A STUDY ON IMPACT OF FOREIGN DIRECT INVESTMENT ON INDIAN ECONOMY- A SECTORAL ANALYSIS

A Thesis submitted to Goa University for the Award of the Degree of

DOCTOR OF PHILOSOPHY

In

COMMERCE

To the

GOA UNIVERSITY

By

Pooja Kumari
Research Scholar
Dept of Commerce
Goa University

Under the guidance of

Dr. P. Sri Ram

Assistant Professor
Dept of Commerce
Goa University

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CERTIFICATE

This is to certify that the work reported in the Ph.D. thesis entitled **"A Study on Impact of Foreign Direct Investment on Indian Economy- A Sectoral Analysis"** submitted by **Ms. Pooja Kumari** at **Goa University, Goa** for the award of the Degree of Doctor of Philosophy in Commerce is a bonafide record of her original work carried out by her under my supervision and guidance.

This work has not been submitted elsewhere in part or in full to any other university or institution of learning for the award of any other Degree or Diploma.

_____

(Dr. P. Sri Ram)
Assistant Professor
Department of Commerce,
Goa University, Goa

Date: _____
Place: Goa University

DECLARATION

I, Pooja Kumari, hereby declare that the work reported in this thesis entitled **"A Study on Impact of Foreign Direct Investment on Indian Economy- A Sectoral Analysis"** submitted to **Goa University, Taleigao-Goa**, in partial fulfillment of the requirements for the award of the degree of Doctor of Philosophy in Commerce is an authentic record of my work carried out under the supervision of **Dr. P. Sri Ram, Assistant Professor, Department of Commerce, Goa University, Goa.**

This work has not previously formed the basis for the award of any degree, diploma or certificate of this or any other University. The references made to previous works of other authors have been clearly indicated and duly acknowledged in the list of reference.

Date:_____

Place: Goa University **_____**

(Pooja Kumari)
Department of Commerce
Goa University

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ABBREVIATIONS

Abbreviations	Full Form
FDI	Foreign Direct Investment
FDII	Foreign Direct Investment Inflow
GDP	Gross Domestic Product
GRGDP	Growth Rate in Gross Domestic Product
GDCF	Gross Domestic Capital Formation
EX	Export
IM	Import
EX RATE	Exchange Rate
INFL	Inflation
DW	Durbin-Watson stat
ADF	Augmented Dicker Fuller
FI	Foreign Investment
TAT	Total Assets Turnover
ET	Equity Turnover
IT	Information Technology
ROI	Return on Investment
ROE	Return on equity
R&D	Research and Development
ROA	Return on Assets
CR	Current Ratio
QR	Quick Ratio
DTE	Debt to Equity
Gsales	Growth in Sales
GPAT	Growth in PAT
Gasst	Growth in Asset

CHAPTER-1

INTRODUCTION

1.1 Introduction

Foreign Direct Investment (FDI) is an investment made by residents of one country (Home County) to acquire ownership in assets for the purpose of controlling the production, distribution and other activities of a firm which is running in another country (host country). According to United Nations, 1999 World Investment Report (UNCTAD,1999) defined Foreign Direct Investment as "an investment involving a long-term relationship and reflecting a lasting interest and control of resident entity in one country in an enterprise resent in an economy other than that of the Foreign Direct Investment. This definition mostly focused on control and controlling interest which is one of the most important features to make a difference between Foreign Direct Investment and portfolio investment because portfolio investment does not have any controlling or lasting interest in the enterprise. The long-term is used to distinguish between Foreign Direct Investment and Portfolio investment. If the foreign shareholding is 10 percent or more than 10 percent then the company is termed as a foreign company but there is no agreement about what constitutes a controlling interest. If capital is transferred from home country to host country it is also qualified to be FDI Company if there is control through substantial equity shareholding and there is a transfer of some part of the company assets, production or sales to the recipient country.

Foreign Direct Investment is one of the important sources for raising capital which will help the developing economy to grow. FDI not only provide capital but there are other benefits which countries will get like technology up gradation, managerial skills which will help in companies to growth. Foreign companies will give competition to domestic companies which will improve the productivity of domestic companies.

The importance of Foreign Direct Investment has increased significantly over the last couple of decades because of Globalization of the world economy. Now Developing countries are more relying on foreign investment to meet growing demand for capital. In the recent decades, FDI is treated as one of the most dynamic components of the world economy (Alam,2000). The scope of production has been expended due to various regional agreements which have been reduced the barriers to international trade (Chakrabarti,2002). There is a bundle of assets are gained by the countries which receiving FDI. Most of these assets are intangible in nature and they are scarce in the developing countries. These assets include technology, management skills, brand name, and quality.

While studying the impact of FDI on developing an economy, a key question is whether FDI has any impact of the developing economy or not. The impact of FDI on economy may vary from country to country depending upon their domestic policy, the kind of FDI country is receiving and the strengths of domestic industry. It is possible to specify a condition that is favorable to attract FDI. In developing countries FDI has positive impact on the formation

of capital and production of new goods and services in the areas where already domestic producer exist. There is positive impact of FDI on developing the economies. This is because domestic producer do not have sufficient knowledge to face the competition given by foreign companies (Agosin & Mayer, 2000). Hence many countries are trying to attract more and more FDI in their countries. The government of developing countries is competing with each other in order to provide foreign investors with special incentives, such as liberal FDI policies, tax holidays, subsidies for infrastructure and with motive to get advantage from the latest technology in the developing countries which will help in growth of its economy. The domestic firm may increase their productivity to be in market by observing foreign firms which will also help in employment generation (Liu et al, 2002) in the country.

There are two types of foreign investment namely Foreign Direct Investment (FDI) and Foreign Portfolio Investment. Foreign Direct Investment (FDI) is an investment made by nonresident investor acquires a right in the management of the enterprise. The limit for classification of foreign investment and FDI has been fixed at 10% or more than 10% of ordinary shares held by nonresident investor. It is a long-term investment made by the nonresident Indian with a motive to get its controlling in the day to day affairs of a business. The main purpose is to get ownership right in the business. Foreign Direct Investment (FDI) cannot be easily liquidated.

Foreign Portfolio Investment is an investment where the investor does not have any long-term controlling and lasting interest in the management of the

enterprise. It is a short-term investment mainly made to earn the profit. It is also called as a hot investment. It includes public sector bonds and other types of bonds. The main motive behind this type of investment is to get the profit with in short period of time. Hence factors like government policy, political stability, will influence the Foreign Direct Investment but portfolio investment can be easily liquidated.

1.2 Meaning and Definition of FDI

There are many definitions for FDI cited in the different books, literature and interpreted by different authors. In this study, the researcher uses the definition of

1.2.1 According to the fifth edition of the IMF's Balance of Payments Manual (BPM5), Foreign Direct Investment is the category of international investment that reflects the objective of obtaining a lasting interest by a resident entity in one economy in an enterprise resident in another economy. The lasting interest implies the existence of a long-term relationship between the direct investor and the enterprise and a significant degree of influence by the investor on the management of the enterprise The World Investment Report 2002 (WIR02),UNCTAD defines FDI as 'an investment involving a long-term relationship and reflecting a lasting interest and control by a resident entity in one economy (foreign direct investor or parent enterprise) in an enterprise resident in an economy other than that of the FDI enterprise, affiliate enterprise or foreign affiliate. FDI implies that the investor exerts a significant degree of influence on the management of the enterprise resident in the other

economy. Such investment involves both the initial transaction between the two entities and all subsequent transactions between them and among foreign affiliates, both incorporated and unincorporated. Flows of Foreign Direct Investment comprise of capital provided (directly or through other related enterprises) by a foreign direct investor to an FDI enterprise, or capital received from an FDI enterprise by a foreign direct investor. FDI has three components, equity capital, reinvested earnings and intra-company loans. Equity capital is the foreign direct investor's purchase of a share of an enterprise in a country other than its own. Reinvested earnings comprise the direct investors' share (in proportion to direct equity participation) of earnings not distributed as dividends by affiliates, or earnings not remitted to the direct investor. Such retained profits by affiliates are reinvested. Intra-company loans or intra-company debt transactions refer to short- or long-term borrowing and lending of funds between direct investors (parent enterprises) and affiliated enterprises.

1.2.2 OECD Benchmark Definition of FDI, 4th Edition- Foreign direct investment reflects the objective of establishing a lasting interest by a resident enterprise in one economy (direct investor) in an enterprise (direct investment enterprise) that is resident in an economy other than that of the direct investor. The lasting interest implies to the existence of a long-term relationship between the direct investor and the direct investment enterprise and a significant degree of influence on the management of the enterprise. The direct or indirect ownership of 10% or more of the voting power (in general ordinary shares are the same as voting power. However, there may be instances that the voting

power is not represented by ordinary shares. In such cases, compilers must determine the voting power.) of an enterprise resident in one economy by an investor resident in another economy is evidence of such a relationship (OECD, April 2008). Some compilers may argue that in some cases and ownership of as little as 10% of the voting power may not lead to the exercise of any significant influence while on the other hand, an investor may own less than 10% but have an effective voice in the management. Nevertheless, the recommended methodology does not allow any qualification of the 10% threshold and recommends its strict application to ensure statistical consistency across countries.

1.2.3 OECD Benchmark Definition of FDI (Third Edition) - FDI reflects the objective of obtaining a lasting interest by a resident entity in one economy (direct investor) in an entity resident in an economy other than that of the investor (direct investment enterprise). The lasting interest implies the existence of a long-term relationship between the direct investor and the enterprise and a significant degree of influence on the management of the enterprise. Direct investment involves both the initial transaction between the two entities and all subsequent capital transactions between them and among affiliated enterprises, both incorporated and unincorporated. As is evident from the above definitions, there is a large degree of commonality between the IMF, UNCTAD and OECD definitions of FDI. Since the IMF definition is followed internationally, the Reserve Bank of India (RBI) is in favor of following the IMF definition.

1.2.4 According to the international monetary fund's Balance of Payment manual "FDI is an investment that made acquire a lasting interest, in an enterprise operating in an economy other than that id the investors, the investor's purpose being to have an effective voice in the management".

1.2.5 The UNs world report 1999 defines that "FDI as an investment involving long-term relationship and reflecting a lasting interest and control of resident entity in one economy. In an enterprise, in an economy other than that of Foreign Direct Investment (Moosa,2002).

1.3 Types of FDI

There are different types of FDI as follows

1.3.1 Horizontal FDI

Horizontal FDI occurs when a company locates the manufacture of the same product or group of products at one or more than one plant located in different countries. The company does all the same activities abroad as at home. For example, Toyota assembles motor cars in Japan and the UK.

1.3.2 Vertical FDI

When a company locates different stages in the production and marketing of a single product or group of related products in different countries. When foreign direct investment bringing the companies near to market is called forward vertical FDI for example if Toyota is buying a distribution of car contract in America, whereas if FDI go close to the raw material it is called

backward vertical FDI for example if Toyota is getting majority of shareholding in rubber plantation or tire manufacturer.

1.3.3 Conglomerate FDI

When companies acquire an unrelated business in some other country it is called Conglomerate FDI. It has to face barriers at two levels, first at a time when a company is entering into another country and secondly when they are working with another unrelated business.

1.3.4 Green filed investment

It is an investment made by parent company by constructing totally new company in host country which will meet the need of project of the parent company in the host country.

1.3.5 Brown filed investment

It is an investment when parent companies purchase existing company in the host company. It is less costly as compared to green filed investment.

1.4 Advantages of FDI

- FDI is helpful to enter the foreign market.
- FDI is also helpful to acquire important natural resources like fossil fuel and metals which are very precious.
- It helps to reduce the production costs
- It helps in the growth and development of host country by providing the latest technology, managerial skill.

- Companies where FDI investment is made get capital which will help to meet there needs.
- It creates employment opportunities in the county.
- It increases saving and investment in the country.

