as the case of Pakistan, heavily depends on foreign financial resources for enhancing domestic potential of savings for the development of macroeconomic indicators. Mainly objectives’ of the study to evaluate impact of FCI on the growth of Pakistan‘s economy and vice versa. Simultaneously effects of growth rate and FCI proposed the "Simultaneous Equation-Model" to incorporate in the aggregate "Time-Series-Data" for the selected period from 1970–1971 to 2000–2001 taking variables FCI, GNP and Savings concluded direct positive relationship with rate of growth. This attempt found significantly direct positive response of direct foreign investments (the main component of foreign capital inflows) with economic development and growth rate of the country. Policy recommendations (on the basis of the study’s findings) are to concentrates on those determinants (FDI’s) of foreign financial capital assets which are more conducive for the plans (strategically optimal for) accelerating growth rate.

2.3 Summary

Summing up the above discussion, the finding of all these studies shows that, the determinants of foreign capital inflows and its relationship with the macroeconomic variables are mixed and country specific. However, present Study was an effort to identify some of the important factors affecting the foreign capital inflows (main two forms of FCI selected ‘Public Foreign Investment’ (PFI), and ‘Private Foreign Investment’. ‘Public Foreign Investment’ (PFI) further divided in to ‘Foreign Direct Investment’ (FDI) and ‘Foreign Portfolio Investment’ (FPI). FDI means government financial resources inflow with the transfer of technical know-how, advanced capital equipment’s to Pakistan from developed countries & Foreign Portfolios flow of investment consisted Foreign Investor’s Purchases of Shares in Companies, Government

Bonds and Short-Term Securities for speculative motives. Due to their impact on output growth, domestic investment, inflation, trade balance and their causal relationship with growth and development in Pakistan, for thirty years data regression analysis approach adopted for modeling by constructed equations and identified the exact relationship between (external and internal determinants) the exogenous and endogenous factors in all the equations of the models. All the models were developed so that first model for the factors affecting the inflow of FCIs was designed. After that, for examining the impact of FCIs on selected macroeconomic variables, some more models were developed for domestic investment, inflation, trade balance and for their causal relationship with growth and development in Pakistan. The study found all the important determinants of Foreign Capital Inflows into Pakistan and carried out its comparative analysis and its impact on economic growth and development to the changing scenario of present world which trapped in global recession further reducing/ stopping the volume/ direction of the determinants of that FCI to Pakistan as compared to Less Develop Countries lifted heavy burden of external debts on the economy of Pakistan.

CHAPTER 3
RESEARCH METHODOLOGY

3.1 Introduction

This section three is based on the construction of methodology followed in this study. Methodology applied is both qualitative and quantitative Time-Series data (Lemi, 2004) in nature. Secondary data was used to carry out the objectives of the study. Both Trend Analysis (Papanik, 1972) and Regressions Analysis (Aslam and Mosely, 1980. 1987) used to analyze the data. Six Models has been constructed to evaluate relationship of the variables. The results are tabulated and graphed for understanding.

3.2 Data Sources and Model Specification

The study is based on secondary data covering the period 1981-2010. For this purpose, data was collected from different sources which are given as follows:

- § Economic Surveys of Pakistan (various issues);
- § International Financial Statistics (various issues);
- § State Bank of Pakistan (various reports);
- § World Development Indicators Data; and
- § Federal Bureau of Statistics of Pakistan (Data of different years).

3.3 Data Analytical Techniques

The main aim of this Study was to examine the determinants of foreign financial capital inflows (Ruffin, 1993) and its impact on key macroeconomic variables namely Gross Domestic Products (GDP) growth rate, domestic investment, trade balances and Inflation rate in Pakistan (Hansen, & B. Tarp, 2000). To find the relationship among the regressor/exogenous (independent) variables of the models with endogenous/regressed (dependent) variables of those models, various econometrics models applied. The first Model specified for analyzing the factors affecting the inflows of FCIs. For examining the impact of FCIs (Rajan & Subramanian, 2008) on selected macroeconomic variables, some more Models have been developed. The present study focused two important sources of foreign financial assets inflows i.e. (FDI) 'Foreign Direct Investment' (Yasmin, B. 2005) and 'Foreign Portfolio Investment' (FPI). In presence of non-stationarity, Co-

integration techniques selected as Johansen co-integration; (JCT) presents a solution to the problem, where some linear combination of non-stationary variables becomes stationary at level. For this purpose separate Models applied (VAR and VECM techniques) to check short and long run relationship among the variables Mohey-ud-Din, G (2011).

Model 1

The economic theories suggest different macroeconomic variables which affect the inflow of capital to a country. Some Economists differ in their views regarding 'growth effects of foreign capital' in the host countries. Optimists argue that foreign capital brings cheap and relatively less risky access to the funds in addition to transfer of technology while pessimists argue that foreign capital is generally moved with intentions inconsistent with fundamentals which leads to economic volatility (Bordo et al., 2007). Moreover, inefficient allocation of funds may not yield the theoretical outcome (Collier et al. 2002). In particular context to developing countries, major blame of ineffective foreign capital utilization goes to underdeveloped financial sector which also is generally responsible for crisis as a consequence of disrupted inflows. Some of these factors which considered in this Study included GDP, Inflation, Interest rate, Domestic investment, Exports and Imports. Model 1 is constructed for the Foreign Capital investment,

FCI = f (GDPG, INF, R, ER, DI, XD, MD)

Or

$$FCI = \alpha_0 + \alpha_1 GDPG + \alpha_2 INF + \alpha_3 R + \alpha_4 ER + \alpha_5 DI + \alpha_6 XD + \alpha_7 MD + u \ldots\ldots (1)$$

While,

FCI = Foreign Capital Inflow

GDPG = Gross Domestic Product Growth Rate

INF = Inflation, CPI is taken

R = Interest rate

ER = Exchange rate of rupee against per unit of US dollar

DI = Domestic Investment

DS = Domestic Saving

XD = Demand for Exports

MD = Demand for Imports

α_0 = Constant

α_i = Slopes with respect to corresponding variable

u = error term

Model 1 estimated using secondary data of Pakistan for the period 1981 to 2010. (To examine the determinants of FCI, u' representing error terms for variables omitted from the models which are unsure/ignorant about the behavior of some effect of that variables or sometimes un-availability of the data on that ignorant variables e.g. u' in FCI Model represents all the omitted variables of the determinants like in inflation (INF) population ethnicity, color (black & white), Religion, marital affairs/status happy/unhappy, psychological behavioral trend and also including financial institutional physical infrastructure, and in exchange-rate (ER) money laundering, security of financial articles, fraudulent transactions, external/internal public perception of Islamic banking, other financial instruments confusion, inconsistencies in legal regulatory and taxation environment, standardization and security of financial articles, non-cheque transaction and guidelines for pre-paid card etc. Dummy for war on terror, also takes value after 2001 to capture the impact of unrest in the country due to Afghan war and its effect on migrant remittances, foreign reserves and exchange rate. Results of the ADF test shows that variables are stationary at first difference which allows us to use Johansen conintegration (JCT). Before estimating the coefficients we tested the variables for unit root problem). Brief results of the empirical estimation are presented in Tables in Chapter five and annexures.

Model 2

In the framework of New Theory of Economic Growth, FDI does not only affect the level of output per capita but also its rate of growth which means that FDI (Kokko et al. 1996) can affect economic growth both in long-run and short-run. Endogenous growth model suggests that FDI facilitates the use of local raw materials, introduces modern management practices, brings-in new technologies, helps in financing current account deficits, increases the stock of human capital via on the job training and labor development, and increases the investment in research

and development. To find out the factors determining the foreign portfolio investment in Pakistan (Collins and Reinhart, 1999) the following model is used.

FDI = f (GDPG, INF, M, R, ER, DI, XD, MD)

Or

$FPI = \beta_0 + \beta_1 GDPG + \beta_2 INF + \beta_3 M + \beta_4 R + \beta_5 ER + \beta_6 DI + \beta_7 XD + \beta_8 MD + u \ldots\ldots (2)$

Where,

FPI = Foreign Portfolio Investment

M = Money Supply. It is the broad money (M_2)

β_0 = Constant

β_1 = Slope with respect to each corresponding variables

u = error term

u representing error terms in the above variables like in inflation (INF) population ethnicity, color (black & white), Religion, marital affairs/status happy/unhappy, in exchange rate (ER) money laundering, transfer of money through hundies, in money supply (M) hoard money, barter transactions, smuggling, in XD/MD intrinsic skills in work-force, human capital endowments, smuggling/dumping, hoarding, black marketing, environment etc. and in GDPG error terms may be natural calamities', floods, earth quick's, geographical location, education, religion, sex, race, human behavior etc. Model-2 is estimated using secondary data of Pakistan for the period 1981 to 2010.

Model 3

Neoclassical model suggests that there is a positive relationship between aid and growth, as long as the GDP in host country is below its peak transitional growth rate Burnside et al. (2000). For investigating whether FCIs put positive or negative effect on economic growth in Pakistan (Fleck and Kilby, 2006) and (Rahman, 1968), the following model is estimated;

GDPG = f (FDI, FPI, INF, R, ER, DI, FR, XD, MD)

Or

$GDPG = a_0 + a_1 FDI + a_2 FPI + a_3 INF + a_4 R + a_5 ER + a_6 DI + a_7 FR + a_8 XD + a_9 MD + u \ldots (3)$

Where,

ER = Exchange Rate of Rupee against per unit of US dollar

FR = Foreign Exchange Reserves

ao = Constant

a_i = Slope with respect to each corresponding variables

u = error term

Model 3 is estimated using nominal secondary data for the period 1981 to 2010.

Model 4

To examine the effects of the 'Foreign Capital Inflows' (FCIs) on domestic investment, (Rajan & Subramanian, 2008) (the following model will be applied;

DI = f (FDI, FPI, C, INF, R, ER, GDPG)

Or

$$DI = \alpha_0 + \alpha_1 FDI + \alpha_2 FPI + \alpha_3 C + \alpha_4 INF + \alpha_5 R + \alpha_6 ER + \alpha_7 GDPG + \mu \ldots\ldots (4)$$

Where,

C = Domestic Consumption

α_0 = Constant

α_i = Slopes with respect to corresponding variable

u = error term

Model 4 is estimated using nominal secondary data for the period of thirty-year i.e. from 1981 to 2010.

Model 5

The impact of the FCIs on inflation **(**Collins and Reinhart, 1999) is examined by using the following model;

INF = f (FDI, FPI, GDPG, M, R, DI)

Or

$$INF = \beta_0 + \beta_1 FDI + \beta_2 FPI + \beta_3 GDPG + \beta_4 M + \beta_5 R + \beta_6 DI + \mu \ldots\ldots\ldots (5)$$

Where

β_0 = Constant

β_1 = Slope with respect to each corresponding variables

u = error term

Model 5 is estimated using nominal secondary data for the period 1981 to 2010.

Model 6

Finally, for showing the influence of FCIs on trade balance (Adam &Moseley, 1983, 1987) in Pakistan, two more models will be used, which are given as under:

$$TB = f (GDPG, FDI, FPI, FR, RPM, RPX, ER)$$

Or

$$TB = a_0 + a_1GDPG + a_2FDI + a_3FPI + a_4FR + a_5RPM + a_6RPX + a_7ER + u..... (6)$$

Where,

RPM = Relative prices of imports

RPX = Relative prices of exports

TB = Trade Balance

a_0 = Constant

a_i = Slope with respect to each corresponding variables

u = error term

In this Study, Time-Series collected observations at different time periods where values of the variables Lagged (as Laps of the time involved in the data) values of the regressand in equation obtained by Granger Causality test (GCT) to have the information relevancy, to the prediction of the respective variables in the above model and exogenous of the variables, e.g. to investigate either an increase in GDP lead to increase in M and an increase in M lead to increase in GDP. Theories support lags due to trend, seasonal, Irregular, cyclical components, Psychological, Technological, Institutional and infrastructural factors during the study periods. For integrated variables of different orders and sample size not so large enough, (JCT) Co-integration Techniques like Johansen (1988) best and imprecise. For detecting first order difference level these various criterions has been used like Akaikey Information criterion (AIK), Hannan Quinn information criterion (HQ), Schwars information criterion (SIC) for the calculation of the numbers of lags. For checking the stationary of the time-data, Augmented Dickey Fuller test unit root used. For the analysis of variation in variables and to find their long-run relationship established among in those variables "Johansen's-Co-integration-Test" (Hasan & Masood, 2000) applied. Whereas for the detection of short-run impacts of FCI

on the selected variables in models, "Vector-Error-Correction-Model" (VECM) technique (Mohyuddin, 2011) and ECM (Shomaila, 2012) used. Moreover, for examination of the inter relationship in the foreign capital inflow with economic growth, domestic investment, consumption and inflation; Granger Causality test (Salma, Sethi, Yasmin, 2013) applied. For deriving the results, a statistical package SPSS and E-views is used.

3.4 Estimation of the Methodology

In the initial phase, the stationarity of issues involved in the research was tested by a Unit Root test. In this situation, the Augmented Dickey Fuller (ADF) was used and three designs were estimated

Model 1 (without any constant and trend)

$$\Delta y_t = \rho * y_{t-1} + \sum_{i=1}^{p} \delta_i \Delta y_{t-i} + e_t$$

Model 2 (constant with no trend)

$$\Delta y_t = a + \rho * y_{t-1} \sum_{i=1}^{p} \delta_i + \Delta y_{t-1+} e_t$$

Model 3 (constant and trend)

$$\Delta y_t = a + \beta t + \rho * y_{t-1} + \sum_{i=1}^{p} \delta_i + \Delta y_{t-1+} e_t$$

The ADF information is the t-value associated with the calculated coefficient of ρ*. The popularity of zero speculation (H0: ρ* = 0) signifies the use of model actual which will signifies non-stationarity. The speculation is declined if ρ* is unfavorable and considerable. Examination was carried out for all the line of income and prices where both the unique line and the distinctions of the line were examined for stationarity. The co-integration between the two lines was examined by managing the OLS regression, known as the co-integrating regression

$$y_t = a + \beta X_t + e_t$$

Then the line of toxins, e_t from this regression was examined for standing. Stationarity in et signifies co-integration between Yt and Xt, and can be examined often, as mentioned in Engle and Granger (1987). One way is to submit an application the ADF applied. The second and a fast way are to look at the Durbin-Watson information of the co-integrating regression. If it is near to zero then therefore that et is not standing and therefore Yt and Xt are not co-integrated. The popularity of co-integration between two lines signifies that there exists a lengthy run relationship between them. However, this relationship may be annoyed by shorter run diversions from stability and thus Problem Modification Style (ECM) may be an appropriate structure which is an expansion of the Granger causality examine where one correction phrase is presented into the test

$$\Delta Y_t = a_1 + \rho_1 e_{t-1} \sum_{i=1}^{p} \beta_1 \Delta Y_{i-1} + \sum_{j=1}^{q} \delta_j \Delta X_{j-1}$$

$$\Delta y_t = a_2 + p_2 e_{t-1} \sum_{i=1}^{p} \beta_1 \Delta y_{i-1} + \sum_{j=1}^{q} \delta_j \Delta X_{j-1}$$

Where $e_{t-1}$is one modification phrase addressing the lengthy run connection ρ1 and ρ2 are regarded the pace of modification coefficients. Furthermore, at least one of these coefficients must be considerable as a way the ECM to carry.
If both coefficients are considerable, this will recommend that both line put in lengthy run connection, that is, there is a suggestions procedure between them. If, however, only ρ1 is discovered to be considerable, this will recommend that X off pushes Y toward lengthy run stability but not the other way around. Moreover, these coefficients must be unfavorable as a way the last time beneficial difference from lengthy run pattern to have unfavorable result in this time and thus driving it again toward the pattern. The lagged conditions of ΔYt and ΔXt, made an appearance as informative issues, indicate short run characteristics or cause and result connection between the two lines. Thus, if the lagged

coefficients of ΔXt appear to be considerable in the regression of ΔYt, therefore that X impacts Y. In the same way, the other supports if the lagged coefficients ΔYt are considerable in ΔXt if none of the lagged coefficient is considerable anywhere therefore that there is no cause and result connection between the two series.

Granger causality test

$$Yi = \beta_o + \sum_{j=1}^{m} \beta_j Y_{t-j} + \sum_{i=1}^{n} \alpha_i X_{t-i} + U_{it}$$

$$X_t = \gamma_o + \sum_{j=1}^{m} \gamma_j X_{t-j} + \sum_{i=1}^{n} \delta_i Y_{t-i} + U_{it}$$

The Granger causality test is a precise speculation examine for figuring out whether one time series is useful in predicting another. Normally, regressions replicate pure connections, but Clive Granger (1969), (won a Nobel Prize in Economics) suggested that there is a description of a set of assessments as disclosing something about causality. Here we check that does Y has any effect on X and alternatively we also check that does X affect Y. If Y has any effect on X, it is not compulsory that X will also affect Y. It can be a two-way relationship or one-way relationship. If we have 3 terms, Xt, Yt and Zt. and that we first try to predict Xt+1 using previous terms of Xt and Zt. We then try to predict Xt+1 using previous terms of Xt, Yt and Zt. If the second prediction is discovered to be more profitable, according to normal cost functions, then the past of Yt usually contain details assisting in predicting Xt+1, that is not in past Xt or Zt. In particular, Zt would be a vector of possible informative variables. Thus, Yt would "Granger cause"Xt+1 if (a) Yt takes place before Xt+1 and (b) it contains details useful in predicting Xt+1 that is not discovered in a number of other appropriate variables.

STEPS

Four-steps procedure adopted for checking the existence of long-run relationship among the variables that have integration of the same order are given as under:

a) All variables are examined for the stationarity of the data, for which Dickey Fuller (DF), the Augmented Dickey-Fuller (ADF), or Philips-Perron (PP) test can be employed. Once proved that the data has a unit root and the variables are integrated of the same order, the Co-integration technique can be employed.

b) The second step involves the estimation of long-run relationship by regressing dependent variable on the set of independent variables. Thus, the residual series of the regression so obtained is used to check the long-run relationship between the variables.

c) In the third step, the existence of long-run relationship in this ascertained, for which a simple test, recommended by Engel Granger, is used. For this purpose, the estimated series of regression error term is looked into for unit root. If the estimated regression residuals are found stationary, it implies that the dependent and independent variables are integrated, which indicates that the long-run relationship exists between the variables.

d) In the fourth step, once it is known that the long-run relationship is exists, error correction model is estimated; and an equation, having the characteristics of short and long run relationships and adjustment mechanism, is obtained. The adjustment procedure is recognized by the co-efficient of the lagged residual term (of the long-run regression) and is included in the final equation.

Error Correction Model

After establishing the co-integration, the error term would become stationary, that is to say, it would be integrated of zero order. For estimating the equation that has the effects of both long and short run relationships, the error correction model specification would assume the following form:

$$\Delta Yt = ao + \text{lagged } (\Delta Xti, \Delta Yt)\text{-p } ut\text{-}1 + ei$$

In the above equation, the dependent variable is expressed in differenced form, whereas the independent variables are shown in lagged difference shape. While the co-efficient of the lagged ΔXti measures the short-run and reflects the immediate effect of change in the explanatory variables upon the dependent variable, "p" shows the long-run relationship and its co-efficient represents the adjustment process.

3.4.1 Justification of the variables

Following is the justification of the variables used in the models.

3.4.2 Foreign capital Inflow

Foreign Capital Inflow is dependent variable used in this study. One of its objectives to analyzed the factors responsible for changes in the Foreign Capital Inflow. Foreign capital inflow helps the economies to cover the gap by augmenting domestic resources through higher productivity, employment generation, expansion and modernization of Industries and improvement in the balance of payments. Foreign financial capital inflow (FCI) induce developmental economic growth in almost all the under develop world Mohey-ud-Din, G (2011). FCI enables the nations to reach beyond to their potential investment levels as compared to their own domestic savings capacity. FCI is a vital source of getting modern technological implements, know-how, innovate the structural base of all most all export oriented industries by the transfer of physical assets from the developed to least-developing economies. Looking to the importance and the role FCI

plays in the economic growth and development of a country, this variable cannot be ignored.

3.4.3 Gross Domestic Product (GDP) Growth Rate

Domestically produced gross final goods and services (GDP), means its financial value in all the markets with in the boundary of the resident country in the period of one year. The percentage increase in the GDP from one year to another year or from the base year to the current year is GDP growth rate. The foreign capital inflow to any country affected by the growth rate of GDP of that country. The greater the GDP growth rate of a country, the more is the international investor's confidence on the domestic economy and hence the more is Foreign Capital Inflow. In the same way GDP is also affected by the net foreign capital inflow to a country. The more is the capital inlow to a country, the higher is the value of its currency, the more is stable the economy, and hence the economy is on the path of growth Mohey-ud-Din, G (2011). While studying the influence of all Foreign Financial Capital assets Inflow, growth rate of GDP must to be considered as dependent as well as independent variable in quantitative modeling of the data on the variables.

3.4.4 Inflation and FCI

Persistent and appreciable rise in the general price level is inflation. Pakistan is facing almost double digit (high) rates of inflation since last two decades. High inflation means that too much money chases too few goods and services. The value of money or the purchasing power of the people decreases. In studying net foreign capital inflow, inflation is an important variable from both dependent and independent point of view. In this study first inflation is taken as independent variable as factor affecting FCI. Foreign Capital Inflow is no doubt affected by inflation. The greater the inflation in the country, less is FCI and vice versa Mohey-ud-Din, G (2011). The relationship is on another way as well. The more capital inflow to a country, the more stable is the value of currency and as the country will be having more foreign exchange reserves, so the value of currency will increase leading to reduction in inflation in the country. So that is why this variable (inflation) is taken in this study both as dependent variable and independent variable.

Inflation rate is also a macroeconomic factor of consideration as it may tell a story about economic stability of a country.

3.4.5 Interest rate and FCI

Changes in the rate of interest and Foreign financial capital inflows are insensitive to each other in the country as some empirical studies revealed. It is said that a point percentage rise in the rate of interest lead to rise in just about 0.05 % in net capital inflows in the case of Indian economy. Besides rate of interest, the host country industrial and other economic activities, rate of stock return, comparative performances of other developed countries and overseas foreign investors' risk perception about marginal efficiency of capital are the eminent determinants that attract foreign capital inflows. It has been observed that application of a tight monetary policy frame-works discouraged the net foreign capital inflows in to the country. Traditionally, Foreign Direct Investments (FDIs) and Foreign Intermediaries Investments (FIIs) are two important parameters of 'foreign capital inflow' and different studies shows that the above mentioned two parameters are non-responsive completely to variation in the rate of interest. However, the effect of the interest rate on capital inflow cannot be ignored totally. Though the affect may be either very small, but it does affect the international flow of capital. Due to this reason, this factor (interest rate) is considered here, and put in the model to go to in depth study of the foreign capital inflow.

3.4.6 Exchange Rate of Rupee against per unit of US Dollar

The co-relation in 'foreign exchange rates' and 'foreign direct investment' arise when both these are examined in global world trade integration capital assets markets and conditionally subject to the informational imperfections in the present time. Imperfections in various matters cause external financing to become more expensive as compared to 'internal financing', so that changes occurs in domestic-wealth lead to changes in the demand for direct investment. It systematically lead to decrease the relative wealth of domestic agents of the economy as appreciation of the foreign currency in comparison of host country’s medium of exchange (currency) value depreciation lead

to acquire certain domestic assets as compared to foreign assets. Exchange rate as a determining factor of FDI is rigorously studied by different researchers. These studies considered exchange rate from different angles and their findings are varied in nature. (Kyereboah-Coleman and Agyire-Tettey, 2008) an empirical analysis carried out taken the data from a developing country 'Ghana' based their assumptions on the volatile character of macro-economic variable i.e. foreign currency rate of exchange and has showed insignificant (indirect) impact in response to the flows of FDI's. Another empirical study (by Jeon and Rhee, 2008) proves positive direct response of currency real exchange rate with expected changes in exchange rate of host country's currency. They choose the data of a Firm's level related to the American's flows of FDI's to the Korean economy. Other studies too (Ramiraz, 2006; Cushman, 1985) shown a positive significant relationship between these two factors. Contrary to its findings on the co-relationship between the two economic variables are also documented. Studies like (Brahmasrene and Jiranyakul, 2001; Dewenter, 1995) state that there is no statistically proved significantly positive (direct) response in exchanging the domestic currency in terms of the rate of foreign currency-exchange and flows of foreign investment.

3.4.7 Domestic Investment and FCI

According to the estimates, private investment decreased to 8.7% of GDP in 2011-12 as compared to last year's 9.6%, indicating that private businesses are continuously decreasing. Contrary to this, public investment improved slightly to 3.9% from 3.7% primarily because of spending under the Public Sector Development Programed and other government expenditure. The fixed investment ratio fell to 12.6% this year from 13.3% last year. The empirical and theoretical literature reviews concentrated their analysis to investigate the possible response in the flows of FCI's and recipient economy's investment exhibiting significant (direct) and non-significant (indirect) impacts in relation. Significant relevance of direct relation between foreign assistance and higher rate of savings supplementing by investment in Pakistan is concluded by some studies. Foreign capital inflow complemented domestic resources to generate growth. Foreign

economic assistance affecting at large the macro-economic indicators of developmental process in Pakistan, specifically aggregate investments and aggregate imports are greatly dependent on the flows of the amount of foreign assistance. Strongly FDI linked to activate total domestic investments as being having significant effect in the host economy aggregate savings potentiality/investments capabilities, as compared to other components in FCI's e.g. external debts, flows of portfolios foreign investment and other public/private loans. Foreign savings have also very strong positive impact on consumption, marginal efficiency of capital and rate of return expected and an upward trend arise in investment and accelerate the consumption effect again resulting surge in the aggregate host investment in non-tradable goods of the economy.

3.4.8 Domestic Saving and FCI

Domestic savings is main determinant in the process of country's capital formation. If these savings are meager resulted low investment leads low employment and low per capita income and at the end low size of GDP. The country has to rely on foreign capital to meet its deficits in the budgets and current and capital accounts. That is why the relationship between that hosts country savings and FCI is a matter of great concerned all the time in the history of the literature for researchers. There is a controversy about the above mentioned variables responsiveness with FCI's, contradiction revealed in the results of empirical analysis positive direct significant and indirect both in FCI's and aggregate host savings. Foreign official aid accelerate the growth rate through increased in the level of aggregate savings and investment in Pakistan by the intensive surge in the flows of the determinants of FCI's during the period of 1960's, 1970's and 1980's. Foreign inflows undoubtedly stimulated savings potentialities and there is a direct significant complementary responsiveness in FCI's and aggregate domestic savings in the developed and under developed economies, while some of ascertains found insignificant substitute relation among macro-economic indicators.

3.4.9 Demand for Exports and FCI

Exports are the expenditure of foreigners on locally produced goods and services and the demand of foreigners for locally produced goods and services. To export more goods and

services, we need to invest in the industrial, agricultural and services sector of the economy. To satisfy the increasing demand for exports from the foreigners, more domestic and foreign investment is needed. Hence increase in demand for exports is the factor which determines foreign level of investment in the country. By analyzing foreign capital inflows, it is must to consider the demand for exports. Demand for exports is also affecting growth rate in the country. So this variable is selected in the model which examines the effects of the flow of FCI on the process of development of economic growth in the country.

3.4.10 Demand for Import

Import is the expenditure of goods and services which are produced abroad, and local people spend on them. This variable is an important factor of determining growth rate in the country. The greater the expenditure on imported goods by the local people, means that lesser will be GDP growth. This ascertain considers the influence of FCI in response of growth in the economy, so as demand for imported goods and services is selected as factor affecting GDP growth rate. The expenditure on imported goods and services is subtracted from the total national income, as it is a leakage from the national income. More leakages from the national income mean less growth in the GDP. Demand for imports is an important factor in the study of growth models. That's why this variable is selected in the models of this ascertain.

3.4.11 Foreign Portfolio Investment

As excessive foreign exchange reserves is the basic determinant for bridging the gap of current and capital accounts deficits in the balance of payment position. There is great competition among the developing country to formulate its policies to enhance its reserves either through exports earnings, foreign remittances or other forms of FCI's. There Economists, Researchers conducting empirical analysis and Policy Analysts are giving considerable attention to the mutual responsiveness of growth rate and investment flows of foreign portfolios (FPI), especially in developmental contests Mohey-ud-Din, G (2011). The argument in favor of an open economy following the strategies of global world economic integration for boosting economic growth irrespective of whether an

economy is developed or developing is highly volatile issue. There are many aspects of that openness i.e. free trade in physical goods and invisible services (further divided into exports and imports), and free international financial capital inflows. The foreign investors move a part of their production to the country where market is large to absorb a substantial part of their production. To investigate such type of effect GDP growth rate is included. It is hypothesized that the coefficient of GDP growth rate should be positive because foreign investors are interested in the larger market for their production.

3.4.12 Money Supply

Money supply is the total amount of money circulating in the economy plus deposits in all banks. Monetary policy of the country determines the total quantity of money supply. If money supply increases, this means that monetary policy is expansionary and vice versa. It is the money supply in the country which affects the interest rate in the country which leads to changes in general price levels and hence inflation. More money supply means that less value of the money in terms of other foreign currencies. So the exchange rate of the currency of the country falls due to increase in money supply. As money supply has many fold effects on the international transactions, the researcher could not ignore this variable. Looking to the effect of money supply, this variable is included in our model.

3.4.13 Government Expenditures

Government expenditure is the basic tool of fiscal policy of a country. Government expenditure can either be developmental or non-developmental expenditures. Increase in government expenditure means expansionary fiscal policy and vice versa. The large government expenditure means that the government is providing basic facilities like infrastructure, energy, law and order etc. to the local/international investors. A country spending more in its budget on infrastructure and other sectors of the economy can create more confidence of the international investors and hence can captures more capital flow. The more government expenditure, the high will be the national income, employment, saving, investment, consumption and hence high will be the GDP growth rate. This is the reason why this variable is included in the analysis of this study.

3.4.14 Exchange Rate of Rupee against per unit of US dollar and FCI

The responsiveness in foreign currency exchange rate and flows of FCI's is now a matter of great concern in recent past, and the literature revealed that few researchers have addressed this issue. Continuously decreasing trend of global interest rate encouraged a more rapid fall in the flows of net foreign financial assets host country's currency real exchange rate depreciated. In the net debtor form (foreign country's currency comparatively appreciate in terms of Real exchange rate appreciates. Contrary to it in the net creditor case the real exchange rate may either be appreciate or depreciate. Countries having large economies using the techniques of free (floating) exchange rate of their currencies such as the United State of America, the United Kingdoms, Japan and some of South East Asian Nations runs 'Causality' test from the value of real exchange rate of currency to the flows of FDI's. Similarly effect of 'Causality runs' have two aspects in its dimension in the economies having small size of GDP as compared to the developed economies with not floating exchange rate but either fixed or quasi-fixed currencies exchange rates (the economies of European Union). Appreciation in foreign exchange rate has significant positive impact on Foreign Capital Inflows. Thus the study proved effective 'causality runs' from the flows of FCI's to currency (appreciation) real foreign rate of exchange.

3.4.15 Foreign Exchange Reserve

Foreign exchange reserves are one of the important variables which affect the growth rate of the country. The more foreign exchange reserves of a country, the greater will be the value of the local currency in terms of foreign currencies and hence exports will be more expensive and imports will be less expensive. Similarly less the amount of foreign exchange reserves, decreases local currency value and hence exports increase and in turn imports of the country will decrease. Greater exports and fewer imports will enhance GDP in the country by improving terms of trade and balance of payment position. Similarly, fewer exports and greater imports will reduce the GDP of the country and will create twin deficits in current/capital accounts. Foreign exchange reserves, affects the

GDP growth rate through exports and imports. That is why this variable is selected in this study.

3.4.16 Domestic Consumption

Domestic consumption is taken as factor affecting the domestic investment. The economic theories show that the domestic saving and domestic consumption are inversely related to each other. The more domestic consumption means less domestic saving, which means fewer funds available for investment purposes. Looking to the statistics of Pakistan, The average spending's of Pakistani people are 87 percent of their incomes on consumption expenditure and the rest 13 percent are saving, which is very low for generating new employment opportunities. This is one of the reasons that, why domestic investment is very low in the country. While studying the impact of FCI on domestic saving, it is necessary to consider those variables also which affect domestic saving and domestic consumption in one of those important factors.

3.4.17 Relative prices of imports

While studying the effect of foreign financial and physical capital inflows on the Balance of Trade, relative prices of imports is very important variable for terms of trade and balance of payment position. It is the price value of imported visible (goods) and non-visible (services) relative to the price of locally produced goods and services which affect local demand for import and exports. This is one (FCI) of the most important variable affecting balance of trade.

3.4.18 Relative prices of exports

While studying the influence of foreign financial flows of capital assets on Balance of Trade, relative prices of exports are also very important variable. It is the market value of physical exports and services relative to the market price of physical goods and services produced by the export receiving country which compose the volume of foreign trade and affect terms of trade. This is one (FCI) of the most important variables affecting balance of trade its deficits in current and capital accounts.