1.5 Disadvantages of FDI

- FDI create a competitive environment in which domestic companies suffer.
- Exploitation of resources of the country.
- Contribute to increase in pollution
- The disappearance of small-scale and cottage industries

1.6 Theories of FDI

Foreign Direct Investments is an emerging topic at national and international level. There are many theoretical papers which examine the importance of Foreign Direct Investments J. Dunning, S Hymer or R.Vernon, Economists believe that FDI is helped in the economic development of a country especially in the developing economies. The relationship between FDI and economic development are found to be complex as per literature reviews. At macro level FDI helps in employment generation, competitiveness, increasing productivity and technology. There as many evidence to prove that FDI promotes the competitiveness of local firms. There is a positive evidence in Mexico and Indonesia Blomstrom (1994) and local suppliers in Lithuania benefited by spillover from supplying foreign customers Smarzynska (2002).Caves(1996) examine the efforts made by various countries to attract foreign direct investments which has a positive impact on the economy. FDI

helps in increasing productivity, technology, managerial skills, and employment. FDI helps to adopt better technology which will contribute to the development of economy Borensztein (1998). FDI has a positive impact on economy Hanson (2001). On the other hand, most of the FDI may negatively impact on economy Greenwood (2002) whereas the positive and negative impact of FDI on the economy will depend on the sector in which investment is taking place Lipsey (2002). There are many researchers who tried to explain the FDI but still, there is no general theory accepted for FDI but all researchers agree that FDI would not exist if there is perfect competition according to Kindleberger (1969). Hymer, notice that if the market is working in an effective way with no trade barriers which will give a scope to participate in the international market. Hymer believes that local firm will be aware of their economic environment and FDI to come to any country two conditions are to be fulfilled i.e. Foreign firm must have a certain advantage which helps them to invest and secondly market should be imperfect. (Kindleberger). Ricardo's theory of comparative advantage, which is based on two countries, two products and a perfect mobility factor, was the first theory which tries to examine FDI but this theory is not able to explain the FDI because the assumptions in comparative advantage are not applicable to FDI.

Portfolio theory was used to explain FDI but it is also failed to explain FDI because theory explains the foreign investment in the portfolio, not direct investment. According to portfolio theory, as long as there is no risk or barriers to capital movement, the capital will go from countries with low-interest rates to countries with high interest rates. But these are not in practice and the introduction of risk and barriers to capital movement erodes the veracity of the theory, and capital can move freely in any direction (Hosseini

2005). The new theories of international trade still can't explain FDI and another form of International investment (Hosseini 2005). FDI model of international trade was explained by Robert Mundell which involved two countries, two good, two production factors and two production function in both countries where production requires a higher factor of production but his model is also not suitable to explain international production through FDI because he has to take portfolio investment (Mundell, 1957). In Japan researcher created a model which explain international trade and FDI, by taking Mundell model as a base and improved it. They say that FDI will only take place in any country if it has a comparative disadvantage in producing a product and international trade forms a basis for comparative advantage. (Kojima and Ozawa, 1984). Multinational enterprise (MNE) growth can be explained by an international theory which forms the basis for Foreign Direct Investment. Following are the theories of FDI.

1.6.1 Theory of Monopolistic Advantages

This theory states that the investing firm possesses relative monopolistic advantage abroad against the local firms. The firm enjoys a monopolistic advantage in two ways Superior knowledge and Advance Technology. All intangible skills- intellectual capital plus advanced technologic possessed by the foreign firm which has competitive advantages and helps it to create unique product differentiation. The marginal cost to transfer new knowledge, technology or assets to the host country is much lower than making asset at full cost in the host country (Roots,1978).

1.6.2 Oligopoly Theory of Advantage

Oligopoly theory of advantage is explaining vertical FDI. The big oligopolistic firms are dominating in the global market on account of barriers to entry and they try to maintain their monopoly power. They do not want new competitors to enter there market and compete with them. This they want the firm to be growth maximized. A firm with relative growth rate will determine its relative size and market share. The defensive investment behavior of multinational firm is examined by oligopoly theory. In other words, this theory explains the investment made by the business in the foreign firms. The oligopoly theory explained the investment behavior of oligopolistic reaction to reaction to maintain its monopoly power of the firm. Apart from horizontal and vertical FDI, the multinational firm yields the production scale economics and comparative cost advantage resulting from a competitive advantage. For this reason, petroleum companies tend to land invested in oil refineries as well as marketing outlets.

1.6.3 Product Life Cycle Model

Product Life Cycle Model can explain trade and FDI which is given by Vermon 1971. It explains the reason why firms are shifting from exporting to FDI. When a firm makes a new product in its home country, it will first enjoy the monopolistic advantage by exporting the product to other countries and become specialized in exports. Once the new product reached its growth phase then the firm may invest in abroad to retain their monopoly power. In the meantime, the rival firms from the home country also invest in the oligopolistic market of the same country. In short, the international trade and

investment theories can be explained by the international business and behavior of its market.

1.6.4 Eclectic Paradigm of Dunning Theory

This theory is also known as OLI Model or OLI framework which was developed by John H Dunning in 1979. This theory will study the approach for FDI and firm issues related to MNCS on foreign product. Eclectic paradigm theory considers three variables. They are country specific, company specific and internalization.

Ownership Advantages- it is a firm-specific advantage which firm use to engage in FDI. If the company has a competitive advantage that they have a chance to engage in foreign production.

Location Advantages- once the first condition is fulfilled, it will be benefited for the company to owns and use them itself instead of selling or giving on rent to foreign firms. Location advantage will help to determine who will be host country. Location advantages include economic advantages like market size, cost of transport etc, Political advantages i.e. common and specific government policies that affect FDI flows and lastly social advantages which includes the difference between home and host countries, cultural diversity etc.

Internationalization Advantages- once the above two condition is met, it will be profitable for the company to use these advantages in collaboration with

some factors outside the country (Dunning, 1973). If the company have more internalizing cross-border intermediate product markets benefit the firm will more prefer to engage in foreign production.

1.6.5 International Theory

The international theory was developed by Buckely & Cassonin1976, after him Hennart in 1982 and casson in 1983. At the initial stage, this theory was first launched by Coase in 1937 for national context and Hymer in 1976 in an international context in which they identified two major determinants of FDI. First one was competition and the second one was advantages related to the specific firm in particular activity (Hymer, 1976). The eclectic theory was developed by Dinning in which he explains only some part of flows of FDI. FDI in any country will only take place if the country has firm-specific advantage related to the cost of operations in another country according to Hymer. He says that MNCs will open its branch in some country due to the presence of market imperfections which lead to divergence from perfect competition. He also discussed the problem associated with information costs for foreign firms with respect to local firms, different government policy & their treatment, currency risk (Eden & Miller, 2004). The result shows that transnational companies are facing problem to adjust costs when they are making investment abroad. Hymer found that FDI is not a capital market financial decision rather than it is a firm level strategy.

To study the impact of FDI there are two models. The first model assumed that FDI is more useful to the economies which are falling in a vicious circle

of under development. In this case, the host economies are falling into the trap of poverty equilibrium with the vicious circle of poverty. FDI helps to break this vicious circle of poverty by using local savings and by providing more effective management, marketing, and technology to improve host economy productivity (Cardoso and Dornbusch, 1989). The growth and development of national income are depending on the size of capital flows and the demand for capital elasticity. The national production function will shift upwards when firms receive technological, managerial inputs, transfers, and spillovers by FDI. Hence FDI inflows help to raise efficiency, expand out which will helps in higher economic growth in the host economy. FDI brings with them new resources in form of technology, managerial skills etc which will help in growth and development of host economy is a common theme among all international business and agencies which is the greater need for accepting FDI in the developing country. The second school of thought made criticism on the role and motive of FDI particularly in the developing countries like India. There are some studies which show that foreign investment has a negative impact on the development of economy (Singer, 1950). It has been experienced that foreign companies have a destructive impact on the host economy because they are operating in the country where they have a barrier to enter and they capture host economy market by giving competition to that company in that economy (Grieco1986). The local producer might drive out by foreign firms from the business. In this situation, the foreign firm is not able to fill the gap between domestic investment and foreign exchange. The repatriation profit by the foreign firms may be drained out the capital from the host country.

1.7 FDI Entry Route

Foreign Direct Investment inflow in India is regulated by Government of India from time to time in accordance with its Industrial Policy. There are two routes by which Foreign Direct Investment can be made. The first one is Automatic Route, where Foreign Investor or Indian company does not require any prior approval from RBI or Government of India for investment in India. The second one is Government Route, where prior approval of Government of India is required to making the investment. The foreign investment proposal under Government route is laid down in the FDI policy from time to time are which is considered by Foreign Investment Promotion Board (FIPB) in Department of Economic Affairs (DEA), Ministry of Finance. In 1991, there was a major liberalisation in the FDI policy by way of the foreign collaboration of certain priority industries and involving not to exceeding 51% of foreign equity which is allowed by RBI without prior approval of Government of India. After 1991, some more areas of foreign investments were opened such as the issue of Global Depository Receipt (GDR) and investment by Foreign Institutional Investors (FIIs). FDI which is coming through:

1.7.1 Automatic Route

If FDI investment is within the limit specified by RBI, such investments do not require any approval before investment from Government. The investors have to notify the Regional office concerned of RBI within 30 days of receipt inward remittances and file the required documents with that office within 30 days of issue of share to foreign investors.

List of activities or items which comes under automatic route for foreign investment are Agriculture, Plantation Sector, Mining of metal and non-metal ores Mining – Coal & Lignite, Manufacturing, Food Product Retail Trading, Broadcasting Carriage Services (Teleports, DTH, Cable Networks, Mobile Broadcasting Content Service - Up-linking of Non-'News & Current Affairs' TV Channels/ Down-linking of TV Channels, Airports – Greenfield, Airports – Brownfield, Air Transport Service - Non-Scheduled, Air Transport Service - Helicopter Services/ Seaplane Services, Ground Handling Services, Maintenance and Repair organizations; flying training institutes; and technical training institutions, Construction Development, Industrial Parks -new and existing, Trading – Wholesale, Trading – B2B E-commerce, Duty Free Shops, Railway Infrastructure, Asset Reconstruction Companies, Credit Information Companies, White Label ATM Operations, Non-Banking Finance Companies, Pharma – Greenfield, Petroleum & Natural Gas - Exploration activities of oil and natural gas fields, Petroleum refining by PSUs, Infrastructure Company in the Securities Market, Commodity Exchanges, Insurance, Pension, Power Exchanges.

1.7.2 Government Route

If FDI investment is more than the limit specified by RBI, such investments required prior approval of Government before investment. These types of investments are considered by the Foreign Investment Promotion Board (FIPB). They are Mining and mineral separation of titanium bearing minerals and ores, Food Product Retail Trading, Defence, Publishing/printing of scientific and technical magazines/specialty journals/ periodicals, Publication of facsimile edition of foreign newspapers, Print Media - Publishing of

newspaper and periodicals dealing with news and current affairs Print Media - Publication of Indian editions of foreign magazines dealing with news and current affairs Air Transport Service – Scheduled, and Regional Air Transport Service, Investment by Foreign Airlines, Satellites- establishment and operation, Telecom Services, Trading – SBRT, Pharma – Brownfield, Banking- Private Sector, Banking- Public Sector, Private Security Agencies Broadcasting Content Service, FM Radio & Uplinking of 'News & Current Affairs' TV Channels, Trading – MBRT. The FDI approvals involving foreign investment/ foreign technical collaboration are also granted on the recommendations of the FIPB. All FDI investment applications except Non-Resident Indian (NRI) investments and 100% Export Oriented Units (EOUs), should be submitted to the FIPB Unit, Department of Economic Affairs (DEA), Ministry of Finance. Application for NRI and 100% EOU cases should be presented to SIA in Department of Industrial Policy & Promotion.

1.8 FDI CAPS Allowed in India as per FDI Policy

Foreign Investment made by non residents' investors in the capital of resident entity in India is limited to the percentage of the total capital permitted by the FDI policy of the country. There are some sectors where foreign investments are allowed 100% which comes under automatic route, whereas some sectors have a restriction, conditions on the foreign investment which required government approval which comes under Government route.

1.8.1 FDI CAPS Automatic Route

The sectors which come under Automatic routes with the percentage of capital allowed in each sector are listed below.

Table 1. 1 List of Sectors wise FDI Caps allowed under Automatic Routes

Sr.No	Sector/Activity	Cap (%)
1	**2**	**3**
1	Agriculture	100%
2	Plantation Sector	100%
3	Mining of metal and non-metal ores	100%
4	Mining – Coal & Lignite	100%
5	Manufacturing	100%
6	Food Product Retail Trading	100%
7	Broadcasting Carriage Services (Teleports, DTH, Cable Networks, Mobile	100%
8	Broadcasting Content Service - Up-linking of Non-'News & Current Affairs' TV Channels/ Down-linking of TV Channels	100%
9	Airports – Greenfield	100%
10	Airports – Brownfield	100%
11	Air Transport Service - Non-Scheduled	100%
12	Air Transport Service - Helicopter Services/ Seaplane Services	100%
13	Ground Handling Services	100%
14	Maintenance and Repair organizations; flying training institutes; and technical training institutions	100%
15	Construction Development	100%
16	Industrial Parks -new and existing	100%
17	Trading – Wholesale	100%
18	Trading – B2B E-commerce	100%
19	Duty Free Shops	100%
20	Railway Infrastructure*	100%
21	Asset Reconstruction Companies	100%
22	Credit Information Companies	100%
23	White Label ATM Operations	100%
24	Non-Banking Finance Companies	100%
25	Pharma – Greenfield	100%
26	Petroleum & Natural Gas - Exploration activities of oil and natural gas fields	100%
27	Petroleum refining by PSUs	49%
28	Infrastructure Company in the Securities Market	49%
29	Commodity Exchanges	49%
30	Insurance	49%
31	Pension	49%
32	Power Exchanges	49%
* Proposals involving FDI beyond 49% in sensitive areas from security point of view, to be brought by the Ministry of Railways before the Cabinet Committee on Security (CCS) for consideration on a case to case basis.		