3.4.18 Foreign Direct (FDI) Investment

FDI and relationship in economic growth is analyzed by theoretical and empirical literature to clarify its contributions on recipients' economies and most suggested that impacts neither automatic nor comparable in all recipient economies. Few under developing economies have high FDI (inward) sharing their economic growth. Analysis of many ascertains based on comparison of cross-country data suggesting the availability of basic requirements in the recipient's countries for the gain from inward FDI viz; a certain level of GDP growth-rate; economic development (Blomstrom, 1994); physical human capital index (Borensztein 1998; Hermes and Lensink, 2000), sound internal financial markets (Hermes and Lensink, 2000) in the country with prudent "outward-export-oriented" commercial strategy (Bhagwati, 1978; Balasubmaranyam, 1999). Recipient's economies derive various types of FDI and their benefits are also varying in nature (Dutt, 1997). Effective analysis of the 'inward-FDI' on the performances of macro-economic indicators of Pakistan would be possible if first to examine that either the economy is appropriately enable in its policies framework to take all the benefits of 'inward-FDI' and having completely (the above-mentioned) prerequisites for FDI to collaborate in the struggle for growth and development. Second argument, is the industrial structure for the FDI inflows is either favorably conducive to the process of growth. (Borensztein, 1998) concluded possible contribution of FDI to economic growth with the condition of having above 25 years male population enrolled in secondary school (advanced technologic education) sufficient labor-force absorptive capabilities available. Studies revealed that Pakistan possessed the criteria in the year 1980's, with a male population at the average of more than one year (1.146) of secondary schooling. According to another study by Hermes and Lensink (2000), in 1970's, the secondary enrolment rate of 12.8% of the population also satisfies the criteria in Pakistan in comparison of minimum availability of human capital of 8.5% for FDI had direct significant influence on development. Besides fulfilling the minimum population thresh-hold criteria the economic indicators of Pakistan do not improved as compared to other under-developed nations in the past.

CHAPTER 4

OVERVIEW OF FOREIGN CAPITAL INFLOW TO PAKISTAN

4.1 Introduction

Foreign Capital Inflow is an element of imminence importance accelerating rate of growth and development of a country for both developed and under-developing economies. Although, it is the dire need for under-developing nations where their saving potential is low, having meager earnings from exports and low foreign remittances. But FCI inflow is not confined only to the under-developing countries. Emerging economies (e.g. China, India, and other East/South Asian Nations) and as well as developed countries facing stiff competition for attracting foreign inflows to meet growing needs of foreign financial and physical assets, to cover their deficits in accounts, budget and attain financial stability in the value of all macro-economic indicators. Although, it's (FCI) composition, size and magnitude are depended on the economy specific needs. When host country has low saving/investment ratios, capital formation, employment level, household per-capita income, the government's developmental expenditure due to its low fiscal revenue and growth of the country ultimately slows down. Thus need for foreign capital inflow arises to increase government expenditures and consequently to generate employment to stimulate consumption level and saving investment. With the passage of time, dependency of under-developed economies become more sever on foreign capital inflows due to which their growth and development completely pro-reliant on funds from foreigners. The result of this pro-dependency usually shocks the recipient's economies when completely or partially the inflows are impeded and its absence disturb the structure of monetary, fiscal and commercial policies. Like-wise misappropriation, very critical issue is misallocation of funds, no proper direction, no research on host country to support the efficiency of the projects of FCI; they may all adversely affect economic development and growth process of a country because of increasing poverty level and unemployment rate with low investment on human capital. Foreign inflow is very critical

issue of importance in Pakistan. Factual grounds of low saving and investment ratios, no inducement for propensity of physical and human capital formation, non-stable political environment and macroeconomic instability are main hurdles in the continuous flows of FCI urgently requires for supplementing its growth stages. The history of the flow of the various forms of foreign financial/physical capital, its determinants and composition for Pakistan has changed over the years. The amount of foreign remittances in total FCI inflows decreased from 16.35% in 1980 to 13.48% in 2010. Contrary to this, share of FDI enhanced from 0.26% to 9.96% in the same period; exhibiting diversion change in trends in its flows and concentrated to some specific countries and fields. External debts Share ballooned and remarkable surge occurred in the last two decades followed by huge increase in its trend from 1985 to 2000 but in 2008 it fell to 76.5% as compared to 93.91% in 2000. Poverty and economic development in relation with FCI found to be controversial indicators in the literature. Some studies revealed positive influence of foreign inflows in relation to poverty and economic development, while other studies highlighted its negative impact (Mohey-ud-din, 2006). In case of Pakistan there are few theoretical and empirical studies on the relationship between inflows and poverty, for example Siddiqui (2006), Zaman (2008) and Mohey-ud-din (2006). After extensive literature review and analyzing the quantitative data by applying different technique and models, these ascertains have explained the relationship between foreign inflows and poverty but none of them have conclude the extent of the effects between these two variables. Similarly for remittances, Adams (2002) and Nishat (1991) found significant direct positive relationship on foreign remittances, potential savings, GNP, consumption level, investment capabilities and imports substitutions in Pakistan.

4.2 HITORICAL REVIEW OF INVESTMENT POLICIES IN PAKISTAN

4.2.1 The 1950s, 1960s, and 1970s

During 1950s and 1960s the industrial development was only depend on the investment of private sector and considered as the main vehicle of drive for that sector in the country.

While public sector was confined to the investment of only three industries out of twenty seven (27) basic industries of the whole structure till by late 1960s and mostly private sector superseded and ruled over it. Industries (certain basic industries mostly dealing in international trade and producing major commodities), and financial sectors eminent branches like insurance companies, corporate sector, banking, and other enterprise were owned by private sector. The government adopted the strategy to keep away foreign investors from dealing in commerce, banking, insurance and other corporate sectors. Similarly, the services sector was also reserved for local investors only. During 1970s, government nationalized commercial banks, development financial institutions, insurance companies and ten major categories of industries. The public sector tried their level best to accelerate direct investment in new establishments of various other fields of industrial sector and covering wide areas i.e. from the consumer goods to the producer goods like steel manufacturing industries, textile garments, and other consumable items (butter/breads) etc. Role of the organizations of the public sector filling the investment gap in the industrial /banking sectors as a main repository in the 1950s and 1960s was negligible. Till that, the direct public investment only attended the position of three basic industries i.e. (i) arms and ammunition; (ii) increasing capacity of production of hydro-electric generation power; and (iii) railway wagons and other locomotives production, enhancing apparatus infrastructure for wire-less/telephones and telegraph lines. The focus also shifted to heavy-mechanical-engineering, assembly of the imported parts of the tractors and motor vehicles, manufacturing of iron, steel, basic heavy chemicals/petrochemicals production, cement, gas, oil refineries and establishment of public utilities.

4.2.2 The 1980s

Miserable conditions and poor performances of the industrial sector compelled the government for nationalization process of the 1970s. The role of the public and private sectors changed due government's approach toward it. In 1980s, it was decided to promulgate the characteristics of the mixed economy in to the running system of the

economy and private sector was entrusted permission for investment in the prohibited areas, and public/private partnership ease the tense environment. At the same time, Pakistan implemented more liberal foreign investment measures and other regulatory policy measures were also taken to induce private sector improve the image of business environment and to encourage particularly foreign investment. An important measure taken by the government to attract foreign investment was the liberalization of exchange rate regime. Furthermore government established special zone in major cities (e.g. EPZ in Karachi for promoting the exports of various traditional and nontraditional goods and services) for the facilitation of foreign investors to give boost to export orientation and process exportable items according to international standards. The govt. also adopted several other policy measures like the concessions in imports and export duties and fiscal facility offered by the EPZ was taxation rebates (tax-holiday) for several years. Similarly side by side one-window credit operation was also provided to the small holders to overcome their financial constraints in the establishment of small, medium and large-size new industries. Despite various incentives measures the highly regulated nature of Pakistan's economy restrained the inflows of foreign investment. Specifically it was restricted by (a) large holdings of public-ownership, imposed tight industrial policy for license, regulatory body of the government for rationing prices (b) no government regulation in capital and money markets for improving its efficiency, delaying-tactics of the public ownership in the disbursement of credit, directed flow of credits for specific sectors of the markets and (c) no competitive environment and distorted trade/commercial policy regime with licensing main import, bans, and high tariffs.

4.2.3 The 1990s

During 1990s government started to apply the same rules and regulations to attract foreign and domestic investors. The sanction of the government required for foreign investment was abolished exception few industries. They were also prohibited for even local investments due to its sensitive nature to the defense point of views e.g. fields of security printing, arms/ammunition, currency/mint, warrior implements high explosives,

radioactive substances, and alcoholic- beverages etc. Some non-industrial sectors were also excluded from the list for foreign investment like cultivable land, green-gold-forestry, energy power, canals system of irrigation, property dealing including real state (land) schemes. The provincial governments also included some items on the negative list. Some fiscal incentives, including various tax holidays to all industries were given again especially custom duty and sales tax concessions were awarded. Tariff and custom duties restriction have been abolished; the prohibited list of imports declined and the policy makers broadened the export-incentives-measures and granted with modified liberal policy. Special-industrial-zones (SIZs) were set up with several fiscal incentives. Government initiative of privatization and deregulation for public industrial units was an important achievement of that period to promote confidence building measures for local and foreign investors.

4.2.4 The 2000s and onward

In the year of 2000s government adopted an investment policies depended on the principle of public sector's owned industries privatization, policy of deregulation, fiscal incentives and liberal remittance of profits and capital by the foreigners, promoting investment in high-tech sophisticated and export-oriented industries while the entire remaining fields like agriculture, services, infrastructure, social sectors, etc. have been open for foreign investment with similar fiscal incentives to facilitates them including loan financing from local banks. In the recent investment policies more incentives have been given by the government to welcome new foreign investment especially keeping interest on the sidelines to find more positive response to the latest granted package of incentives.

4.3 The Problems Caused by "Excessive" Capital Inflows

1. Excessive Foreign Capital Inflows may destabilize macroeconomic management by arising the problems of changes in exchange rate of domestic currency. This have two-way effects, the inflows lead to an increase in the value of currency (appreciation) real

foreign exchange rate resulted Dutch disease, secondly through the accumulated flows a balloon of external loan fueled lead to disturbing current and capital accounts of the country and finds difficulty in continuously financing real debt value and its services charges which resulting deficit in the balance of payment and terms of trade contractually agreed terms.

2. Appreciation in the value of local currency either may be temporary or permanent. The problem emerges when the real external value of currency increased with increase in the flows of foreign financial assets. Necessarily it may be differentiate to clarify the impact of FCI on real exchange rate. Public expects Foreign capital inflow effects on investment temporary and is unlikely to governed by long-run expectations to have a struggle to take the benefits of low prices of foreign capital goods, to get accelerated inflow of investment, to complements domestic capital goods, building infrastructure, buy foreign-made capital goods equipment's to spill over local boom of local reforms, boom of stock exchange by following expansionary monetary policy, Consumption boom, as a result of increasing wealth on domestic and imported goods.

3. Assuming the inflows of capital not recognizing low foreign interest rates or the local stock market boom. The falling profit levels of tradable goods discourage investment. Investment then shift toward non-tradable industrial outcomes, a decrease in the cost of capital, expenditure shift from investment to consumption goods as marginal propensity to consume increase due to increase in employment. When the capital inflow stopped, the economy fell in to the gauq-mire of external foreign debt.

4. Consider now the possibility of permanent capital inflow, because the reforms are the source of inducement in domestic economy. The desire of resisting real appreciation from permanent capital inflow to have resources discovery, can take combination of increased consumption and investment. Latin American economists argued key reason for East Asian's superior economic performances of their attention given to maintaining a stable/ competitive real exchange rate. No prudent government policy followed to induce capital inflow and gain real appreciation of currency big enough to expedite exports.

5. Macro-economic problem raised by capital inflows is increasing debt level that the country finds to pay service charges and real-value as well on the bases of agreed contract, this experienced in1982 at Latin America, in the early 1990s at Mexico and recent Greek debt crises of 2010. This identifying two issues, prudent solution of debt problems and limiting borrowing discretion level of market.

6. Other problems are speculative bubbles in the stock market, financial crisis, the danger of a recession, and a decrease in the domestic rate of savings as house-holds finds the value of their asset accumulation depreciating.

7. Capital inflows compelled resident's investors to get out of market and they losses local control of economic decision-making units when foreign direct investment, portfolio equity investment get access of the market. But loss of control may be restrained encouraging joint ventures.

8. Dollarization of an economy when having the problem of meager foreign exchange reserves to finance local imports bills expenditure is indispensable. The best use of foreign borrowing and new foreign investment to contribute the production of tradable items to increase reserves of foreign currencies which could be utilized for the payment of its real value and the service charges of external debt and not to spent capital on it.

4.4 Restrictions imposed on Foreign Capital Inflows (Sterilizing)

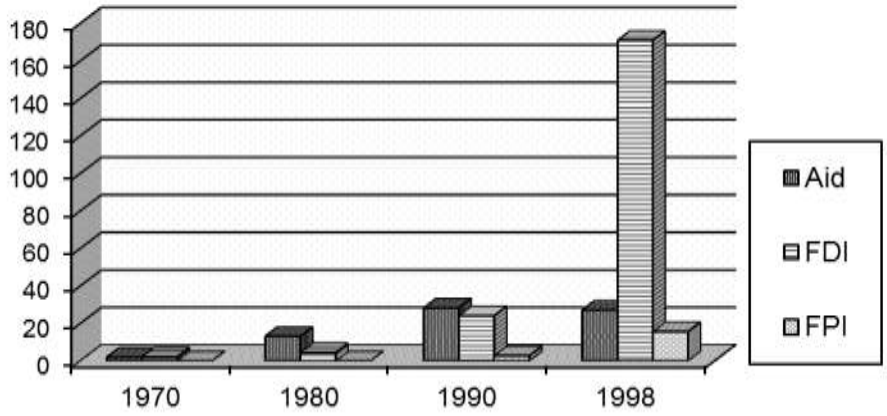
Least-developing countries are reaping advantages of the flow of foreign capital handsome amount of rewards from escalation of flows in the recent years by increasing the levels of foreign investment to encourage economic growth. But it is also a double-edged sword, depicting inflation by destabilizing local currency value and undermining competitiveness of export industries. As a result when Capital inflows increases it lead to raise foreign exchange reserves purchasing local currency, the value of local currency enhanced not with parallel increase in the production goods and services so that inflation arises. In order to make tense situation easy (the pressure arise due to currency appreciation), central banks measuring to restrict and "sterilization" of capital flows in

domestic component of monetary base permitting foreigners to take loan from the domestic market and follow tight monetary policy with some capital controls. These ascertains examines the empirical evidences of large-scale enterprises and continues inflows of capital assets to Indonesia, Spain, Chile, Colombia, , Korea, and Thailand, taking different time periods during the last decade. Emphasized sterilization policy and expansionary fiscal policy helped diverting Foreign Capital Inflow in raising revenue of these countries.

4.5 Foreign Capital Inflows to Least Developing Countries

Analyzing broadly the flow of Foreign aid and Private investment during the last three Decades, it is important to mention Foreign aid in its separate forms that are Foreign Grants, Low interest Loans, Foreign Portfolios Investments (FPI) and Foreign Direct Investments(FDI). Significant changes occurred in its direction and pattern. Its growth rate varied from country to country significantly. Official foreign assistant increased to under develop economies in 1970 from US $1.9 billion to US $ 27.1 billion in 1998. The comparison` of three main forms of FCI i.e. ODA, FDI and FPI is clear from the figure 4.1 given below. Increase is varying in flows in comparison of increase in FPI and FDI flows from US $ 2.2 billion in 1970 to US $ 2.4 billion in 1990 and more than US $1.70 billion in 1998. Foreign portfolios investment amount was negligible until the early 1980's. It rose to US $ 2.8 billion in 1990 and to US $15.6 billion in 1998 as it given in the figure given below.

Chart 4.1: Net Resource Flows to Developing Countries in billion US$ (1970-1998)



Source: Global Development Finance (2000)

- FDI is the net flows of Foreign Direct Investment
- FPI is the net flows of Portfolio Equity Flows
- Aid is the net flows of Grants (excluding technical cooperation)

4.6 Pakistan's Foreign Capital Inflow Trend

History of Pakistan's foreign capital inflows has variation in its trends. Its different forms e.g. foreign aid, foreign direct investment and portfolios investment are explained in the subsequent section.

4.6.1 Foreign Aid to Pakistan:

Foreign Capital Inflow in the form of Foreign aid in the history of Pakistan has always been remained a vital source for bridging its gap in its current and capital accounts in 1960s and 1970s (Papanek, 1967). In South-Asian countries Pakistan was the biggest aid receiving country of that area as shown in Table 4.1. In the 1980s, by starting American/Russian conflict and invasion of Russian troops on Afghanistan, Pakistan got attention of the countries of central alliance and received more foreign aid flows than before for the front line role in the international alliance and aid reached to US $ 2.0 billion annually till 1985 covering the gap of savings and foreign workers remittances (due to shacked confidence on

the economy) which boosted credit worthiness of Pakistan (Husain, 1999). After that trends of the super world changed the direction of Foreign aid flows to Pakistan and converted in to loan not aid. Economic Surveys of Pakistan (various issues) shows share of aid in total grants reduced sharply from 80% to 12% in 1970-1978 and decrease to 9% in 1993 as clear from table 4.1. The aid providing institutions, like International Monetary Fund (IMF) and World Bank (WB) have now became the more influential bodies in dictating the Government of Pakistan (GOP). Section 4.6.2 will analyze effect of foreign aid on the growth of the economy of Pakistan.

Table 4.1 Foreign Aid to Pakistan and some Asian Countries

	Aid per GNP (current US$)		**Aid per capita (current US$)**	
	1960	1970	1960	1970
Pakistan	**6.8**	**4.2**	**5.5**	**7**
Bangladesh	N/A[a]	N/A	N/A	N/A
India	2.3	1.3	1.6	1.5
Indonesia	N/A	4.7	0.9	4
Mauritius	0.3	2.7	0.7	7.3
Nepal	1.6	2.7	0.9	2.1
Philippines	0.7	0.7	1.8	1.2
Malaysia	0.6	0.6	1.6	2.4
Korea, Rep.	6.3	3.0	10	8.6
Hong Kong	0.4	0.03	1.9	0.4
Singapore	-0.04	1.5	-0.2	15
Sri Lanka	0.7	2.1	1.1	3.9
Thailand	1.5	1.04	1.6	2

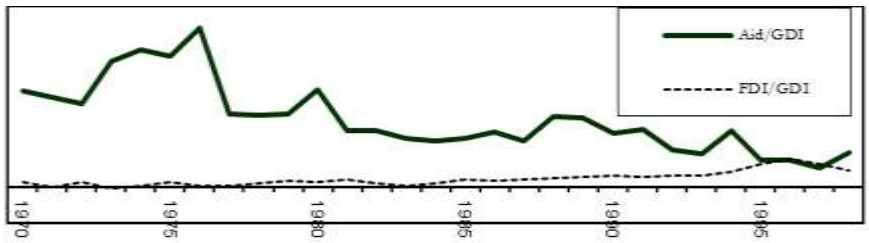
Source: World Development Indicators 2001
[a] Not available

4.6.2. Analysis of FDI Inflows to Pakistan

There are two phases in the history of FDI inflows to the economy of Pakistan. The first stage is characterized by starting struggle to induce Foreigners to divert the flow of direct public investment and flow of foreign private investment after passing the Act 1976. Prior to this Act, government's uses its 1959's policy statement for regulating foreign investment. The 1976 Act stream lined security against 'expropriation' and if government

wants to take ownership, will sufficiently compensate in case of that 'acquisition'. Full guarantee of profit remittances and capital permitted to the foreigners equal to 50% of their net income. Capital-intensive and technologically advanced industries were given priority to strengthen the industrial base, to reduced imports and export supplementing projects were tackled on priority basis to improve the terms of trade and BOP position. Other policy measures were One Window credit facility in financial market, set-up of the Board of Investment to accelerate these inflows. During the last two decades, no remarkable increase in FDI to Pakistan noticed despite the above mentioned measures. Foreign investments were replaced by loan not aid (see Chart 4.1).The important factors are still required for the flows of FDI like strength of market regarding its potential and size, skilled labor, macroeconomic stability, and the structural reforms process are not available in Pakistan[1].

Chart 4.2 Foreign aid and FDI as percentage of GDI (1970-1998)



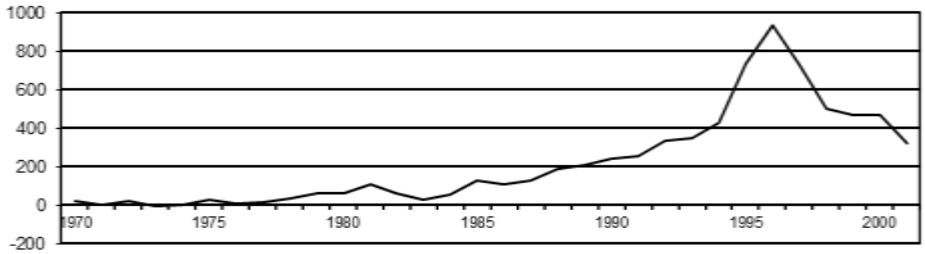
Source: World Development Indicators 2001

The trend and magnitude of FDI to Pakistan changed in 1983. As mentioned earlier in section 2.2, host countries incentives are not mere a decisive factor to motivate Foreign investors. Least-developing economies and policy incentives by the Government Of Pakistan alone were not 'overwhelming' enough to make it an optimal investment's Hub. Figure 4.2 shows foreign aid and FDI flow from 1970 to 1985, the steep annual flow of FDI was onward modestly affected. Main threats face by foreign investors was political instability due to Bhutto's nationalization policy of banking system and different industries

[1] For determinants of FDI in Pakistan, see Buckley (2000), Khan (1996), or Akhtar (2000).

no improvement in physical infrastructure and index of human capital. At the same period East Asian nations (Hong Kong, Malaysia and Singapore) stimulated more foreign investors by improving their domestic economic infrastructure enabling them to attract relatively more successful in improving relatively more successful in improving more FDI.

Figure 4.3 FDI inflows to Pakistan at current



Source: Data from 1970-1998 is from World Development Indicators, 2001;
Data from 1999-2001 is from State Bank of Pakistan Annual Report, 2001

In the late 1980s the second phase started by the withdrawal of controls on the capital flows of the government of Pakistan allowed income remittances, transfer of physical/financial ownership, granted Tax rebates, tariff and other duties concessions to foreign investors. Liberalization and privatization policy followed in the post-1988 period characterized by the process to accelerate the inflow in 1988 from US $ 185.6 million to US $ 939.0 million in 1996 as shown in the above figure 4.3. FDI inflows decreased in 1998.to US $ 500.0 million. After 1996, the decrease in FDI was the results of numerous problems like sanctions after the nuclear tests during Nawaz Sharif's regime, freezing foreign currency accounts, Independent Power Plant (IPPs) conflict extra. The external issues were low foreign investors' confidence due to Asian crisis; a new Investment Policy of 1997 was introduced to restore that confidence paralleled with the implementation of Corrupt Business Practices Ordinance of Pakistan in 1998. After the year 1988 the government's shifted its focus from industrial sector to agricultural and services sectors opened for foreigners. Policy objectives of 1997-98 highlighted to increase FDI to US $ 2.0 billion per year, but the targets to expand the

industrial base from value-added to export-oriented, hi-tech and agro-based manufacturing units as set, not have been achieved (Pakistan Economic Survey, 1997-98) and to resolve the HUBCO issue almost completely. The problem worsened due to the event of 9th September 2011 in America indulged Pakistan's in the coalition-support-nations to help in the so-called "war against terrorism" damaged infrastructure and left Pakistan in the quagmire of external/internal debts and aggravated its current and capital accounts deficits in the balance of payment. And on ward that the ratio of FDI to Pakistan declined sharply, failed to stimulate foreign investors. If the terrorism war of America and coalition nations extended to Iran, it would be difficult for Pakistan to be the part of that coalition. Ministry of Finance Mid-Year-Summary exhibits FDI slight increased and stand in 2001 (Jul-Dec) at US $ 205.1 million in comparison of US $ 142.1 million during 2000.

4.6.3. Industries Receiving Direct Pubic Investments

Table 4.2 represents the percentage rate of Direct Public Investment that industrial sector captured during 1996 and 2001. Despite the efforts of Governments of Pakistan (GOP) to increase Foreign Direct Public Investment in export-oriented industries, exploiting natural resources industries, to flourish domestic exports have received the little. Till 1998-99 the energy sector got (1: 3) one third of the flows of total Direct Foreign Investments, onwards in 2000-2001 the total FDI received only 10% of due to saturated market and HUBCO dispute. Textile industries facing stiff competition on international front especially those required skill or semi-skill labor force to upgrade technological exports base to machinery, electronics implements, and petrochemicals, services and trading of financial business got not more than 5% of total foreign investment. The government launched Pakistan Fund in early 1990s and opened Stock Markets to attract several other investors in securities projects, banks of investment and agencies in credit rating. Onward 1997 foreign investment decreased and again. In 2000-2001, it rose to one-fifth of the total flows. Still food sector, beverages and tobacco, mining, oil exploration, investment in stock markets after launching of the Pakistan Fund has attracted many projects in the last decade. More FDI needed in services, export-

oriented ventures and labor-intensive/technology extensive industries to generate employment for its growing population.

Table 4.2 Selected Indicators for FDI Shares by Sectors

	1996-7	**1997-8**	**1998-9**	**1999-0**	**2000-1**
Power	35.9%	39.8%	27.8%	14.3%	9.9%
Mining&quarrying oil exp.	5.5%	16.5%	23.9%	17.0%	26.7%
Food, beverages & tobacco	7.6%	3.2%	1.6%	10.6%	22.2%
Textiles	1.8%	4.5%	0.4%	0.9%	1.9%
Transport, Storage & Com.	0.9%	1.7%	7.1%	6.6%	25.6%
Machinery other than electrical	0.3%	0.0%	0.2%	0.7%	0.1%
Electronics	0.0%	0.4%	0.3%	0.5%	1.1%
Electrical machinery	0.6%	1.4%	0.4%	0.3%	0.5%
Financial business	15.6%	3.4%	5.2%	6.3%	20.4%
Trade	0.0%	2.1%	1.2%	1.6%	4.3%
Petrochemicals & refining	0.2%	0.3%	8.2%	2.6%	3.7%
Source: Investment indicators – Board of Investment, Pakistan					

4.6.4 Comparative Analysis of FDI to Pakistan with Developing Countries of Asia

Unimpressive performance of Pakistan to attract FDI inflows is clear from the table 4.3 as compared with that of other developing countries. During 1999, the average stock of inward FDI in least-developing countries was 28% of the total GDP, while Pakistan has only 17% FDI flows in the same period. The total ratio of FDI is lower toward Pakistan in comparison of the countries in East Asia (Malaysia, Singapore and Thai-wan). These countries have opened there key sectors for FDI very early and having long history of FDI as compared to Pakistan. This is the matter of great thinking for researchers in Pakistan. China and Vietnam recently opened their economies and gained more FDI. In South Asian countries though Pakistan, India, Bangla-Desh and Sri Lanka started policies for promoting inward-stock ratio of FDI in GDP nearly at the same time, but Sri-Lanka

and India have more than Pakistan. India since early 1990s is diverting more flows of FDI as compared to all countries including Pakistan as shown in Figure 4.3.

Table 4.3 FDI Inward Stock by Host Region and Economy

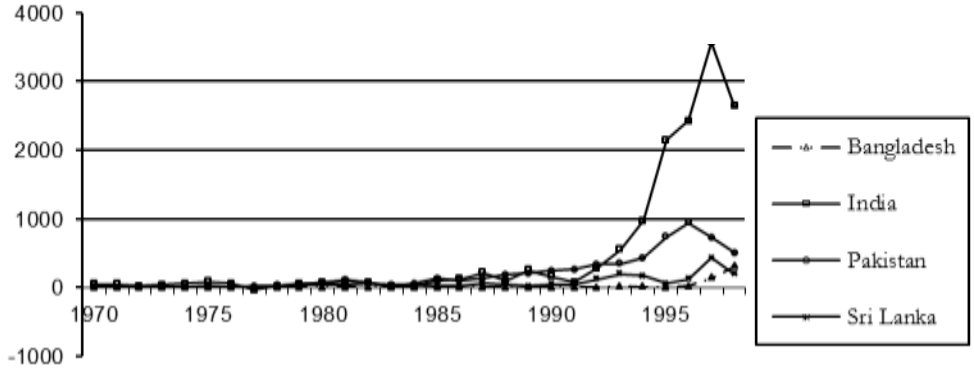
(In million US$ and as percentage of GDP)

Host region/Year	**1980**	**1985**	**1990**	**1995**	**1999**
Dev.Countries	240 837 **10.2**	347 237 **14.1**	487 694 **13.4**	849 376 **15.6**	1 740 377 **28.0**
Pakistan	688 **2.9**	1 079 **3.5**	1 928 **4.8**	5 552 **9.1**	10 303 **17.2**
Bangladesh	63 **0.4**	112 **0.5**	147 **0.5**	180 **0.5**	703 **1.5**
India	1 177 **0.7**	1 075 **0.5**	1 667 **0.6**	5 684 **1.7**	16 656 **3.6**
Sri Lanka	231 **5.7**	517 **8.7**	681 **8.5**	1 297 **10.0**	2 248 **14.2**
China	6 251 **3.1**	10 499 **3.4**	24 762 **7.0**	137 435 **19.6**	305 922 **30.9**
Indonesia	10 274 **14.2**	24 971 **28.6**	38 883 **34.0**	50 601 **25.0**	65 188 **46.2**
Malaysia	5 169 **21.1**	7 388 **23.7**	10 318 **24.1**	28 732 **32.9**	48 773 **65.3**
Singapore	6 203 **52.9**	13 016 **73.6**	28 565 **76.3**	59 582 **70.0**	82 859 **97.5**
Thailand	981 **3.0**	1 999 **5.1**	8 209 **9.6**	17 452 **10.4**	21 717 **17.5**
Vietnam	7 **0.2**	38 **0.6**	230 **3.6**	6286 **31.1**	15 875 **55.6**

Source: World Investment Report 2001

Chart 4.4 FDI Inflows to South Asia

(1970-1998)



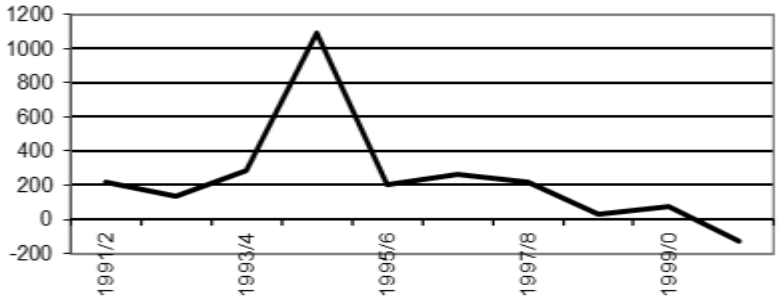
Source: World Development Indicators 2001

4.6.5 The Flow of Foreign Portfolios Investment to Pakistan:

For Pakistan's Foreign Portfolios Investment is a relatively recent phenomenon among the under-developing economies. Initially Pakistan took access of international financial organizations by introducing various Certificates/Bonds viz. "Foreign Exchange Bearer Certificates" produced by Federal Government of Pakistan, "Sovereign Bonds", and "Dollar Bearer Certificates" (Khan, 1996). The other eminent measures took by the government in the year 1997 was the formulation of more liberal policy and opened the doors of its "domestic financial markets" to induce more foreign investors and join the financial/capital markets, especially concentrate on Foreign Port-folios Investment which significantly increased. The government allowed entry and exit (expatriation) both for foreign investors in its financial markets. In 1990s the "Securities Markets" have been developed by producing Bonds and established "The Central Depository Company, Credit Rating Agencies, Corporate Brokerage Houses", received some flow from the International Financial Corporation (IFC) also. Thus the domestic financial structure additionally strengthened by an updated "Company-Laws" and "Securities-Exchange Laws" further gave boost to Foreign Portfolio Investment inflows (its peak) in the year

1994 to more than US $ 1000 million, (equal to the twice) of FDI inflows of the same year. During the Asian financial crisis this flow saved the economy foreign exchange reserves and proved highly volatile as clear from Figure 4.4. Some empirical analysis recommended Foreign Portfolios Investment an imminent determinant, as portfolios investment in Pakistan consists of short term and mid-term 'instruments of public debt', the 'instruments for stock exchanges shares' and capital markets access in dealing of international financial instruments has remain restricted in past (Khan, 1996). It is clear from the review of Ministry of Finance during 2001 (Jul-Dec) for mid-year declaring an outflow of FPI US $ 57.1 million as compared to an outflow of US $ 67.4 million in year 2000.