(Source: Department of Industrial Policy and Promotion as on 08.07.2016)

1.8.2 FDI CAPS Government Route

The sectors which require prior approval of Government with percentage of capital allowed in each sector are listed below

Table 1. 2 List of Sectors wise FDI Caps allowed under Government Routes

Sr.No	Sector/Activity	Cap	Govt. Approval
1	**2**	**3**	**4**
1	Mining and mineral separation of titanium bearing minerals and ores	100%	Upto 100%
2	Food Product Retail Trading	100%	Upto 100%
3	Defense	100%	Beyond 49%
4	Publishing/printing of scientific and technical magazines/specialty journals/ periodicals	100%	Upto 100%
5	Publication of facsimile edition of foreign newspapers	100%	Upto 100%
6	Print Media - Publishing of newspaper and periodicals dealing with news and current affairs	26%	Upto 26%
7	Print Media - Publication of Indian editions of foreign magazines dealing with news and current affairs	26%	Upto 26%
8	Air Transport Service – Scheduled, and Regional Air Transport Service,	100%	Beyond 49%
9	Investment by Foreign Airlines	49%	Upto 49%
10	Satellites- establishment and operation	100%	Upto 100%
11	Telecom Services	100%	Beyond 49%
12	Trading - SBRT	100%	Beyond 49%
13	Pharma – Brownfield	100%	Beyond 74%
14	Banking- Private Sector	74%	Beyond 49%
15	Banking- Public Sector	20%	Upto 20%
16	Private Security Agencies	74%	Beyond 49%
17	Broadcasting Content Service a) FM Radio b) Uplinking of 'News & Current Affairs' TV Channels	49%	Upto 49%
18	Trading – MBRT	51%	Upto 51%

(Source: Department of Industrial Policy and Promotion as on 08.07.2016)

1.9 Foreign Investment Inflows in India

The foreign investments are two types Foreign Direct Investment and Foreign Portfolio Investment. Table 1.3 shows the inflow of Foreign Direct Investment and Foreign Portfolio Investment from 1991-92 to 2015-06.

Table 1. 3 Foreign Investment inflow in India

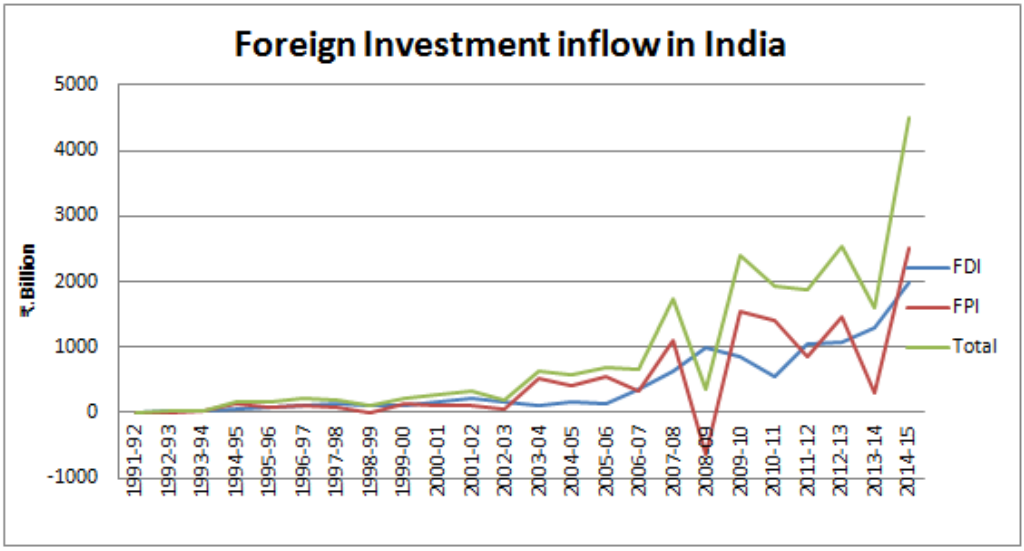
Year	Direct Investment		Portfolio Investment		Total	
	₹. Billion	Million, USD	₹. Billion	Million, USD	₹. Billion	Million, USD
1	**2**		**3**		**4**	
1991-92	3.16	129	0.1	4	3.26	133
1992-93	9.65	315	7.48	244	17.13	559
1993-94	18.38	586	11.18	3567	29.56	4153
1994-95	41.26	1314	120.07	3824	161.33	5138
1995-96	71.72	2144	91.92	2784	163.64	4928
1996-97	100.15	2821	117.58	3312	217.73	6133
1997-98	132.20	3557	66.96	1828	199.16	5385
1998-99	103.58	2462	-2.57	-61	101.01	2401
1999-00	93.38	2155	131.12	3026	224.50	5181
2000-01	149.24	4029	118.20	2590	267.44	5862
2001-02	226.30	4734	92.90	1952	319.20	6686
2002-03	155.94	3217	45.04	944	200.98	4161
2003-04	109.44	2388	518.98	11356	628.42	13744
2004-05	167.45	3713	413.12	9287	580.57	13000
2005-06	134.25	3034	553.57	12494	687.82	15528
2006-07	349.10	7693	318.81	7060	667.91	14753
2007-08	637.76	15893	1106.19	27433	1743.95	43326
2008-09	1001.06	22372	-650.45	-14030	350.61	8342
2009-10	859.83	17966	1539.67	32396	2399.51	50362
2010-11	541.01	11834	1393.81	30293	1934.82	42127
2011-12	1031.67	22061	855.71	17170	1887.38	39231
2012-13	1081.86	19819	1464.67	26891	2546.53	46711
2013-14	1299.69	21564	296.80	4822	1596.50	26386
2014-15	1996.28	32627	2499.45	40934	4495.73	73561

(Source: RBI Handbook of statistics on Indian Economy 2014-2015)

It also shows that inflow of FDI is very high as compared to the inflow of FPI in India. The Foreign Direct Investment in India has shown a mixed

contribution with increasing rate over previous years in most of the year in the study and very few years shows declining trend whereas Portfolio investment also shows the mixed result that is some period shows increasing trend 1992-93, 1997-98, decreasing trend are 1995-96, 2001-02, 2011-12 and some period has shown negative trend during 1998-99 and 2008-09.

Figure 1. 1 Foreign Investment inflow in India



(Source: RBI Handbook of statistics on Indian Economy 2014-2015)

1.10 Indian Economy and Foreign Direct Investment

India is the world largest democratic country. There has been impressive growth in the Indian economy from the liberalization period. This growth has been measured with the help of economic indicators. FDI started in India during the colonial era of British's when the east India Company has come.

Table 1. 4 Features of Indian FDI during Four Phases

Phase-I (1950-67)	Phase- II (1968-80)	Phase- III (1981-90)	Phase- IV (1991 onwards
Receptive Attitude and Caution Welcome	**Restrictive Attitude**	**Gradual Liberalization**	**Open door Policy**
The discrimination treatment for FDI is not there	There was restriction on FDI without technology	In export oriented units are allowed with higher foreign equity	Towards foreign trade, foreign exchange and technology collaboration policy was liberal
There is no restriction on dividend and remittance to profit	Only 40% foreign investment was allowed and more than 40% is only based on priority areas	For royalty and technical fees remittance there was procedures	In infrastructure industry FDI inflow was in core
The control and ownership are within Indian hands	FERA was controlling FDI in India	Liberalized	FERA was replaced with FEMA
	There was discriminating power while sanctioning the project	FDI clearance is become fast	There was transparency in procedures of FDI

Source: Jeromi P.D, 2002

The above table shows liberalization of India FDI policies phase wise over a period of time. Today India is an attractive destination for FDI and it is one of the largest economy in Asia which helps in Indian service sector to grow. The sectors which highest FDI inflows after service sectors are Pharmaceutical sector, Chemical sector, Auto sector, IT sector, Retail sector etc**.**

As a result of globalization of world economy, FDI plays a significant role in driving force behind the interdependence of national economies. Most of the FDI inflows are concentrated in the developing countries and its role is undeniable for well-developing countries. Development of economy is a wider concept. Its centers are not only economic and social progress but it also

includes social justice, political freedom, and environment which account for overall higher standards of living. The research study shows that there is a correlation between economic development and economic growth i.e. if a country is having faster economic growth will help to improve its health and education outcome, equitable distributing of wealth and enhanced capacity for environmental management(Sun, 2002).

FDI helps to transfer a managerial resource to the host economy. The effect of FDI on economic growth with the help of knowledge and existence of human capital in host developing economy can be explained by endogenous growth theories. This theory will be helpful to contribute significantly to research & development, managerial skill etc.

1.11 FDI Equity Inflows in India

Table 1.4 shows the equity inflow in India from 1991-92 to 2015-16. The FDI inflows in India in 1991-92 was ₹ 409 crores ($ 165) which were increased to ₹ 13,548 Crores ($3682) in the year 1999-2000. The FDI inflow is an increase in 2000-02 was ₹ 19.361 ($4222) and its decline to ₹ 12,117 ($2643) in the year 2003-04 and then it further increased to ₹ 123,378 crores ($25888) in 2009-10.

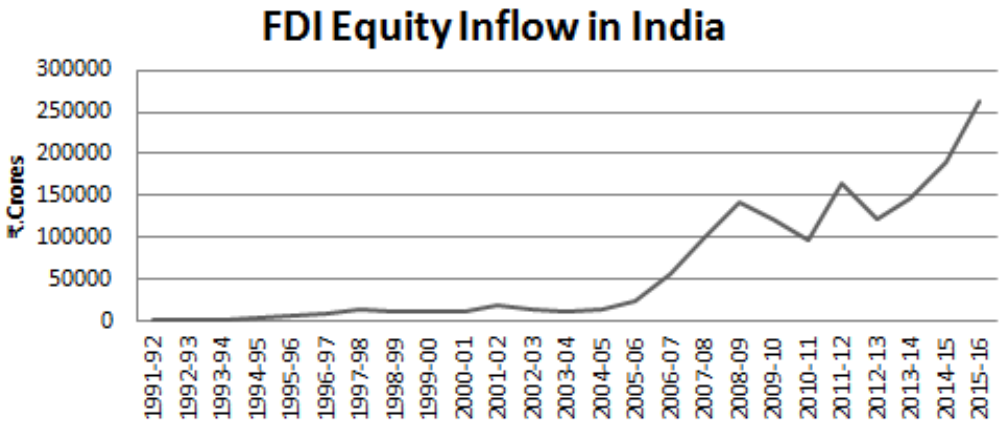
Table 1. 5 FDI Equity Inflow in India

S.No	Year	Amount of FDI (₹.Crores)	Amount of FDI (US$ Million)
1	**2**	**3**	**4**
1	1991-92	409	165
2	1992-93	1094	393
3	1993-94	2018	654
4	1994-95	4312	1374
5	1995-96	6916	2141
6	1996-97	9654	2770
7	1997-98	13548	3682
8	1998-99	12343	3083
9	1999-00	10311	2439
10	2000-01	10733	2463
11	2001-02	18654	4065
12	2002-03	12871	2705
13	2003-04	10064	2188
14	2004-05	14653	3219
15	2005-06	24584	5540
16	2006-07	56390	12492
17	2007-08	98642	24575
18	2008-09	142829	31396
19	2009-10	123120	25834
20	2010-11	97320	21383
21	2011-12	165146	35121
22	2012-13	121907	22423
23	2013-14	147518	24299
24	2014-15	189107	30931
25	2015-16	262322	40001

(Source: Department of Industrial Policy and Promotion, MCI,GOI)

The below graph 1.2 shows the equity inflow in India from 1991-92 to 2015-16. FDI inflows in India are showing ups and down word trend.

Figure 1. 2 FDI Equity Inflow in India



(Source: Department of Industrial Policy and Promotion, MCI,GOI)

The years which shows decreasing trend are 1998-99, 1999-22, 2002-03 and 2003-04 as compare to the previous year whereas all other years shows increasing trend of FDI in India over the previous years. In the year 2014-15 and 2015-16 show increasing trend of FDI inflow in India i.e ₹ 189107($30931) and ₹ 262322 (40001).