Chart 4.5 FPI in the 1990s (million US$)



Source: Pakistan Economic Survey (various issues)

4.7 Government's Policies towards FCI

Least developing countries low capabilities of capturing less FDI as compared to the developed world due to various policies and have a little control on foreign financial assistances, this section attempted to review pursued policies of the GOP towards foreign private investment, particularly FDI. Comparative analysis of these macroeconomic policies of the governments across Asian nations gives insights into the matter that why amount of FCI comparatively meager to Pakistan. Malaysian and Singapore's governments made export-oriented policy and removed almost all restrictions for foreign investors since

mid of 1960's and 1970's respectively became enabled to attract heavy flows of FDI, in electrical appliances industries and earned reputed exportable market product**.** During 1980s, appreciation of the 'Japanese Yen' created favorable external environment and brought new opportunities. Liberalization policies emphasized and followed by Thailand and Indonesia to encourage extensive FDI in export oriented projects and left far behind other Newly Industrialized Economies (NIEs) and South Asian Tigers (Malaysia and Singapore) in competition and received extensive FDI in export promoting manufactures and produced exportable surplus with cheap unskilled labor which accelerate their growth rate. 1986 is the year of Indonesian deregulation FDI policy to replace by small and medium-enterprises investment in electronic industry. Contrary to it Thai-Land's government adopted strategies concentrated on export-oriented foreign investment macroeconomic reforms. Thus both of them formulated measures to reduce protectionism, custom duty-exemption schemes on imports of inputs used in export production in Indonesia and change infrastructure of public sector finance/industrial policies for higher technology, value-added and skill-intensive investment. Singapore and Malaysia continue efforts to enhance their business environment, by developing their infrastructure and physical human capital. But the GOP followed inconsistent and rather rigid Policies to pursue the flows of foreign portfolios and other forms of investments. No attention has been paid to the legal promulgation to solve judicial problems and no financial incentives granted to foreign investors. After the Investment Act of 1976, no other serious policy efforts have been done to induce vital determinants of FDI inflows (human capital resources, infrastructure and business environment. In 1976 Pakistan's introduced that Investment Act for foreigners and in the year 1977, Sri Lankan's government also opened its economy for foreign investors, (i.e. one year after) and successfully attracted foreign investment in textile and garment. Despite low-cost labor force, Pakistan still unable to specialize in textile world and induce foreign investment. Liberalization policies of 1988 attracted large foreign private investment to Pakistan during 1990s. The amount of inflows was not as higher as too many under-developing economies improving basic determinants (domestic human and physical infrastructures). Both democratic governments (Sharif and Bhutto's) adopted

liberalization policies (highly inconsistent) and they were both unable to protect the interests of foreign investors). So a golden era of foreign investment in that period is missed. In the years 1990s the government concentrated in the investment of advanced-technology and skill-intensive industries as compared in low-skill manufacturing units and has done enough to compete for FCI with India and Sri-Lanka opening their economies for investors. Pakistan already far behind than South-East Asian Nations, as took initiative early in the 1960s, tackled two important issues to accelerate the rate of economic growth and development through FCI, to improve human development index through foreign capital investments and measures for connecting links in foreigners, resident entrepreneurs and corporate firms. Human capital strength of India is the third-largest pool of the world's technical, skilled and scientific cadre declared in 2001 by the State Department of America "Country Commercial Guides' Report. India mostly implemented it's programed through the UNIDO Partnership since 1999. The government of India selected TNCs, research-work institutions, civil society organizations, to build link in investors and residents researchers, automobile industry suppliers and targeted small & medium enterprises to create a 'force' for international competent suppliers in India. For this purpose India's designed suitable soft wares for financial planning, the assessment of business purposes, experiencing along with the training on the spot in enterprise's (shop-floors) for orientation by the world-class methods of manufacturer, trainers for junior engineers, managerial and technical staff. Due to lack of technical manpower deficiencies of 1990s, Sri Lanka has failed to get FDI in technology and skills-intensive industries. But still, Pakistan is far behind in illiteracy ratio 59% in 1998 as compared to Sri Lankan's illiteracy ratio only 8.9%, (World Development Indicators, 2001). Policy measures have adopted to create linkages in local suppliers and foreign firms. It is clear from the policy review that, contrary to the policies of under developing countries (South-East/West-Asian nations), no serious and dynamic efforts have been done by the GOP to induce the flow of the determinant's of FCI (foreign private investment, foreign direct investment). Concentration only on financial/fiscal policies was not sufficient to divert the FCI flows in past. The neglected determinants like infrastructure regarding transportation, telecommunications,

increasing human capital index, encouraging domestic enterprises, development in collaboration of foreigners and domestic firm's relation should be focused more properly.

4.8 Effects of Foreign Financial Assets Inflows on the Economy of Pakistan

The impact of the three types of Foreign Capital Inflows can be evaluated by analyzing developmental strategies of the country. In the case of Pakistan, its developmental strategy not tackled prudently in the past. No comprehensive policies for strengthening the effectiveness of the required determinants have been formulated. The government's measures were almost inconsistent with that of its predecessor and its less commitment for foreign investors to protect their interest underestimates their profits possibility from those capital investments. This section briefly explains influences of foreign financial capital inflows on Pakistan's economy.

4.8.1 Review of Foreign Aid

After the inception of Pakistan, the initial thirty years history (i.e. from 1960's to 1980's) show great flow of official aid, Pakistan was on the top of the list and received a big amount of financial aid as compared to other aid recipient nations, but no benefit of this aid has extended to the common man of the society. The "explicit aim" of Pakistan Perspective Plan (PPP) formulated for twenty years i.e. from 1965-85 was to start endeavors to create internal resources and curtail dependency on external assistance, but dependency increased with the passage of time substantially left no remarkable development in socio-economic indicators. The review of history shows that during twenty years (1960s and 1970s) Pakistan was on the top of the list in aid receiving Asian's economies. It increased the GDP growth rate by increasing employment and per capita income and intern decreased the poverty level of average percentage of the total population from 43% to 39% and encourage public and private both to upgrade the standards of education in Pakistan by cutting down the illiteracy ratio from 65% to 59% in the above mentioned period (Pakistan Economic Survey, 1997-98). In contrast, two South Asian Nations, Malaysia received only US $ 2.4 while Sri Lanka US $ 3.9 per head

out of foreign official assistance in 1970's and improved their literacy rates and also other social indicators, like health, employment significantly, but if it is compared with Pakistan aid US $ 7.0 per head which could not be utilized properly to improve its above mentioned socio-economic indicators (see Table 4.2). Khan (1997) found an insignificant inverse "causal impact" of foreign official aid on gross domestic products and concluded indirect effect of economic assistance on and development. Foreign aid out of FCI have an ambiguous role in the developmental process, aid providing organizations and donor countries have resumed an overwhelming position in the policy formulation of the aid recipient nations and so as affected the decision making authority of the GOP liberalization of its policy framework for its main macroeconomics variables. Utilization of aid on proper projects is a matter of great concern and argument for researchers in all under developing countries for the growth and economic development of their economies. In case of Pakistan, financial foreign aid has utilized to safeguard the interest of the individuals of little groups has "delayed the day of reckoning" rather; this aid served the individual citizens. Thus flow of loan-type aid (foreign debt) onward 1990's decade made the external debts post-effects more worsen in the economy of Pakistan.

4.8.2 Effects of Foreign Portfolio Investment in Pakistan (FPI)

The effective utilization of FPI in the process of economic development and growth of an economy significantly rely on performances of various components of domestic financial systems of that markets (stock exchanges, capital/money markets) and effective framework of the institutions to continue the flow of funds to the entrepreneurs where needed financial asymmetries. The flow of funds may either be the part of corporate profits i.e. retained earnings of firms and enterprises or it could be generated in the external security markets by selling of bonds, equities, securities, debts and borrowing from banks. How much a country security market is effective in providing funds depends on various measures adopted to run the financial system and on its socio-economic structure especially overcoming information asymmetry by modern means of communications. Most of the developed countries (USA Security Market-based system,

Japan Stock Markets-based system), UK and Germany achieved the highest growth rate of GDP due to their advance banking and other financial institutions especially US have top class security market-based system (Levine, 1997) following the "Post-Keynesian Economic Frame-Work" based on the argument that till now formally no financial universally applicable policy has been designed for all the global economies. For example, Foreign Portfolios Investment and dealing in the shares of stock market is beneficial in the States of American's economy, it necessarily be as much not profitable means of inflow for the economy of Pakistan. Empirical analysis argued FPI could have only a direct influence on the structures of its socio-economic indicators, if a country permits its money, capital Markets efficiently to perform its functions. The Security Market of Pakistan is not properly developed and well organized and FPI has not played as much effective role in the process of socio-economic growth and development as in the developed world unless and until the overall socio-economic infrastructure and environment designed accordingly. Since the inception of Pakistan's first Stock Exchange at Karachi (September 1947) slowly and gradually developed, the Security Market played comparatively minor role in funding the industrial sector due to the guided industrialization policies of the Government of Pakistan (GOP) during the first two decades of history (1950s and 1960s). The government focus of attention was not industrial, banking, stock and security market sectors to develop and undermined policies formulation for these sectors. For GOP it was relatively difficult to induced Stock Market as it had very little share in funding the sector and other capital formation process. For example, during 1980-90, Stock Market mobilized on average only 5% to 6% through private investments and new issues raised the average amount only Rs.7 to 9 billion, in comparison of Rs.75 to 80 billion from commercial banks accounts mobilization by financial/capital markets system (Khan, 1999). After liberalization policies of 1990s, Pakistan Stock Exchanges induced FPI at large and fetched the flow of 'Commonwealth Equity Fund' and 'Pakistan Credit Lyonnais Growth Fund'. Onward it Pakistan's gain sufficient capital assets and reached to its peak level, but soon foreign portfolios investors take out from the Stock Market and shacked Pakistan's overall financial system. This underdevelopment of financial market, lacking liquidity in the security

market, discouraged investment in the stock market, the people preferred to keep their assets in bank deposits or invest in saving deposit schemes. Pakistan had no stable democratic government in the last five decades. Political instability discourages foreigners and local public. This general unstable situation in the security market disturbed particularly short-term commitment of FPI and affected projects of portfolio investors; entrepreneurs need constant means of foreign flows or to take loan. Therefore, government require to influence host investors to enhance the potential of liquidity in those markets, before start marketing securities to foreigners or before attracting foreign investors first it is necessary to develop the security markets and formulized it access to the general citizens. By launching International Bank Accounts Numbers (IBAN) in 2012 for identifying Standardized Bank Accounts internationally ATMs facility, e-Banking, fraudulent transactions, security of financial articles, cheque-based transactions and guide-line for pre-paid has encouraged Net Foreign Assets (NFA) of Rs.236.9 billion has recorded till July 9th, 2014 due to increase in external financing from International Financial Institutions (IFI,s). Investment in Securities &Shares of private sectors increased to Rs.8.6 billion in May 2014 due to State Bank of Pakistan issuing Prudential Regulation (PRs) and Mortgage Refinance Company (MRC) with financing reforms in favor of Consumers Protection Department (CPD). A Committee established in August 2013 of SBP, SECP, KSE & CDC as Regulatory Body for Operational Framework started in Jan.2014.

4.8.3 Current Foreign Direct (FDI) Investment Position

During the current financial year (2013-14) Foreign Direct Investment has registered a decline in July-August compared with the same period last year (2012-13), while foreign portfolio investment has also witnessed a downward trend. Foreign investment, which is either invested directly in bricks, mortar and factories, or in a nations stock markets, was an important source of foreign exchange for the economy which is under pressure due to its falling trend in foreign exchange reserves in last year. A commitment of the government to obtain foreign investment rather than foreign aid would do well to tackle

the main underlying cause why there is not enough investment in Pakistan, whether foreign or local, and that is because of the poor security situation. That security situation is in turn determined by the progress in the War on Terror, more specifically Pakistan's internal struggle against terrorism. The government is responsible for ensuring that business can be carried out in an atmosphere of normalcy and without fear of militancy. So far, by following the policy wishes of (foreign) super powers rather than its own interests, the government is merely discouraging foreign investment in the present situation. During 1960s and 1970s 'external official assistance' (ODA) remained a vital mean of international financial assets for Pakistan and the country was one of the largest among the Asian region aid recipients countries. In the 1980s, Pakistan was again big receiver of the large amount of official foreign assistance because of performing the strategic and very helpful leading part in war of Afghanistan and supporting other conflicted issues of the 'Super-Powers' (America and Russia) conflicts over Middle-East, Bosnia and Afghanistan. The amount of these foreign financial aid inflows, fetch the level of US $2.00 billion per annum till 1985 greatly supplemented meager domestic savings and gap in the flow of financial remittances from abroad, and boosted credibility of the economy due sufficient increase in foreign exchange reserves. Increase in the foreign financial capital flows in the form of FDI in to the country in (the past) twenty years, has remained low not as sharp as compared to 'less-developed economies' in all over the world or East Asian's countries in specific. Main determining factors of FDI flows to Pakistan are size of different main domestic markets, cheap skilled labor especially in textile industries, stable economy and infrastructure in economy. Some years back, the World Bank Group hailed Pakistan in its annual report as by its position of ranking order and needed urgently to fulfill all the required reforms as globally, Pakistan was ranked at the 60th position on the bases of regulations and key reforms for business. India was ranked 56 and China was placed 31 after Pakistan. Economic and business reforms in Pakistan are a painfully slow process, reforms are undertaken only when a government finds seek assistance from international organizations formed for multilateral lending like World Bank (WB), International Monetary Fund (IMF), Asian Bank for Development, African Development

Bank (ADB) and Inter-American Development Bank (IADB) etc. As a nation, we have never been able to develop a consensus on reforming the economy because reforms in this country are considered as something imposed on us by some foreign forces through their local agents. Reforms are never taken seriously as a way of moving forward on the road to sustainable economic and social growth. There is a need for proper study to make a consistence policy framework.

4.8.4 External Debt and Current Financial Position

Entering into 3-year arrangement under the Extended Fund Facility (EFF) with IMF, successful launch of Pakistan Sovereign bonds worth $2.0 billion and auction of 3G/4G license during 2013-14 were the major developments, helpful in strengthening the financial internal and external sector while reducing short term risks by addressing Pakistan's underlying medium term problems to sustain higher and more inclusive growth. Moreover, expected issuance of international Sukuk bonds worth $500 million in first and second quarter of the year has further supported the improvement of sectors. Extended Fund Facility (EFF) Pakistan entered into this program with IMF on September 4th, 2013. It is a 36-month extended arrangement under the Extended Fund Facility (EFF) for SDR 4.393 billion (US$6.64 billion, 425 percent of quota) with an aim to support the country' s economic reform program as well as to address Pakistan's underlying medium term problems to sustain higher growth (Pakistan Economic Survey 2013-14). To date, Pakistan has received three tranches totaling about $ 1.65 billion. Three reviews have been completed till now and it is pertinent to mention that EFF program with IMF is on track and Pakistan has achieved almost all performance criteria till March, 2014 under IMF's condition on account of reducing budget deficit, limiting borrowing from SBP and providing cash transfers to beneficiaries of BISP. Furthermore, on the basis of improved economic performance, IMF has raised the growth projection from 3.1 percent to 3.3 percent for fiscal year 2013-14 and lowers down inflation from 9.8% to the end June to 8.8 percent. While for fiscal year 2014-15, for end June target is 7.5 percent and 8.1 percent for end period. For fiscal year 2014-15, IMF has projected

growth from 3.7 percent to 4.0 percent in State Bank of Pakistan (SBP), Second quarter report 2013-14.

4.8.5. Capital Market Performances and FPI

Pakistan's benchmarked stock market100 index has increased from 11,348 points in January 2012 to 28,913 points in April 2014, a rise of over 17,565 points or an increase of 155 percent. Similarly aggregate market capitalization has increased from Rs. 2,961 billion ($32.9 billion) in January 2012 to Rs. 7,116 billion ($72.2 billion) in April, 2014, showing a rise of over Rs.4155 billion ($39.3 billion) or an increase of 140 percent in rupee term. The listed capital at KSE has increased from Rs. 1,048.44 billion to end-December, 2011 to Rs.1153.18 billion in April, 2014. However, the GDP for FY14 recorded a growth of 4.14 percent. The improvement in industrial growth came from the better margins for domestic producers; capacity enhancement in paper, motor tires, iron and steel; investment in alternate energy; strong construction growth and better financial conditions in POL. Load shedding has been reduced due to significant reduction in the circular debt. Overseas Pakistani workers remitted an amount of $12.89 billion during first ten months of current fiscal year showing a growth of 11.45percent compared with $11.57 billion of last year (2013). The average Inflation recorded during July-April (2013-14) was 8.68% beating the market consensus of above 10% and full year CPI is expected in single digit. Rupee has appreciated against the dollar and foreign exchange reserves of SBP have increased due to issuance of Eurobond and 3G / 4G licenses resulting in US $ 2 billion and around US $ 1.1 billion inflow respectively. European Union has granted the Generalized Scheme of Preferences (GSP) Plus status to Pakistan in December 2013 increasing access to the EU market through duty free imports of textile and non-textile products. The grant of the GSP Plus status is a positive development. The prospects of duty-free access for textile and clothing suggest enormous scope for Pakistan's exports expansion. Due to these developments, positive sentiments have been prevailing in the stock market since 11th May, 2013.

4.8.6 Government Measures for Attracting Foreign Portfolios

1. Improving Code of Conduct for Credit Rating (CRAs) Agencies

A Govt. Commission constituted a Committee to review the role and responsibilities of CRAs having representation from SECP, State Bank of Pakistan (SBP) and both the domestic CRAs. SECP in light of the recommendations of the Committee has revised the existing Code of Conduct. The revised Code dated January 13, 2014 has been formulated in line with International Best Practices and has replaced the earlier Code of Conduct for Credit Rating Agencies (CRAs) dated February 17, 2005.

2. Commercial Papers Regulations, 2013

On Dec.4th, 2013 Commercial l Paper Regulations, 2013 announced. Commercial Papers (CP) is an unsecured short term debt instrument used by highly rated companies in the form of promissory note. In 2002, SECP had issued guidelines for its Issue. In order to appropriately regulate CP issues and to facilitate its users, the guidelines have been reviewed and replaced with the regulations.

3. Listing of SMEs on the Stock Exchange

Small and Medium Enterprises (SMEs) plays vital role in development. Availability of cheaper source of funds is crucial for their survival. As financial constraints sometime compel SMEs to close down their businesses creates unemployment. To divert flows of unlimited funds an updated regulatory framework requires for fund raising. The Listing of a company on the exchange gives better valuation to the company. The listed SMEs reveal their wealth in the medium to long term ventures and expected to create wealth. The Securities and Exchange Commission of Pakistan (SECP) approved the Regulations for listing of SMEs for Islamabad Stock Exchange to ensure certain pre-requisite conditions provided a set of procedures for issue, listing and trading of shares of SMEs by raising funds from capital market for new projects and expansion of existing one.

4. Introduction and implementation of e-IPO

SECP has introduced the concept of e–IPO, i.e. electronic submission of subscription form to enable the investors to apply for subscription of shares via internet (e-

Banking/ATMs) facilitating companies intend to raise fund from the capital market through e-IPO, bringing transparency and efficiency. The e–IPO facility was first used in the offer for sale of shares of Aisha Steel Mills Ltd and United Bank Limited. Later the same bank has successfully offered e– IPO facility in the IPOs of Lalpir Power Limited, Engro Fertilizers Limited, and Avanceon Limited. A committee of the representatives from SECP, CDC, Banks, Share Registrar, and the Stock exchange in the process of devising a centralized system for handling e-IPO applications.

5. Separate Portal for IPO/Capital Issue Matter

In order to facilitate the issuers, consultants, researchers as well as other stakeholders, a separate portal on SECP's website has been created under the name "Capital Issues and Public Offerings" showing all material/information relevant to capital issues**,** public offerings has been placed including detail of equity issues; debt issues; Listed Term Finance Certificates (TFCs); privately placed TFCs, Sukuks and Commercial Papers, redemption statuses of debt securities, laws, rules regulations and guidelines applicable on issue of securities have also been placed under the said portal. Further, List of Registered Debt Securities Trustees, List of Underwriters to the issue, Ballotters, Share Registrars to an issue, and List of advisors/consultant to an issue are also available under the said portal to facilitate local and foreign investors.

6. Future Roadmap of the SECP is the introduction of structural/ regulatory reforms like development of equity, derivatives markets, debt, commodities and currencies markets, and measures for improving governance, risk management, efficiency and transparency in capital market operations.

7. Post-Demutualization Reforms of SECP and Stock Exchanges are in the process of introducing reforms to bring strategic foreign investors and take benefit from their extensive expertise, technological knowhow, by broadening investor base. Simultaneously, listing of the stock exchanges and sale of their shares to the general public in terms of the demutualization law to integrate three stock exchanges operational synergies in line with international best practices is a great effort in process.

8. Commodities Market Development for diversification of product portfolios, the futures contracts of Brent Crude Oil and Copper are being reviewed for introduction at Pakistan Mercantile Exchange Limited (PMEX) to formulate comprehensive criteria for its membership will be implemented after SECP approval. As for the improvement of regulatory framework, the regulations governing default management at PMEX are also being considered for approval to safeguard the interests of investors, in the event of default by a PMEX Broker.

9. Development of new Products and Systems is future SECP agenda includes: listing and trading of stock options, cross listing of foreign and domestic indices at Pakistani and foreign stock exchanges, activation of the market for Exchange Traded Funds (ETFs) and boosting activity in the index futures market. Further, avenues for introducing the latest risk management techniques, including introduction of the Standardized Portfolio Analysis of Risk (SPAN) margining regime in the derivative market segments.

10. Establishment of Centralized Know Your Client (KYC) Organization by National Clearing Company of Pakistan Limited (NCCPL) to facilitate the securities market investors, will act as a Centralized KYC whose objective will be to register and maintain investors' Know Your Customer (KYC) records on line with the international best practices pertaining to KYC and Customer Due Diligence (CDD) policies, defaulters, KYC records will be available for access by all market intermediaries, thus avoiding duplication of effort and bringing uniformity to the KYC process.

11. **Establishment of SIPC** (Securities Investor Protection Corporation) to cater situations like collapse of brokerage houses results in a large number of investor complaints. The stock exchanges strive to settle complaints through limited recourse on the assets of defaulting brokers for example, by disposing their trading rights and other collaterals deposited. The concept of SIPC exists in USA, China, and Malaysia etc. and usually implemented through specialized legislation to enable the SIPC to create recourse on the assets of a defaulting brokerage house in favor of clients. The SIPC maintains an adequate pool of funds to compensate investors to the maximum extent in the event of default of their broker/ custodian. (Pakistan Economic Survey 2013-14)

12. Establishment of a Brokers' Association is an effective platform for the stockbroking community to voice their concerns to the government and regulatory bodies, and ensure professional training and exposure to the intermediaries, while creating awareness about capital market issues.

13. Mutual Funds total size of this industry stood at Rs.452.378 billion in March 31, 2014 as compared to Rs.417.80 billion on December 31, 2013, showing an increase of Rs 34.5 billion (8.0%). The total number of funds stood at 157 in March 31, 2014 as compared to 153 in December 31, 2013. Money market funds (both Conventional and Shariah Compliant) dominated the Assets under Management (AUM) of the industry with the largest share of the mutual fund industry i.e. 34.68 percent. Equity funds (both Conventional and Shariah Compliant) held the second largest market share i.e. 34.38 percent, followed by Income funds (both Conventional and Shariah Compliant) with market share of 21 percent. Portfolios management industry in Pakistan is steadily growing under discretionary/nondiscretionary portfolio managed by Asset Management Companies (AMCs). The portfolio industry have reached to Rs.68.17 billion in March 31, 2014 as compared to Rs. 56 billion in June 30, 2013 registering a growth of Rs. 12.17 billion or 21.7% during the period. The SECP endeavors to safe guard the interest of unit holders and to facilitate industries. The SECP has prescribed detailed requirements for outsourcing of functions performed by an Asset Management Company (AMC) on behalf of Collective Investment Schemes (CIS). The SECP has provided flexibility to AMCs in terms of delegating certain function as confidence building measures.

CHAPTER 5
ANALYSIS OF DATA

5.1 Introduction

This part of thesis is concerned with the analysis of the data which is collected from different sources for the period from 1981 till 2010 to carry out in two steps. In the first step trend analysis is given to highlight pattern of changes in the dependent and independent variables. In the second step, regression analysis is carried out to know the factors affecting the Inflows of Foreign Capital to the country and impact of FCI on economic growth on the country from 1981 to 2010. For this purpose six different models are estimated. The results are tabulated.

5.2 Trend Analysis

In this section, trend analysis is given to highlight patterns of changes in the foreign capital inflow and its determinants. For this purpose data is taken from various sources for the period of 1981to 2010.

5.2.1 Trend Analysis of FCI and GDP Growth Rate

To know about the direction of variations in the inflows of foreign financial capital and GDP growth rate, data is taken from 1981 to 2010 and analyzed. The results are shown in the graph below;

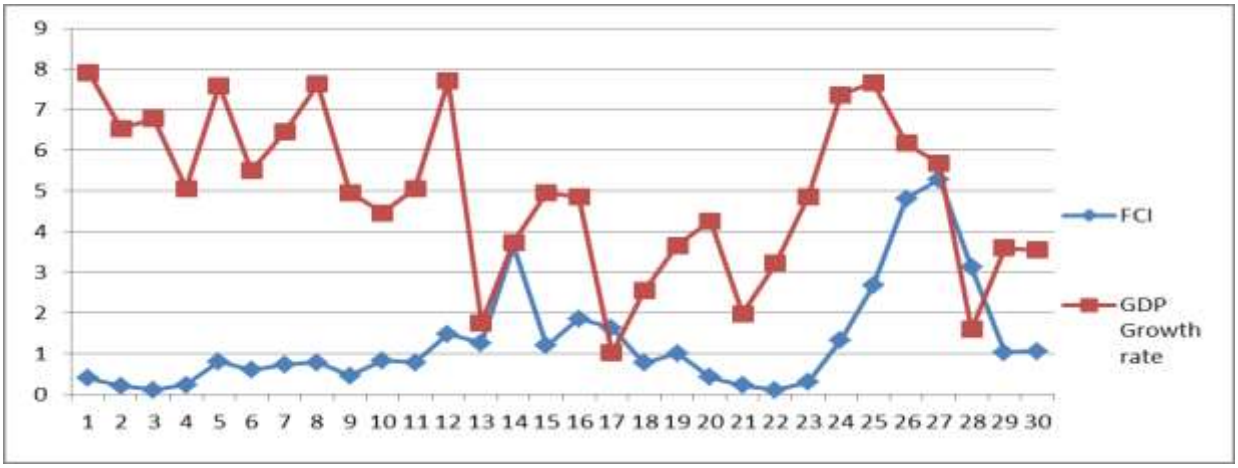


Fig 5.1 Trend Analysis of FCI and GDP growth rate

The trend analysis of the inflows of foreign financial capital and the growth rate of GDP are shown in the figure 5.1 above. Thirty years data of FCI and GDP Growth rate are measured on Vertical- Axes and Years have been taken on Horizontal-Axes. The graph shows that since 1981 till 2010 there is positive direct relation between foreign financial capital inflows and the rate of growth of Gross Domestic Products. In few cases like 1997, GDP growth rate is increasing and FCI is decreasing and the same is the case in 1999. Similarly in 2001, there is opposite trend between the two variables. In the rest duration from 1981 to 2010, there is direct relation between the two variables.

5.2.2 Trend Analysis of FCI and Interest Rate

To analyze the direction of variations in the inflows foreign capital and interest rate, data is taken from 1981 to 2010 and analyzed. The results are shown in the graph below;

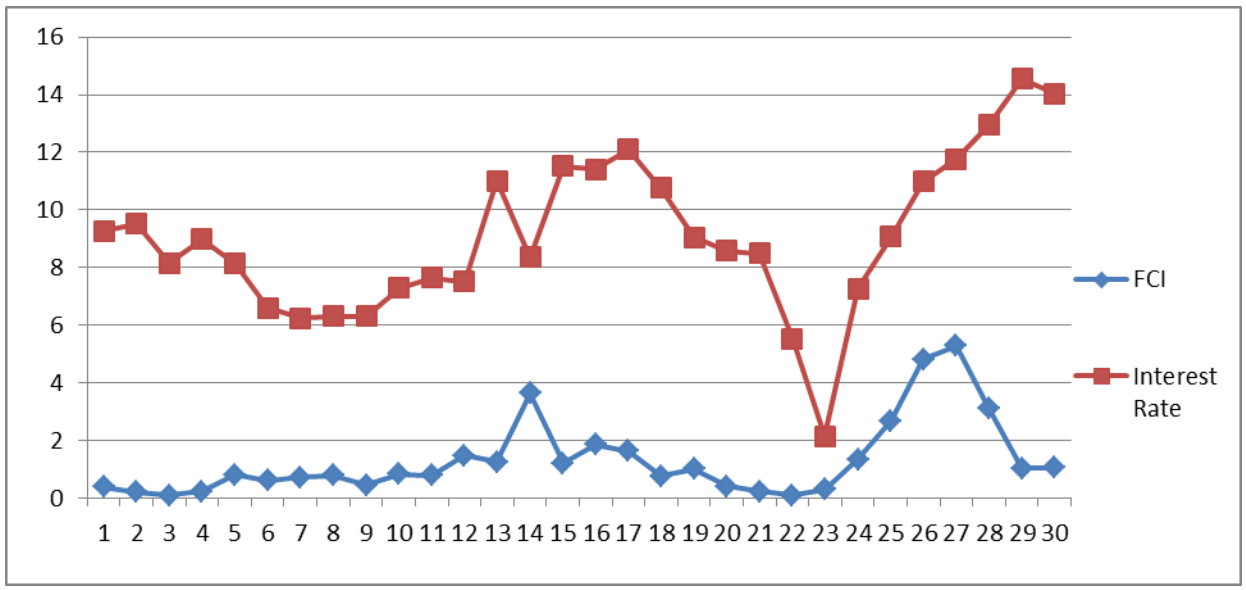


Fig 5.2 Trend Analysis of FCI and interest rate

The trend analysis of the variation between the inflows of foreign financial capital and the interest rate is given in the figure 5.2 above. Thirty years data of FCI and interest rate are measured on Vertical- Axes and Years have been taken on Horizontal-Axes. Looking at the trend line of the FCI and interest rate, it can be assumed that there is positive relation between them. Since 2007 to 2009 the trend between them is opposite. The

interest rate is increasing during this period while the FCI is decreasing. According to the economic theory, there is positive relation between the two variables. As the interest rate in the home country increases foreign investors tends to invest more in the home country and hence FCI increases. As a good Policy for a developing country to attract more capital into the country, the governments and the central bank should increase the interest rate.

5.2.3 Trend Analysis of FCI and Exchange Rate

To analyze the direction of variations in Foreign Capital Inflow and exchange rate, data is taken from the years 1981 to 2010 and analyzed. The results are shown in the graph given below.

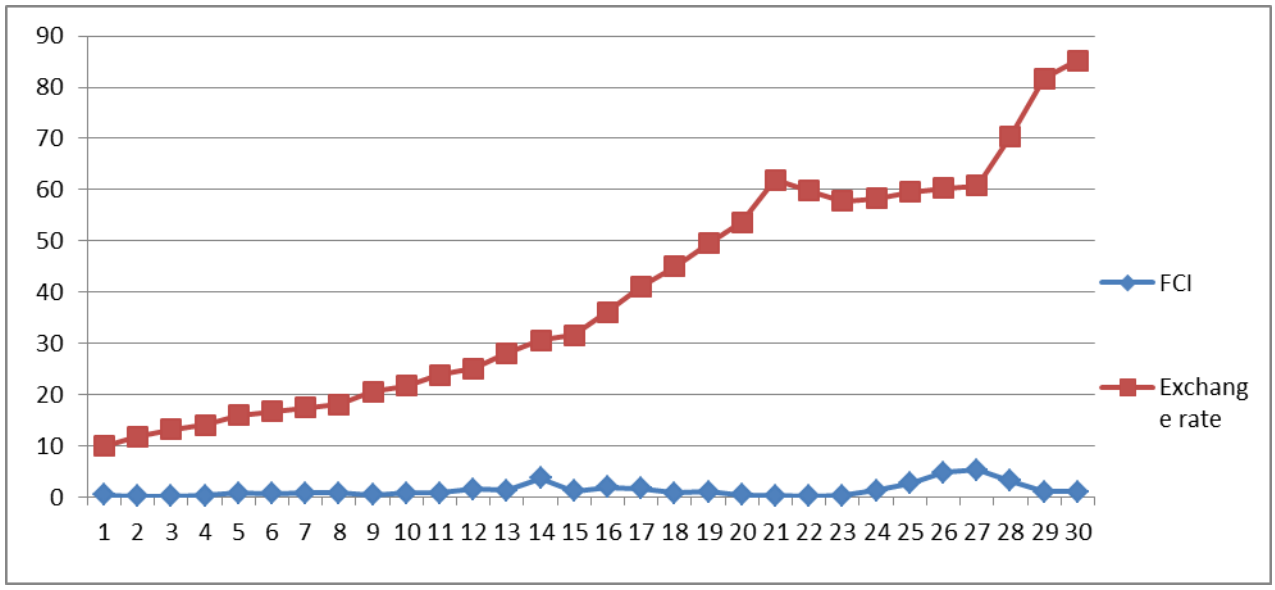


Fig 5.3 Trend Analysis of FCI and Exchange rates

The figure 5.3 above shows the trend analysis between the foreign currency rate of exchange of host country with respect to dollar and the Foreign Capital Inflow. On Vertical- Axes FCI and Exchange Rate have been measured and Years have been taken on Horizontal-Axes. The trends line shows almost an inverse relationship between the rate of foreign exchange and FCI. When the value of currency in terms of the dollars decreases, international investors invest more in the home country and hence increasing

FCI. However, in 2001 the exchange rate was decreasing but the FCI is also decreasing which means that during this time there in positive trends. The reason may be due to terrorist activities in the country.

5.2.4 Trend Analysis of FCI and Domestic Saving and Consumption

To evaluate trend direction of variations in foreign financial capital inflow, domestic saving and domestic consumption, data is taken from 1981 to 2010 and analyzed. The results are shown in the graph below;

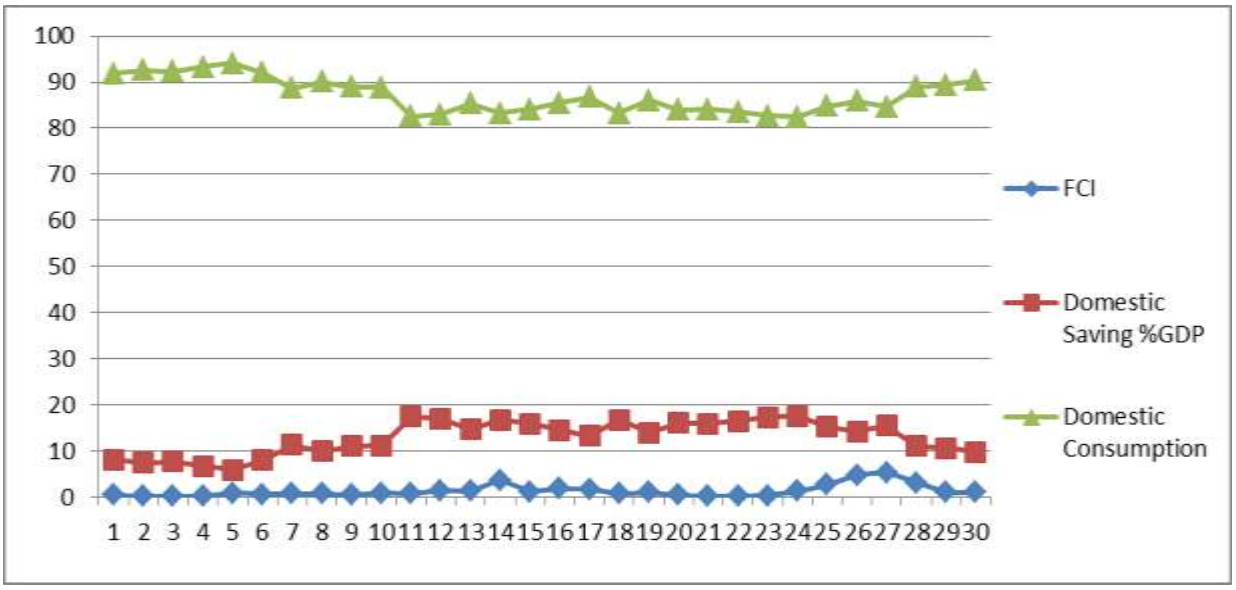


Fig 5.4 Trend Analysis of FCI, Domestic Saving and Consumption

The above figure 5.4 shows trend analysis of the inflows of foreign financial capital and domestic saving, and between the foreign financial capital and domestic consumption. FCI, Domestic Consumption and Domestic Saving % rate are measured on Vertical-Axes and Years have been taken on Horizontal-Axes. Trend line shows that domestic and foreign capital inflows are positively related to each other. The greater the amount of saving, the greater will be domestic investment and hence more foreign investment will be attracted. The trend lines show that there is inverse relation between domestic consumption and Foreign Capital Inflow. The greater the consumption expenditure, the less will be the saving rate and hence less funds will be available for domestic

investment. Less the domestic investment will attract less foreign investment and hence less capital inflows.

5.2.5 Trend Analysis of FCI, Exports and Imports

To analyze the direction of variations in foreign capital inflow and volume of exports and volume of imports, data about FCI, Exports and imports is taken from 1981 to 2010 and analyzed. The results are shown in the graph below;

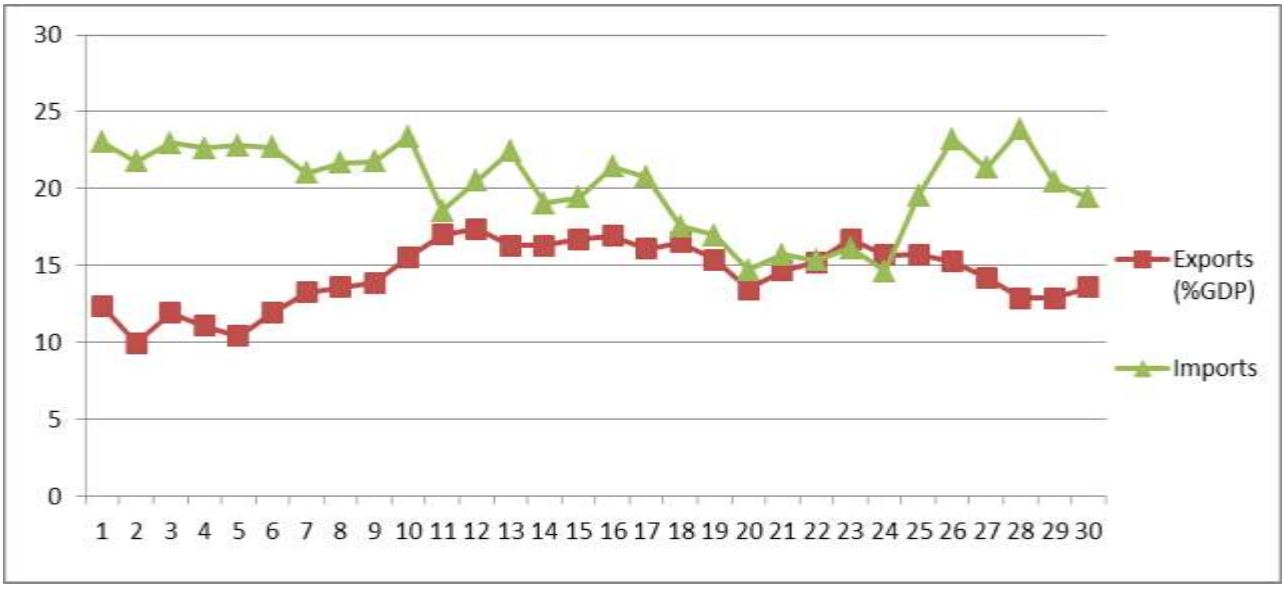


Fig 5.5 Trend Analysis of FCI, Exports and Imports

The above fig 5.5 shows the trend analysis of the FCI and exports and FCI and imports. Export % of GDP rate and Imports are measured along Vertical- Axes and Years have been taken on Horizontal-Axes. The figure shows that FCI and exports have almost the opposite trend from 1981 to 2010. However, in some years like 1998 to 2000, the trend of both variables was the same, that is both are decreasing. Similarly from 2000 to 2003, both the variables are showing increasing trend. The rest in the whole time period, both the variables are showing the opposite trend. Similarly, the graph compares variations of FCI with imports. The trend line shows almost the same variations in the two variables as the two lines are exactly the same. For example in 2004 both are showing increasing trend till 2007 and then onwards decreasing trend till 2010.

5.2.6 Trend Analysis of FCI and Money Supply

To analyze the direction of variations in foreign capital inflow and money supply, data is taken from 1981 to 2010 and analyzed. The results are shown in the graph below;

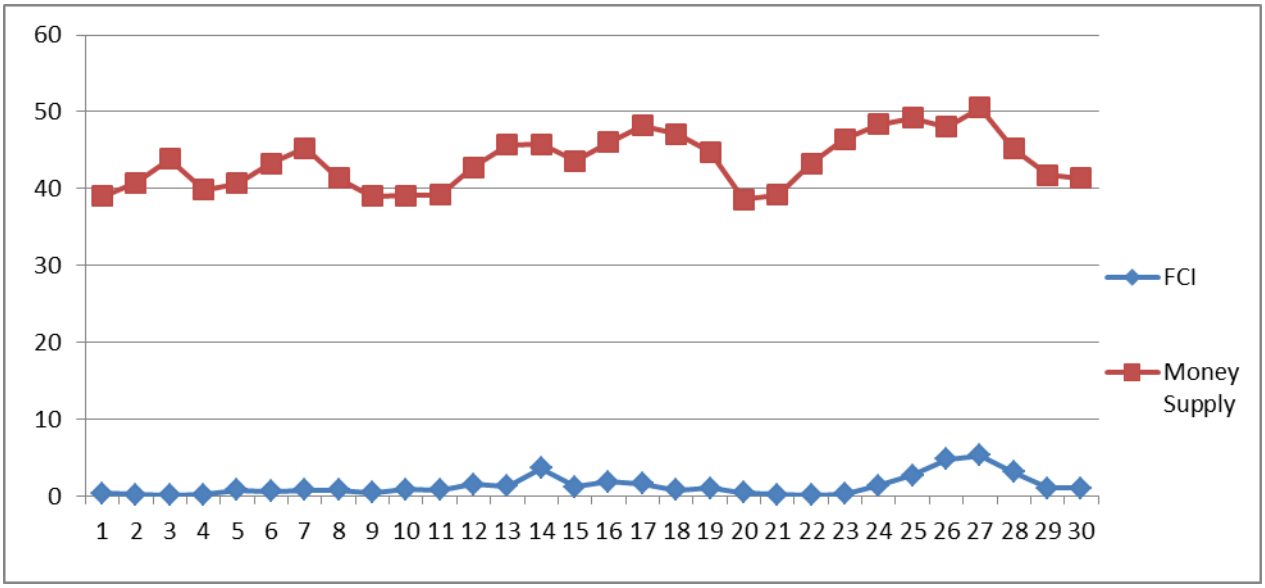


Fig 5.6 Trend Analysis of FCI and Money Supply

The figure 5.6 above shows the variations in the foreign capital inflow and the money supply. FCI and Money Supply are measured along Vertical- Axes and Years have been taken on Horizontal-Axes. The figure shows that FCI and The upper trend line shows variations in the money supply and the lower trend line shows variations in the FCI. There are large variations in the money supply. From 2000 till 2007, there is increasing trend in the money supply. From 2007 till 2010, the money supply shows decreasing trend. The foreign capital inflow shows almost the same trends as that of the money supply. 2001 to 2007 there is increasing trend in the foreign capital inflow and then onwards there is decreasing trend.

5.2.7 Trend Analysis of FCI, FDI and Domestic Investment

To analyze the direction of variations in the flow of foreign financial capital, foreign direct investment and domestic investment, data is taken from 1981 to 2010 and analyzed. The results are shown in the graph below;

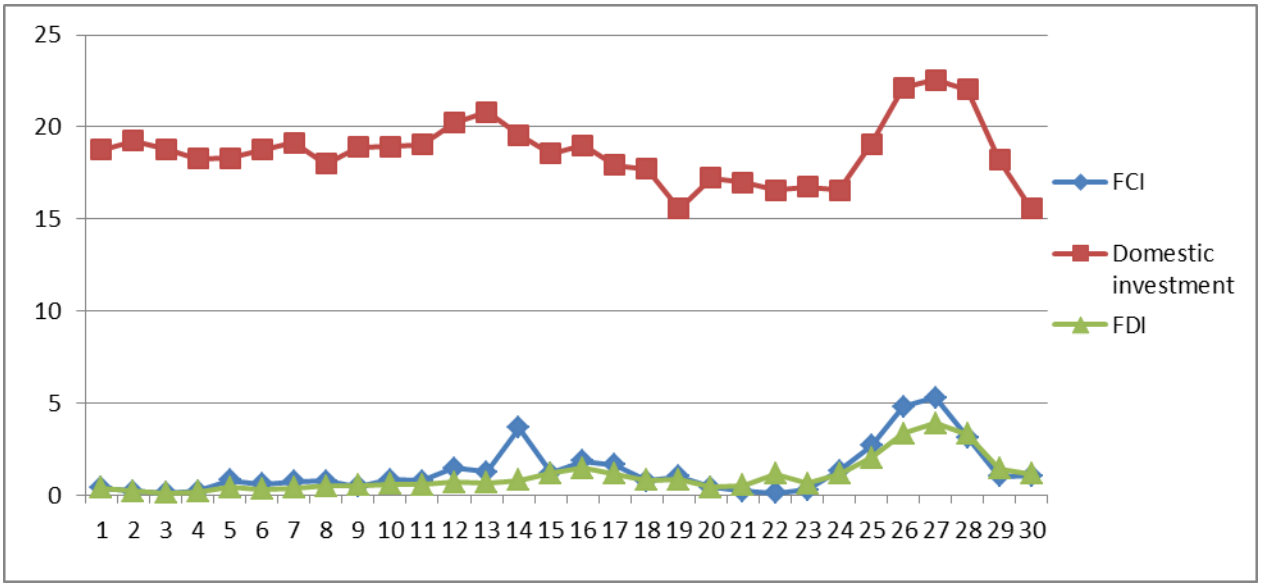


Fig 5.7 Trend Analysis of FCI, FDI and Domestic Investment

The figure 5.7 below shows the variations of the foreign capital inflow, foreign direct investment, and domestic investment. FCI, Domestic Investment and FDI are measured along Vertical- Axes and Years have been taken on Horizontal-Axes. Looking to the figure it can be seen that FDI and FCI trend lines are almost the same. This means that when FDI is increasing, FCI is also increasing and it is true because FDI is one factor of FCI. However, both FDI and FCI have the same variations with the domestic investment as well. The variations in the domestic investment are almost same to that of FDI and FCI. This is true according to the economic theory. To attract more foreign investment, more domestic investment is needed. Whenever the domestic investment is decreasing, the foreign investment and foreign capital inflows are also decreasing and vice versa.

5.2.8 Trend Analysis of FCI and Government Expenditure

To examine the direction of variations in the Inflows of Foreign Capital and Government Expenditure, data is taken from 1981 to 2010 and analyzed. The results are shown in the graph below;

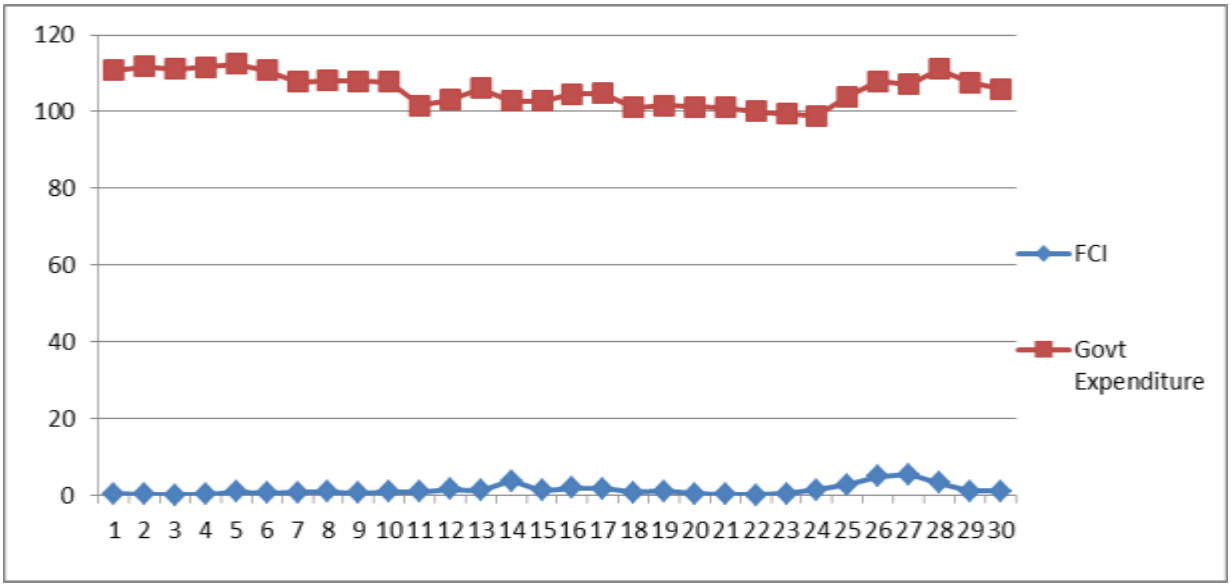


Fig 5.8 Trend Analysis of FCI and Government Expenditure

The figure 5.8 shows the trend lines of the variations in the Foreign Capital Inflow and government expenditure. FCI and Govt. Expenditure are measured along Vertical- Axes and Years have been taken on Horizontal-Axes. The upper line shows variations in the government expenditure. From 1981 to 1991 there is decreasing trend in the government expenditure. There seems to be some variations in the government expenditure from 1991 till 1999. From 2000 to 2004, government expenditure is almost stable and then show increasing trend till 2008. The lower line shows variations in the foreign capital inflow. The two lines show that there is direct relation between the government expenditure and the foreign capital inflows. More government expenditure in infrastructure, roads, communications, energy sector will provide more incentive to the foreign investors and hence more foreign capital inflows and vice versa.

5.2.9 Trend Analysis of FCI and Relative Prices of Exports and Imports

To evaluate the direction of variations in the flow of Foreign Capital and the relative prices of exports and imports, data is taken from 1981 to 2010 and analyzed. The results are shown in the graph below; exports and imports, data is taken from 1981 to 2010 and analyzed. The results are shown in the graph below;

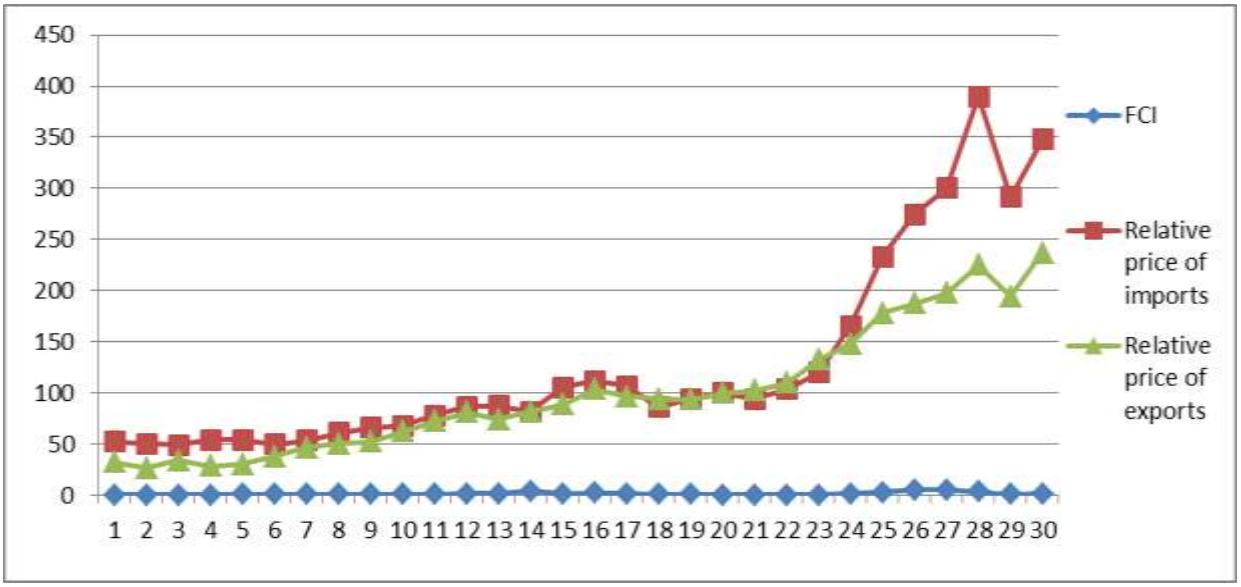


Fig 5.9 Trend Analysis of FCI and Relative prices of Exports and Imports

In the figure 5.9 FCI, relative prices of exports and relative prices of imports are measured along Vertical- Axes and Years have been taken on Horizontal-Axes. The figure shows the variations in the relative prices of exports, relative prices of imports and Foreign Capital Inflows during thirty years from 1981-2010. The upper two lines show the relative prices of exports and imports. The trend in the prices of exports and imports is almost the same showing increasing trend in the relative prices. However, during 1996 till 1999, the relative prices showed decreasing trend. Comparing these two lines with the lower line it can be seen that there is direct relation between the relative prices of imports and exports and the FCI in the country. This relation is true from the economic theory.

5.2.10 Trend Analysis of FCI, FDI and Inflation

To examine the direction of variations in the flow of Foreign Capital, Foreign Direct Investment and inflation, data is taken from 1981 to 2010 and analyzed. The results are shown in the graph below; Investment and inflation, data is taken from 1981 to 2010 and analyzed. The results are shown in the graph below;

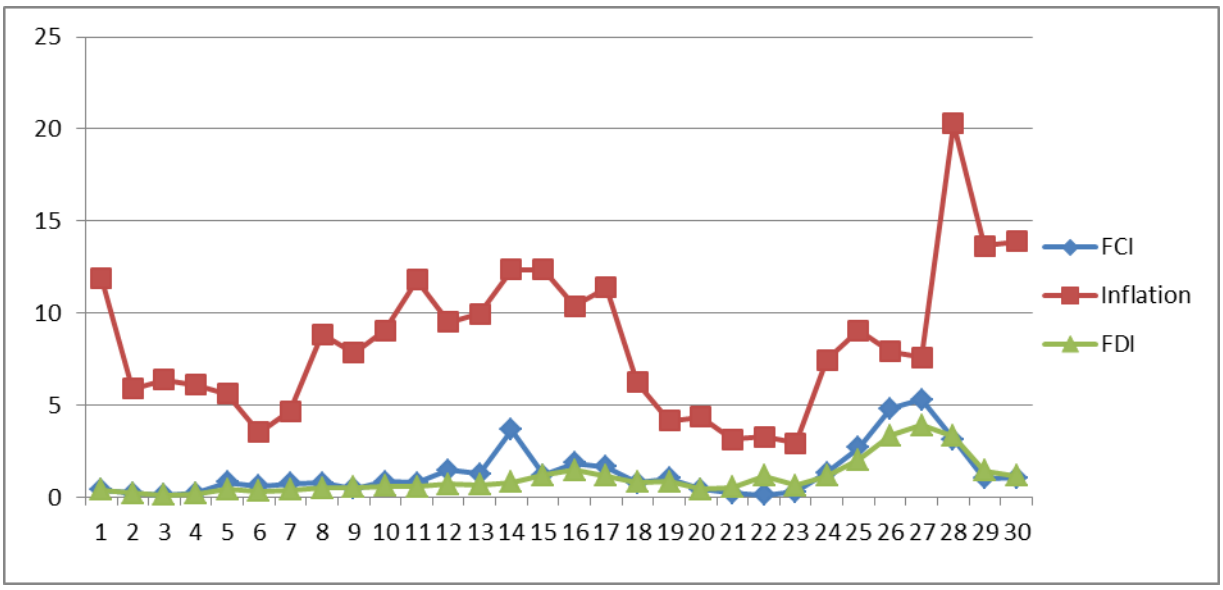


Fig 5.10 Trend Analysis of FCI, FDI and Inflation

In the figure 5.10 FCI, Inflation and FDI are measured along Vertical- Axes and Years have been taken on Horizontal-Axes. The trend lines showing variation from of the flows of foreign financial capital assets, direct foreign investments, and inflation. Upper trend line shows variation in rate of inflation. There are decreasing trends in inflation till 1986, showing increasing trend till 1997. From 1997 till 2003 there is decreasing trend in inflation and then increasing trend till 2008 and decreasing trend from 2008 till 2010. The inflation rate was at the maximum in 2008 and minimum in 2003. From 1981 till 1989 there is negative trend between foreign capital inflows and inflation. From 1989 to 2007 there is positive relation between the two variables. But since 2007 till 2010 there is negative relation between the variables.

5.3 Regression Analysis

Regression analysis (Collins & Rahim, 1999) carried out to examine determining factors affecting inflows of Foreign Capital to the country and also the effects of that several forms of FCI on the macro-economic indicators of the country. In order to carry out Regression Analysis (Hasnain, Rangrjan, 2000) data has taken from 1981 to 2010 for all the variables. To analyze the data 6 different models specified and estimated. In this chapter the models, specified in chapter 3 are estimated. Model 1 estimates the factors

affecting the FCI. Model 2 estimates the factors affecting FDI to the country. Model 3 estimates the possible effects of FCI and FDI on the growth rate of economic development of the economy. Model 4 evaluates effects of FCI and FDI on the domestic investment of the country. Model 5 estimates the impact of FDI and FCI on the inflation rate of the country. Model 6 analyze the influences of FDI and FCI on trade balances (TOT's) of the country. OLS technique used to estimate the models. The data analyzed through SPSS and the results are tabulated.

5.3.1 Stationary of the Macro-Economic Variables

In order to examine that either the selected macro-economic variables are stationary or of non-stationary at level or any difference, Augmented Ducky Fuller test is used. Results of the test data of the variables in the Models are given in the table 5.1 below;

Table 5.1

ADF test results to check stationary

Variables	p-value at level	p-value at first difference
DS	0.5607	0.0000
ER	0.6346	0.0494
FCI	0.1260	0.0000
FDI	0.1158	0.0003
FR	1.0000	0.0317
G	0.5161	0.0000
GDP	0.1213	0.0000
i	0.4546	0.0016
Inf	0.3288	0.0000
M	0.4492	0.0000
M2	0.6649	0.0001
R	0.6943	0.0000
RPM	0.9991	0.0402
RPX	0.9997	0.0147
X	0.1561	0.0000

Looking to the table above, it can be concluded that all the variables of the Models are non-stationary at the level because the probability is greater than 5% significance level. While considering variables at the first difference, the variables become stationary as shown by the table i.e. the probability is less than 5% significance level.

5.3.2 Factor affecting FCI to the Country (Model 1)

Before analyzing the factors which determine the FCI, VAR lag selection criteria was adopted for choosing the no. of lag. The results of the criteria are given below. The table shows the result of different test (i.e. AIC, SC and HQ), which is used for the selection of the proper lag. According to table the proper lag is 2 i.e. the AIC, SC, and HQ says that lag 2 be selected. Because the value the AIC, SC and HQ at lag 2 is the lowest as compared to lag 0 and 1.

5.3.2.1 VAR Lag Order Selection Criteria for Model 1

Table 5.2 Results of VAR

VAR Lag Order Selection Criteria
Endogenous variables: FCI GDP INF R ER I X M
Exogenous variables: C
Sample: 1980 2010
Included observations: 28

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-497.6339	NA	669264.6	36.11671	36.49734	36.23307
1	-328.0992	230.0829	430.2944	28.57851	32.00418	29.62577
2	-201.6294	99.36908*	19.47679*	24.11639*	30.58710*	26.09455*

* shows lag order chosen by the criterion
LR: sequential modified LR test statistic (each test at 5% level)
FPE: Final prediction error
AIC: Akaike information criterion

The test shows that all the AIC, SC, and HQ says that 2 lag be selected.

5.3.2.2 Application of "Granger Causality Test" (GCT) for Model 1

'Granger causality test' is applied to check the possibility of the existence of any sort of causality among the independent variables. According to the table if the probability is less than 5% significance level than it will be significant and the change in one variable is followed by another variable. In this case we have four hypothesis: the causality stem from FCI toward GDP or the causality stem from GDP toward FCI or there is bi-directional causality between GDP and FCI or the behavior of GDP and FCI is independent from each other. The results are given in the tables below;

Table 5.3 Results of GCT

Null Hypothesis:	Observation	F-Statistic	Probability
GDP does not Granger Cause FCI	28	1.46295	0.2523
FCI does not Granger Cause GDP		1.81436	0.1855
INF does not Granger Cause FCI	28	0.10072	0.9046
FCI does not Granger Cause INF		4.38324	0.0244
R does not Granger Cause FCI	28	8.25594	0.0020
FCI does not Granger Cause R		6.19431	0.0070
ER does not Granger Cause FCI	28	1.66452	0.2113
FCI does not Granger Cause ER		10.2914	0.0006
I does not Granger Cause FCI	28	3.27989	0.0558
FCI does not Granger Cause I		3.01030	0.0690
X does not Granger Cause FCI	28	1.08534	0.3545
FCI does not Granger Cause X		1.38526	0.2704
M does not Granger Cause FCI	28	2.70536	0.0881
FCI does not Granger Cause M		0.69454	0.5095
INF does not Granger Cause GDP	28	1.38090	0.2714
GDP does not Granger Cause INF		0.58748	0.5639
R does not Granger Cause GDP	28	4.01294	0.0320
GDP does not Granger Cause R		1.59298	0.2249
ER does not Granger Cause GDP	28	1.48156	0.2482
GDP does not Granger Cause ER		0.11548	0.8914
I does not Granger Cause GDP	28	1.56322	0.2309
GDP does not Granger Cause I		6.19508	0.0070

X does not Granger Cause GDP	28	1.33815	0.2820
GDP does not Granger Cause X		0.40403	0.6723
M does not Granger Cause GDP	28	1.06317	0.3617
GDP does not Granger Cause M		17.6121	2.E-05
R does not Granger Cause INF	28	0.47079	0.6304
INF does not Granger Cause R		4.42096	0.0237
ER does not Granger Cause INF	28	1.96147	0.1635
INF does not Granger Cause ER		2.45076	0.1084
I does not Granger Cause INF	28	6.98780	0.0043
INF does not Granger Cause I		0.14076	0.8694
X does not Granger Cause INF	28	0.19814	0.8216
INF does not Granger Cause X		0.07567	0.9274
M does not Granger Cause INF	28	0.44577	0.6457
INF does not Granger Cause M		0.00208	0.9979
ER does not Granger Cause R	28	0.64785	0.5325
R does not Granger Cause ER		2.95671	0.0720
I does not Granger Cause R	28	2.14718	0.1396
R does not Granger Cause I		3.46785	0.0483
X does not Granger Cause R	28	1.05014	0.3661
R does not Granger Cause X		0.67155	0.5207
M does not Granger Cause R	28	0.32770	0.7239
R does not Granger Cause M		2.50001	0.1041
I does not Granger Cause ER	28	2.65797	0.0915
ER does not Granger Cause I		2.83095	0.0796

X does not Granger Cause ER	28	3.02170	0.0684
ER does not Granger Cause X		0.35011	0.7083
M does not Granger Cause ER	28	1.57243	0.2290
ER does not Granger Cause M		1.71556	0.2021
X does not Granger Cause I	28	0.21600	0.8074
I does not Granger Cause X		0.39605	0.6775
M does not Granger Cause I	28	0.15480	0.8575
I does not Granger Cause M		2.12998	0.1417

5.3.2.3 Johansen Co-Integration Test for Model 1

To examine co-integration among the factors of Model 1, analyze variation in variables and find their long-run relationship, Johansen Co-Integration technique applied. To find the number of co-integrating vector, according to trace statistics and maximum Eigenvalue, the number of co-integrating vector is four because the probability at "None", "At most 1", "At most 2", and "At most 3" is significant , while the "At most 4" probability is insignificant i.e. less than 5%. At "None" the "Ho" hypothesis is the number of co-integrating vector is zero and "Ha" hypothesis is the number of co-integrating vector is greater than zero. Similarly at "At most 1" the "Ho" hypothesis is the number of co-integrating vector is one and "Ha" hypothesis is the number of co-integrating vector is greater than one. The result so obtained has given in the schedule below;

Table 5.4 Results of JCT

Trend assumption: No deterministic trend (restricted constant)
Series: FDI GDP INF M2 R ER
Lags interval (in first differences): 1 to 1
Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Tarce Statistic	0.05 Critical Value	Prob.**
None *	0.879189	179.2167	103.8473	0.0000
At most 1 *	0.790692	120.0380	76.97277	0.0000

At most 2 *	0.698540	76.24740	54.07904	0.0002
At most 3 *	0.561337	42.67209	35.19275	0.0065
At most 4	0.331373	19.59946	20.26184	0.0615
At most 5	0.257291	8.328639	9.164546	0.0719

Trace test indicates 4 cointegrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-value

Table 5.5 of UCRT Results

Unrestricted Co-integration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Tarce Statistic	0.05 Critical Value	Prob.**
None *	0.879189	59.17869	40.95680	0.0002
At most 1 *	0.790692	43.79061	34.80587	0.0033
At most 2 *	0.698540	33.57531	28.58808	0.0105
At most 3 *	0.561337	23.07264	22.29962	0.0390
At most 4	0.331373	11.27082	15.89210	0.2324
At most 5	0.257291	8.328639	9.164546	0.0719

Max-eigenvalue test indicates 4 cointegrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

5.3.2.4 VECM Model 1

For the detection of short-run impacts of FCI on the selected variables in models, VECM is used. The results are given in the table below; according to the table the value of error correction is negative and insignificant, its means the model will converge to its mean value. The first box of the table shows the long run elasticity, which are significant because the probability is less than 5% significance level. According to the table interest rate have a significant and negative impact on FCI, while it has positive impact on inflation and GDP in the long run. In the short run at one year lag I, and X have significant FCI, GDP and INF in the short and M have insignificant impact on GDP in the short run at 5% significance level.

Table 5.6 Results of VECM

Vector Error Correction Estimates
Date: 03/04/14 Time: 21:57
Sample (adjusted): 1982 2009
Included observations: 28 after adjustments

Cointegrating Eq:	CointEq1	CointEq2	CointEq3

FCI(-1)	1.000000	0.000000	0.000000
GDP(-1)	0.000000	1.000000	0.000000
INF(-1)	0.000000	0.000000	1.000000
R(-1)	-6.518126	0.985091	7.011329
	(0.72975)	(0.13492)	(0.84987)
	[-8.93198]	[7.30108]	[8.24990]
ER(-1)	0.002133	-0.001337	-0.040098
	(0.07186)	(0.01329)	(0.08369)
	[0.02969]	[-0.10060]	[-0.47911]
I(-1)	7.227885	-1.167250	-9.728712
	(1.17228)	(0.21674)	(1.36524)
	[6.16566]	[-5.38540]	[-7.12602]
X(-1)	-2.067154	0.568460	1.456532
	(0.56652)	(0.10474)	(0.65977)
	[-3.64886]	[5.42713]	[2.20764]
M(-1)	-2.938984	0.128418	2.779614
	(0.90616)	(0.16754)	(1.05531)
	[-3.24334]	[0.76649]	[2.63392]
C	-10.13098	-0.091179	61.15055
	(15.1497)	(2.80104)	(17.6434)
	[-0.66872]	[-0.03255]	[3.46592]

To analyze the factors affecting foreign capital inflow to the country, this model is estimated. The factors which are considered here are growth rate of GDP, rate of inflation, interest, foreign exchange rate, domestic investment rate, exports and imports. The data is taken from 1981 to 2010 and the results are tabulated below;

Table 5.7
Factor affecting FCI to the Country for 1981 to 2010

Variable	Coefficient	Std. Error	T	Sig.
Constant	-13.761	2.437	-5.646	0.000*
GDP Growth Rate	0.147	0.084	1.740	0.096***
Inflation Rate	-0.303	0.053	-5.716	0.038**
Interest Rate	0.195	0.084	2.321	0.072***
Exchange Rate	0.027	0.010	2.818	0.010*
Domestic Investment	0.545	0.119	4.578	0.000*
Exports (% of	0.159	0.089	1.780	0.089***

GDP)				
Imports (% of GDP)	-0.012	0.103	-0.117	0.908
R Square	0.754	Std. Error of the Estimate	0.75837	
Adjusted R Square	0.676	Durbin-Watson	2.235	
F-Statistics	9.659	Residual sum of Square	12.653	
Sig.	0.000	Residual mean Square	0.575	

a. Predictors: (Constant), Imports (% of GDP), GDP Growth Rate, Exports (% of GDP), Interest Rate, Domestic Investment, Inflation Rate, Exchange Rate

b. Dependent Variable: Foreign Capital Inflow

* Significant at 0.01 levels of significance

** Significant at 0.05 levels of significance

*** Significant at 0.10 levels of significance

The estimated equation model 1 can be written as under;

FCI=-13.761+0.147GDPG+-0.303INF+0.195R+0.027ER+0.545DI+0.159XD+-0.012MD…+u Model 1

The table 5.7 represents the factors affecting foreign capital inflows to the country. The table shows that GDP growth rate positively affects (0.147) foreign capital inflows. The greater the GDP growth rate of the country more will be the confidence of foreigners on the economy and hence there will be more foreign capital inflows. The less GDP growth rate of the country, lesser will be the foreign capital inflows. This relation is true according to economic theory. The coefficient of the GDP growth rate is significant at 0.10 levels of significance. Foreign capital inflows are negatively affected (-0.033) by the inflation rate. The greater the inflation rate of the country less will be foreign capital inflows to the country. This relation is also according to economic theory. The coefficient of the inflation rate is significant at 0.05 levels of significance. The Foreign capital inflow is affected positively (0.195) by the interest rate of the country. The greater the interest rate more will be capital inflows. The lower the interest rate, lower will be the foreign capital inflows to the country. The value of the parameter is significant at 0.10 levels of significance. Exchange rate is positively related (0.027) to the foreign capital inflows. An appreciation in the value of the currency will lead to more foreign capital inflows and a depreciation of the currency in terms of other currencies will lead to less capital inflows.