1.12 Country-Wise FDI Inflows in India

FDI is very important for the development of the country. India is receiving FDI from many countries, among them, top ten countries from where FDI inflows are coming to India are Mauritius, Singapore, U.S.A, U.K, Netherlands, Japan, Cyprus, Germany, France and U.A.E. Mauritius account for more the 40% of total FDI inflows coming to the country.

In the year 2008-09 and 2015-16 show ₹ 50,794 ($ 10,376), ₹ 54706 ($ 8355) and that both highest inflows of FDI from Mauritius. The country coming to the second position is Singapore which accounts for ₹ 89510 ($ 13692) followed by USA ₹ 94,575 ($ 17943), UK ₹ 5938 ($ 898) and Netherland ₹ 17175 ($ 2643) which is ranked third, fourth and fifth respectively. The sixth position Japan ₹ 17175 ($ 2614), the seventh position ₹ Cyprus 2904 ($491), eighth Germany ₹ 6361 ($ 986), France is at ninth ₹ 3937 ($ 598) and the tenth is U.A.E ₹ 6528($ 985) respectively.

Table 1. 6 Top Country-Wise FDI Inflows in India ₹ Crore (USD. Millions)

Sr.No	Country	1991-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**
1	Mauritius	27,446	3,766	2,609	5,141	11,411	28,759	44,483	50,794	49,633	26,230	38,155	40,586	22,062	35,647	54706
		(6731)	(788)	(567)	(1,129)	(2,570)	(6,363)	(11,093)	(10,376)	(47,240)	(5746)	(6987)	(7452)	(3678)	(5892)	(8355)
2	Singapore	1,997	180	172	822	1,218	2,662	12,319	15,727	11,295	6,569	18,436	8,967	18,584	26,246	89510
		(515)	(38)	(37)	(184)	(275)	(578)	(3,073)	(3,454)	(2,379)	(1449)	(3999)	(1639)	(3205)	(4313)	(13692)
3	U.S.A	12,248	1,504	1,658	3,055	2,210	3,861	4,377	8,002	9,230	4,829	4,189	2,226	3,670	9,010	94575
		(3,188)	(319)	(360)	(668)	(502)	(856)	(1,089)	(1,802)	(1,943)	(1055)	(884)	(408)	(623)	(1480)	(17943)
4	U.K	4,263	1,617	769	458	1,164	8,389	4,690	3,840	3,094	2,171	11,593	3,309	20,011	6,170	5938
		(1,106)	(340)	(167)	(101)	(266)	(1,878)	(1,176)	(864)	(657)	(475)	(2576)	(622)	(3148)	(1029)	898
5	Netherlands	3,856	836	2,247	1,217	340	2,905	2,780	3,922	4,283	4,610	4,998	7,253	9,731	15,630	17275
		(986)	(176)	(489)	(267)	(76)	(644)	(695)	(883)	(899)	(1016)	(1072)	(1339)	(1596)	(2579)	(2643)
6	Japan	5,099	1,971	360	575	410	382	3,336	1,889	5,670	5,384	12,670	8,945	4,936	8,655	17175
		(1,299)	(412)	(78)	(126)	(93)	(85)	(815)	(405)	(1,183)	(1192)	(2688)	(1626)	(810)	(1427)	(2614)
7	Cyprus					515 (118)	266	3,385	5,983	7,728	2,901	4,883	2,171	2,312	2,905	-
							(58)	(834)	(1,287)	(1,623)	(633)	(1027)	(400)	(380)	(481)	-
8	Germany	3,455	684	373	663	1,345	540	2,075	2,750	2,980	504	6,313	2,744	3,730	4,703	6361
		(908)	(144)	(81)	(145)	(303)	(120)	(514)	(629)	(626)	(111)	(1395)	(502)	(658)	(771)	(986)
9	France	1,947	534	176	537	82	528	583	2,098	1,437	3,127	2,034	2,541	1,602	3,499	3937
		(492)	(112)	(38)	(117)	(18)	(117)	(145)	(467)	(303)	(685)	(446)	(471)	(267)	(573)	(598)
10	U.A.E					699 (156)	1,174	1,039	1,133	3,017	1,480	953	655	1,364	-	6528
							(260)	(258)	(257)	(1,549)	(321)	(201)	(119)	(223)	-	(985)

(Source: Department of Industrial Policy and Promotion, MCI, GOI)

1.13 Sector-wise FDI Inflows in India

The FDI inflows in various sectors like Services Sector, Construction Development Sector, Telecommunications, Computer Software & Hardware, Drugs & Pharmaceuticals, Chemicals, Power Sector, Automobile Industry, Trading and Hotel & Tourism in India are shown below from April 2000 to March 2016. The table no 1.6 shows that service sector is account for highest cumulative inflow ₹ 258354 ($ 50792) for the period. Construction sector accounts for ₹113936 ($ 24188) whereas sectors like Telecommunications ₹92729 ($18382) and Computer Software & Hardware ₹ 112184 ($21018). Drugs & Pharmaceuticals sector also shown a ₹70097 ($1498) as a cumulative FDI inflows for 2000 to 2016, Chemicals ₹59555 ($1470), Power Sector ₹52613 ($869). The sectors account for Automobile Industry ₹ 81394 ($2527), Trading ₹25244 ($3845), Hotel & Tourism ₹49710 ($1333).

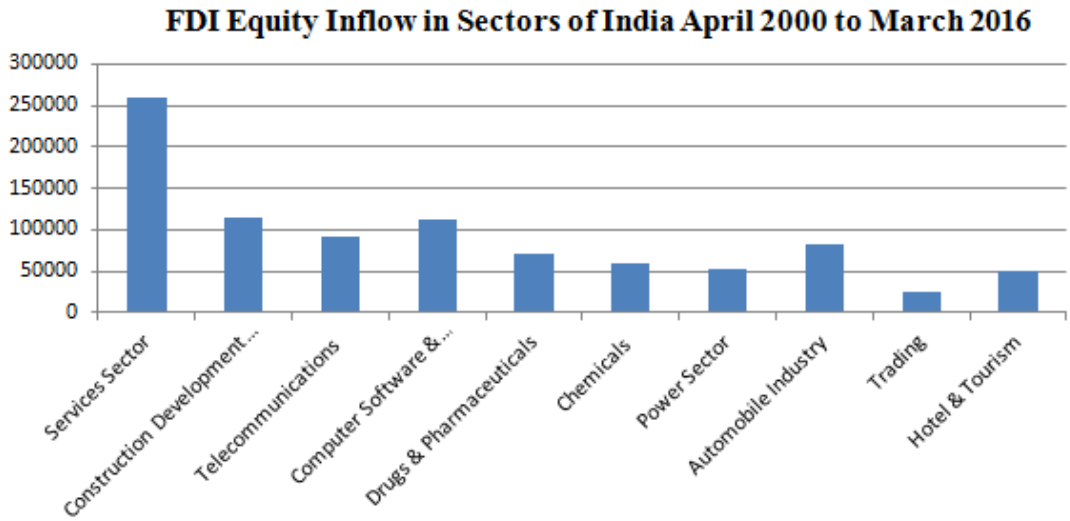
Table 1. 7 FDI Equity Inflow in Sectors of India
(April 2000 to March 2016)

Name of Sectors	₹ Crores (US $ in Millions)
1	2
Services Sector	258354 (50792)
Construction Development Sector	113936 (24188)
Telecommunications	92729 (18382)
Computer Software & Hardware	112184 (21018)
Drugs & Pharmaceuticals	70097 (1498)
Chemicals	59555 (1470)
Power Sector	52613 (869)
Automobile Industry	81394 (2527)
Trading	25244 (3845)
Hotel & Tourism	49710 (1333)

Source:- Department of Industrial Policy and Promotion DIPP

Figure 1. 3 FDI Equity Inflow in Sectors of India

(April 2000 to March 2016)



Source:- Department of Industrial Policy and Promotion

The FDI inflows in Services Sector, Construction Development Sector, Telecommunications, Computer Software & Hardware, Drugs & Pharmaceuticals, Chemicals, Power Sector, Automobile Industry, Trading and Hotel & Tourism are shown in above figure. The service sector is the sector which is receiving highest FDI followed by remaining sectors. The trading sector is accounting for lowest FDI inflows.

CHAPTER-2

LITERATURE REVIEW AND RESEARCH METHODOLOGY

2.1 Introduction

In the present chapter, an attempt has been made to review the existing studies conducted by various researchers and developed research gap. It also covers the objectives of the study and hypothesis. The research methodology was framed which consist of a period of study, sources of data collection, sample selection procedure for macroeconomic variables, sectors, companies, statistical tools, variables used, econometrics models used, limitations of the study and Chapterisation.

2.2 Literature Reviews

The purpose of the literature review is to provide the researcher the relevant up to date material on the research topic and to know the ideas of other researchers about the same topic. It will be helpful for the researcher to know his own work and to know the different view of authors in the same area of research.

Aftab & Ahmed (2017) to assess the impact, relationship of FDI and growth at sectoral level in Indian economy by using panel data from 2001-14. Unit root test, Cointegration test, Fixed and Random effect regression, Lin, Chu test, and Panel Granger causality test were used. Gross output, FDI inflows, Exports, GDP deflator, Inflation, Financial Stability, Gross Enrolment in

Secondary Education and Human Capital were the variables used. The study concluded that growth has an impact on FDI but FDI doesn't have an impact on growth at the sectoral level.

Alba, Donghyun, & Wang (2009) aim is to examine the impact of Exchange Rates on Foreign Direct Investment inflows into the United States. Unbalanced panel data at industry-level was used in this paper. Variables like exchange rate, the trend in the exchange rate, unit labor costs, sunk cost and advertising expenses were used. Regression analysis was used to meet the objective of the study. The study concluded that FDI & exchange rates are interdependent over time which is proved to be a favorable FDI environment. It also shows that exchange rate has a positively significant impact on FDI inflows in the United States.

Albis & Isabel (2017) made an attempt to analyse the innovation performance of foreign-owned firms compared to domestic owned firms in Colombian manufacturing firms from 2007 and 2008. The variable used are Foreign subsidiary, Domestic exporting firm, Domestic non-exporting firm Control variables, Firm size, Innovation protection, Public support, Industrial sector. Statistical tools used in the study are correlation and regression analysis. The study concluded that foreign subsidiaries are superior in knowledge as compare to domestic firms because they enjoy with internal and external knowledge of the input.

Aneta & Zuzana (2016) to assess the effect of degree of foreign ownership on firm's performance. The firms are dividing into three groups i.e. Domestic, Foreign, and Joint Ventures. Variables used in the study are GERD, R&D Employees, Leverage, Production, ROS, NWCI, and Value Added. Statistical tools employed were Descriptive statistics, t-Test, and Regression Analysis. The study concluded that there is a statistically significant difference in firm's performance whereas foreign ownership & performance are linked and show the U-shaped relationship

Antwi & Zhao (2013) focus to study the relationship between FDI and economic growth in Ghana for the period 1980-2010 by using time series data. Variables used were FDI, GDP, and GNI. Statistical tools used were Unit root test for stationary, Augmented Dickey-Fuller Test, Ordinary Least Square method, Cointegration test and Vector error correction model. The study concluded that there is a long run and causal relationship exists between FDI and GDP, GNI. It also revealed that GDP Granger-Causes FDI and unidirectional relation from GNI to GDP.

Arfan & Kaid (2013) to examine the moderating role of Political stability relationship between macroeconomic variables with Foreign Direct Investment inflows in Pakistan from 1991 to 2011. FDI inflows, GDPGR, Exports, Imports, Inflation rate, Balance of payment and Political stability index were used as a variable. Statistical tools like ADF test and Regression analysis were used in SPSS 19.0 statistical software package. The study concluded that GDP Growth Rate, Exports, Imports and Balance of Payment

have positive significant effects on FDI inflows in Pakistan whereas the inflation rate was not significant in determining the FDI inflows in Pakistan.

Awe (2013) analysed the impact of Foreign Direct Investment on economic growth in Nigeria from 1976-2006. Two-stage least square method of simultaneous equation model was used. FDI, Domestic Investment, Exports, Inflation rate, Exchange rate, External Debt were selected as variables in the study. The results show that there is a negative relationship exists between GDP and FDI. It is also concluded that Nigerian economy should encourage Domestic Investment to accelerate growth instead of relying on FDI.

Aydin, Sayim, & Yalama (2007) to find out whether foreign-owned firms perform significantly better than domestically owned Turkish firms listed on Istanbul stock exchange in Turkey. Variables like operating Profit Margin of Firms, Return on Assets and Return on Equity between Foreign-Owned firms and Domestic firms were used. t-test statistics were used in the study for the period 2003-2004. The study reveals that the firms with Foreign Ownership operating in Turkey perform better than the Domestic-Owned firm in respect to Return on Assets in Turkey.