The variable coefficient's is significant at the levels of 1% significance. Domestic investment affects positively (0.545) the foreign capital inflows. This means that the greater the domestic investment will attract more foreign investment and hence more capital inflows. This relation is true according to the economic theory and significant at 1% levels of significance. Exports affect foreign capital inflows positively (0.159). The greater the exports of a country means more foreign currency will come to the country and hence more inflows. This relation is significance at 10% levels of significance and true relation according to economic theory. Finally, foreign capital inflows are negatively affected (-0.012) by the volume of imports. The greater the volume of imports less will be the foreign capital inflows and vice versa. However, this relation is not significant. To check the overall significance of the model F-statistic is used. The value of the F-statistic is 9.659 and significant at 1% levels of significance. This means that the overall model is significant at 0.01 levels of significance. The coefficient of determination (R^2) shows strength of co-relationship among the dependent and independent variables and also to check the model is good fit or not. The value of R^2 (0.754) means that 75.4% of the variations in the FCI are due to the independent variables. This shows strong relation and the model is good fit. Finally to check for auto-correlation, Durbin-Watson d-statistic is used. If the value of the Durbin-Watson d-statistic lies in the range of 1.73 and 2.37, then it means there is no auto-correlation. The value of the d-statistic for this model is 2.235 meaning that it lie in the region of no auto-correlation. So it can be concluded that there is no auto-correlation in the model.

5.3.3 Factor affecting FDI to the Country

To analyze the factors affecting Foreign Direct Investment (FDI) to the country, this model is estimated. The factors which are considered here are growth rate of GDP, rate of inflation, country rate of interest, foreign currency rate of exchange, domestic aggregate investment, money supply, exports and imports. The data is taken from 1981 to 2010 and the results are tabulated below;

5.3.3.1 VAR Lag Order Selection Criteria for Model 2

Before analyzing the factors which determine the FCI, VAR lag selection criteria was adopted. The results of the criteria are given below showing the results of different tests (i.e. AIC, SC and HQ) used for the selection of the proper lag. According to table the proper lag is 2 i.e. the AIC, SC, and HQ says that lag 2 be selected. Because the value of the AIC, SC and HQ at lag 2 is the lowest as compared to lag 0 and 1.

5.8 Results of VAR of Model 2

VAR Lag Order Selection Criteria
Endogenous variables: FDI GDP INF M2 R ER I X M
Exogenous variables: C
Sample: 1980 2010
Included observations: 28;

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-544.6942	NA	1213435.	39.54959	39.97779	39.68049
1	-354.2370	244.8735	656.3413	31.73122	36.01330	33.04029
2	-122.4816	148.9856*	0.147210*	20.96297*	29.09894*	23.45022*

* exihbits lag order selected by the criterion
LR: sequential modified LR test statistic (each test at 5% level)
FPE: Final prediction error
AIC: Akaike information criterion
SC: Schwarz information criterion
HQ: Hannan-Quinn information criterion

5.3.3.2 Granger Causality Test (GCT) Model 2

GCT used to check whether there exists any sort of any causality among the independent variables, the table shows if the probability is less than 5% significance level than it will be significant and the change in one variable is followed by another variable. In this case we have four hypothesis: the causality stem from FCI toward GDP or the causality stem from GDP toward FCI or there is bi-directional causality between GDP and FCI or the behavior of GDP and FCI is independent from each other. The results are given below;

5.9 GCT Model 2

Pairwise Granger Causality Tests

Null Hypothesis:	Obs	F-Statistic	Prob.
GDP does not Granger Cause FDI	28	0.87326	0.4310
FDI does not Granger Cause GDP		1.38724	0.2699
INF does not Granger Cause FDI	28	0.96727	0.3951
FDI does not Granger Cause INF		2.82073	0.0802
M does not Granger Cause FDI	28	1.51792	0.2403
FDI does not Granger Cause M		3.10617	0.0640
R does not Granger Cause FDI	28	1.95650	0.1642
FDI does not Granger Cause R		4.36186	0.0248
ER does not Granger Cause FDI	28	2.95769	0.0719
FDI does not Granger Cause ER		8.99963	0.0013
I does not Granger Cause FDI	28	1.61210	0.2212
FDI does not Granger Cause I		7.00142	0.0042
X does not Granger Cause FDI	28	0.76288	0.4778
FDI does not Granger Cause X		1.36964	0.2742
M2 does not Granger Cause FDI	28	1.25563	0.3037
FDI does not Granger Cause M2		1.22579	0.3120
INF does not Granger Cause GDP	28	1.38090	0.2714
GDP does not Granger Cause INF		0.58748	0.5639
M does not Granger Cause GDP	28	1.06317	0.3617
GDP does not Granger Cause M		17.6121	2.E-05
R does not Granger Cause GDP	28	4.01294	0.0320
GDP does not Granger Cause R		1.59298	0.2249
ER does not Granger Cause GDP	28	1.48156	0.2482
GDP does not Granger Cause ER		0.11548	0.8914

I does not Granger Cause GDP	28	1.56322	0.2309
GDP does not Granger Cause I		6.19508	0.0070
X does not Granger Cause GDP	28	1.33815	0.2820
GDP does not Granger Cause X		0.40403	0.6723
M2 does not Granger Cause GDP	28	0.14830	0.8630
GDP does not Granger Cause M2		0.00877	0.9913
M does not Granger Cause INF	28	0.44577	0.6457
INF does not Granger Cause M		0.00208	0.9979
R does not Granger Cause INF	28	0.47079	0.6304
INF does not Granger Cause R		4.42096	0.0237
ER does not Granger Cause INF	28	1.96147	0.1635
INF does not Granger Cause ER		2.45076	0.1084
I does not Granger Cause INF	28	6.98780	0.0043
INF does not Granger Cause I		0.14076	0.8694
X does not Granger Cause INF	28	0.19814	0.8216
INF does not Granger Cause X		0.07567	0.9274
M2 does not Granger Cause INF	28	1.98919	0.1597
INF does not Granger Cause M2		0.31740	0.7312
R does not Granger Cause M	28	2.50001	0.1041
M does not Granger Cause R		0.32770	0.7239
ER does not Granger Cause M	28	1.71556	0.2021
M does not Granger Cause ER		1.57243	0.2290
I does not Granger Cause M	28	2.12998	0.1417
M does not Granger Cause I		0.15480	0.8575
;			
X does not Granger Cause M	28	0.26434	0.7700
M does not Granger Cause X		0.53018	0.5955

M2 does not Granger Cause M	28	0.18270	0.8342
M does not Granger Cause M2		1.70095	0.2047
ER does not Granger Cause R	28	0.64785	0.5325
R does not Granger Cause ER		2.95671	0.0720
I does not Granger Cause R	28	2.14718	0.1396
R does not Granger Cause I		3.46785	0.0483
X does not Granger Cause R	28	1.05014	0.3661
R does not Granger Cause X		0.67155	0.5207
M2 does not Granger Cause R	28	3.68987	0.0408
R does not Granger Cause M2		1.28282	0.2964
I does not Granger Cause ER	28	2.65797	0.0915
ER does not Granger Cause I		2.83095	0.0796
X does not Granger Cause ER	28	3.02170	0.0684
ER does not Granger Cause X		0.35011	0.7083
M2 does not Granger Cause ER	28	5.13053	0.0144
ER does not Granger Cause M2		1.81545	0.1853
X does not Granger Cause I	28	0.21600	0.8074
I does not Granger Cause X		0.39605	0.6775
M2 does not Granger Cause I	28	0.35980	0.7017
I does not Granger Cause M2		2.04573	0.1522
M2 does not Granger Cause X	28	5.80555	0.0091
X does not Granger Cause M2		1.70296	0.2043

5.3.3.3 Johansen Co-integration Test Model 2

To examine co-integration among the components for the model 2, Johansen Co-integration test applied to find the number of the co-integrating vector. According to the trace statistics and maximum Eigenvalue the number of co-integrating vector is four because the probability at "None", "At most 1", "At most 2", and "At most 3" is significant , while the "At most 4" probability is insignificant i.e. less than 5%. At "None" the "Ho" hypothesis is the number of co-integrating vector is zero and "Ha" hypothesis is the number of co-integrating vector is greater than zero. Similarly at "At most 1" the "Ho" hypothesis is the number of co-integrating vector is one and "Ha" hypothesis is the number of co-integrating vector is greater than one. The results so obtained are given in the schedule below;

5.10 Unrestricted Co integration Rank Test (Trace)

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.879189	179.2167	103.8473	0.0000
At most 1 *	0.790692	120.0380	76.97277	0.0000
At most 2 *	0.698540	76.24740	54.07904	0.0002
At most 3 *	0.561337	42.67209	35.19275	0.0065
At most 4	0.331373	19.59946	20.26184	0.0615
At most 5	0.257291	8.328639	9.164546	0.0719

Trace test indicates 4 cointegrating eqn (s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.879189	59.17869	40.95680	0.0002
At most 1 *	0.790692	43.79061	34.80587	0.0033
At most 2 *	0.698540	33.57531	28.58808	0.0105
At most 3 *	0.561337	23.07264	22.29962	0.0390
At most 4	0.331373	11.27082	15.89210	0.2324
At most 5	0.257291	8.328639	9.164546	0.0719

Max-eigenvalue test indicates 4 cointegrating eqn (s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

5.3.3.4 VECM for Model 2

To check the long and short term relation among the variables, Vector error correction model is used. The results are given in the table below showing value of error correction negative and insignificant which means that model will converge to its mean value. The first box of the table shows long run elasticity, which are significant because the probability is less than 5% significance level. According to the table interest rate have a significant and negative impact on FCI, while it has positive impact on inflation and GDP in the long run. In the short run at one year lag I and X have significant FCI, GDP and INF in the short and M have insignificant impact on GDP in the short run at 5% significance level.

5.11 Table VECM Results for Model 2

Standard errors in ( ) & t-statistics in [ ]

Cointegrating Eq:	CointEq1	CointEq2	CointEq3	CointEq4
FDI(-1)	1.000000	0.000000	0.000000	0.000000
GDP(-1)	0.000000	1.000000	0.000000	0.000000
INF(-1)	0.000000	0.000000	1.000000	0.000000
M2(-1)	0.000000	0.000000	0.000000	1.000000
R(-1)	499.1964	936.3776	1352.954	2861.966
	(57.4918)	(107.830)	(155.967)	(329.506)
	[8.68292]	[8.68385]	[8.67462]	[8.68563]
ER(-1)	-13.85641	-25.91526	-37.47621	-79.32371
	(3.67741)	(6.89724)	(9.97628)	(21.0765)
	[-3.76798]	[-3.75734]	[-3.75653]	[-3.76360]

I(-1)	-467.7344	-877.0470	-1268.918	-2679.822
	(59.7262)	(112.021)	(162.029)	(342.312)
	[-7.83131]	[-7.82933]	[-7.83144]	[-7.82859]
X(-1)	79.91431	150.1646	215.8670	457.9129
	(34.0415)	(63.8472)	(92.3497)	(195.104)
	[2.34756]	[2.35194]	[2.33750]	[2.34702]
C	4970.727	9306.727	13497.41	28424.88
	(1054.22)	(1977.26)	(2859.94)	(6042.10)
	[4.71508]	[4.70688]	[4.71947]	[4.70447]

The estimation of the variables of the model is given below;

Table 5.12

Factor affecting FDI to the Country for 1981 to 2010

Variable	Coefficient	Std. Error	T	Sig.
Constant	-9.364	1.265	-7.401	0.000*
GDP.GrowthRate	0.157	0.044	3.568	0.026**
Inflation Rate	-0.001	0.029	-0.035	0.972
Interest Rate	0.015	0.043	0.355	0.726
Exchange Rate	0.030	0.005	5.683	0.000*
Domestic Investment	0.295	0.063	4.681	0.000*
Exports (% of GDP)	0.008	0.051	0.160	0.875
Imports (% of GDP)	0.038	0.053	0.720	0.479
Money Supply	0.056	0.027	2.035	0.055**
R Square	0.881	Std. Error of the Estimate	0.38381	
Adjusted R Square	0.838	Durbin-Watson	1.731	
F-Statistics	19.698	Residual sum of Square	3.093	
Sig.	0.00	Residual mean meanSquare	0.147	

a. Predictors: (Constant), Money Supply, Inflation Rate, GDP Growth Rate, Exports (% of GDP), Domestic Investment, Exchange Rate, Interest Rate, Imports (% of GDP)

b. Dependent Variable: Foreign Direct Investment

* Significant at 0.01 levels of significance ** Significant at 0.05 levels of significance

*** Significant at 0.10 levels of significance

The estimated equation can be written as under

FPI = -9.364+ 0.157 GDPG +-0.001 INF + 0.015M + 0.030 R + 0.295 ER +0.008 DI + 0.038 XD + 0.056 MD + u……(2)

The table 5.12 represents the determinants responsible for changes in the foreign direct investment to the country. The table exhibit that GDP growth rate positively affects (0.157) the direct foreign investment. The greater the GDP growth rate of the country, the more will be the confidence of foreign investors on the country and hence more foreign direct investment. The less the GDP growth rate, the less will be the foreign direct investment to the country. This relation is true according to economic theory. The coefficient of the GDP growth rate is significant at 0.05 levels of significance. Foreign direct investment is negatively affected (-0.001) by the inflation rate. The greater the inflation rate of the country less will be foreign direct investment to the country. This relation is true according to economic theory. However, coefficient of inflation rate is not significant. Foreign direct investment is affected positively (0.015) by the interest rate of. The greater the interest rate, the more foreign investment will be attracted to the country. The lower the interest rate, the lower will be the foreign capital inflows. The value of the parameter is not significant. Exchange rate is positively related (0.030) to the foreign direct investment. An appreciation in the value of the currency will lead to more foreign capital inflows and a depreciation of the currency in terms of other currencies will lead to less capital inflows. The coefficient of the variable is significant at 1% levels of significance. Domestic investment affects positively (0.295) foreign direct investment. This means that the greater the domestic investment will attract more foreign investment. This relation is true according to the economic theory and significant at 1% levels of significance. Exports affect the foreign capital inflows positively (0.008). The greater the export of a country means more foreign direct investment to the country and vice versa. However, this relation is not significance according to economic theory. Foreign direct investment positively affected (0.038) by the volume of imports. The greater the volume of imports more will be foreign direct investment and vice versa. The coefficient is not

significant. Finally money supply affects foreign direct investment directly (0.056). The greater the money supply in the country, more FDI will be attracted. The coefficient of money supply is significant at 0.05 levels of significance. To check the overall significance of the model F-statistic applied. The value of the F-statistic is 19.698 and is significant at 1% levels of significance. This means that the overall model is significant at 0.01 levels of significance. The value of R^2 in this case is 0.881, which means that 88.1% of the variations in the FDI are due to the independent variables. This shows strong relation and the model is good fit. The value of the d-statistic for this model is 1.73, means that it lies in the region of no auto-correlation.

5.3.4 Effect of FDI on Growth rate of GDP in the Country

To analyze the impact of Direct Foreign Investment (FDI) on growth rate of the country, this model is estimated. The factors which are considered in this model are inflation rate, interest rate, exchange rate, domestic investment, money supply, exports, imports, and foreign direct investment and foreign exchange reserves. The data is taken from 1981 to 2010 and the results are tabulated below;

VAR Lag Order Selection Criteria

VAR Lag Order Selection Criteria
Endogenous variables: FDI FCI INF R ER I FR M X
Exogenous variables: C

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-1092.554	NA	1.20e+23	78.68242	79.11063	78.81333
1	-869.9173	286.2471	6.52e+18	68.56552	72.84761	69.87460
2	-562.0988	197.8833*	6.39e+12*	52.36420*	60.50017*	54.85145*

* indicates lag order selected by the criterion
LR: sequential modified LR test statistic (each test at 5% level)

FPE: Final prediction error AIC: Akaike information criterion SC: Schwarz information criterion HQ: Hannan-Quinn information criterion

The tests shows that (AIC, SC, and HQ) says that 2 lag be selected as lowest from 0&1.

5.3.4.2 Granger Causality Test of Model 3

Granger causality test applied to check the existence of any sort of causality between the independent factors. Results are given in tables below showing that probability is less than 5% significance level the change in one variable is followed by another variable. In this case we have four hypothesis: the causality stem from FCI toward GDP or the causality stem from GDP toward FCI or there is bi-directional causality between GDP and FCI or the behavior of GDP and FCI is independent from each other.

Pairwise Granger Causality Tests

Pairwise Granger Causality Tests
Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
FCI does not Granger Cause FDI	28	1.29757	0.2925
FDI does not Granger Cause FCI		2.05093	0.1515
INF does not Granger Cause FDI	28	0.96727	0.3951
FDI does not Granger Cause INF		2.82073	0.0802
R does not Granger Cause FDI	28	1.95650	0.1642
FDI does not Granger Cause R		4.36186	0.0248
ER does not Granger Cause FDI	28	2.95769	0.0719
FDI does not Granger Cause ER		8.99963	0.0013
;			
I does not Granger Cause FDI	28	1.61210	0.2212
FDI does not Granger Cause I		7.00142	0.0042
FR does not Granger Cause FDI	28	6.75615	0.0049
FDI does not Granger Cause FR		0.79529	0.4635

M does not Granger Cause FDI	**28**	**1.51792**	**0.2403**
FDI does not Granger Cause M		**3.10617**	**0.0640**
X does not Granger Cause FDI	**28**	**0.76288**	**0.4778**
FDI does not Granger Cause X		**1.36964**	**0.2742**
INF does not Granger Cause FCI	**28**	**0.10072**	**0.9046**
FCI does not Granger Cause INF		**4.38324**	**0.0244**
	;		
R does not Granger Cause FCI	**28**	**8.25594**	**0.0020**
FCI does not Granger Cause R		**6.19431**	**0.0070**
ER does not Granger Cause FCI	**28**	**1.66452**	**0.2113**
FCI does not Granger Cause ER		**10.2914**	**0.0006**
I does not Granger Cause FCI	**28**	**3.27989**	**0.0558**
FCI does not Granger Cause I		**3.01030**	**0.0690**
FR does not Granger Cause FCI	**28**	**1.57322**	**0.2289**
FCI does not Granger Cause FR		**1.85290**	**0.1794**
M does not Granger Cause FCI	**28**	**2.70536**	**0.0881**
FCI does not Granger Cause M		**0.69454**	**0.5095**
X does not Granger Cause FCI	**28**	**1.08534**	**0.3545**
FCI does not Granger Cause X		**1.38526**	**0.2704**
R does not Granger Cause INF	**28**	**0.47079**	**0.6304**
INF does not Granger Cause R		**4.42096**	**0.0237**
ER does not Granger Cause INF	**28**	**1.96147**	**0.1635**
INF does not Granger Cause ER		**2.45076**	**0.1084**
I does not Granger Cause INF	**28**	**6.98780**	**0.0043**
INF does not Granger Cause I		**0.14076**	**0.8694**
FR does not Granger Cause INF	**28**	**2.95244**	**0.0722**
INF does not Granger Cause FR		**0.11269**	**0.8939**
M does not Granger Cause INF	**28**	**0.44577**	**0.6457**
INF does not Granger Cause M		**0.00208**	**0.9979**

X does not Granger Cause INF	**28**	**0.19814**	**0.8216**
INF does not Granger Cause X		**0.07567**	**0.9274**
ER does not Granger Cause R	**28**	**0.64785**	**0.5325**
R does not Granger Cause ER		**2.95671**	**0.0720**
I does not Granger Cause R	**28**	**2.14718**	**0.1396**
R does not Granger Cause I		**3.46785**	**0.0483**
FR does not Granger Cause R	**28**	**4.96749**	**0.0161**
R does not Granger Cause FR		**0.17170**	**0.8433**
M does not Granger Cause R	**28**	**0.32770**	**0.7239**
R does not Granger Cause M		**2.50001**	**0.1041**
X does not Granger Cause R	**28**	**1.05014**	**0.3661**
R does not Granger Cause X		**0.67155**	**0.5207**
I does not Granger Cause ER	**28**	**2.65797**	**0.0915**
ER does not Granger Cause I		**2.83095**	**0.0796**
FR does not Granger Cause ER	**28**	**4.76182**	**0.0186**
ER does not Granger Cause FR		**6.25317**	**0.0068**
M does not Granger Cause ER	**28**	**1.57243**	**0.2290**
ER does not Granger Cause M		**1.71556**	**0.2021**
X does not Granger Cause ER	**28**	**3.02170**	**0.0684**
ER does not Granger Cause X		**0.35011**	**0.7083**
FR does not Granger Cause I	**28**	**0.20058**	**0.8197**
I does not Granger Cause FR		**0.73044**	**0.4925**
M does not Granger Cause I	**28**	**0.15480**	**0.8575**
I does not Granger Cause M		**2.12998**	**0.1417**
X does not Granger Cause I	**28**	**0.21600**	**0.8074**
I does not Granger Cause X		**0.39605**	**0.6775**
M does not Granger Cause FR	**28**	**1.66374**	**0.2114**
FR does not Granger Cause M		**0.42696**	**0.6576**

X does not Granger Cause FR	**28**	**0.02359**	**0.9767**
FR does not Granger Cause X		**1.27542**	**0.2983**
X does not Granger Cause M	**28**	**0.26434**	**0.7700**
M does not Granger Cause X		**0.53018**	**0.5955**

The test shows that all the AIC, SC, and HQ says that 2 lag be selected.

5.3.4.3 Johansen Co-integration Test for Model 3

To examine co-integration among the selected factors for the model, Johansen Co-integration technique is used to find the number of the co-integrating vector. According to the trace statistics and maximum Eigenvalue the number of co-integrating vector is four because the probability at "None", "At most 1", "At most 2", and "At most 3" is significant , while the "At most 4" probability is insignificant i.e. less than 5%. At "None" the "Ho" hypothesis is the number of co-integrating vector is zero and "Ha" hypothesis is the number of co-integrating vector is greater than zero. Similarly at "At most 1" the "Ho" hypothesis is the number of co-integrating vector is one and "Ha" hypothesis is the number of co-integrating vector is greater than one. The results so obtained are given in the schedule below;

Unrestricted Co-integration Rank Test (Trace)

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.935126	162.4785	76.97277	0.0000
At most 1 *	0.793248	88.62533	54.07904	0.0000
At most 2 *	0.642556	46.06693	35.19275	0.0023
At most 3	0.388421	18.28999	20.26184	0.0913
At most 4	0.169474	5.013781	9.164546	0.2819

Trace test indicates 3 cointegrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.935126	73.85318	34.80587	0.0000
At most 1 *	0.793248	42.55840	28.58808	0.0005
At most 2 *	0.642556	27.77693	22.29962	0.0078
At most 3	0.388421	13.27621	15.89210	0.1234
At most 4	0.169474	5.013781	9.164546	0.2819

Max-eigenvalue test indicates 3 cointegrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

5.3.4.4 Application of VECM on the Model 3

To check the long and short term relation among the variables, Vector error correction model is used. The results are given in the table below; according to the table value of error correction is negative and insignificant, its means the model will converge to its mean value. The first box of the table shows long run elasticity, which are significant because the probability is less than 5% significance level. According to the table interest rate have a significant and negative impact on FCI, while it has positive impact on inflation and GDP in the long run.

VECM Application

Standard errors in ( ) & t-statistics in [ ]

Cointegrating Eq:	CointEq1	CointEq2	CointEq3
FDI(-1)	1.000000	0.000000	0.000000
FCI(-1)	0.000000	1.000000	0.000000
INF(-1)	0.000000	0.000000	1.000000
R(-1)	0.026567	-0.520478	-2.024609
	(0.06637)	(0.06946)	(0.55257)
	[0.40029]	[-7.49354]	[-3.66401]
ER(-1)	-0.040338	0.004559	0.178994
	(0.00456)	(0.00477)	(0.03798)
	[-8.84358]	[0.95497]	[4.71338]

C	-0.792659	3.899782	10.62552
	(0.48773)	(0.51042)	(4.06066)
	[-1.62521]	[7.64034]	[2.61670]

The estimation of the variables of the Model is given below**;**

Table 5.13

Effect of FDI on the growth rate of GDP of the country for 1981 to 2010

Variable	Coefficient	Std. Error	T	Sig.
Constant	22.574	9.424	2.395	0.027
Inflation Rate	0.021	0.119	.172	0.865
Interest Rate	-0.080	0.186	-0.431	0.671
Exchange Rate	-0.149	0.044	-3.396	0.003
Domestic Investment	0.290	0.067	4.328	0.004
Exports (% of GDP)	0.099	0.015	6.600	0.050
Imports (% of GDP)	-0.229	0.226	-1.012	0.323
Money Supply	-0.066	0.129	-0.510	0.616
Foreign Direct Investment	1.083	0.069	15.697	0.000*
ForeignExchange Reserves	3.922	1.340	2.926	0.008
R Square	0.569	Std. Error of the Estimate	1.583	
Adjusted R Square	0.376	Durbin-Watson	2.108	
F-Statistics	2.939	Residual sum of Square	50.127	
Sig.	0.021	Residual mean Square	2.506	

a. Predictors: (Constant), Foeign Exchange Reserves, Domestic Investment, Exports (% of GDP), Interest Rate, Money Supply, Inflation Rate, Imports (% of GDP), Foreign Direct Investment, Exchange Rate

b. Dependent Variable: GDP Growth Rate

* Significant at 0.01 levels of significance
** Significant at 0.05 levels of significance
*** Significant at 0.10 levels of significance

The estimated model 3 can be written as under

GDPG = 22.574 +0.021INF + -0.080R + -0.149ER +0.290DI +0.099XD + -0.229MD + -0.066M+ -1.083FDI +3.922FER + μ… (3)

Table 5.13 represents the effect of FDI on growth rate of GDP of the country positively affected (1.083) FDI. The greater FDI, the higher will be the economic growth rate and vice versa. Relation is true according to the economic theory. The coefficient of FDI is significant at 0.01 levels of significance. GDP growth rate is positively affected (0.021) by the inflation rate of the country. The greater is the inflation rate greater is the GDP growth rate at that period. This relation is also according to economic theory in case of nominal growth rate of GDP not the real growth rate of GDP. However, the coefficient of the inflation rate is not significant. The GDP growth rate is affected negatively (-0.080) by the interest rate. The greater the interest rate, the lower will be GDP growth rate. The lower the interest rate, the higher will be the GDP growth rate of the country. The value of parameter is not significant. Exchange rate is negatively related (-0.149) to the GDP growth rate of the country. An appreciation in the value of the currency will lead to lower growth rate of GDP and a depreciation of the currency in terms of other currencies will lead to higher GDP growth rate. Depreciation of currency affects the exports of the country and hence leads to growth in the GDP. The coefficient of the component in the model is significant at 1% levels of significance. Domestic investment affects positively (0.290) the GDP growth rate of the country. This means that the greater the domestic investment will lead to higher GDP growth rate. This relation is true according to the economic theory. The relation is significant at 1% levels of significance. Export affects the GDP growth rate positively (0.099). The greater the export of a country means higher the GDP growth rate of the country and vice versa. This relation is significant at 0.01 levels of significance and true according to economic theory. GDP growth rate is negatively affected (-0.229) by the volume of imports. The greater the volume of imports, lower will be the GDP growth rate of the country and vice versa. However, the coefficient is not significant. Money supply affects the GDP growth rate directly (1.083). The greater the money supply in the country, higher will be the GDP growth rate of the country. The coefficient of money supply is significant at 0.01 levels of significance.

Finally foreign exchange reserve affects the GDP growth rate positively (3.922) the growth rate of GDP of the country. The coefficient of foreign exchange reserves is significant at 0.01 levels of significance. To check overall significance of the model F-statistic is used. The value of the F-statistic is 2.939 and is significant at 5% levels of significance meaning that overall model is significant at 0.01 levels of significance. The value of R^2 in this case is 0.569, which means that 56.8% of the variations in the GDP growth rate are due to the independent variables. This shows strong relation and the model is good fit. The value of the d-statistic for this model is 2.108, means that it lies in the region of no auto-correlation.

5.3.5 Impact of FDI and FCI on Domestic Investment of the Country

5.3.5.1 VAR Lag Order Selection Criteria for Model 4

Before analyzing its factors which determine the FCI, VAR lag selection criteria was adopted. Results so calculated (of the criteria) are given below; shows result of the different tests (i.e. AIC, SC and HQ), which is used for the selection of the proper lag. According to the table, the proper lag is 2 i.e. the AIC, SC, and HQ says that lag 2 be selected. Because the value the AIC, SC and HQ at lag 2 is the lowest as compared to lag 0 and 1.

VAR Lag Order Selection Criteria

Endogenous variables: I FDI FCI C01 INF R

Exogenous variables: C

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-316.1588	NA	397.1283	23.01134	23.29681	23.09861
1	-236.3457	119.7195	18.53257	19.88184	21.88015*	20.49274
2	-185.6715	54.29381*	9.661225*	18.83368*	22.54482	19.96821*

* indicates lag order selected by the criterion

LR: sequential modified LR test statistic (each test at 5% level)

FPE: Final prediction error

AIC: Akaike information criterion

SC: Schwarz information criterion

HQ: Hannan-Quinn information criterion

The test exhibits that all the AIC, SC, and HQ says that 2 lag be selected.

5.3.5.2 Application of "Granger Causality Test" (GCT) Model 4

GCT is applied to check the existence of any sort of causality among the independent variables. Results so obtained are given in the tables below; according to the table if the probability is less than 5% significance level than it will be significant and the change in one variable is followed by another variable. In this case we have four hypothesis: the causality stem from FCI toward GDP or the causality stem from GDP toward FCI or there is bi-directional causality between GDP and FCI or the behavior of GDP and FCI is independent from each other.

Granger Causality Test (GCT) Model 4

Pairwise Granger Causality Tests
Date: 03/16/14 Time: 14:24
Sample: 1980 2010
Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
FDI does not Granger Cause I	28	7.00142	0.0042
I does not Granger Cause FDI		1.61210	0.2212
FCI does not Granger Cause I	28	3.01030	0.0690
I does not Granger Cause FCI		3.27989	0.0558
C01 does not Granger Cause I	28	0.16441	0.8494
I does not Granger Cause C01		1.13520	0.3387
INF does not Granger Cause I	28	0.14076	0.8694
I does not Granger Cause INF		6.98780	0.0043

R does not Granger Cause I	28	3.46785	0.0483
I does not Granger Cause R		2.14718	0.1396
ER does not Granger Cause I	28	2.83095	0.0796
I does not Granger Cause ER		2.65797	0.0915
GDP does not Granger Cause I	28	6.19508	0.0070
I does not Granger Cause GDP		1.56322	0.2309
FCI does not Granger Cause FDI	28	1.29757	0.2925
FDI does not Granger Cause FCI		2.05093	0.1515
C01 does not Granger Cause FDI	28	1.42782	0.2603
FDI does not Granger Cause C01		1.35098	0.2788
INF does not Granger Cause FDI	28	0.96727	0.3951
FDI does not Granger Cause INF		2.82073	0.0802
R does not Granger Cause FDI	28	1.95650	0.1642
FDI does not Granger Cause R		4.36186	0.0248
ER does not Granger Cause FDI	28	2.95769	0.0719
FDI does not Granger Cause ER		8.99963	0.0013
GDP does not Granger Cause FDI	28	0.87326	0.4310
FDI does not Granger Cause GDP		1.38724	0.2699
C01 does not Granger Cause FCI	28	1.28004	0.2971
FCI does not Granger Cause C01		1.56719	0.2301
INF does not Granger Cause FCI	28	0.10072	0.9046
FCI does not Granger Cause INF		4.38324	0.0244
R does not Granger Cause FCI	28	8.25594	0.0020
FCI does not Granger Cause R		6.19431	0.0070
ER does not Granger Cause FCI	28	1.66452	0.2113
FCI does not Granger Cause ER		10.2914	0.0006

GDP does not Granger Cause FCI	28	1.46295	0.2523
FCI does not Granger Cause GDP		1.81436	0.1855
INF does not Granger Cause C01	28	0.47203	0.6296
C01 does not Granger Cause INF		0.45165	0.6421
R does not Granger Cause C01	28	1.06137	0.3623
C01 does not Granger Cause R		1.03254	0.3720
ER does not Granger Cause C01	28	0.28272	0.7563
C01 does not Granger Cause ER		0.24519	0.7846
GDP does not Granger Cause C01	28	1.74182	0.1975
C01 does not Granger Cause GDP		1.59091	0.2254
R does not Granger Cause INF	28	0.47079	0.6304
INF does not Granger Cause R		4.42096	0.0237
ER does not Granger Cause INF	28	1.96147	0.1635
INF does not Granger Cause ER		2.45076	0.1084
GDP does not Granger Cause INF	28	0.58748	0.5639
INF does not Granger Cause GDP		1.38090	0.2714
ER does not Granger Cause R	28	0.64785	0.5325
R does not Granger Cause ER		2.95671	0.0720
GDP does not Granger Cause R	28	1.59298	0.2249
R does not Granger Cause GDP		4.01294	0.0320
GDP does not Granger Cause ER	28	0.11548	0.8914
ER does not Granger Cause GDP		1.48156	0.2482

5.3.5.3 Johansen Co-integration Test Model 4

To evaluate co-integration among the selected variables for the model, Johansen Co-integration test is used. Before analyzing the factors which determine the FCI, VAR lag

selection criteria was adopted for the selection of the proper lag. According to table the proper lag is 2 i.e. the AIC, SC, and HQ says that lag 4 be selected. As values of the AIC, SC and HQ at lag 4 is the lowest as compared to lag 0 1, 2 and 3.

Unrestricted Co-integration Rank Test (Trace)

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.990555	335.2040	103.8473	0.0000
At most 1 *	0.981671	209.3224	76.97277	0.0000
At most 2 *	0.824065	101.3419	54.07904	0.0000
At most 3 *	0.687130	54.42558	35.19275	0.0002
At most 4 *	0.523344	23.05249	20.26184	0.0201
At most 5	0.106703	3.046571	9.164546	0.5720

Trace test indicates 5 cointegrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.990555	125.8816	40.95680	0.0000
At most 1 *	0.981671	107.9805	34.80587	0.0000
At most 2 *	0.824065	46.91632	28.58808	0.0001
At most 3 *	0.687130	31.37309	22.29962	0.0021
At most 4 *	0.523344	20.00592	15.89210	0.0106
At most 5	0.106703	3.046571	9.164546	0.5720

Max-eigenvalue test indicates 5 cointegrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

5.3.5.4 Application of VECM for Model 4

To check the long and short term relation among the variables, Vector error correction model is used. The results are given in the table below; according to the table the value of error correction is negative and insignificant means that model will converge to its mean value. The first box of the table shows the long run elasticity, which are significant

because the probability is less than 5% significance level. According to the table interest rate have a significant and negative impact on FCI, while it has positive impact on inflation and GDP in the long run. In the short run at one year lag I, and X have significant FCI, GDP and INF in the short and M have insignificant impact on GDP in the short run at 5% significance level.

Standard errors in ( ) & t-statistics in [ ]

Cointegrating Eq:	CointEq1	CointEq2	CointEq3	CointEq4
I(-1)	1.000000	0.000000	0.000000	0.000000
FDI(-1)	0.000000	1.000000	0.000000	0.000000
FCI(-1)	0.000000	0.000000	1.000000	0.000000
C01(-1)	0.000000	0.000000	0.000000	1.000000
INF(-1)	0.277219	-0.014916	-0.015572	4.785461
	(0.19184)	(0.09202)	(0.07408)	(1.08401)
	[1.44505]	[-0.16210]	[-0.21021]	[4.41460]
R(-1)	1.673247	-1.286623	-1.250645	11.56397
	(0.27835)	(0.13351)	(0.10748)	(1.57284)
	[6.01129]	[-9.63688]	[-11.6358]	[7.35228]
C	-35.00348	10.32919	9.885168	-222.4487
	(2.12968)	(1.02150)	(0.82235)	(12.0339)
	[-16.4360]	[10.1118]	[12.0206]	[-18.4852]

To examine the impact of Foreign Capital Inflow (FCI) on domestic investment of the country, this model is estimated. The factors considered in this model are FDI, FCI, inflation rate, interest rate, exchange rate, domestic consumption, and GDP growth rate. The data is taken from 1981 to 2010 and the results are tabulated below;

Table 5.14
Impact of FDI and FCI on Domestic Investment of the Country for 1981 to 2010

Variable	Coefficient	Std. Error	T	Sig.

Constant	19.074	5.328	3.580	0.002 *
Foreign Direct Investment	1.479	0.500	2.954	0.007 *
Foreign Capital Inflow	0.284	0.117	2.427	0.079 ***
Domestic Consumption	0.002	0.063	0.033	0.974
Inflation Rate	0.053	0.009	5.889	0.003 *
Interest Rate	-0.012	0.106	-0.110	0.913
Exchange Rate	-0.061	0.013	-4.622	0.000 *
GDP Growth Rate	0.087	0.018	4.833	0.043 **
R Square	0.778	Std. Error of the Estimate	0.934	
Adjusted R Square	0.708	Durbin-Watson	1.770	
F-Statistics	11.022	Residual sum of Square	19.196	
Sig.	0.000	Residual mean Square	0.873	

a. Predictors: (Constant), GDP Growth Rate, Foreign Capital Inflow, Domestic Consumption, Inflation Rate, Exchange Rate, Interest Rate, Foreign Direct Investment

b. Dependent Variable: Domestic Investment

* Significant at 0.01 levels of significance
** Significant at 0.05 levels of significance
*** Significant at 0.10 levels of significance

The estimated equation is fitted now as under

$DI = \alpha_0 + \alpha_1 FDI + \alpha_2 FPI + \alpha_3 C + \alpha_4 INF + \alpha_5 R + \alpha_6 ER + \alpha_7 GDPG + \mu \ldots\ldots(4)$

$DI = 19.074 + 1.479 FDI + 0.284 FPI + 0.002 DC + 0.053 INF + -0.012 R + -0.061 ER + 0.087 GDPG + \mu \ldots\ldots(4)$

The table 5.14 shows the influences of FCI and FDI on domestic investment in the country. The table shows that FDI positively affects (1.479) the domestic investment. The

greater the FDI attracted to the country, the more will be the confidence of domestic investors to invest in the country. The less the FDI lesser will be the domestic investment in the country. This relation is true according to economic theory. The coefficient of the FDI is significant at 0.01 levels of significance. Domestic investment is negatively affected (-0.012) by the interest rate of the country. The greater the interest rate in the country less will be the domestic investment. This relation is also according to the economic theory. However, the coefficient of the interest rate is not significant. Domestic investment is affected positively (0.053) by the inflation rate of the country. The greater the inflation rate, the more will be domestic investment. The lower the inflation rate, the lower will be the domestic investment. The value of the parameter is not significant. Exchange rate is negatively related (-0.061) to domestic investment in the country. An appreciation in the value of the currency will lead to fall in domestic investment and a depreciation of the currency in terms of other currencies will lead to rise in domestic investment. The coefficient of the variable is significant at 1% levels of significance. Domestic investment is positively affected (0.087) by the GDP growth rate. This means that the greater the GDP growth rate, the higher will be the domestic investment and vice versa. This relation is true according to economic theory. The relation is significant at 5% levels of significance. Domestic consumption affects domestic investment positively (0.002). The relation is weak and insignificant. Finally, domestic investment is positively affected (0.284) by the foreign capital inflows. The greater the FCI to the country more will be domestic investment. The coefficient of FCI is significant at 0.05 levels of significance. To check the overall significance of the model F-statistic is used. The value of the F-statistic is 11.022 and is significant at 1% levels of significance. This means that the overall model is significant at 0.01 levels of significance. The value of R^2 in this case is 0.788, which means that 78.8% of the variations in the domestic investment are due to the independent variables. This shows strong relation and the model is good fit. The value of the d-statistic for this model is 1.770, which means that it lies in the region of no auto-correlation.

5.3.6 Impact of FDI and FCI on Inflation Rate of the Country

5.3.6.1 VAR Lag Order Selection Criteria for Model-5

Before analyzing the factors which determine the FCI, VAR lag selection criteria was adopted so as to calculate results of different tests (i.e. AIC, SC and HQ) for selection of the proper lag. According to table the proper lag is 2 i.e. the AIC, SC, and HQ says that lag 2 be selected. Because the value of AIC, SC and HQ at lag 2 is the lowest as compared to lag 0 and 1.

VAR Lag Order Selection Criteria
Endogenous variables: INF FDI FCI GDP M2 R I
Exogenous variables: C

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-363.7322	NA	746.9083	26.48087	26.81392	26.58269
1	-279.3060	120.6089	66.67248	23.95043	26.61483*	24.76496
2	-201.5479	72.20388*	18.26336*	21.89628*	26.89205	23.42354*

* indicates lag order selected by the criterion
LR: sequential modified LR test statistic (each test at 5% level)
FPE: Final prediction error
AIC: Akaike information criterion
SC: Schwarz information criterion
HQ: Hannan-Quinn information criterion

5.3.6.2 Application of Granger Causality Test for Model 5

This test is applied to check the existence of any sort of causality among the independent variables. The results are given in the tables below; according to the table if the probability is less than 5% significance level than it will be significant and the change in one variable is followed by another variable. In this case we have four hypothesis: the causality stem from FCI toward GDP or the causality stem from GDP toward FCI or there is bi-directional causality between GDP and FCI or the behavior of GDP and FCI is independent from each other.

Pairwise Granger Causality Tests

Null Hypothesis:	Obs	F-Statistic	Prob.

FDI does not Granger Cause INF	28	2.82073	0.0802
INF does not Granger Cause FDI		0.96727	0.3951
FCI does not Granger Cause INF	28	4.38324	0.0244
INF does not Granger Cause FCI		0.10072	0.9046
GDP does not Granger Cause INF	28	0.58748	0.5639
INF does not Granger Cause GDP		1.38090	0.2714
M2 does not Granger Cause INF	28	1.98919	0.1597
INF does not Granger Cause M2		0.31740	0.7312
R does not Granger Cause INF	28	0.47079	0.6304
INF does not Granger Cause R		4.42096	0.0237
I does not Granger Cause INF	28	6.98780	0.0043
INF does not Granger Cause I		0.14076	0.8694
FCI does not Granger Cause FDI	28	1.29757	0.2925
FDI does not Granger Cause FCI		2.05093	0.1515
GDP does not Granger Cause FDI	28	0.87326	0.4310
FDI does not Granger Cause GDP		1.38724	0.2699

5.3.6.3 Johansen Co-integration Test for Model-5

To analyze the Co-integration among the variables for the constructed model, Johansen Co-integration test is used to find the number of the co-integrating vector, according to the trace statistics and maximum Eigenvalue the number of the co-integrating vector is four because the probability at "None", "At most 1", "At most 2", and "At most 3" is significant, while the "At most 4" probability is insignificant i.e. less than 5%. At "None" the "Ho" hypothesis is the number of co-integrating vector is zero and "Ha" hypothesis is the number of co-integrating vector is greater than zero. Similarly at "At most 1" the "Ho" hypothesis is the number of co-integrating vector is one and "Ha" hypothesis is the

number of co-integrating vector is greater than one. The results so obtained are given in the schedule below;

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.935706	201.0232	103.8473	0.0000
At most 1 *	0.844614	126.9273	76.97277	0.0000
At most 2 *	0.743940	76.65752	54.07904	0.0002
At most 3 *	0.609507	39.87422	35.19275	0.0145
At most 4	0.287286	14.48491	20.26184	0.2574
At most 5	0.179469	5.340681	9.164546	0.2481

Trace test indicates 4 cointegrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.935706	74.09584	40.95680	0.0000
At most 1 *	0.844614	50.26982	34.80587	0.0004
At most 2 *	0.743940	36.78330	28.58808	0.0036
At most 3 *	0.609507	25.38931	22.29962	0.0179
At most 4	0.287286	9.144229	15.89210	0.4185
At most 5	0.179469	5.340681	9.164546	0.2481

Max-eigenvalue test indicates 4 cointegrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

5.3.6.4 VECM for Model-5

To check the long and short term relation among the variables, Vector error correction model is used. The results are given in the table below; showing the value of error correction is negative and insignificant, its means the model will converge to its mean

value. The first box of the table shows the long run elasticity, which are significant because the probability is less than 5% significance level. According to the table interest rate have a significant and negative impact on FCI, while it has positive impact on inflation and GDP in the long run. In the short run at one year lag I and X have significant FCI, GDP and INF in the short and M have insignificant impact on GDP in the short run at 5% significance level.

Standard errors in ( ) & t-statistics in [ ]

Cointegrating Eq:	CointEq1	CointEq2	CointEq3	CointEq4
INF(-1)	1.000000	0.000000	0.000000	0.000000
FDI(-1)	0.000000	1.000000	0.000000	0.000000
FCI(-1)	0.000000	0.000000	1.000000	0.000000
GDP(-1)	0.000000	0.000000	0.000000	1.000000
M2(-1)	-0.439256	-0.165792	-0.162413	1.529579
	(0.32152)	(0.07170)	(0.03618)	(0.27547)
	[-1.36619]	[-2.31223]	[-4.48950]	[5.55265]
R(-1)	3.350167	-0.826926	-0.292224	-2.900752
	(0.59248)	(0.13213)	(0.06666)	(0.50762)
	[5.65451]	[-6.25847]	[-4.38356]	[-5.71443]
C	-18.60307	13.58275	8.383615	-45.23404
	(11.8572)	(2.64429)	(1.33413)	(10.1589)
	[-1.56893]	[5.13664]	[6.28395]	[-4.45264]

To analyze the effect of Foreign Capital Inflow (FCI) and Foreign Direct Investment on the inflation rate of the country, this model is estimated. The factors considered in this model are FDI, FCI, inflation rate, interest rate, domestic investment, money supply and GDP growth rate. The data is taken from 1981 to 2010 and the results are tabulated below;

Table 5.15

Impact of FDI and FCI on Inflation in the Country for 1981 to 2010

		Std. Error	T	Sig.

Variable	Coefficient			
Constant	3.495	15.232	0.229	0.821
Foreign Direct Investment	0.176	0.054	3.256	0.046**
Foreign Capital Inflow	0.467	0.106	4.405	0.006*
GDP Growth Rate	-0.065	0.333	-0.196	0.846
Money Supply	0.246	0.037	6.648	0.002*
Interest Rate	0.811	0.277	2.933	0.007*
Domestic Investment	-0.423	0.493	-0.858	0.400
R Square	0.489	Std. Error of the Estimate	3.187	
Adjusted R Square	0.356	Durbin-Watson	1.847	
F-Statistics	3.674	Residual sum of Square	233.620	
Sig.	0.000	Residual mean Square	10.157	

a. Predictors: (Constant), Domestic Investment, GDP Growth Rate, Money Supply, Interest Rate, Foreign Direct Investment, Foreign Capital Inflow

b. Dependent Variable: Inflation Rate

* Significant at 0.01 levels of significance
** Significant at 0.05 levels of significance
*** Significant at 0.10 levels of significance

$$INF = \beta_0 + \beta_1 FDI + \beta_2 FPI + \beta_3 GDPG + \beta_4 M + \beta_5 R + \beta_6 DI + u \ldots\ldots\ldots (5)$$

The above constructed model is estimated and the fitted equation is written as under

$$INF = 3.495 + 0.176 FDI + 0.467 FPI + -0.065 GDPG + 0.246 M + 0.811 R + -0.423 DI + u \ldots (5)$$

The table 5.15 analyzes the impact of FDI and FCI on inflation rate of the country shows that inflation rate is positively affected (0.157) by FDI to the country. The greater the FDI, the higher will be the inflation rate in the country. The less the FDI to the country, the lower will be the inflation rate. This relation is true according to the economic theory. The coefficient of the FDI is significant at 0.05 levels of significance. Foreign capital inflows affect the inflation rate positively (0.467). The coefficient is significant at 1% levels of significance. Inflations rate is negatively affected (-0.065) by the GDP growth rate. The greater the GDP growth rate of the country less will be inflation rate in the country. This relation is also according to the economic theory. However, the coefficient

of the GDP growth rate is not significant. The inflation rate is affected positively (0.246) by the money supply in the country. The greater the money supply, the higher will be the inflation rate. The lower the money supply, the lower will be the inflation rate in the country. The value of the parameter is significant at 0.01 levels of significance. Interest rate is positively related (0.811) to the inflation rate. The greater the interest rate, the higher will be the inflation rate and vice versa. This relation is against the economic theory. In Pakistan, interest rate is increased to reduce inflation but not so. The reasons may be different natural disasters, supply shocks, depreciation of the exchange rate, and increase in oil prices in the international market. The coefficient of the interest rate is significant at 1% levels of significance. Inflation rate is positively affected (-0.423) by the level of domestic investment. The greater the domestic investment, the lower will be the inflation rate. The lower the domestic investment, the higher will be the inflation rate. This relation is true according to the economic theory. However, the coefficient of the domestic investment is not significant. To check the overall significance of the model F-statistic is used and its value is 3.764 and is significant at 1% levels of significance. This means that the overall model is significant at 0.01 levels of significance. The value of R^2 in this case is 0.489, means that 48.9% of the variations in the inflation rate are due to the independent variables. This shows strong relation and the model is good fit. The value of the d-statistic for model-5 is 1.847, which means that it lies in the region of no auto-correlation.

5.3.7 Impact of FDI and FCI on Balance of Trade of the Country

5.3.7.1 VAR Lag Order Selection Criteria

Before analyzing the factors which determine the FCI, VAR lag selection criteria was adopted. The results of the criteria are given below in a table shows that different test (i.e. AIC, SC and HQ), used for the selection of the proper lag. The proper lag is 2 i.e. the AIC, SC, and HQ says that lag 2 be selected. Because the value the AIC, SC and HQ at lag 2 is the lowest as compared to lag 0 and 1.

VAR Lag Order Selection Criteria

Endogenous variables: TB GDP FDI FCI FR RPM RPX ER

Exogenous variables: C

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-1320.526	NA	2.25e+31	94.89468	95.27531	95.01104
1	-1130.619	257.7296	3.38e+27	85.90139	89.32706	86.94865
2	-1005.012	98.69166*	1.63e+26*	81.50085*	87.97156*	83.47901*

* indicates lag order selected by the criterion

LR: sequential modified LR test statistic (each test at 5% level)

FPE: Final prediction error

AIC: Akaike information criterion

SC: Schwarz information criterion

HQ: Hannan-Quinn information criterion

5.3.7.2 Granger Causality Technique

Granger causality technique is applied to check the existence any sort of any causality among the independent variables. The results are given in the tables below shows that if the probability is less than 5% significance level than it will be significant and the change in one variable is followed by another variable. In this case we have four hypothesis: the causality stem from FCI toward GDP or the causality stem from GDP toward FCI or there is bi-directional causality between GDP and FCI or the behavior of GDP and FCI is independent from each other.

Pairwise Granger Causality Tests

Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
GDP does not Granger Cause TB	28	0.15480	0.8575
TB does not Granger Cause GDP		0.32802	0.7237
FDI does not Granger Cause TB	28	1.12929	0.3405
TB does not Granger Cause FDI		0.88396	0.4267
FCI does not Granger Cause TB	28	1.26658	0.3007
TB does not Granger Cause FCI		0.54873	0.5851
FR does not Granger Cause TB	28	0.00294	0.9971
TB does not Granger Cause FR		0.78891	0.4663
RPM does not Granger Cause TB	28	0.49441	0.6163
TB does not Granger Cause RPM		5.09412	0.0147
RPX does not Granger Cause TB	28	0.47200	0.6297
TB does not Granger Cause RPX		5.79005	0.0092
ER does not Granger Cause TB	28	0.50545	0.6098
TB does not Granger Cause ER		0.13484	0.8745
FDI does not Granger Cause GDP	28	1.38724	0.2699
GDP does not Granger Cause FDI		0.87326	0.4310

FCI does not Granger Cause GDP	28	1.81436	0.1855
GDP does not Granger Cause FCI		1.46295	0.2523
FR does not Granger Cause GDP	28	0.00158	0.9984
GDP does not Granger Cause FR		1.50517	0.2430
RPM does not Granger Cause GDP	28	0.88095	0.4279
GDP does not Granger Cause RPM		5.05245	0.0152
RPX does not Granger Cause GDP	28	0.81862	0.4535
GDP does not Granger Cause RPX		3.90244	0.0347
ER does not Granger Cause GDP	28	1.48156	0.2482
GDP does not Granger Cause ER		0.11548	0.8914
FCI does not Granger Cause FDI	28	1.29757	0.2925
FDI does not Granger Cause FCI		2.05093	0.1515
FR does not Granger Cause FDI	28	6.75615	0.0049
FDI does not Granger Cause FR		0.79529	0.4635
RPM does not Granger Cause FDI	28	7.47524	0.0032
FDI does not Granger Cause RPM		6.28371	0.0066
RPX does not Granger Cause FDI	28	8.57992	0.0016
FDI does not Granger Cause RPX		3.78347	0.0380
ER does not Granger Cause FDI	28	2.95769	0.0719
FDI does not Granger Cause ER		8.99963	0.0013

FR does not Granger Cause FCI	28	1.57322	0.2289
FCI does not Granger Cause FR		1.85290	0.1794
RPM does not Granger Cause FCI	28	1.37247	0.2735
FCI does not Granger Cause RPM		4.63624	0.0203
RPX does not Granger Cause FCI	28	1.30605	0.2902
FCI does not Granger Cause RPX		2.31190	0.1216
ER does not Granger Cause FCI	28	1.66452	0.2113
FCI does not Granger Cause ER		10.2914	0.0006
RPM does not Granger Cause FR	28	1.24191	0.3075
FR does not Granger Cause RPM		23.8497	2.E-06
RPX does not Granger Cause FR	28	2.20165	0.1334
FR does not Granger Cause RPX		15.8381	5.E-05
ER does not Granger Cause FR	28	6.25317	0.0068
FR does not Granger Cause ER		4.76182	0.0186
RPX does not Granger Cause RPM	28	3.07418	0.0656
RPM does not Granger Cause RPX		2.41130	0.1120
ER does not Granger Cause RPM	28	16.1061	4.E-05
RPM does not Granger Cause ER		4.08802	0.0303
ER does not Granger Cause RPX	28	11.3304	0.0004
RPX does not Granger Cause ER		4.00582	0.0322

5.3.7.3 Johansen Co-integration Test Model 6

To examine co-integration among the selected factors for the model, Johansen Co-integration technique is used to find the number of the co-integrating vector, according to the trace statistics and maximum Eigenvalue the number of the co-integrating vector is four because the probability at “None”, “At most 1”, “At most 2”, and “At most 3” is significant, while the “At most 4” probability is insignificant i.e. less than 5%. At “None” the “Ho” hypothesis is the number of co-integrating vector is zero and “Ha” hypothesis is

the number of co-integrating vector is greater than zero. Similarly at "At most 1" the "Ho" hypothesis is the number of co-integrating vector is one and "Ha" hypothesis is the number of co-integrating vector is greater than one. The results so obtained are given in the schedule below;

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.981342	251.4342	103.8473	0.0000
At most 1 *	0.923843	143.9350	76.97277	0.0000
At most 2 *	0.780186	74.41100	54.07904	0.0003
At most 3	0.545535	33.50675	35.19275	0.0752
At most 4	0.270527	12.21363	20.26184	0.4299
At most 5	0.127964	3.696956	9.164546	0.4591

Trace test indicates 3 cointegrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.981342	107.4993	40.95680	0.0000
At most 1 *	0.923843	69.52397	34.80587	0.0000
At most 2 *	0.780186	40.90426	28.58808	0.0008
At most 3	0.545535	21.29312	22.29962	0.0687
At most 4	0.270527	8.516671	15.89210	0.4873
At most 5	0.127964	3.696956	9.164546	0.4591

Max-eigenvalue test indicates 3 cointegrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

5.3.7.4 VECM for Model 6

To check the long and short term relation among the variables, Vector error correction model is used. The results are given in the table below; value of error correction is negative and insignificant, means the model will converge to its mean value. The first

box of the table shows the long run elasticity, which are significant because the probability is less than 5% significance level. According to the table interest rate have a significant and negative impact on FCI, while it has positive impact on inflation and GDP in the long run. In the short run at one year lag I and X have significant FCI, GDP and INF in the short and M have insignificant impact on GDP in the short run at 5% significance level.

Standard errors in ( ) & t-statistics in [ ]

Cointegrating Eq:	CointEq1	CointEq2	CointEq3
TB(-1)	1.000000	0.000000	0.000000
GDP(-1)	0.000000	1.000000	0.000000
FDI(-1)	0.000000	0.000000	1.000000
FCI(-1)	180.7063	-0.883987	0.016877
	(166.129)	(0.70567)	(0.04513)
	[1.08775]	[-1.25269]	[0.37397]
FR(-1)	2.59E-07	-8.15E-10	1.56E-10
	(5.6E-08)	(2.4E-10)	(1.5E-11)
	[4.61547]	[-3.42419]	[10.2274]
RPM(-1)	-33.16051	0.113604	-0.017077
	(4.70543)	(0.01999)	(0.00128)
	[-7.04728]	[5.68376]	[-13.3599]
C	717.7925	-10.65425	0.358987
	(158.898)	(0.67496)	(0.04316)
	[4.51731]	[-15.7851]	[8.31675]

To analyze the effect of Foreign Capital Inflow (FCI) and Foreign Direct Investment on the balance of trade of the country, this model is estimated. The factors considered in this model are FDI, FCI, foreign exchange reserves and foreign exchange rate, relative prices of exports and imports and GDP growth rate. Data is taken from 1981 to 2010 and the results are tabulated below;

Table 5.16

Effect of FDI and FCI on the Trade Balances of the Country for 1981 to 2010

Variable	Coefficient	Std. Error	T	Sig.
Constant	-12.080	1.656	-7.293	0.000*
GDP Growth Rate	0.127	0.025	5.080	0.042**
Foreign Direct Investment	0.043	0.925	0.046	0.964
Foreign Portfolio Inflow	-0.127	0.032	-3.968	0.014**
ForeignExchange Reserves	-2.252	0.098	-1.554	0.104***
Relative Price of Exports	-0.132	0.014	-9.220	0.000*
Relative Price of Imports	0.237	0.038	6.292	0.000*
Exchange Rate	-0.602	0.063	-9.556	0.005*
R Square	0.893	Std. Error of the Estimate	1.549	
Adjusted R Square	0.859	Durbin-Watson	1.994	
F-Statistics	26.150	Residual sum of Square	52.854	
Sig.	0.000	Residual mean Square	2.402	

a. Predictors: (Constant), Exchange Rate, Foreign Capital Inflow, GDP Growth Rate, Relative Price of Exports, Foreign Exchange Reserves, Foreign Direct Investment, Relative Price of Imports

b. Dependent Variable: Trade Balance

* Significant at 0.01 levels of significance
** Significant at 0.05 levels of significance
*** Significant at 0.10 levels of significance

$TB = a_0 + a_1GDPG + a_2FDI + a_3FPI + a_4FR + a_5RPM + a_6RPX + a_7ER + u$..... (6)

The above estimated equation is now fitted as under

TB =-12.080+.127GDPG+ 0.043FDI + -0.127FPI + -2.252FR + 0.237RPM + -0.132RPX + -0.602ER + μ..... (6)

The table 5.16 analyzes the influences of FDI and FCI on trade balances of the country. The table shows that Balance of trade is positively affected (0.043) by the foreign direct

investment. The greater FDI to the country, the higher will be the balance of trade. The less FDI to the country means lower balance of trade. This relation is true according to the economic theory. The coefficient of the FDI is not significant. FCI affect the balance of trade negatively (-0.127). The coefficient is significant at 5% levels of significance. Balance of trade is positively affected (0.127) by the GDP growth rate. The greater the GDP growth rate, higher will be the balance of trade of the country. This relation is also according to the economic theory. The coefficient of the GDP growth rate is significant at 5% levels of significance. The balance of trade is affected positively (0.237) by the relative prices of imports. The higher the relative price of imports, the less will be demand for imported goods and hence less will be imports and balance of trade will improve and vice versa. Balance of trade is negatively affected (-0.132) by the relative prices of exports. The higher the relative prices of exports less will be demand for exported goods in the international market and hence less exports, which will worsen the balance of trade. Similarly foreign exchange reserves and exchange rat affects the balance of trade negatively. The more the foreign exchange reserves in the country, the value of the currency appreciates in terms of foreign currencies and hence exports become more expensive. This leads to reduction in exports and hence worsening the balance of trade. Similarly, as the currency depreciates, the exports become less expensive and hence the demand for exports increases in the international markets. Increase in domestic exports improves TOT and the balance of payment position. The coefficients of relative prices of imports, relative prices of exports, and exchange rate are significant at 0.01 levels of significance and the coefficient of foreign exchange reserves is significant at 0.10 levels of significance. To check the overall significance of the model F-statistic is used. The value of the F-statistic is 26.150 and is significant at 1% levels of significance. This means that the overall model is significant at 0.01 levels of significance. The value of R^2 in this case is 0.893, which means that 89.3% of the variations in the trade balance are due to the independent variables. This shows strong relation and the model is good fit. The value of the d-statistic for this model is 1.993, which means that it lies in the region of no auto-correlation.

CHAPTER 6
CONCLUSIONS AND RECOMMENDATIONS

6.1 Introduction

This part of the research provides conclusions and recommendations of the whole thesis. In the first part of this chapter main findings are given, followed by conclusions of the study. At the end of the chapter, recommendations based on the results of the thesis are given and some policy implications are provided for the better use of the findings of the thesis.

6.2 Main Findings (of Six Models Numeric Co-Efficient of the Variables)

- In Model-1; GDP growth rate positively and significantly affects (0.147) the foreign capital inflows.
- Foreign capital inflows are negatively affected (-0.033) by the inflation rate of the country.
- The Foreign capital inflow is affected positively (0.195) by the interest rate of the country. The value of the parameter is significant at 0.10 levels of significance.
- Exchange rate is positively related (0.027) to the foreign capital inflows.
- Domestic investment affects positively (0.545) the foreign capital inflows.
- Exports affect the foreign capital inflows positively (0.159).
- Foreign capital inflows are negatively affected (-0.012) by the volume of imports.
- In Model-2; GDP growth rate positively affects (0.157) the foreign direct investment to the country.

- Foreign direct investment is negatively affected (-0.001) by the inflation rate of the country.
- The Foreign direct investment is affected positively (0.015) by the interest rate of the country.
- Exchange rate is positively related (0.030) to the foreign direct investment. An appreciation in the value of the currency will lead to more foreign capital inflows and vice versa.
- Domestic investment affects positively (0.295) the foreign direct investment.
- Exports affect the foreign capital inflows positively (0.008).
- Foreign direct investment is positively affected (0.038) by the volume of imports.
- Money supply affects the foreign direct investment directly by (0.056).
- In Model-3; GDP growth rate is positively affected (1.083) by the foreign direct investment to the country.
- GDP growth rate is positively affected (0.021) by the country rate of inflation.
- The GDP growth rate is affected negatively (-0.080) by the country rate of interest.
- Currency rate of exchange is negatively related (-0.149) to the GDP growth rate of the country. Domestic investment affects positively (0.290) the GDP growth rate of the country. Exports affect the GDP growth rate positively (0.099).
- GDP growth rate is negatively affected (-0.229) by the volume of imports.
- Money supply affects the GDP growth rate directly (1.083).
- Foreign exchange reserve affects the GDP growth rate positively (3.922) the GDP growth rate of the country.
- In Model-4; FDI positively affects (1.479) the domestic investment of the country.
- Domestic investment is negatively affected (-0.012) by the country rate of interest. The domestic investment is affected positively (0.053) by inflation rate.
- Country exchange rate of foreign currency is negatively related (-0.061) to the domestic investment in the country. Domestic investment is positively affected (0.087) by the GDP growth rate.

- Domestic consumption affects the domestic investment positively (0.002). The relation is weak and insignificant.
- Domestic investment is positively affected (0.284) by the foreign capital inflows.
- In Model-5; Inflation rate is positively affected (0.157) by the foreign direct investment to the country.
- Foreign capital inflows affect the inflation rate positively (0.467).
- The inflation rate is affected positively (0.246) by the money supply in the country. Interest rate is positively related (0.811) to the inflation rate.
- Inflation rate is positively affected (-0.423) by the level of domestic investment.
- In Model-6; Balance of trade is positively affected (0.043) by the foreign direct investment to the country.
- Foreign capital inflows affect the balance of trade negatively (-0.127). The coefficient is significant at 5% levels of significance.
- Balance of trade is positively affected (0.127) by the GDP growth rate of the country. The balance of trade is affected positively (0.237) by the relative prices of imports. Balance of trade is negatively affected (-0.132) by the relative prices of exports.
- Foreign exchange reserves and exchange rat affects the balance of trade negatively.
- Similarly, as the currency depreciates, the exports become less expensive and hence the demand for exports increases in the international markets. Increase in exports will lead to improvement in the balance of trade.