Aysegul (2015) made an attempt to examine the relationship between the Degree of Foreign Ownership and Performance of firms in Turkish. The balanced panel data was used for 270 firms from 2008 to 2012. Statistical tools used were Fixed Effects, Random Effects and Hausman test were used. Variables like Foreign Ownership, Return on Assets, Return on Equity and

Debt Ratio were used. The result shows that there is a positive and significant relationship exists between Foreign Ownership and Corporate Performance but no difference with a degree of ownership.

Azam, Khan, Ahmed, Ahmad, & Muhammad (2011) attempt to examine the role of institutional factors and macroeconomic policy factors on FDI inflows in seven South Asian countries for 12 years, starting from 1996 to 2007 by using panel data. Statistical tools used in this paper are Z statistics for Unit Root Test, Panel Least Square, Fixed Effect and Random Effect. Variables like FDI Inflows, GDP per capita, Labor force, Macroeconomic policy index, Institutional Quality Index, Internet user (per 1000 people) was used in this paper. The study concluded that Macroeconomic policy had a negative effect on FDI inflow.

Azzam, Fouad, & Ghosh (2013) focus to examine the relationship between the degrees of Foreign Ownership and Financial Performance of 8,815 companies in Egypt. Panel data was used from 2006 to 2010. Statistical tools used were Fixed Effects, Random Effects and Hausman test. Foreign ownership, Return on Assets, Return on Equity and Debt Ratio was used as a variable for the study. The study concluded that Return on Assets, Return on Equity and Debt Ratio was positively related to Foreign Ownership. It is also shown that with an increase in Foreign Ownership the Financial Performance of companies will also increase depending on sector specification in Egypt.

Babita (2015) made an attempt to find out the impact of FDI on Indian Economy from 1991 to 2013. FDI inflow, Exports, Imports, Employment,

National Income and Foreign Exchange Reserves were variables used in the study. Regression analysis was used. The study concluded that Foreign Direct Investment has a significant and positive impact on macroeconomic variables such as National Income, Foreign Exchange Reserves of the country, Exports, Imports and some extent it is useful for improvement in Employment.

Barua (2013) made an attempt to study the impact of FDI on the growth of an economy, the need of FDI for the promotion of exports and analyse the relationship between exports and FDI. Time series data from 2000 to 2012 was used. Variables like FDI, GDP, and Exports were used. Statistical tools used were Correlation, Simple Regression, Multiple Regression Models, ANOVA and Durbin-Watson test. The results show that FDI & Exports, FDI & GDP, GDP & Exports all are positively and highly corrected with each other. FDI helps to improve the level of GDP in the host country.

Clement & Nuel (2016) made an attempt to examine the Impact of Foreign Direct Investment on Sectoral Performance in the Nigerian Economy with special reference to the Telecommunications Sector. The Ordinary Least Square Simple Regression technique was used in E-views 8.1. The time series data was used from 1986 to 2014. Gross Domestic Product and Foreign Direct Investment in the Telecommunications sector of Nigeria was variables used. Statistical tools like Descriptive test, unit root test, Cointegration test and Error Correction Mechanism was used. The study concluded that Foreign Direct Investment has a significant impact on Gross Domestic Product of Telecommunications Sector in Nigeria.

Dean, Pan, Changqi, & Yim (2005) made an attempt to examine the performance of domestic Chinese firms with various ownership categories and foreign-invested firm from 1998 to 2002. Variables used are Profit, Sales, Assets, Return on Sales, Return on Assets, and Profit per Employee. ANOVA test was used to the meet the objective of the study among State Owned Enterprises, Shareholding Enterprises, Privately Owned Enterprises, Limited Liability Enterprises, Collectively Owned Enterprises, and Foreign Owned Enterprises. The study concluded that in nonstate sector domestic firms and foreign firms perform better than State Owned Enterprises. It also shows that private, collectively owned and shareholding firms performance is higher than foreign firms.

Deepak & Anupam (2014) examine the impact of FDI on the growth of an Indian economy from 2000-2012. Variables used in the paper are FDI, GDP growth rate, and export performance. Data was presented by using charts. The study concludes that FDI plays a major role in increase growth rate of the various sectors of India which helps the GDP of Indian to increase constantly during the study period. Exports to India were also showing increasing trend with an increase in GDP which shows that FDI has a significant impact on Indian economy.

Dinesh & Jain (2013) focus to analyse the distribution of FDI in India and to find the relationship between the FDI inflows and GDP of India. The time series data was used from 1991 to 2013 in SPSS software. Statistical tools used were Descriptive statistics, Correlation, and Regression Analysis in order

to know the cause and effect relationship among FDI inflows and GDP in India. The study concluded that inflow of FDI has a significantly positive impact on GDP of India.

Dionisis, Katsaiti, & Petrakis (2011) focus to examine whether any difference is present between Domestic and Foreign-owned firms operating in Greece and to study the financial management characteristics of 140 selected firms. The variables used were Net Worth, Short-term Debt, Fixed Assets, Inventories, Total Assets, Net Sales and four main categories Solvency, Managerial Performance, Profitability and Growth. Regression analysis was used. The study concluded that foreign firms have higher capital, manage more financial elements, more access to long-term capital as compared to domestic firms. Foreign firms have higher sales and presented greater profitability. The variables which are found to be statistically significant at the 5% level are: Total Assets, Total Working Capital to Total Assets, Long-Term Debt plus Net Worth to Fixed Assets, Fixed Assets to Total Assets, Inventory, Net Sales to Fixed Assets, Net Sales to Total Assets, Net Sales to No of Employees, Net Profit to Net Worth, % change in Total Assets and Net Profit to Total Assets. For foreign-owned firms has a positive relationship between Inventory and Short Term Debt, whereas for domestic firms shows a negative relationship.

Dogan (2013) made an attempt to compare the financial performance of foreign and domestic banks in Turkish Banking Sector. The data for 10 domestic and 10 foreign banks from 2005 to 2011 have been used. Variables

used in domestic and foreign banks are Profitability, Capital Adequacy, Asset Quality, Riskiness, Size, Liquidity, and Management Effectiveness. The study concluded that Asset Quality, Return on Equities, Total Assets and Management Effectiveness of domestic banks are higher as compare to foreign banks whereas domestic banks have a lesser capital adequacy ratio than foreign banks.

Ekienabor, Sunday, & Liman (2016) made an attempt to examine the Impact of Foreign Direct Investment on the management of manufacturing Sector in Nigeria. The time series data was used from 1981 to 2012. The statistical tools like a Descriptive test, Correlation Matrix, and regression analysis were used in E-views 8.0. Variable used manufacturing output, Foreign Direct Investment, and Exchange Rate. The study concluded that there is a positive and significant relationship between Foreign Direct Investment and manufacturing output in Nigeria. It also observes that there is a positive and significant relationship between Foreign Direct Investment, Exchange Rate and Manufacturing Output in Nigeria.

Erkan, Koch, & Mehmet (2010) made an attempt to empirically examine the relationship between growth and FDI in Turkey from 1980 to 2004. Statistical tools used in the paper were Augmented Dickey-Fuller test, Granger Causality, VAR model and Impulse Response Functions in E-views software. This paper use Variables like FDI, Growth, Labour, Investment, and Balance of Payment. The results show that there is a positive and bi-directional causality relationship exists between FDI and growth.

Fabienne (2007) aim is to examine factors which are influencing the relationship between FDI and economic growth in 71 host countries from 1989 to 2002 by using panel data. Descriptive statistics, Pearson correlations, Regression analysis and Durbin Watson test were used to meet the objective. Variables such as the growth of GDP, GDP per capita, Gross capital formation as a percentage of GDP, change in total inward FDI stock/ host GDP, secondary school enrollment, exports, and imports were used. The result shows that growth of FDI differs from country to country and there is a significant relationship exists between FDI and economic growth.

Galaye & Helian (2016) focus to examine the impact of Foreign Direct Investment on economic WAEMU from 1990-2012. Variables like the Gross domestic product, Foreign Direct Investment, Gross fixed capital formation, Capital, Inflation Rate, Government Consumption, Labor, Trade and Growth rate were used. Descriptive test, Simple regression, fixed effect model, Haussmann test and Breusch Pagan test were used. The study concluded that FDI has a positive impact on economic growth.

Helhel (2015) attempt has been made to compare the financial performance of foreign and domestic banks in Georgia from 2009 to 2013 and their performance before and after January 1st, 2012. Variables used were Return on Assets, Return on Equity, Net Interest Margin and Profit Expense Margin. Independent t-test was used to check the significance of mean differences between foreign and domestic banks, analysis of variance was used to check the significance of mean differences among banks, and paired t-test was used

to compare pre and post January 1st 2012 for nine foreign and six domestic-commercial banks were used. The study concluded that there were no significant differences of profitability between foreign and domestic banks in terms of ROA, ROE, NIM, and PEM, but there were significant differences of profitability among the banks studied in terms of ROA, ROE and NIM, but not in terms of PEM. Whereas Pre and post-January 1st 2012 profitability performances were found to be significantly different in terms of ROA and NIM, but not in terms of ROE and PEM.

Hunjra, Syed, & Muhammad (2013) aims to examine the impact of macroeconomic variables on Foreign Direct Investment inflows in Pakistan from 1992 to 2013. ADF test, Cointegration, Descriptive Statistics and Granger Causality test were used to analysis the data in E-views 8. Variables such as GDP, Inflation Rate, Interest Rate, Exchange Rate and FDI were used. The study concluded that GDP growth rate and interest rate have a significant impact on FDI inflows in Pakistan whereas Inflation and Exchange rate is found to be insignificant in determining the FDI inflows in the country.

Isaac & Matthew (2017) to examine the relationship between Foreign Direct Investment and Economic Growth in Ghana from 1983-2012. Variable used were Inflation, Gross Fixed Capital Formation, Trade Openness and Government Spending. Statistical tools like Descriptive test, Unit root test Augmented Dickey-Fuller, Phillips-Perron and Ordinary Least Squares Regression were used. The study concluded that Foreign Direct Investment has a statically significant positive impact on economic growth in Ghana.

Javed, Sher, Rehmat, & Muhammad (2012) made an attempt to link Foreign Direct Investment, Trade and Economic Growth in selected South Asian countries namely Bangladesh, India, Pakistan and Sri Lanka by using annual time series data from 1973 to 2010. Statistical tools like a Descriptive test, Unit root test and generalized method of moments were used. Variables like GDP, Exports, Imports, FDI (Net Inflows) and DI (Gross Fixed Capital Formation) were used. The study concluded that FDI has a positive effect on growth in all countries except Sri Lanka while exports have a positive impact in all nations. Imports show the positive and significant impact on output only in Pakistan and Sri Lanka. Whereas Labor Force and Domestic Investment have a positive effect on growth. GDP & export growth more as compared to FDI in all South Asian countries.

Jung & Jungho (2017) focus to examine the productivity spillover effects from India's inward Foreign Direct Investment and controlling for Trade. Statistical tools like Unit Root Test, Regression Analysis, Johansen Cointegration were used. Variables like a Foreign Direct Investment and Total Factor Productivity in India was used to measure FDI-induced spillovers. The study concluded that inflow of FDI to India helps to improve TFP growth through positive spillover effects.

K & Mathiyazhagan (2005) to examine the long run relationship of Foreign Direct Investment with Gross Output, Export, and Labour Productivity in Indian economy at a sectoral level from 1990-91 to 200-01. Panel Cointegration test was used. Variables are Foreign Direct Investment with

Gross Output, Export, and Labour Productivity. The study concluded that there is no significant relationship exist between FDI, GO, EX and LPR in selected power and fuels, Electrical Equipments, Transport, Chemicals, Food Processing, Metallurgical, Drugs and Pharmaceuticals, Textiles and Industrial Machinery sectors of Indian economy. It also concluded that FDI does not help in the positive impact of Indian economy at the sectoral level.

Kishor (2000) aim is to examine how FDI contribution to India's export performance by using the annual data from 1970-98. Variable used are Export Demand, Real Effective Exchange Rate, World Income, Export Supply, Domestic Demand and Foreign Direct Investment. Regression Models and Durbin-Watson test were used. The result shows that when the export prices of the world fall, India export increases. FDI does not have a significant impact on the export performance.

Kunle, Olowe, & Oluwafolakemi (2014) made an attempt to examine the impact of Foreign Direct Investment on Nigeria economic growth. The time series data has been used from 1999-2013. Direct Foreign Investment, Gross Domestic Products, Exchange Rate and Export were variables used in the study. OLS Regression technique was employed. The study concludes that economic growth has a statically significant impact on FDI at 5% level of significance.