6.3 Conclusions

- Foreign capital inflows help the developing economies to cover the gap by increasing domestic resources through higher productivity, employment generation, expansion and modernization of Industries and improvement in

balance of payments. Most empirical analysis is in favor of FCI as it accelerates the rate of economic growth in the developing world. The process of capital formation through these flows stimulates beyond the potential level of own savings. Transferring of modern technology from developed world innovate the structural basis of least developing economies. Pakistan has shortage of foreign capital due to low exports, low access to invisible foreign resource markets, which reduce the flow of the other determinants of FCI. The basic objectives of this ascertain have been mostly achieved. to evaluate the nature and trend of FCI in Pakistan for the period 198I to 2010; to find out the determinants of FCI in Pakistan; to analyze the effect of FCI on economic growth, domestic aggregate investment, inflation and trade balance in Pakistan for the period 198I to 2010; to examine causal relation in FCI and growth rate of development, domestic investment, inflation and trade balance in Pakistan for thirty years (198I to 2010). The methodology applied in this research is both qualitative and quantitative in nature. Secondary data is used to achieve the objectives and to test the hypothesis i.e. Growth rate of GDP, general price level, interest rate, foreign exchange rate, investment, external debt and trade balance can be affected by the Inflows of FC in the country and FCI has effect on economic growth, investment, inflationary trend and trade balances in Pakistan. Both the hypotheses are accepted in this study. Trend and regression analysis used to analyze the data. The results of the estimated first Model of the study shows that GDP growth rate positively and significantly affects (0.147) the foreign capital inflows. Foreign capital inflows are negatively affected (-0.033) by the inflation rate of the country. The Foreign capital inflow is affected positively (0.195) by the interest rate. The value of the parameter is significant at 0.10 levels of significance. Exchange rate is positively related (0.027) to the foreign capital inflows. Domestic investment affects positively (0.545) the foreign capital inflows. Exports affect the foreign capital inflows positively (0.159). Foreign capital inflows are negatively affected (-0.012) by the volume of imports. Result of the second Model shows that, GDP growth

rate positively affects (0.157) the foreign direct investment. Foreign direct investment is negatively affected (-0.001) by the country's inflationary trend. The FDI affected positively (0.015) by the rate of interest in the country. Exchange rate positively related (0.030) to the foreign direct investment. Appreciation in the value of country's currency leads to more foreign capital inflows and vice versa. Domestic investment affects positively (0.295) FDI. Exports affect the foreign capital inflows positively (0.008). FDI positively affected (0.038) by the volume of imports. Money supply affects FDI directly (0.056). GDP growth rate positively affected (1.083) by FDI to the country. GDP growth rate positively affected (0.021) by the rate of inflation rate in country. The third Model in the Study shows that GDP growth rate affected negatively (-0.080) by rate of interest in the country. Currency foreign rate of exchange negatively related (-0.149) to the GDP growth rate of the country. Domestic investment affects positively (0.290) the GDP growth rate of the country. Exports affect the GDP growth rate positively (0.099). GDP growth rate negatively affected (-0.229) by the volume of imports. Money supply affects the GDP growth rate directly (1.083). Foreign exchange reserve affects the GDP growth rate positively (3.922) the GDP growth rate of the country. Fourth Model shows FDI positively affects (1.479) the domestic investment of the country. Domestic investment negatively affected (-0.012) by the interest rate of the country. The domestic investment affected positively (0.053) by the inflation rate of the country. Exchange rate negatively related (-0.061) to the domestic investment in the country. Domestic investment positively affected (0.087) by the GDP growth rate. Domestic consumption affects the domestic investment positively (0.002). The relation weak and insignificant. Domestic investment positively affected (0.284) by the foreign capital inflows. Inflation rate in fifth Model positively affected (0.157) by FDI. FCI affect the inflation rate positively (0.467). The inflation rate affected positively (0.246) by the money supply in the country. Interest rate positively related (0.811) to the inflation rate. Inflation rate positively affected (-0.423) by the level of domestic

investment. Sixth Model shows Balance of trade positively affected (0.043) by the foreign direct investment to the country. FCI affect the balance of trade negatively (-0.127). The coefficient significant at 5% levels of significance. Balance of trade is positively affected (0.127) by the GDP growth rate of the country. The balance of trade affected positively (0.237) by the relative prices of imports. Balance of trade negatively affected (-0.132) by the relative prices of exports. Foreign exchange reserves and exchange rat affects the balance of trade negatively. Similarly, as the currency depreciates, the exports become less expensive and hence the demand for exports increases in the international markets. Increase in exports will lead to improvement in the balance of trade. So, all six Models are significant at 0.1 levels of significance and variation occurs in the depended variables due to the strong relationships with independent variables in the Models. A result of the Durbin-Watson d-Statistics of the Models shows no Auto-Correlation in variables.

6.4 Recommendations/Policy Implications

The recommendations given in this research are divided into specific part recommendations and general recommendation.

6.4.1 Specific Recommendations

These recommendations of the study are formulated on the basis of concluded results. The study has the following specific recommendations;

- GDP growth rate, interest rate, exchange rate, domestic investment, and exports affect the foreign capital inflow into the country positively, so the such policies should be made to improve these factors so that to attract more foreign capital. Incentives should be given to domestic investors, which will boost GDP and exports and will attract more and more foreign capital.

- Inflation rate and imports volume affects the FCI negatively. The government should control inflation through monetary policy/fiscal policy and should reduce

the imports of un-necessary items through imports restrictions or imports substitution.

- FDI positively affected by GDP growth rate, interest rate, exchange rate, domestic investment, exports and imports. The government and monetary authorities should concentrate on these factors to boost FDI to the country.

- Inflation affects FDI negatively and GDP so strict financial policy measures are needed to control budget deficit, expenditures, inflation by the govt. specially the prices of Kerosene oil, petrol, diesel, CNG, electricity and natural gas required to be stable. Govt. borrowing (external/internal) should also be controlled as it balloon deficit in current/capital accounts.

- FCI and FDI affect the GDP growth rate positively. The government should liberalized FDI regime by formulating friendly investment policies-incentives to build confidence of the foreign investors so that to attract more FDI. Consistent Conducive business environment with effective regulatory authority should be introduced to attract more FDI.

- Domestic investment positively affected by the FDI and FCI to the country. Money/capital markets, corporate sectors and other financial institutions management for domestic's sources mobilization with modern structural regulatory body of e-banking facility required to boost domestic investment with effective security policy to manage militancy, good governess, energy crises by solving problem of circular debt. So more attention should be given this area.

- Reforms of the SBP to control money supply by minimum capital requirements, and capital adequacy ratio for financial stability, financial integrity, and consumer protection on the other hand expanding insurance industry and formulating reforms as it having great potential of growth.

- Foreign Direct Investment positively affects the balance of trade while the FCI negatively affects the balance of trade. To improve balance of trade, more FDI should be attracted and foreign exchange rate should be stabilized.

6.4.2 General Recommendations

Pakistan has to make stronger efforts to attract as much domestic and foreign investment in the foreign exchange sectors at least in the short term to improve its balance of payments position. To encourage domestic and foreign investment, Pakistan has to remove the bottlenecks outlined in the previous section. In addition, it should be the core priority of the Government of Pakistan to follow the measures given below to more expedite the flow of investment from both internal and external sources.

- **Satisfactory Law and Order Situation**

Strong and efficient Institutional framework required for the implementation of the Constitutional-Law and Order to strengthen the confidence level of domestic and foreign investors. The Democratic Political Leadership has to concentrate on the law and order situation of Karachi that zones ("growth poles") established in different regions.

- **Internal Political Stability**

Internal political stability in all over the country is indispensable to induce local/foreign investors.

- **Strong Macroeconomic Indicators**

Pakistan's should concentrate to improve fiscal revenue, reduce non developmental expenditures in budget deficit, enhance trade surplus to improve TOT and balances of current/capital accounts, foreign exchange reserves which always remains under pressure position and makes environment un attractive for foreign investors.

- **Influential Bureaucratic Hurdles**

The GOP should stream line code of conduct for foreign investors and formulate discretionary power to restrict the bureaucratic administrative tactics of delaying the process of investment approval required; (numerous permits, clearances certificates at national, regional, and local levels) creating hurdles especially at the time of official clearances after completion of project. A simplified, updated, modernized, transparent, and clear-cut procedure is needed.

- **Fiscal Measures**

Fiscal policy in conformity with monetary measures and properly designed commercial policy in harmony is required to divert the flow of FCI. More fiscal measures are required for investor in corporate sectors with duty free imported machinery and plants, tax holidays; in case of expansion, modernization and production.

- **Credit Flow for Foreigners**

Foreign Investors needs cash flow from internal financial institution of Pakistan as their power is limited to borrow equal to their equity capital only. Sound credit facilitation policy measures should adopt to enable the foreign firms to have access in the financial markets.

- **Application of Intellectual/Industrial Rights of Technology**

GOP should remove all restriction on payment of royalty for the provision of technical service fees of the industrial manufacturing sector. Proper application of Intellectual and Industrial Property Rights is rightly needed in conformity of WTO Agreements.

- **Affective Labor Laws**

Labor laws do not be as overprotective as it discourages productivity and investment. Rationalized labor laws should be developed to encourage skills and remove multiple

banes on the generation of new employments and removing restrictions on jobs in the existing one.

Expansion of strong Infrastructure

Weak Institutional infrastructural services in Pakistan compared to under developing countries should be gradually updated in order to compete with East and Southeast Asian nations especially in the fields of education and physical infrastructure.

- **Confidence-building Measures**

Private/Public partnership is essential to create high level confidence. Seminars, Conferences should be arranged for the Public/Private collaboration in joint business promotion-related issue. Public/Private relationship will restore foreign investor's confidence and encourage investment. Efficient and deeply liquidized capital markets are essential and SECP has competition to establish fair and modern capital markets to attract domestics /foreign investors by improving risk management, corporate governance, enhance transparency, investor protection and develop new products/systems/markets.

- **Identification of Potential Sectors to the Foreign Investors**

GOP should find new foreign potential investors in different regions of the developed world for its newly identifying sectors having the dire need of investments like exploration of coal-mining, energy power, solar system, tourism, construction, education, arts & fashion designing and health sectors etc.

- **Improvement in the Form of Tax Structure**

Tax structure should be examine and to incorporate reforms on urgent basis to decrease tax burden and also regulate and streamlined its administrative procedures of collection for local as well as foreign investors so as properly regulating tax basis/tariffs.

- **Early End of War-on-Terror and Extremism**

Since 2011 Pakistan is bearing huge losses in the budget due to compensation payments to all the effected (civilian/forces) of war-on-terror in Afghanistan resulted massive bomb blasting damaging public private properties, tourism industry, education, health sectors, losses to human lives can never be compensate and damaging physical infrastructure, created negative image of Pakistan and Muslim community, decreased FDI, cost of uncertainty and total loses up reached to $28459.89mill. Cost of war crossed $102.5billion. Securities measures on borders and FATA, PATA due to violence extremisms need quick solution.

6.4.3 Institutional Recommendations

1. Efforts for Generalized Scheme of Preferences (GSP) Plus status to Pakistan in European Union and other Countries.
2. To Improve Code of Conduct of Credit Rating (CRAs) Agencies.
3. Commercial Papers Regulations for short-term debt instruments.
4. Listing /trading of SMEs shares on the Stock Exchanges.
5. Installing e–IPO, capital issues of public offering i.e. electronic submission of subscription of shares via internet to enhance funds risk management, efficiency and transparency governing default management at PMEX to safeguard local/for. Investors default by a PMEX Brokers.
6. SECP listing and trading of stock options with cross listing of foreign and domestic indices at Pakistani and foreign stock exchanges for activation of market & Exchange Traded Funds (ETFs) to attract Local and Foreign investors.
7. Centralized Know Your Client (KYC),
8. Organization Customer Due Diligence (CDD) policies of international level for complete data-base by all market intermediaries.
9. Setting of Securities Investor Protection Corporation (SIPC) and Brokers Association like USA, China, and Malaysia to protect defaulting brokerage house in favor of clients and relevant inform.
10. Early ending of war-on-terror and extremism.

REFERNCES

Griffin, K.B and J.L.Econ (1970). "Foreign capital, Domestic Saving and Economic Development" *The Oxford Bulletin of Economics and Statistic, Vol.5,* 99-112.

Weisskopt, T.E. (1972). "The impact of foreign capital inflow on saving in under developing countries", *Journals of International Economics, Vol.1.No.5,* 245-38

Aslam, N (1987), "The impact pf foreign capital inflow on savings and investment: The case of Pakistan", *The Pakistan Development Review, Vol.4, No .26,* 787-89

Hall (1986), "An Application of the Granger and Engle Two-step Estimation procedure to UK Aggregate Wage Data", *The Oxford Bulletin of Economics and Statistic, Vol.48, No.3,* 229-240.

Lucas, Robert E. Jr., (1990). Why Doesn't Capital Flow from Rich to Poor Countries?" American Economic Review, 1990, 80, 92-96.

Mankiw, N. Gregory, David Romer, and David Weil, (1992). A Contribution to the Empirics of Economic growth," Quarterly Journal of Economics, 1992, 107 (2), 407-38.

Kamal (1992). "Self-Reliance and Implications in Growth and Resource Mobilization". *The Pakistan Development Review.Vol.4, No.31,* 1101-1110.

Iqbal, Zafer (1993)."Institutional Variations in Saving in Pakistan", *The Pakistan Development Review, Vol.4, No .31,* 1293-1311.

Khan, N.Z and Rahim (1993). "Foreign aid, domestic savings and economic growth", *Pakistan Development Review, Vol.4, No .32,* 1157-67.

Shabbir, T and Muhammad. A (1992). The Effect of Foreign Private Investment on Economic Growth in Pakistan", *The Pakistan Development Review, Vol.4, No .31,* 831-41.

Muhammad, Z and Qasim.A (1992). "Saving behavior in different trade Regime", *The Pakistan Development Review, Vol.4, No .31,* 756-61.

Iqbal, Zafer (1993). "Institutional Variations in Saving in Pakistan", *The Pakistan Development Review, Vol.4, No .31,* 1293-1311.

Khan, N.Z and Rahim (1993). “Foreign aid, domestic savings and economic growth”, *Pakistan Development Review, Vol.4, No .32,* 1157-67.

Ch, Muhammad and Ali (1993). “Pakistan’s foreign dependence, its capacity for debt repayment and future prospects”, *Pakistan Economic and Social Review*, Vol.31.No.1

Ch, Muhammad and Ali (1993). “Pakistan’s foreign dependence, its capacity for debt repayment and future prospects”, *Pakistan Economic and Social Review*, Vol.31.No.1

Chenery, H.B and Strout, A.M (1966). “ Foreign assistant and economic development” *American Economic Review, Vol.4.No.56*..679-733.

Balasubramanyan, V. (1996). FDI and Growth in EP and IS countries. *The Economic Journal*, Vol. 106, Issue. 4, 92-105.

De Mello, L. R. (1999). Foreign Direct Investment let Growth: Evidence from Time Series and Panel Data. *Oxford Economic Papers,* Vol. 51, 133-151.

Zhang, H. (2001). How Does Foreign Direct Investment Affect Economic Growth in China? *Journal of Economics and Transition,* Vol. 9, 679-693.

Bernanke, Ben and Refet G• urkaynak**,** (2001). Is Growth Exogenous? Taking Mankiw, Romer and Weil seriously," in Ben Bernanke and Kenneth Rogo , eds., N.B.E.R. Macroeconomics Annual, MIT Press Cambridge MA 2001, 11{72}.

Hecht, Y., Razin, A. and Shinar, N. (2004). Interactions between Capital Inflows and Domestic Investment: Israel and Developing Economies. *Israel Economic Review,* Vol. 2, Issue. 2, 1-14.

Akinlo, A. E. (2004). Foreign Direct Investment and Growth in Nigeria: An Empirical Investigation. *Journal of Policy Modeling*, Vol. 26, 627-639. 220.

Sethi, N and Patnaik K. U. S. (2005). Impact of International Capital Flows on India’s Economic Growth. *Unpublished Thesis*, Department of Economics, University of Hyderabad.

Baharumshah, A. Z. and Thanoon , M. A. M. (2006). Foreign capital flows and

Economic growth in East Asian countries. *China Economic Review*, Vol. 17, Issue 1, 70-83.

Lane, Philip R. and Gian Maria (2006). Milesi-Ferretti, The External Wealth of Nations Mark II: Revised and Extended Estimates of Foreign Assets and Liabilities, 1970-2004," CEPR Discussion Papers 5644.

Mohey-ud-Din (2006). Impact of Foreign Capital Inflows (FCI) on Economic Growth in Pakistan (1975 -2004). *Journal of Independent Studies and Research*, Vol. 5, Issue.1, 24-49.

Moosa, I. A. and Cardak, B. A. (2006). The Determinants of FDI: An Extreme Bound Analysis. *Journal of Multination Financial Management*, Vol. 16, 199-11.

Aghion, Philippe, Diego Comin, and Peter Howitt, (2006). When Does Domestic Saving Matter for Economic Growth?" NBER Working Papers 12275.

Aguiar, Mark and Gita Gopinath (2007). Emerging Market Business Cycles: The Cycle is the Trend," Journal of Political Economy, February 2007, 115 (1), 69-102.

Mottaleb, D. K. A. (2007). Determinants of Foreign Direct Investment and Its Impact On Economic Growth in Developing Countries. *MPRA Paper* No. 9457, 1-15.

Ayanwale, A. B. (2007). FDI and Economic Growth: Evidence from Nigeria. *African Economic Research Center Paper*, No. 165.

Chukwuemeka, E. P. (2008). Modeling the Long Run Determinants of Foreign Portfolio Investment in an Emerging Market: Evidence from Nigeria. *International Conference on Applied Economics*, Department of Economics, University of Nigeria.

Via, G. D. and Kyaw, K. S. (2008). Determinants of FDI and Portfolio Flows to Developing Countries: A Panel Co integration Analysis. *European Journal of Economics, Finance and Administrative Sciences*, Vol. 13.

Adams, S. (2009). Foreign Direct Investment, Domestic Investment, and Economic Growth in Sub-Saharan Africa. *Journal of Policy Modeling*, Vol. 31, Issue. 6, 939-949.

Government of Pakistan, Economic Survey of Pakistan (2009-2010), Economic Advisors Wing, Ministry of Finance, Islamabad.

Osinubi, T. S. and Amaghionyeodiwe, L. A. (2010). Foreign Private Investment and Economic Growth in Nigeria. *Review of Economic and Business Studies*, Vol. 3, Issue. 1, 105-127.

Qazi Muhammad Adnan Hye, Shahbaz and Amra Hye (2010). *Foreign Capital Inflow and Economic Growth Nexus: A Case Study of Pakistan1* 6 The IUP Journal of Applied Economics, Vol. IX, No. 1, 2010

Raza, S. A., Sabir, M.S. Mehboob, F. (2011). Capital inflows and Economic Growth in Pakistan. *MPRA Paper*, No. 3679.

Amadou, A. (2011). The Effect of Foreign Capital on Domestic Investment in Togo. *International Journal of Economics and Finance*, Vol. 3, Issue. 5, 223-26.

Badeji, O. B. and Abayomi, O. O. (2011). The Impact of Foreign Direct Investment on Economic Growth in Nigeria? *International Research Journal of Finance and Economics*, Issue. 73, 122-132.

Fatima, S., Azeem, M. M., Elahi, E. and Abid, M. (2012). Comparative Analysis of Foreign Capital Inflows and Domestic Resources in the Economic Growth of Pakistan.*J. Agriculture & Social Sciences*, Vol. 8, 34-36.

Javed, K., Sher, F., Awan, R. U. and Ashfaq, M. (2012). Foreign Direct Investment, Trade and Economic Growth: A Comparison of Selected South Asian Countries. *International Journal of Humanities and Social Science*, Vol. 2, Issue.5 210-

Shah, S. H., Hasnat, H. and Jiang, L. J. (2012). Does Foreign Capital Inflows Really Stimulate Domestic Investment: A Case Study of Pakistan. *International Researc*

ANNEXTURES

Estimation of Model 1

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	Df1	df2	Sig. F Change	
1	.869[a]	.754	.676	.75837	.754	9.659	7	22	.000	2.235

a. Predictors: (Constant), Imports (% of GDP), GDP Growth Rate, Exports (% of GDP), Interest Rate, Domestic Investment, Inflation Rate, Exchange Rate

b. Dependent Variable: Foreign Capital Inflow

ANOVA[b]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	38.886	7	5.555	9.659	.000[a]
	Residual	12.653	22	.575		
	Total	51.539	29			

a. Predictors: (Constant), Imports (% of GDP), GDP Growth Rate, Exports (% of GDP), Interest Rate, Domestic Investment, Inflation Rate, Exchange Rate

b. Dependent Variable: Foreign Capital Inflow

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	-13.761	2.437		-5.646	.000
	GDP Growth Rate	.147	.084	.221	1.740	.096
	Inflation Rate	-.033	.053	-.100	-.626	.538
	Interest Rate	.095	.084	.192	1.127	.272
	Exchange Rate	.027	.010	.456	2.818	.010
	Domestic Investment	.545	.119	.706	4.578	.000
	Exports (% of GDP)	.159	.089	.248	1.780	.089
	Imports (% of GDP)	.012	.103	.025	.117	.908

a. Dependent Variable: Foreign Capital Inflow

Residuals Statistics[a]					
	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	-.0351	4.3903	1.3017	1.15797	30
Residual	-1.10150	2.18066	.00000	.66054	30
Std. Predicted Value	-1.154	2.667	.000	1.000	30
Std. Residual	-1.452	2.875	.000	.871	30
a. Dependent Variable: Foreign Capital Inflow					

Estimation of Model 2

Model Summary[b]										
					Change Statistics					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change	Durbin-Watson
1	.939[a]	.882	.838	.38381	.882	19.698	8	21	.000	1.721
a. Predictors: (Constant), Money Supply, Inflation Rate, GDP Growth Rate, Exports (% of GDP), Domestic Investment, Exchange Rate, Interest Rate, Imports (% of GDP)										
b. Dependent Variable: Foreign Direct Investment										

ANOVA[b]						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	23.214	8	2.902	19.698	.000[a]
	Residual	3.093	21	.147		
	Total	26.307	29			
a. Predictors: (Constant), Money Supply, Inflation Rate, GDP Growth Rate, Exports (% of GDP), Domestic Investment, Exchange Rate, Interest Rate, Imports (% of GDP)						
b. Dependent Variable: Foreign Direct Investment						

Coefficients[a]						
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	T	Sig.
1	(Constant)	-9.364	1.265		-7.401	.000
	GDP Growth Rate	.057	.044	.120	1.306	.206
	Inflation Rate	-.001	.029	-.004	-.035	.972
	Interest Rate	.015	.043	.043	.355	.726
	Exchange Rate	.030	.005	.700	5.683	.000
	Domestic	.295	.063	.534	4.681	.000

	Investment					
	Exports (% of GDP)	.008	.051	.018	.160	.875
	Imports (% of GDP)	.038	.053	.112	.720	.479
	Money Supply	.056	.027	.206	2.035	.055
a. Dependent Variable: Foreign Direct Investment						

Residuals Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	.0328	3.3380	1.0292	.89469	30
Residual	-.72398	.56638	.00000	.32660	30
Std. Predicted Value	-1.114	2.581	.000	1.000	30
Std. Residual	-1.886	1.476	.000	.851	30
a. Dependent Variable: Foreign Direct Investment					

Estimation of Model 3

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.755[a]	.569	.376	1.58314	.569	2.939	9	20	.021	2.108

a. Predictors: (Constant), Foeign Exchange Reserves, Domestic Investment, Exports (% of GDP), Interest Rate, Money Supply, Inflation Rate, Imports (% of GDP), Foreign Direct Investment, Exchange Rate

b. Dependent Variable: GDP Growth Rate

ANOVA[b]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	66.304	9	7.367	2.939	.021[a]
	Residual	50.127	20	2.506		
	Total	116.430	29			

a. Predictors: (Constant), Foeign Exchange Reserves, Domestic Investment, Exports (% of GDP), Interest Rate, Money Supply, Inflation Rate, Imports (% of GDP), Foreign Direct Investment, Exchange Rate

b. Dependent Variable: GDP Growth Rate

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	T	Sig.
1	Constant	22.574	9.424		2.395	.027

	Inflation Rate	.021	.119	.041	.172	.865
	Interest Rate	-.080	.186	-.108	-.431	.671
	Exchange Rate	-.149	.044	-1.663	-3.396	.003
	Domestic Investment	-.290	.367	-.250	-.790	.439
	Exports (% of GDP)	-.099	.215	-.103	-.460	.650
	Imports (% of GDP)	-.229	.226	-.320	-1.012	.323
	Money Supply	-.066	.129	-.115	-.510	.616
	Foreign Direct Investment	1.083	.869	.515	1.246	.227
	Foeign Exchange Reserves	3.922E-10	.000	1.007	2.926	.008
a. Dependent Variable: GDP Growth Rate						

Residuals Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	2.4053	7.0994	4.9379	1.51207	30
Residual	-2.09029	3.01909	.00000	1.31472	30
Std. Predicted Value	-1.675	1.429	.000	1.000	30
Std. Residual	-1.320	1.907	.000	.830	30
a. Dependent Variable: GDP Growth Rate					

Estimation of Model 4

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.882[a]	.778	.708	.93411	.778	11.022	7	22	.000	1.770

a. Predictors: (Constant), GDP Growth Rate, Foreign Capital Inflow, Domestic Consumption, Inflation Rate, Exchange Rate, Interest Rate, Foreign Direct Investment

b. Dependent Variable: Domestic Investment

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	67.322	7	9.617	11.022	.000[a]
	Residual	19.196	22	.873		
	Total	86.519	29			

a. Predictors: (Constant), GDP Growth Rate, Foreign Capital Inflow, Domestic Consumption, Inflation Rate, Exchange Rate, Interest Rate, Foreign Direct Investment

b. Dependent Variable: Domestic Investment

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	Constant	19.074	5.328		3.580	.002
	Foreign Direct Investment	1.479	.500	.815	2.954	.007
	Foreign Capital Inflow	.284	.317	.219	.897	.379
	Domestic Consumption	.002	.063	.004	.033	.974
	Inflation Rate	.053	.059	.122	.898	.379
	Interest Rate	-.012	.106	-.018	-.110	.913
	Exchange Rate	-.061	.013	-.792	-4.622	.000
	GDP Growth Rate	-.087	.108	-.101	-.805	.430

a. Dependent Variable: Domestic Investment

Residuals Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	16.1931	22.5726	18.6437	1.52364	30
Residual	-1.98162	1.68858	.00000	.81359	30
Std. Predicted Value	-1.608	2.579	.000	1.000	30
Std. Residual	-2.121	1.808	.000	.871	30

a. Dependent Variable: Domestic Investment

Estimation of Model 5

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.700[a]	.489	.356	3.18706	.489	3.674	6	23	.010	1.487

a. Predictors: (Constant), Domestic Investment, GDP Growth Rate, Money Supply, Interest Rate, Foreign Direct Investment, Foreign Capital Inflow

b. Dependent Variable: Inflation Rate

ANOVA[b]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	223.910	6	37.318	3.674	.010[a]
	Residual	233.620	23	10.157		
	Total	457.529	29			

a. Predictors: (Constant), Domestic Investment, GDP Growth Rate, Money Supply, Interest Rate, Foreign Direct Investment, Foreign

Capital Inflow						
b. Dependent Variable: Inflation Rate						

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	T	Sig.
1	Constant	3.495	15.232		.229	.821
	Foreign Direct Investment	.076	1.354	.018	.056	.956
	Foreign Capital Inflow	.467	1.106	.157	.423	.676
	GDP Growth Rate	-.065	.333	-.033	-.196	.846
	Money Supply	-.246	.237	-.217	-1.035	.312
	Interest Rate	.811	.277	.552	2.933	.007
	Domestic Investment	.423	.493	.184	.858	.400
a. Dependent Variable: Inflation Rate						

Estimation of Model 6

ANOVA[b]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	439.772	7	62.825	26.150	.000[a]
	Residual	52.854	22	2.402		
	Total	492.627	29			
a. Predictors: (Constant), Exchange Rate, Foreign Capital Inflow, GDP Growth Rate, Relative Price of Exports, Foeign Exchange Reserves, Foreign Direct Investment, Relative Price of Imports						
b. Dependent Variable: Trade Balance						

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	T	Sig.
1	Constant	-12.080	1.656		-7.293	.000
	GDP Growth Rate	.127	.205	.062	.619	.542
	Foreign Direct Investment	.043	.925	.010	.046	.964
	Foreign Capital Inflow	-.127	.532	-.041	-.238	.814
	Foeign Exchange Reserves	-2.252E-10	.000	-.281	-1.554	.134
	Relative Price of	-.132	.014	-3.111	-9.220	.000

	Exports					
	Relative Price of Imports	.237	.038	3.544	6.292	.000
	Exchange Rate	-.002	.063	-.011	-.032	.975
a. Dependent Variable: Trade Balance						

Residuals Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	-12.2211	1.3070	-5.8250	3.89417	30
Residual	-2.95198	3.34388	.00000	1.35002	30
Std. Predicted Value	-1.642	1.831	.000	1.000	30
Std. Residual	-1.905	2.157	.000	.871	30
a. Dependent Variable: Trade Balance					

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.945[a]	.893	.859	1.54999	.893	26.150	7	22	.000	1.994
a. Predictors: (Constant), Exchange Rate, Foreign Capital Inflow, GDP Growth Rate, Relative Price of Exports, Foeign Exchange Reserves, Foreign Direct Investment, Relative Price of Imports										
b. Dependent Variable: Trade Balance										

Stationary of the variables

Table

ADF test results to check stationary

Variables	p-value at level	p-value at first difference
DS	**0.5607**	**0.0000**
ER	**0.6346**	**0.0494**
FCI	**0.1260**	**0.0000**
FDI	**0.1158**	**0.0003**
FR	**1.0000**	**0.0317**
G	**0.5161**	**0.0000**
GDP	**0.1213**	**0.0000**
I	**0.4546**	**0.0016**
Inf	**0.3288**	**0.0000**
M	**0.4492**	**0.0000**

M2	**0.6649**	**0.0001**
R	**0.6943**	**0.0000**
RPM	**0.9991**	**0.0402**
RPX	**0.9997**	**0.0147**
X	**0.1561**	**0.0000**

VAR Lag Order Selection Criteria for Model 1

VAR Lag Order Selection Criteria
Endogenous variables: FCI GDP INF R ER I X
M
Exogenous variables: C
Date: 03/04/14 Time: 21:45
Sample: 1980 2010
Included observations: 28

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-497.6339	NA	669264.6	36.11671	36.49734	36.23307
1	-328.0992	230.0829	430.2944	28.57851	32.00418	29.62577
2	-201.6294	99.36908*	19.47679*	24.11639*	30.58710*	26.09455*

* indicates lag order selected by the criterion
LR: sequential modified LR test statistic (each test at 5% level)
FPE: Final prediction error
AIC: Akaike information criterion
SC: Schwarz information criterion
HQ: Hannan-Quinn information criterion

Granger Causality test for Model 1

Pairwise Granger Causality Tests
Date: 03/04/14 Time: 22:07
Sample: 1980 2010
Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
GDP does not Granger Cause FCI	28	1.46295	0.2523
FCI does not Granger Cause GDP		1.81436	0.1855
INF does not Granger Cause FCI	28	0.10072	0.9046
FCI does not Granger Cause INF		4.38324	0.0244
R does not Granger Cause FCI	28	8.25594	0.0020

FCI does not Granger Cause R		6.19431	0.0070
ER does not Granger Cause FCI	28	1.66452	0.2113
FCI does not Granger Cause ER		10.2914	0.0006
I does not Granger Cause FCI	28	3.27989	0.0558
FCI does not Granger Cause I		3.01030	0.0690
X does not Granger Cause FCI	28	1.08534	0.3545
FCI does not Granger Cause X		1.38526	0.2704
M does not Granger Cause FCI	28	2.70536	0.0881
FCI does not Granger Cause M		0.69454	0.5095
INF does not Granger Cause GDP	28	1.38090	0.2714
GDP does not Granger Cause INF		0.58748	0.5639
R does not Granger Cause GDP	28	4.01294	0.0320
GDP does not Granger Cause R		1.59298	0.2249
ER does not Granger Cause GDP	28	1.48156	0.2482
GDP does not Granger Cause ER		0.11548	0.8914
I does not Granger Cause GDP	28	1.56322	0.2309
GDP does not Granger Cause I		6.19508	0.0070
X does not Granger Cause GDP	28	1.33815	0.2820
GDP does not Granger Cause X		0.40403	0.6723
M does not Granger Cause GDP	28	1.06317	0.3617
GDP does not Granger Cause M		17.6121	2.E-05
R does not Granger Cause INF	28	0.47079	0.6304
INF does not Granger Cause R		4.42096	0.0237
ER does not Granger Cause INF	28	1.96147	0.1635
INF does not Granger Cause ER		2.45076	0.1084

I does not Granger Cause INF	28	6.98780	0.0043
INF does not Granger Cause I		0.14076	0.8694
X does not Granger Cause INF	28	0.19814	0.8216
INF does not Granger Cause X		0.07567	0.9274
M does not Granger Cause INF	28	0.44577	0.6457
INF does not Granger Cause M		0.00208	0.9979
ER does not Granger Cause R	28	0.64785	0.5325
R does not Granger Cause ER		2.95671	0.0720
I does not Granger Cause R	28	2.14718	0.1396
R does not Granger Cause I		3.46785	0.0483
X does not Granger Cause R	28	1.05014	0.3661
R does not Granger Cause X		0.67155	0.5207
M does not Granger Cause R	28	0.32770	0.7239
R does not Granger Cause M		2.50001	0.1041
I does not Granger Cause ER	28	2.65797	0.0915
ER does not Granger Cause I		2.83095	0.0796
X does not Granger Cause ER	28	3.02170	0.0684
ER does not Granger Cause X		0.35011	0.7083
M does not Granger Cause ER	28	1.57243	0.2290
ER does not Granger Cause M		1.71556	0.2021
X does not Granger Cause I	28	0.21600	0.8074
I does not Granger Cause X		0.39605	0.6775
M does not Granger Cause I	28	0.15480	0.8575
I does not Granger Cause M		2.12998	0.1417
M does not Granger Cause X	28	0.53018	0.5955
X does not Granger Cause M		0.26434	0.7700

Johansen Co-Integration Test for Model

Date: 03/04/14 Time: 22:14
Sample (adjusted): 1982 2009
Included observations: 28 after adjustments
Trend assumption: No deterministic trend (restricted constant)
Series: FDI GDP INF M2 R ER
Lags interval (in first differences): 1 to 1

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.879189	179.2167	103.8473	0.0000
At most 1 *	0.790692	120.0380	76.97277	0.0000
At most 2 *	0.698540	76.24740	54.07904	0.0002
At most 3 *	0.561337	42.67209	35.19275	0.0065
At most 4	0.331373	19.59946	20.26184	0.0615
At most 5	0.257291	8.328639	9.164546	0.0719

Trace test indicates 4 cointegrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.879189	59.17869	40.95680	0.0002
At most 1 *	0.790692	43.79061	34.80587	0.0033
At most 2 *	0.698540	33.57531	28.58808	0.0105
At most 3 *	0.561337	23.07264	22.29962	0.0390
At most 4	0.331373	11.27082	15.89210	0.2324
At most 5	0.257291	8.328639	9.164546	0.0719