M & Nirmala (2014) to assess the relationship between India's Foreign Direct inflows and Economic growth in India. Variables used in the study are

Gross Domestic Product, Gross National Product, Balance of Payment, Total Trade, Foreign Exchange Reserves and Foreign Direct Investment. Time series data has been used for 10 years starting from 2003 to 2013. Statistical tools used were Annual Growth Rate, Compounded Annual Growth Rate, Correlation, and t-Test for Correlation Coefficient. The study concluded that FDI shows a significant relationship with economic growth in India.

M.A, Afolayan, & Adamu (2015) focus to examine the Impact of Foreign Direct Investment on Agriculture Sector in Nigerian Economy. The Ordinary Least Square Simple Regression Technique was used in E-views 8.1. The time series data was employed from 1977 to 2010. Gross Domestic Product and Foreign Direct Investment in the Agriculture sector of Nigeria was variables used. Statistical tools like Descriptive test, unit root test, Cointegration test, and Vector Error Correction were used. The study concluded that Foreign Direct Investment has a significant impact on the performance of Agriculture Sector to the Gross Domestic Product of Nigeria.

Maathai (2005) focus to examine the long run relationship of FDI with Gross Output, Export, and Labor Productivity in Indian economy at sectoral level by using annual data from 1990-91 to 200-01. Panel Cointegration test was used. Variables used were Foreign Direct Investment, Gross Output, Export and Labour Productivity. The study concluded that sectors do not have a significant relationship among variables like FDI, Gross Output, Export and Labor Productivity in Indian economy. It also shows that in some sectors FDI had a positive impact. The study concluded that there is no significant co-

integrating relationship among the variables like FDI, GO, EX and LPR in core sectors in the economy which means when there is an increase in the Output, Export or Labor Productivity of the sectors it is not only due to FDI. Thus FDI is not having a positive impact on the Indian economy at the sectoral level.

Manamba (2016) made an attempt to examine the sectoral economic impact of FDI in Tanzania. The time series data was used from 1970 to 2015. Statistical tools like Descriptive Statistics and Correlation, Unit Root Test, Cointegration Test and Error Correction test were used. Variables like FDI, Real Per Capita Income, Gross Fixed Capital Formation, Trade Liberalization or Degree of Openness, Real Exchange Rate, Labor Force and the Inflation Rate were used. The study concluded that FDI has a positive and statistically significant impact on sectors like manufacturing and construction sectors. Transportation, storage, and communications sectors are showing positive impact whereas agriculture and mining the results are insignificant.

Nair & Minimol (2015) made an attempt to study the trends inflow of FDI and to analyse the relationship between FDI and economic growth of Indian Economy. Time series data were taken from 1992 to 2015. Descriptive statistics and Correlation coefficients were used in SPSS software to analyse the data. Variables like FDI, GDP, and Market Indices i.e. NIFTY & SENSEX were used. The study concluded that FDI inflows into the country have shown an increasing trend during the study period between 1992-2015. Secondly, a very strong positive correlation exists between FDI and BSE SENSEX, FDI and GDP and FDI and NSE NIFTY at 1 percent level of significance.

Netrja (2013) examine the impact of FDI on Employment and GDP in India from 1970 to 2007. Statistical tools like Descriptive Statistics, Correlation, and Multiple Regression models were used. The data were analysed by using SPSS software. Variables used in the study were FDI, Employment, and GDP. The study concluded that there is a positive relationship between FDI and GDP but not necessarily between FDI and Employment.

Nishi & Nishant (2014) focus to examine the association between inflow Of Foreign Direct Investment and Gross Domestic Product in Brazil, Russia, India, China and South Africa (BRICS) countries. 20 years data has been collected from 1993-2012. Statistical tools such as Descriptive statistics, Unit Root test, Correlation matrix, cointegration rank test and Granger Casualty test were used. Variables used are FDI and GDP from Brazil, Russia, India, China and South Africa. The study concluded that there is no long-term relationship between FDI and GDP in Russia, India, and China. Granger casualty test shows that in Russia neither GDP Granger cause FDI nor FDI Granger cause GDP nor remaining four nations shows the presence of the unidirectional relationship. Whereas in India and China GDP Granger caused FDI and Brazil and South Africa FDI Granger causes GDP.

Ourania & Vlachvei (2008) made an attempt to examine whether foreign-owned firms perform significantly better than domestically-owned firms listed on the Athens Stock Exchange in Greece from 1995 to 2000. A balance data of 177 Greek manufacturing and trading firms were used. Variables used were Return on Assets, Return per Employees, Size, Age, and Efficiency Index.

Tools used in the study were t-test, fixed effects method, and Chow test. The study concluded that the profitability of domestically owned firms increases with increase in growth whereas the profitability of foreign-owned firms increases with efficient use of sales promotion expenditures.

Paula (2014) aim of this paper is to find out the link between FDI inflows and GDP growth in Romanian economy from 1990 to 2012. FDI, GDP, Government Expenditure and Gross Fixed Capital Formation were the variables used. The Durbin Watson test was applied to determine the autocorrection problem by using the regression in SPSS software. The results show that there is a Correlation exists between FDI and economic growth. FDI has a positive impact on GDP growth of Romanian economy during the study period.

Prachi (2013) focus to examine the relationship between FDI inflows with GDP and examine its impact on Indian economy. The Convenience sampling and Purposive Sampling techniques were used. Karl Pearson's Coefficient of Correlation and Chi-Square were used as Statistical tools to meet the objective. FDI and GDP were variables used. The study concluded that 80% of respondents agreed that the constraints on FDI India are Poor infrastructure; labor Laws, tax laws, financial sector and political climate. 48.57% of the respondents also agreed that the inflow of FDI in India is quite satisfactory and positive relationship between the inflow of FDI and the development of India's economy.

Pradeep (2010) focus to examine empirically the differences in the relative characteristics and performance of multinational enterprises and domestic firms in non-electrical machinery industry in India from 2000-01 to 2006-07. Statistical tools used were a univariate statistical method based on Welch's t-test, the Multivariate Linear Discriminate Analysis and the dichotomous Logit and Probit Models. Variables like Firm Size, Age, Financial Leverage, Advertisement and Marketing Intensity, Capital Intensity, Research and Development intensity, intensity of import of disembodied technology, the intensity of import of intermediate goods used for production, export intensity, technical efficiency and gross profit margin. The study concluded that foreign firms have greater technological efficiency, firm size, export intensity, high intensity of import and lower advertisement, marketing intensity and financial leverage.

Pradhan.J.P (2002) to examine the relationship between the foreign and local productivity growth in Indian Pharmaceutical industry by using unbalanced panel data for the sample 268 foreign firms and 247 domestic firms from 1989-90 to 2000-01. Variables used like technical efficiency, age, R&D expenditure, Royalties, technical & professional fees, Imports, total sales, capital stock to labor. Statistical tools used were Fixed Effects, Random Effects and Hausman test. The study concluded that there is a negative relationship exists between the foreign and local productivity growth in Indian Pharmaceutical industry.

Ramakrushna & Patra (2014) to study the relationship between Foreign Direct Investment and Economic growth in India from 1990 to 2012. Statistical tools like Graphical Presentation, Line Chart, Correlation, ANOVA and Regression Analysis were used in SPSS and spreadsheet. Variables used in the study are Foreign Direct Investment Inflows and GDP. The study concluded that there is a positive and strong correlation between FDI inflow and growth of GDP in India and per capita GDP.

Rashmita (2013) made an attempt to study the impact of FDI on the growth of an economy, the need of FDI for the promotion of exports and analyse the relationship between exports and FDI, the Correlation between FDI, GDP, and Exports and to study the dependency of GDP growth on exports and FDI. The period of study is starting from 2000-2012. Statistical tools like Simple Regression, Multiple Regression Models, ANOVA and Durbin-Watson test has been employed. Variables like FDI, GDP, and Exports were taken. The results show that there is a positive correlation between FDI, GDP, and Exports present. FDI not only acts as a vehicle for accelerating the pace of exports but it is also an important variable that alters the level of GDP of the host country.

Saiyed (2012) to examine the effect of FDI on economic growth in India by using annual data from 1990-91 to 2011-12. Statistical tools like student's t-statistics, R^2, F-test, D-W Statistics and the regression coefficients were used in Econometric Views (E-views 3.0). The variables like FDI and GDP used. The study concluded that FDI is positively correlated with the growth of

Indian economy. The causality tests also show that there is unidirectional causation that FDI stock causes the output to rise and also indicate unidirectional causality among the FDI to output. It also concludes that there is a significant effect of FDI on India's economic Growth which is an evidence of an FDI-Output causal relationship.

Sanghamitra & Raju (2016) focus to study the role and effect of Foreign Direct Investment in manufacturing industry in India. Time series data was used from 2000 to 2015. Tools used like a Bar Graph, Pie Charts, and Correlation Matrix. Variables used are FDI, GDP, Currency, Stock Market, Foreign Exchange Reserves, Interest Rate, Current Account, Exports, Imports, and Unemployment Rate. The study concluded that FDI has a significant and positive impact on manufacturing industry and it is one of the factors which influence the economic growth in India.

Sumi & Bansal (2015) focus to study the trends of FDI & FII and analyse the impact of FDI and FII on the Indian economy. Statistical tools like Correlation matrix were used. Variables like FDI, FII, Employment, Foreign Exchange, Export, Import, and GDP were taken to meet the objective of study during the period 2000-01 to 2013-14. The study concluded that FDI and FII have the significant and positive impact on Indian economy**.**

Taqadus, Ayesha, Zulfiqar, & Riaz (2014) to analyse the impact of Foreign Direct Investment in South Asian countries including Pakistan, India, Bangladesh and Sri Lanka with China. The main objective is to make

comparative analysis among the countries which is receiving Foreign Direct Investment. The time period for the study is from 1976 to 2011. Statistcal tools like OLS regression test and Granger Causality test were used. GDP, FDI, External Debt, Human Capital Formation, Domestic Investment, and Remittances were the variables in the paper. The study concluded that there is a negative impact of FDI in India, Bangladesh, and Pakistan whereas FDI shows a positive relationship with economic growth. It also concluded that China is much faster-growing economy than the South Asian economy.

Taymaz & Ozler (2007) made an attempt to examine the performance in terms of profitability of a Foreign firm is better than Domestic firm in Turkish. Panel data was used from 1983 to 2001. Statistical tools used were Fixed Effects, Random Effects, and Hausman test. Foreign Ownership, Size, Capital Intensity, Growth Rate and Quality of Labor Force were variables used. The study concluded that foreign firms have a better performance level than domestic firms when they are first established in the local market and performance is not caused by foreign ownership, but Larger Size, Capital Intensity, Growth Rate and Quality of Labor Force.

Uwubanmwen & Mayowa (2012) made an attempt to examine the determinants and impact of FDI in Nigeria from 1970 to 2009. Statistical tools used in the paper were Descriptive Statistics, Unit root test, Johansen Cointegration, Vector error correction model (VECM) and Granger causality. Macroeconomic variables like GDP, Exchange Rate, Interest Rate, Government Size, Inflation and Openness were used to determine the inflow

of FDI in the country. This paper concluded that GDP, Government Size was showing the insignificant impact on FDI. It also shows that there is long-run relationship exists between FDI and GDP but FDI does not have any significant impact on growth and development of Nigeria economy during the study period.

VS & Hiremath (2012) to make the comparative performance of domestic and foreign-owned firms in India. From foreign subsidiaries, domestic private, and public sector companies 15 firms were taken hence total sample size is 45 firms in the study. The time period is divided into two points from 2002-03 and 2011-12. Variables used are Operating Profit Margin, Net Profit Margin, Return on Net worth and Asset Turnover Ratio. Statistical tools used were WELCH Test (W-test), Bonferroni post-hoc test, the Linear Discriminate Analysis technique and Chi-square test. The study concluded that all three groups Foreign Subsidiaries, Domestic Private, and Public Sector firm performance are found to be at par.

2.3 Research Gap

After doing an extensive review of literature it was found that the topic Foreign Direct Investment is widely focused to study at macro and micro level across all sectors and countries. The key macro-level indicators are GDP, Growth Rate, Forex Earnings, Employment Rate, Inflation, Poverty, Exports, Imports, Balance of Payment and micro level indicators are Labor Productivity, Firm-Level Imports, Exports, Spillover Effect, Operational Efficiency and Managerial Efficiency. The methodology and model used by

other research in their studies are subjected to a limitation in terms of availability of data and econometrics models application. In India, it is very difficult to obtain the firm-level data for a long time due to changes in Foreign Direct Investment policy across the sectors. Therefore there is a great need to study the impact of Foreign Direct Investment at the macro level with the help of macroeconomic indicators. There is a need to study the impact of Foreign Investment on the efficiency of the selected companies in selected sectors. There is also need to study the financial performance of FDI based companies and Non-FDI based companies in selected sectors.

2.4 Scope of the Study

The scope of the study as follows.

i. In this research study the impact of foreign direct investment is analysed with the help of macroeconomic variables.

ii. The sectors which are receiving foreign investment and examine whether there is any impact of foreign investment on efficiency of the companies which have foreign shareholding of more than 10% of foreign investment.

iii. This study tries to analyse the financial performance of FDI based companies and Non-FDI based companies with the help of selected financial ratios.

2.5 Significance of the Study

This study will provide the significant contribution to different users including the Companies, Government Agencies, Researchers and other interested

parties. It will first analyse the impact of FDI on Indian economy at the macro level, which will show wither FDI has any impact on economy or not. If yes then wither it is positive and negative. In the second part the study is focusing on the impact of foreign investment on Operating, Managerial and Technological efficiency of FDI based companies. Lastly, the study will make a comparative analysis between FDI and Non FDI based companies financial performance which will help us to improve the strategy to overcome those weaknesses. The research result will be a source for the investors to identify in advance the factors that affect domestic companies' financial performance. The research result will also be used as a basis for researchers in similar areas and help government agencies in formulating policy.

2.6 Objectives of the Study

Keeping in view the importance of Foreign Direct Investment for the development of the economy and identifying research gap from the previous studies, the present study frames the following objectives and sub-objectives of the study as follows.

i. To study the impact of Foreign Direct Investment on Indian Economy at macro level.

ii. To study the impact of Foreign Investment on efficiency of FDI based Companies in selected sectors in India.

In the study the efficiency of FDI is measured in terms of Operating, Managerial and Technological factors. Therefore the following sub objectives have been formulated for the study.

a) To study the impact of Foreign Investment on Operating efficiency of FDI based Companies in selected sectors in India
b) To study the impact of Foreign Investment on the Managerial efficiency of FDI based Companies in selected sectors in India
c) To study the impact of Foreign Investment on the Technological efficiency of FDI based Companies in selected sectors in India

iii. To compare the financial performance of selected FDI based Companies with Non-FDI based Companies in selected sectors.

In the study the financial performance of FDI and Non FDI based companies is compared to see is there is any difference in the factors which are affecting profitability of these two groups of companies and know whether FDI based companies financial performance is better or Non FDI based companies in selected sectors in India. Therefore the following sub objectives have been formulated for the study.

a) To study the factors affecting Profitability are different for FDI & Non-FDI based Companies in Selected Sectors in India.
b) To study the Financial Performance of FDI Based Companies is superior to Non-FDI based Companies in Selected Sectors in India.

2.7 Hypothesis Formulated

The study has been taken up with the following null and alternative hypothesis.

1 H0: FDI inflows do not have a statistically significant impact on the Gross Domestic Product.

H1: FDI inflows have a statistically significant impact on the Gross Domestic Product.

2 H0: FDI inflows do not have a statistically significant impact on the Growth Rate Gross Domestic Product.

H1: FDI inflows have a statistically significant impact on the Growth Rate Gross Domestic Product.

3 H0: FDI inflows do not have a statistically significant impact on the Foreign Exchange Reserves.

H1: FDI inflows have a statistically significant impact on the Foreign Exchange Reserves.

4 H0: FDI inflows do not have a statistically significant impact on the Gross Capital Formation.

H1: FDI inflows have a statistically significant impact on the Gross Capital Formation.

5 H0: FDI inflows do not have a statistically significant impact on the Exports.

H1: FDI inflows have a statistically significant impact on the Exports.

6 H0: FDI inflows do not have a statistically significant impact on the Imports.

H1: FDI inflows have a statistically significant impact on the Imports.

7 H0: FDI inflows do not have a statistically significant impact on the Exchange Rate.

H1: FDI inflows have a statistically significant impact on the Exchange Rate.

8 H0: FDI inflows do not have a statistically significant impact on the Inflation.

H1: FDI inflows have a statistically significant impact on the Inflation.

9 H0: Foreign Investment does not have a statically significant impact on Operating efficiency of FDI based Companies in Selected Sectors in India.

H1: Foreign Investment has a statically significant impact on Operating efficiency of FDI based Companies in Selected Sectors in India.

10 H0: Foreign Investment does not have a statically significant impact on Managerial efficiency of FDI based Companies in Selected Sectors in India.

H1: Foreign Investment have a statically significant impact on Managerial efficiency of FDI based Companies in Selected Sectors in India.

11 H0: Foreign Investment does not have a statically significant impact on Technological efficiency of FDI based Companies in Selected Sectors in India.

H1: Foreign Investment has a statically significant impact on Technological efficiency of FDI based Companies in Selected Sectors in India.

12 H0: There is no significant difference between FDI based companies and Non FDI based companies in terms of ROA, Age, Size, Current ratio, Quick ratio and Debt to Equity Raito, Growth in sales, profit and assets in Selected Sectors in India.

H1: There is significant difference between FDI based companies and Non FDI based companies in terms of ROA, Age, Size, Current ratio, Quick ratio and Debt to Equity Raito, Growth in sales, profit and assets in Selected Sectors in India.

13 H0: Financial Performance of FDI based companies is superior than Non FDI based companies in Selected Sectors in India.

H1: Financial Performance of FDI based companies is superior than Non FDI based companies in Selected Sectors in India.

2.8 Research Methodology

The research methodology of the study as follows.

2.8.1 Period of Study

To study the Impact of Foreign Direct Investment on Indian Economy annual data was collected from 1995 to 2016 for a period of 22 years. In order to study the second and third objectives, the data has been collected from 1st April 2007 to 31st March 2016 for a period of 10 years, as it was the period of which many sectors are opened for foreign investment in India.

2.8.2 Sources of Data Collection

This study is based on secondary data. The required data has been collected from Websites of the Reserve Bank of India (RBI), World Investment Report, United Nations Conference on Trade and Development (UNCTD), Department of Industrial Policy and Promotion (DIPP) and from database such as Bloomberg and Center for Monitoring Indian Economy (CMIE) Prowess IQ.

2.8.3 Sample Selection

The sample selection procedure for macro economic variables, sectors and companies in the study as follows.

2.8.3.1 Sample Selection Procedure for Macro Economic Variables

The study has been collected the major economic variables which are significantly related with the FDI from various available review of literature, Gross Domestic Product at Factor Cost (GDP), Growth rate in Gross Domestic Product at Factor Cost (GRGDP), Foreign Reserve (FRESE), Gross Domestic Capital Formation (GDCF), Exports (EX), Imports (IMP), Exchange Rate (ER), Inflation (INFL), Interest Rate (IR), Trade Balance (TB), Wholesale Price Index (WPI), Financial position (FP), however to select the final macro economic variables, the study was used the regression analysis to find out the variables which are significantly related and not significantly related.

Table 2.1 Regression Analysis result for selecting Macro Economic Variables

Variable	Coefficient	Std. Error	t-Statistic	Prob.	R-squared
Gross Domestic Product at Factor Cost (GDP)					
C	1.757779	0.419968	4.185508	0.0005	0.884079
FDI	0.543635	0.045161	12.03761	0.0000	
Growth rate in Gross Domestic Product at Factor Cost (GRGDP)					
C	2.092453	0.17557	11.91809	0.0000	0.887705
FDI	0.142429	0.01888	7.543965	0.0000	
Foreign Reserve (FRESE)					
C	17.58505	0.601167	29.25151	0.0000	0.9015
FDI	0.852487	0.064647	13.18687	0.0000	
Gross Domestic Capital Formation (GDCF)					
C	2.092453	0.17557	11.91809	0.0000	0.749708
FDI	0.142429	0.01888	7.543965	0.0000	
Exports (EX)					
C	4.325158	0.516504	8.373903	0.0000	0.919296
FDI	0.817113	0.055542	14.7115	0.0000	
Imports (IMP)					
C	4.510757	0.527655	8.548686	0.0000	0.916263
FDI	0.818142	0.056742	14.41876	0.0000	
Exchange Rate (EX)					
C	4.050852	0.100698	40.22755	0.0000	0.64247
FDI	0.063273	0.010829	5.843149	0.0000	
Inflation (INFL)					
C	1.759007	0.420162	4.186499	0.0005	0.745331
FDI	0.336923	0.045182	7.456977	0.0000	
Interest Rate (IR)					
C	2.589991	0.137898	18.78189	0.0000	0.293584
FDI	-0.59216	0.191531	-3.09172	0.0051	
Trade Balance (TB)					
C	1.853595	0.513304	3.611106	0.0015	0.01725
LFDI	0.417533	0.657126	0.635393	0.5314	
Wholesale Price Index (WPI)					
C	6.611044	1.28048	5.162944	0.0000	0.342691
LFDI	-2.74699	0.793279	-3.46283	0.0021	
Financial position (FP)					
C	13.31307	2.416935	5.508244	0.0000	0.177417
LFDI	-2.194492	1.084049	-2.02434	0.0572	

(Source: Author Compilation)

The above table 2.1 shows that the variables like Gross Domestic Product at Factor cost, Growth rate in Gross Domestic Product at Factor Cost, Foreign

Reserve, Gross Domestic Capital Formation, Exports, Imports, Exchange rate, Inflation are significantly related with FDI and variables like Open Trade Balance, Wholesale Price Index, Financial position are insignificant. Hence the study has been considering the variables like Gross Domestic Product at Factor cost, Growth rate in Gross Domestic Product at Factor Cost, Reserve, Gross Domestic Capital Formation, Export, Import, Exchange rate, Inflation.

2.8.3.2 Sample Selection Procedure for Sectors

There are 15 sectors such as Food & Agriculture Sector, Textile Sector, Pharmaceutical Sector, Construction Sector, Consumer Goods, Communication, Chemical & Chemical Product, Metal Sector, Machinery Sector, Transport Sector, Hotel Sector, Wholesale & Retail trading, IT Sector, Real Estate, Financial Service Sector are available in Prowess data base which is receiving FDI.

For the purpose of the study the sectors which are opened 100% FDI and whose data is available for the study period were selected. Therefore the following selected sectors are Food & Agriculture Sector, Textile Sector, Pharmaceutical Sector, Construction Sector, Metal Sector, Machinery Sector, Transport Sector, Hotel Sector, IT Sector, and Financial Service Sector and sectors like Consumer Goods, Communication, Chemical & Chemical Product, Wholesale & Retail trading, and Real Estate are dropped.

Table 2. 2 List of Sectors selected

Sr.No	Name of Sectors	Percentage of Capital
1	**2**	**3**
1	Food & Agriculture Sector	100%
2	Textile Sector	100%
3	Pharmaceutical Sector	100%
4	Construction Sector	100%
5	Metal Sector	100%
6	Machinery Sector	100%
7	Transport Sector	100%
8	Hotel Sector	100%
9	IT Sector	100%
10	Financial Service Sector	100%

(Source: Department of Industrial Policy and Promotion)

2.8.3.3 Sample Selection Procedure for Companies

The following is the procedure used to select the sample companies in the study.

a) The total numbers of Companies existing in CMIE Prowess database as on 31st March 2016 were 23,490 in selected sectors.

b) For the purpose of selecting sample companies in the study, definition for foreign investment given by IMF and OECD[1] is considered i.e. if the foreign investment is 10% or more of the ordinary share or voting power of an enterprise such company is termed as FDI based company and if foreign investment is less than 10% of the ordinary share or voting power of an enterprise such company is than it is termed as Non-FDI based companies in each selected sectors has been considered (Annexure-I).

[1] http://unctad.org/en/Pages/DIAE/Foreign-Direct-Investment-(FDI).aspx

c) As per the criteria mention in the second point there are 267 FDI based companies and 328 Non-FDI based companies found among the total 23,490 companies available in a prowess database (Annexure-II).

d) The next criteria applied to choose the final companies are listening of companies at Bombay Stock Exchange (BSE) and they are 217 out of 267 FDI based companies and 301 out of 328 Non-FDI based Companies.

Table 2. 3 Number of Sample companies in selected Sectors

Sr.No	Name of Sectors	No. Companies in Prowess database 31/3/2016	Total No of Companies fulfilling 10% criteria in CMIE Prowess as on 31/3/2016		Total No of Companies fulfilling listed at BSE as on 31/3/2016	
			FDI	Non FDI	FDI	Non FDI
1	**2**	**3**	**4**	**5**	**6**	**7**
1	Food & Agriculture Sector	2399	23	20	22	20
2	Textile Sector	1775	20	17	18	15
3	Pharmaceutical Sector	2676	61	58	29	53
4	Construction Sector	647	18	65	16	62
5	Metal Sector	1924	23	31	22	30
6	Machinery Sector	1648	34	30	30	30
7	Transport Sector	797	22	30	17	26
8	Hotel Sector	671	09	10	09	06
9	IT Sector	1281	27	27	26	26
10	Financial Service Sector	9672	30	40	27	33
Total Number of Companies		**23490**	**267**	**328**	**217**	**301**

(Source: Author Compilation as per CMIE-Prowess Database)

2.8.4 Statistical and Econometrics Tools

2.8.4.1 Sargan's test

This test is used to know which functional form should be used in the study i. e. linear or log of linear functional form. According to the Sargan's Criterion, if the calculated 'S' value is greater than one (i.e., S> 1), the log-linear functional form is preferred over the linear functional form. On the other hand,

when the calculated 'S' value is less than one (i.e., S<1), the linear functional form is supposed to be the appropriate functional form.