Max-eigenvalue test indicates 4 cointegrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

VECM for Model 1

Vector Error Correction Estimates
Date: 03/04/14 Time: 21:57
Sample (adjusted): 1982 2009
Included observations: 28 after adjustments
Standard errors in ( ) & t-statistics in [ ]

Cointegrating Eq:	CointEq1	CointEq2	CointEq3
FCI(-1)	1.000000	0.000000	0.000000
GDP(-1)	0.000000	1.000000	0.000000
INF(-1)	0.000000	0.000000	1.000000
R(-1)	-6.518126	0.985091	7.011329
	(0.72975)	(0.13492)	(0.84987)
	[-8.93198]	[7.30108]	[8.24990]
ER(-1)	0.002133	-0.001337	-0.040098
	(0.07186)	(0.01329)	(0.08369)
	[0.02969]	[-0.10060]	[-0.47911]
I(-1)	7.227885	-1.167250	-9.728712
	(1.17228)	(0.21674)	(1.36524)
	[6.16566]	[-5.38540]	[-7.12602]
X(-1)	-2.067154	0.568460	1.456532
	(0.56652)	(0.10474)	(0.65977)
	[-3.64886]	[5.42713]	[2.20764]
M(-1)	-2.938984	0.128418	2.779614
	(0.90616)	(0.16754)	(1.05531)
	[-3.24334]	[0.76649]	[2.63392]
C	-10.13098	-0.091179	61.15055
	(15.1497)	(2.80104)	(17.6434)
	[-0.66872]	[-0.03255]	[3.46592]

VAR Lag Order Selection Criteria for Model 2

VAR Lag Order Selection Criteria
Endogenous variables: FDI GDP INF M2 R ER I
X M
Exogenous variables: C
Date: 03/04/14 Time: 22:10
Sample: 1980 2010
Included observations: 28

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-544.6942	NA	1213435.	39.54959	39.97779	39.68049

1	-354.2370	244.8735	656.3413	31.73122	36.01330	33.04029
2	-122.4816	148.9856*	0.147210*	20.96297*	29.09894*	23.45022*

* indicates lag order selected by the criterion
LR: sequential modified LR test statistic (each test at 5% level)
FPE: Final prediction error
AIC: Akaike information criterion
SC: Schwarz information criterion
HQ: Hannan-Quinn information criterion

Granger Causality Test for Model 2

Pairwise Granger Causality Tests
Date: 03/04/14 Time: 22:20
Sample: 1980 2010
Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
GDP does not Granger Cause FDI	28	0.87326	0.4310
FDI does not Granger Cause GDP		1.38724	0.2699
INF does not Granger Cause FDI	28	0.96727	0.3951
FDI does not Granger Cause INF		2.82073	0.0802
M does not Granger Cause FDI	28	1.51792	0.2403
FDI does not Granger Cause M		3.10617	0.0640
R does not Granger Cause FDI	28	1.95650	0.1642
FDI does not Granger Cause R		4.36186	0.0248
ER does not Granger Cause FDI	28	2.95769	0.0719
FDI does not Granger Cause ER		8.99963	0.0013
I does not Granger Cause FDI	28	1.61210	0.2212
FDI does not Granger Cause I		7.00142	0.0042
X does not Granger Cause FDI	28	0.76288	0.4778
FDI does not Granger Cause X		1.36964	0.2742
M2 does not Granger Cause FDI	28	1.25563	0.3037

FDI does not Granger Cause M2		1.22579	0.3120
INF does not Granger Cause GDP	28	1.38090	0.2714
GDP does not Granger Cause INF		0.58748	0.5639
M does not Granger Cause GDP	28	1.06317	0.3617
GDP does not Granger Cause M		17.6121	2.E-05
R does not Granger Cause GDP	28	4.01294	0.0320
GDP does not Granger Cause R		1.59298	0.2249
ER does not Granger Cause GDP	28	1.48156	0.2482
GDP does not Granger Cause ER		0.11548	0.8914
I does not Granger Cause GDP	28	1.56322	0.2309
GDP does not Granger Cause I		6.19508	0.0070
X does not Granger Cause GDP	28	1.33815	0.2820
GDP does not Granger Cause X		0.40403	0.6723
M2 does not Granger Cause GDP	28	0.14830	0.8630
GDP does not Granger Cause M2		0.00877	0.9913
M does not Granger Cause INF	28	0.44577	0.6457
INF does not Granger Cause M		0.00208	0.9979
R does not Granger Cause INF	28	0.47079	0.6304
INF does not Granger Cause R		4.42096	0.0237
ER does not Granger Cause INF	28	1.96147	0.1635
INF does not Granger Cause ER		2.45076	0.1084
I does not Granger Cause INF	28	6.98780	0.0043
INF does not Granger Cause I		0.14076	0.8694
X does not Granger Cause INF	28	0.19814	0.8216
INF does not Granger Cause X		0.07567	0.9274

M2 does not Granger Cause INF	28	1.98919	0.1597
INF does not Granger Cause M2		0.31740	0.7312
R does not Granger Cause M	28	2.50001	0.1041
M does not Granger Cause R		0.32770	0.7239
ER does not Granger Cause M	28	1.71556	0.2021
M does not Granger Cause ER		1.57243	0.2290
I does not Granger Cause M	28	2.12998	0.1417
M does not Granger Cause I		0.15480	0.8575
X does not Granger Cause M	28	0.26434	0.7700
M does not Granger Cause X		0.53018	0.5955
M2 does not Granger Cause M	28	0.18270	0.8342
M does not Granger Cause M2		1.70095	0.2047
ER does not Granger Cause R	28	0.64785	0.5325
R does not Granger Cause ER		2.95671	0.0720
I does not Granger Cause R	28	2.14718	0.1396
R does not Granger Cause I		3.46785	0.0483
X does not Granger Cause R	28	1.05014	0.3661
R does not Granger Cause X		0.67155	0.5207
M2 does not Granger Cause R	28	3.68987	0.0408
R does not Granger Cause M2		1.28282	0.2964
I does not Granger Cause ER	28	2.65797	0.0915
ER does not Granger Cause I		2.83095	0.0796
X does not Granger Cause ER	28	3.02170	0.0684
ER does not Granger Cause X		0.35011	0.7083
M2 does not Granger Cause ER	28	5.13053	0.0144
ER does not Granger Cause M2		1.81545	0.1853

X does not Granger Cause I	28	0.21600	0.8074
I does not Granger Cause X		0.39605	0.6775
M2 does not Granger Cause I	28	0.35980	0.7017
I does not Granger Cause M2		2.04573	0.1522
M2 does not Granger Cause X	28	5.80555	0.0091
X does not Granger Cause M2		1.70296	0.2043

Johansen Co-integration Test for Model 2

Date: 03/04/14 Time: 22:14
Sample (adjusted): 1982 2009
Included observations: 28 after adjustments
Trend assumption: No deterministic trend (restricted constant)
Series: FDI GDP INF M2 R ER
Lags interval (in first differences): 1 to 1

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.879189	179.2167	103.8473	0.0000
At most 1 *	0.790692	120.0380	76.97277	0.0000
At most 2 *	0.698540	76.24740	54.07904	0.0002
At most 3 *	0.561337	42.67209	35.19275	0.0065
At most 4	0.331373	19.59946	20.26184	0.0615
At most 5	0.257291	8.328639	9.164546	0.0719

Trace test indicates 4 cointegrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.879189	59.17869	40.95680	0.0002
At most 1 *	0.790692	43.79061	34.80587	0.0033
At most 2 *	0.698540	33.57531	28.58808	0.0105
At most 3 *	0.561337	23.07264	22.29962	0.0390
At most 4	0.331373	11.27082	15.89210	0.2324
At most 5	0.257291	8.328639	9.164546	0.0719

Max-eigenvalue test indicates 4 cointegrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

VECM for Model 2

Vector Error Correction Estimates
Date: 03/04/14 Time: 22:17
Sample (adjusted): 1982 2009
Included observations: 28 after adjustments
Standard errors in ( ) & t-statistics in [ ]

Cointegrating Eq:	CointEq1	CointEq2	CointEq3	CointEq4
FDI(-1)	1.000000	0.000000	0.000000	0.000000
GDP(-1)	0.000000	1.000000	0.000000	0.000000
INF(-1)	0.000000	0.000000	1.000000	0.000000
M2(-1)	0.000000	0.000000	0.000000	1.000000
R(-1)	499.1964	936.3776	1352.954	2861.966
	(57.4918)	(107.830)	(155.967)	(329.506)
	[8.68292]	[8.68385]	[8.67462]	[8.68563]
ER(-1)	-13.85641	-25.91526	-37.47621	-79.32371
	(3.67741)	(6.89724)	(9.97628)	(21.0765)
	[-3.76798]	[-3.75734]	[-3.75653]	[-3.76360]
I(-1)	-467.7344	-877.0470	-1268.918	-2679.822
	(59.7262)	(112.021)	(162.029)	(342.312)
	[-7.83131]	[-7.82933]	[-7.83144]	[-7.82859]
X(-1)	79.91431	150.1646	215.8670	457.9129
	(34.0415)	(63.8472)	(92.3497)	(195.104)
	[2.34756]	[2.35194]	[2.33750]	[2.34702]
C	4970.727	9306.727	13497.41	28424.88
	(1054.22)	(1977.26)	(2859.94)	(6042.10)
	[4.71508]	[4.70688]	[4.71947]	[4.70447]

VAR Lag Order Selection Criteria for Model 3

VAR Lag Order Selection Criteria
Endogenous variables: FDI FCI INF R ER I FR
M X

Exogenous variables: C

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-1092.554	NA	1.20e+23	78.68242	79.11063	78.81333
1	-869.9173	286.2471	6.52e+18	68.56552	72.84761	69.87460
2	-562.0988	197.8833*	6.39e+12*	52.36420*	60.50017*	54.85145*

* indicates lag order selected by the criterion
LR: sequential modified LR test statistic (each test at 5% level)
FPE: Final prediction error
AIC: Akaike information criterion
SC: Schwarz information criterion
HQ: Hannan-Quinn information criterion

Granger Causality Test for Model 3

Pairwise Granger Causality Tests
Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
FCI does not Granger Cause FDI	28	1.29757	0.2925
FDI does not Granger Cause FCI		2.05093	0.1515
INF does not Granger Cause FDI	28	0.96727	0.3951
FDI does not Granger Cause INF		2.82073	0.0802
R does not Granger Cause FDI	28	1.95650	0.1642
FDI does not Granger Cause R		4.36186	0.0248
ER does not Granger Cause FDI	28	2.95769	0.0719
FDI does not Granger Cause ER		8.99963	0.0013
I does not Granger Cause FDI	28	1.61210	0.2212
FDI does not Granger Cause I		7.00142	0.0042
FR does not Granger Cause FDI	28	6.75615	0.0049
FDI does not Granger Cause FR		0.79529	0.4635
M does not Granger Cause FDI	28	1.51792	0.2403

FDI does not Granger Cause M		3.10617	0.0640
X does not Granger Cause FDI	28	0.76288	0.4778
FDI does not Granger Cause X		1.36964	0.2742
INF does not Granger Cause FCI	28	0.10072	0.9046
FCI does not Granger Cause INF		4.38324	0.0244
R does not Granger Cause FCI	28	8.25594	0.0020
FCI does not Granger Cause R		6.19431	0.0070
ER does not Granger Cause FCI	28	1.66452	0.2113
FCI does not Granger Cause ER		10.2914	0.0006
I does not Granger Cause FCI	28	3.27989	0.0558
FCI does not Granger Cause I		3.01030	0.0690
FR does not Granger Cause FCI	28	1.57322	0.2289
FCI does not Granger Cause FR		1.85290	0.1794
M does not Granger Cause FCI	28	2.70536	0.0881
FCI does not Granger Cause M		0.69454	0.5095
X does not Granger Cause FCI	28	1.08534	0.3545
FCI does not Granger Cause X		1.38526	0.2704
R does not Granger Cause INF	28	0.47079	0.6304
INF does not Granger Cause R		4.42096	0.0237
ER does not Granger Cause INF	28	1.96147	0.1635
INF does not Granger Cause ER		2.45076	0.1084
I does not Granger Cause INF	28	6.98780	0.0043
INF does not Granger Cause I		0.14076	0.8694
FR does not Granger Cause INF	28	2.95244	0.0722
INF does not Granger Cause FR		0.11269	0.8939
M does not Granger Cause INF	28	0.44577	0.6457
INF does not Granger Cause M		0.00208	0.9979
X does not Granger Cause INF	28	0.19814	0.8216

INF does not Granger Cause X		0.07567	0.9274
ER does not Granger Cause R	28	0.64785	0.5325
R does not Granger Cause ER		2.95671	0.0720
I does not Granger Cause R	28	2.14718	0.1396
R does not Granger Cause I		3.46785	0.0483
FR does not Granger Cause R	28	4.96749	0.0161
R does not Granger Cause FR		0.17170	0.8433
M does not Granger Cause R	28	0.32770	0.7239
R does not Granger Cause M		2.50001	0.1041
X does not Granger Cause R	28	1.05014	0.3661
R does not Granger Cause X		0.67155	0.5207
I does not Granger Cause ER	28	2.65797	0.0915
ER does not Granger Cause I		2.83095	0.0796
FR does not Granger Cause ER	28	4.76182	0.0186
ER does not Granger Cause FR		6.25317	0.0068
M does not Granger Cause ER	28	1.57243	0.2290
ER does not Granger Cause M		1.71556	0.2021
X does not Granger Cause ER	28	3.02170	0.0684
ER does not Granger Cause X		0.35011	0.7083
FR does not Granger Cause I	28	0.20058	0.8197
I does not Granger Cause FR		0.73044	0.4925
M does not Granger Cause I	28	0.15480	0.8575
I does not Granger Cause M		2.12998	0.1417
X does not Granger Cause I	28	0.21600	0.8074
I does not Granger Cause X		0.39605	0.6775
M does not Granger Cause FR	28	1.66374	0.2114
FR does not Granger Cause M		0.42696	0.6576
X does not Granger Cause FR	28	0.02359	0.9767

FR does not Granger Cause X		1.27542	0.2983
X does not Granger Cause M	28	0.26434	0.7700
M does not Granger Cause X		0.53018	0.5955

Johansen Co-Integration Test for Model 3

Unrestricted Co-integration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.935126	162.4785	76.97277	0.0000
At most 1 *	0.793248	88.62533	54.07904	0.0000
At most 2 *	0.642556	46.06693	35.19275	0.0023
At most 3	0.388421	18.28999	20.26184	0.0913
At most 4	0.169474	5.013781	9.164546	0.2819

Trace test indicates 3 co-integrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

Unrestricted Co integration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.935126	73.85318	34.80587	0.0000
At most 1 *	0.793248	42.55840	28.58808	0.0005
At most 2 *	0.642556	27.77693	22.29962	0.0078
At most 3	0.388421	13.27621	15.89210	0.1234
At most 4	0.169474	5.013781	9.164546	0.2819

Max-eigenvalue test indicates 3 co-integrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

VECM for Model 3

Standard errors in ( ) & t-statistics in [ ]

Cointegrating Eq:	CointEq1	CointEq2	CointEq3
FDI(-1)	1.000000	0.000000	0.000000
FCI(-1)	0.000000	1.000000	0.000000

INF(-1)	0.000000	0.000000	1.000000
R(-1)	0.026567	-0.520478	-2.024609
	(0.06637)	(0.06946)	(0.55257)
	[0.40029]	[-7.49354]	[-3.66401]
ER(-1)	-0.040338	0.004559	0.178994
	(0.00456)	(0.00477)	(0.03798)
	[-8.84358]	[0.95497]	[4.71338]
C	-0.792659	3.899782	10.62552
	(0.48773)	(0.51042)	(4.06066)
	[-1.62521]	[7.64034]	[2.61670]

VAR Lag Order Selection Criteria for Model 4

VAR Lag Order Selection Criteria
Endogenous variables: I FDI FCI C01 INF R
Exogenous variables: C

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-316.1588	NA	397.1283	23.01134	23.29681	23.09861
1	-236.3457	119.7195	18.53257	19.88184	21.88015*	20.49274
2	-185.6715	54.29381*	9.661225*	18.83368*	22.54482	19.96821*

* indicates lag order selected by the criterion
LR: sequential modified LR test statistic (each test at 5% level)
FPE: Final prediction error
AIC: Akaike information criterion
SC: Schwarz information criterion
HQ: Hannan-Quinn information criterion

Granger Causality Test for Model 4

Pairwise Granger Causality Tests
Date: 03/16/14 Time: 14:24
Sample: 1980 2010
Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
FDI does not Granger Cause I	28	7.00142	0.0042
I does not Granger Cause FDI		1.61210	0.2212
FCI does not Granger Cause I	28	3.01030	0.0690

I does not Granger Cause FCI		3.27989	0.0558
C01 does not Granger Cause I	28	0.16441	0.8494
I does not Granger Cause C01		1.13520	0.3387
INF does not Granger Cause I	28	0.14076	0.8694
I does not Granger Cause INF		6.98780	0.0043
R does not Granger Cause I	28	3.46785	0.0483
I does not Granger Cause R		2.14718	0.1396
ER does not Granger Cause I	28	2.83095	0.0796
I does not Granger Cause ER		2.65797	0.0915
GDP does not Granger Cause I	28	6.19508	0.0070
I does not Granger Cause GDP		1.56322	0.2309
FCI does not Granger Cause FDI	28	1.29757	0.2925
FDI does not Granger Cause FCI		2.05093	0.1515
C01 does not Granger Cause FDI	28	1.42782	0.2603
FDI does not Granger Cause C01		1.35098	0.2788
INF does not Granger Cause FDI	28	0.96727	0.3951
FDI does not Granger Cause INF		2.82073	0.0802
R does not Granger Cause FDI	28	1.95650	0.1642
FDI does not Granger Cause R		4.36186	0.0248
ER does not Granger Cause FDI	28	2.95769	0.0719
FDI does not Granger Cause ER		8.99963	0.0013
GDP does not Granger Cause FDI	28	0.87326	0.4310
FDI does not Granger Cause GDP		1.38724	0.2699
C01 does not Granger Cause FCI	28	1.28004	0.2971
FCI does not Granger Cause C01		1.56719	0.2301

INF does not Granger Cause FCI	28	0.10072	0.9046
FCI does not Granger Cause INF		4.38324	0.0244
R does not Granger Cause FCI	28	8.25594	0.0020
FCI does not Granger Cause R		6.19431	0.0070
ER does not Granger Cause FCI	28	1.66452	0.2113
FCI does not Granger Cause ER		10.2914	0.0006
GDP does not Granger Cause FCI	28	1.46295	0.2523
FCI does not Granger Cause GDP		1.81436	0.1855
INF does not Granger Cause C01	28	0.47203	0.6296
C01 does not Granger Cause INF		0.45165	0.6421
R does not Granger Cause C01	28	1.06137	0.3623
C01 does not Granger Cause R		1.03254	0.3720
ER does not Granger Cause C01	28	0.28272	0.7563
C01 does not Granger Cause ER		0.24519	0.7846
GDP does not Granger Cause C01	28	1.74182	0.1975
C01 does not Granger Cause GDP		1.59091	0.2254
R does not Granger Cause INF	28	0.47079	0.6304
INF does not Granger Cause R		4.42096	0.0237
ER does not Granger Cause INF	28	1.96147	0.1635
INF does not Granger Cause ER		2.45076	0.1084
GDP does not Granger Cause INF	28	0.58748	0.5639
INF does not Granger Cause GDP		1.38090	0.2714
ER does not Granger Cause R	28	0.64785	0.5325
R does not Granger Cause ER		2.95671	0.0720
GDP does not Granger Cause R	28	1.59298	0.2249
R does not Granger Cause GDP		4.01294	0.0320

GDP does not Granger Cause ER	28	0.11548	0.8914
ER does not Granger Cause GDP		1.48156	0.2482

Johansen Co-integration Test for Model 4

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.990555	335.2040	103.8473	0.0000
At most 1 *	0.981671	209.3224	76.97277	0.0000
At most 2 *	0.824065	101.3419	54.07904	0.0000
At most 3 *	0.687130	54.42558	35.19275	0.0002
At most 4 *	0.523344	23.05249	20.26184	0.0201
At most 5	0.106703	3.046571	9.164546	0.5720

Trace test indicates 5 co-integrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

Unrestricted Co-integration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.990555	125.8816	40.95680	0.0000
At most 1 *	0.981671	107.9805	34.80587	0.0000
At most 2 *	0.824065	46.91632	28.58808	0.0001
At most 3 *	0.687130	31.37309	22.29962	0.0021
At most 4 *	0.523344	20.00592	15.89210	0.0106
At most 5	0.106703	3.046571	9.164546	0.5720

Max-eigenvalue test indicates 5 co-integrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

VECM for Model 4

Standard errors in ( ) & t-statistics in [ ]

Cointegrating Eq:	CointEq1	CointEq2	CointEq3	CointEq4

I(-1)	1.000000	0.000000	0.000000	0.000000
FDI(-1)	0.000000	1.000000	0.000000	0.000000
FCI(-1)	0.000000	0.000000	1.000000	0.000000
C01(-1)	0.000000	0.000000	0.000000	1.000000
INF(-1)	0.277219	-0.014916	-0.015572	4.785461
	(0.19184)	(0.09202)	(0.07408)	(1.08401)
	[1.44505]	[-0.16210]	[-0.21021]	[4.41460]
R(-1)	1.673247	-1.286623	-1.250645	11.56397
	(0.27835)	(0.13351)	(0.10748)	(1.57284)
	[6.01129]	[-9.63688]	[-11.6358]	[7.35228]
C	-35.00348	10.32919	9.885168	-222.4487
	(2.12968)	(1.02150)	(0.82235)	(12.0339)
	[-16.4360]	[10.1118]	[12.0206]	[-18.4852]

VAR lag Order Selection Criteria for Model 5

VAR Lag Order Selection Criteria
Endogenous variables: INF FDI FCI GDP M2 R
I
Exogenous variables: C

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-363.7322	NA	746.9083	26.48087	26.81392	26.58269
1	-279.3060	120.6089	66.67248	23.95043	26.61483*	24.76496
2	-201.5479	72.20388*	18.26336*	21.89628*	26.89205	23.42354*

* indicates lag order selected by the criterion
LR: sequential modified LR test statistic (each test at 5% level)
FPE: Final prediction error
AIC: Akaike information criterion
SC: Schwarz information criterion
HQ: Hannan-Quinn information criterion

Granger Causality Test for Model 5

Pairwise Granger Causality Tests
Date: 03/16/14 Time: 14:22
Sample: 1980 2010
Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.

FDI does not Granger Cause INF	28	2.82073	0.0802
INF does not Granger Cause FDI		0.96727	0.3951
FCI does not Granger Cause INF	28	4.38324	0.0244
INF does not Granger Cause FCI		0.10072	0.9046
GDP does not Granger Cause INF	28	0.58748	0.5639
INF does not Granger Cause GDP		1.38090	0.2714
M2 does not Granger Cause INF	28	1.98919	0.1597
INF does not Granger Cause M2		0.31740	0.7312
R does not Granger Cause INF	28	0.47079	0.6304
INF does not Granger Cause R		4.42096	0.0237
I does not Granger Cause INF	28	6.98780	0.0043
INF does not Granger Cause I		0.14076	0.8694
FCI does not Granger Cause FDI	28	1.29757	0.2925
FDI does not Granger Cause FCI		2.05093	0.1515
GDP does not Granger Cause FDI	28	0.87326	0.4310
FDI does not Granger Cause GDP		1.38724	0.2699
M2 does not Granger Cause FDI	28	1.25563	0.3037
FDI does not Granger Cause M2		1.22579	0.3120
R does not Granger Cause FDI	28	1.95650	0.1642
FDI does not Granger Cause R		4.36186	0.0248
I does not Granger Cause FDI	28	1.61210	0.2212
FDI does not Granger Cause I		7.00142	0.0042
GDP does not Granger Cause FCI	28	1.46295	0.2523
FCI does not Granger Cause GDP		1.81436	0.1855
M2 does not Granger Cause FCI	28	1.37168	0.2737
FCI does not Granger Cause M2		0.16450	0.8493
R does not Granger Cause FCI	28	8.25594	0.0020
FCI does not Granger Cause R		6.19431	0.0070

I does not Granger Cause FCI	28	3.27989	0.0558
FCI does not Granger Cause I		3.01030	0.0690
M2 does not Granger Cause GDP	28	0.14830	0.8630
GDP does not Granger Cause M2		0.00877	0.9913
R does not Granger Cause GDP	28	4.01294	0.0320
GDP does not Granger Cause R		1.59298	0.2249
I does not Granger Cause GDP	28	1.56322	0.2309
GDP does not Granger Cause I		6.19508	0.0070
R does not Granger Cause M2	28	1.28282	0.2964
M2 does not Granger Cause R		3.68987	0.0408
I does not Granger Cause M2	28	2.04573	0.1522
M2 does not Granger Cause I		0.35980	0.7017
I does not Granger Cause R	28	2.14718	0.1396
R does not Granger Cause I		3.46785	0.0483

Johansen Co-Integration Test for Model 5

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	*Eigenvalue*	*Trace Statistic*	*0.05 Critical Value*	*Prob.***
*None **	*0.935706*	*201.0232*	*103.8473*	*0.0000*
*At most 1 **	*0.844614*	*126.9273*	*76.97277*	*0.0000*
*At most 2 **	*0.743940*	*76.65752*	*54.07904*	*0.0002*
*At most 3 **	*0.609507*	*39.87422*	*35.19275*	*0.0145*
At most 4	*0.287286*	*14.48491*	*20.26184*	*0.2574*
At most 5	*0.179469*	*5.340681*	*9.164546*	*0.2481*

Trace test indicates 4 cointegrating eqn(s) at the 0.05 level
** denotes rejection of the hypothesis at the 0.05 level*
***MacKinnon-Haug-Michelis (1999) p-values*

Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized	*Max-Eigen*	*0.05*

No. of CE(s)	*Eigenvalue*	*Statistic*	*Critical Value*	*Prob.***
*None **	*0.935706*	*74.09584*	*40.95680*	*0.0000*
*At most 1 **	*0.844614*	*50.26982*	*34.80587*	*0.0004*
*At most 2 **	*0.743940*	*36.78330*	*28.58808*	*0.0036*
*At most 3 **	*0.609507*	*25.38931*	*22.29962*	*0.0179*
At most 4	*0.287286*	*9.144229*	*15.89210*	*0.4185*
At most 5	*0.179469*	*5.340681*	*9.164546*	*0.2481*

Max-eigenvalue test indicates 4 cointegrating eqn(s) at the 0.05 level
** denotes rejection of the hypothesis at the 0.05 level*
***MacKinnon-Haug-Michelis (1999) p-values*

VECM for Model 5

Standard errors in ( ) & t-statistics in [ ]

Cointegrating Eq:	CointEq1	CointEq2	CointEq3	CointEq4
INF(-1)	1.000000	0.000000	0.000000	0.000000
FDI(-1)	0.000000	1.000000	0.000000	0.000000
FCI(-1)	0.000000	0.000000	1.000000	0.000000
GDP(-1)	0.000000	0.000000	0.000000	1.000000
M2(-1)	-0.439256	-0.165792	-0.162413	1.529579
	(0.32152)	(0.07170)	(0.03618)	(0.27547)
	[-1.36619]	[-2.31223]	[-4.48950]	[5.55265]
R(-1)	3.350167	-0.826926	-0.292224	-2.900752
	(0.59248)	(0.13213)	(0.06666)	(0.50762)
	[5.65451]	[-6.25847]	[-4.38356]	[-5.71443]
C	-18.60307	13.58275	8.383615	-45.23404
	(11.8572)	(2.64429)	(1.33413)	(10.1589)
	[-1.56893]	[5.13664]	[6.28395]	[-4.45264]

VAR lag Order Selection Criteria for Model 6

VAR Lag Order Selection Criteria
Endogenous variables: TB GDP FDI FCI FR
RPM RPX ER
Exogenous variables: C

Lag	LogL	LR	FPE	AIC	SC	HQ

0	-1320.526	NA	2.25e+31	94.89468	95.27531	95.01104
1	-1130.619	257.7296	3.38e+27	85.90139	89.32706	86.94865
2	-1005.012	98.69166*	1.63e+26*	81.50085*	87.97156*	83.47901*

* indicates lag order selected by the criterion
LR: sequential modified LR test statistic (each test at 5% level)
FPE: Final prediction error
AIC: Akaike information criterion
SC: Schwarz information criterion
HQ: Hannan-Quinn information criterion

Granger Causality Test for Model 6

Pairwise Granger Causality Tests
Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
GDP does not Granger Cause TB	28	0.15480	0.8575
TB does not Granger Cause GDP		0.32802	0.7237
FDI does not Granger Cause TB	28	1.12929	0.3405
TB does not Granger Cause FDI		0.88396	0.4267
FCI does not Granger Cause TB	28	1.26658	0.3007
TB does not Granger Cause FCI		0.54873	0.5851
FR does not Granger Cause TB	28	0.00294	0.9971
TB does not Granger Cause FR		0.78891	0.4663
RPM does not Granger Cause TB	28	0.49441	0.6163
TB does not Granger Cause RPM		5.09412	0.0147
RPX does not Granger Cause TB	28	0.47200	0.6297
TB does not Granger Cause RPX		5.79005	0.0092
ER does not Granger Cause TB	28	0.50545	0.6098
TB does not Granger Cause ER		0.13484	0.8745
FDI does not Granger Cause GDP	28	1.38724	0.2699
GDP does not Granger Cause FDI		0.87326	0.4310

FCI does not Granger Cause GDP	28	1.81436	0.1855
GDP does not Granger Cause FCI		1.46295	0.2523
FR does not Granger Cause GDP	28	0.00158	0.9984
GDP does not Granger Cause FR		1.50517	0.2430
RPM does not Granger Cause GDP	28	0.88095	0.4279
GDP does not Granger Cause RPM		5.05245	0.0152
RPX does not Granger Cause GDP	28	0.81862	0.4535
GDP does not Granger Cause RPX		3.90244	0.0347
ER does not Granger Cause GDP	28	1.48156	0.2482
GDP does not Granger Cause ER		0.11548	0.8914
FCI does not Granger Cause FDI	28	1.29757	0.2925
FDI does not Granger Cause FCI		2.05093	0.1515
FR does not Granger Cause FDI	28	6.75615	0.0049
FDI does not Granger Cause FR		0.79529	0.4635
RPM does not Granger Cause FDI	28	7.47524	0.0032
FDI does not Granger Cause RPM		6.28371	0.0066
RPX does not Granger Cause FDI	28	8.57992	0.0016
FDI does not Granger Cause RPX		3.78347	0.0380
ER does not Granger Cause FDI	28	2.95769	0.0719
FDI does not Granger Cause ER		8.99963	0.0013
FR does not Granger Cause FCI	28	1.57322	0.2289
FCI does not Granger Cause FR		1.85290	0.1794
RPM does not Granger Cause FCI	28	1.37247	0.2735
FCI does not Granger Cause RPM		4.63624	0.0203
RPX does not Granger Cause FCI	28	1.30605	0.2902
FCI does not Granger Cause RPX		2.31190	0.1216
ER does not Granger Cause FCI	28	1.66452	0.2113
FCI does not Granger Cause ER		10.2914	0.0006

RPM does not Granger Cause FR	28	1.24191	0.3075
FR does not Granger Cause RPM		23.8497	2.E-06
RPX does not Granger Cause FR	28	2.20165	0.1334
FR does not Granger Cause RPX		15.8381	5.E-05
ER does not Granger Cause FR	28	6.25317	0.0068
FR does not Granger Cause ER		4.76182	0.0186
RPX does not Granger Cause RPM	28	3.07418	0.0656
RPM does not Granger Cause RPX		2.41130	0.1120
ER does not Granger Cause RPM	28	16.1061	4.E-05
RPM does not Granger Cause ER		4.08802	0.0303
ER does not Granger Cause RPX	28	11.3304	0.0004
RPX does not Granger Cause ER		4.00582	0.0322

Johansen Co-integration Test for Model 6

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.981342	251.4342	103.8473	0.0000
At most 1 *	0.923843	143.9350	76.97277	0.0000
At most 2 *	0.780186	74.41100	54.07904	0.0003
At most 3	0.545535	33.50675	35.19275	0.0752
At most 4	0.270527	12.21363	20.26184	0.4299
At most 5	0.127964	3.696956	9.164546	0.4591

Trace test indicates 3 cointegrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.981342	107.4993	40.95680	0.0000

At most 1 *	0.923843	69.52397	34.80587	0.0000
At most 2 *	0.780186	40.90426	28.58808	0.0008
At most 3	0.545535	21.29312	22.29962	0.0687
At most 4	0.270527	8.516671	15.89210	0.4873
At most 5	0.127964	3.696956	9.164546	0.4591

Max-eigenvalue test indicates 3 cointegrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

VECM for Model 6

Standard errors in ( ) & t-statistics in [ ]

Cointegrating Eq:	CointEq1	CointEq2	CointEq3
TB(-1)	1.000000	0.000000	0.000000
GDP(-1)	0.000000	1.000000	0.000000
FDI(-1)	0.000000	0.000000	1.000000
FCI(-1)	180.7063	-0.883987	0.016877
	(166.129)	(0.70567)	(0.04513)
	[1.08775]	[-1.25269]	[0.37397]
FR(-1)	2.59E-07	-8.15E-10	1.56E-10
	(5.6E-08)	(2.4E-10)	(1.5E-11)
	[4.61547]	[-3.42419]	[10.2274]
RPM(-1)	-33.16051	0.113604	-0.017077
	(4.70543)	(0.01999)	(0.00128)
	[-7.04728]	[5.68376]	[-13.3599]
C	717.7925	-10.65425	0.358987
	(158.898)	(0.67496)	(0.04316)
	[4.51731]	[-15.7851]	[8.31675]