2.8.4.2 Descriptive test

The descriptive test is used to describe data used in the study. It will provide average size and deviation of individual values from means value. Mean is used to find out the average value of data. The standard deviation is used to deviation from the central value. Skewness measures the shape of data whereas kurtosis measures the Preakness of data used in the study.

2.8.4.3 Correlation

The correlation used to show what type of relationship and strength exists between the variables which i.e. positive or negative.

2.8.4.4 Regression Test

Regression is used to know how independent variable explaining dependent variable. R^2 is more than 60% which means that the data of variables used for the study are of very high reliability. t- Statistics states that independent variables should be individually significant to explain dependent variables. F-Statistic show wither all independent variables have jointly powerful to affect the dependent variable.

2.8.4.5 Unit Root Test

Augmented Dicker Fuller (ADF) test is used to test wither data is stationary or non stationary and if it is non-stationary then data it is made stationary by

taking Level, First Difference and Second Difference which make the data in equal units and helps to avoid spurious regression and give accurate results.

2.8.4.6 Granger Causality Test

Granger causality test is used for testing of one variable whether it is useful in forecasting other variables. It shows that whether there is a relationship between dependent and independent variables or not. For Example, If X Granger Causes Y and Y Granger Causes X we call it bi-directional causality. If only one exit then it is unidirectional causality. If both do not exist then variables are independent of each other.

2.8.4.7t- Statistic

If t-statistic is smaller than the critical value we will accept the null hypothesis and if t-statistic more than the critical value we should reject the null hypothesis.

2.8.4.8 Fixed Effect Model

When model parameters are fixed or nonrandom this type of model is called Fixed Effect Model. In other words, it is a regression model in which the group's means are fixed as opposed to random effects model in which the group means are a random sample from a population. Fixed effects estimator also knows as within estimator which is used as an estimator for the coefficient in the regression model.

2.8.4.9 Random Effect Model

Random effect model is also known as a variance components model which is a kind of hierarchical liner model. It is assumed that the data which is analysed in random effect model is drawn from a hierarchy of different populations whose differences are present in the hierarchy.

2.8.4.10 Hausman test

Hausman test helps us to know among Fixed Effect Model and Random Effect Model which model is suitable for the data to get an accurate result.

2.8.4.11 Chow test

Chow econometrician proposed the test known as Chow test in 1960. This test helps to know whether the true coefficients in two linear regressions on different data sets are equal**.**

2.8.5 Variables of the Study

Following is the list of independent and dependent variables used in the study.

a) Independent Variables

2.8.5.1 Foreign Direct Investment

Foreign Direct Investment Inflows (FDII) is an investment made by Multi-National Corporation (MNCs) or by a nonresident in an enterprise of host (recipient) countries over which they have a control and earn the profit. FDI come to India by different routes i.e. Automatic route and Government route. The present study uses the definition accepted by RBI on the guideline of the

IMF with effect from 31st March 1992. As per the guideline, 10 percent ownership of ordinary share capital by an overseas investor in any investment is treated as FDI in India. The relevant data on FDI inflows are collected from the DIPP (Department of Industrial Policy and Promotion). The importance of FDI on the development of host economy is supported strongly by endogenous growth theories. According to this theory, FDI helps to transfer knowledge, managerial skill, technology spillover and human capital growth (Lan, 2006). There are still arguments for and against the role of FDI inflows in the economic growth of host country. Whether FDI inflows are favorable for the growth of economy or not is still a debated topic among economists. Hence it is very important to study the expected theoretical relationship between FDI and these macroeconomic variables.

2.8.5.2 Foreign Investment

As compared to Non-FDI based companies, FDI based companies are performing better in export, information, and marketing for their parent enterprises. As a result, FDI based companies are expected to do better than Non-FDI based companies in terms of export performance. However most of them in India was set up to explore the domestic and local markets instead of import of substitute. There are few studies which presented a positive relationship between FDI based companies and their export performance. It has been observed that MNCs prefer to control export-oriented affiliate through high FDI, treating their marketing. According to Kumar (1990), there is no significant difference between the export performance of foreign and domestic owned firms across various industries. Banga (2003) examined the

impact of FDI on performance with respect to the source-country of FDI. The results show that US FDI has a positive and significant effect as compared to Japanese FDI.

2.8.5.3 Firm size

Firm size is included to account for the potential economies of scale and scope accruing to large firms. If present, these would produce a positive relationship between firm size and profitability in industrial organisation as per literature reviews. In case of small firms.

This argument has its roots in the early industrial organization literature. On the other hand, small firms may be able to compensate their cost differentials by adopting more flexible managerial organizations and methods of production responding more rapidly to changes in the competitive environment and obtaining higher profits.

2.8.5.4 Age

Age older firms are more experienced, receive the benefits of learning and are associated with first mover advantages. However, older firms are also arguably prone to inertia and are less flexible in their ability to adapt to competitive pressures that can negatively affect firm performance.

2.8.5.5 Growth

The growth of firms is included to measure demand conditions the firm can be faced with, as well as product cycle effects. In relatively fast-growing markets,

firms are expected to experience above-average profitability. Higher growth opportunities make it possible to continuously generate revenue growth through profitable ventures.

b) Dependent variables

2.8.5.6 Gross Domestic Product

The researcher and policymaker's believe that FDI helps to boost economic growth through different channels. It not only brings capital with them but also bring new technology. Foreign investment will increase and improve the existing knowledge of host economy but provid training and skill to its employee. As a result, it will help to improve the productivity of economy which in terms increases GDP (Jallab, 2008). The present study uses GDP at factor cost (GDPFC) with constant prices as one of the dependent variable in the study because as constant prices are used to net out the effect of inflation. The GDP at factor cost is also called "net product" or "net value added" method. GDP at factor cost is computed at three stages. First is to compute the gross value of domestic output. Second is to deduct intermediate consumption from gross value to get net value and the sum total of net value added from economic activity is called GDP at factor cost. An economy with higher GDPFC will attract more FDI.

2.8.5.7 Growth Rate in Gross Domestic Product

It refers to the Growth Rate of GDPFC as constant prices. This is one of the dependent variables to study the impact of FDI inflows into India because sometimes it is assumed that it is the growth rate of a market, which attracts

more FDI inflows to a particular location rather than the market size. In the present study, the annual growth rate [AGR of GPDFC in constant price is given by (GDPFCt – GDPFCt-1)/ GDPFCt-1] of GDPFC as constant.

2.8.5.8 Gross Domestic Capital Formation

This variable is used to represent a gross investment. The capital formation in durable goods is called as the fixed capital formation and the capital formation in the non-durable goods is accounted for the changes in the stock of inventories. GDCF is the sum of gross fixed capital formation and change in the stocks in an accounting year. The change in stocks takes into account the change in the stock of raw materials and finished product held by the producer, stock of food grains in the possession of the government and the livestock raised by the commercial households. The change in the stock is calculated by comparing the stocks at the beginning of the accounting year with the stocks available at the end of the same year. The balance amount is a capital formation in the country.

2.8.5.9 Foreign Exchange Reserve

Foreign exchange reserves are external assets which are held by a central bank or monetary authority in the form of money or other assets which they can use to pay back liabilities if needed. For example the currency issued by the RBI or various bank reserves with RBI. It serves a variety of purposes but is primarily used to give the central govt. As foreign investment provide technology, management, marketing etc to the host country and helps to increase foreign exchange reserve in that country.

2.8.5.10 Exports

An export is a function of international trade whereby goods produced in one country are shipped to another country for future sale or trade which will be added to gross output of a nation. The export of goods will be added to nation the gross output. The companies export its product and services to other countries for various reasons. Exporting has an ability to increase sales and profits by exporting into new markets. It provides an opportunity to capture the global market share. Companies which are exporting to another country it will diversify business risk into multiple markets. If the country is exporting to foreign market which will help in reducing per unit costs by expanding operations to meet increasing demand. Finally, companies will increase new knowledge and experience which will help them to discover new technologies, marketing and foreign competitors if they are exporting into foreign markets.

2.8.5.11 Imports

An import is a good or service brought into one country from another. The word "import" comes from the word "port" which means goods are shipped via boat to foreign countries. Import and export are backbone of international trade. If the value of import is more export then balance of payment of country will be negative. Import becomes an important part of the development of many countries because there are many goods that domestic industries cannot produce efficiently or cost of producing is more than the cost of importing. For example there are many countries which have to import oil because they cannot produce it domestically or they cannot meet there demand. Agreement like free trade and tariff schedules are made goods and material less expensive to import.

2.8.5.12 Exchange Rate

It is defined as the domestic currency price of a foreign currency matter both in terms of their levels and their volatility. The Exchange rate can influence both the total amount of FDI that takes place and allocation of this investment spending across a range of countries.

2.8.5.13 Inflation

Inflation is defined as a sustained increase in the general level of prices for goods and services. It is measured as an annual percentage increase. As inflation rises, every dollar you own buys a smaller percentage of a good or service. When there is inflation value of a dollar does not stay constant. The Dollar is observed in terms of purchasing power. When inflation goes up, there is a decline in the purchasing power of money.

2.8.5.14 Total Assets Turnover

The total asset turnover helps to measure the company able to create sales if its investment in total assets is given. If the ratio is 3, it means that a company will generate 3 dollars in revenue for every dollar invested in the total asset. In case of capital-intensive businesses will account less total assets as compared to noncapital intensive businesses. The formula for finding out TAT is

$$\text{Total Asset Turnover (TAT)} = \frac{\text{Net Sales}}{\text{Average Total Assets}}$$

2.8.5.15 Equity Turnover

The equity turnover helps to measure the company able to create sales if its investment in total equity is given. If the ratio is 3, it means that a company will generate 3 dollars in revenue for every dollar invested in equity. The formula for finding out ET is

$$\text{Equtiy Turnover (ET)} = \frac{\text{Net Sales}}{\text{Average Total Equity}}$$

2.8.5.16 Return on Investment

Return on Investment is referred as an amount which is expressed in percentage, earned on a company's total capital – its common and preferred stock equity plus its long-term funded debt. Return on Invested capital is termed as return on Investment or ROI is a useful means of comparing companies or corporate division in terms of efficiency of management and viability of product lines. The formula for finding out ROI is

$$\text{Return on Investment(ROI)} = \frac{\text{Quarterly Operating Profit X4}}{\text{Average Invested Capital}} \text{X100}$$

Beside ROI, the investor should invest in assets generating maximum return. Leased assets can generate high ROI but it will be expensive in the long run as compared to purchase of assets. It can also be calculated by

$$\text{Return on Investment (ROI)} = \frac{\text{Net Income}}{\text{Total Assets}}$$

2.8.5.17 Return on equity

Return on equity (ROE) is a measure which shows us how much profit is being returned to the common shareholders equity. It is generally being found out with help of following formula

$$\text{Return on Equity (ROE)} = \frac{\text{Quarterly Operating Profit X4}}{\text{Shareholder's Equity}} \text{ X100}$$

Return on equity (ROE) is also known as rate of return of the shareholder's Investment and can be found out as

$$\text{Return on Equity (ROE)} = \frac{\text{Net Income}}{\text{Shareholder's Equity}}$$

2.8.5.18 Research and Development

The foreign investment and technology help in growth and development of firms which is explored by some of the studies. In the developing countries, it has been noticed that foreign investment helps in developing technology and provide support at companies level. R&D is very important for the growth of the firm. It gives new life to the firm by unfolding new methods of growth. It helps the firm to stand strong in difficult times by opening new product launch, by differentiating the process to distinguish from competitors and teach firmly to adopt unique methods of selling the product. Thus as finance is the life blood of business, R&D act as an oxygen for it. Therefore it is important to have R&D activity in order to make the business sustainable. R&D is amount spend by the firm for its R&D activity.

2.8.5.19 Return on Assets

Return on Assets as dependent variable to indicate accounting-based (i.e. financial) performance. Other accounting measures such as return on sales or return on equity are available but using return on assets enhances our study's comparability with the many previous variance decomposition studies that have used ROA.

2.8.6 Description of Variables

Following is the Description of variables used in the study

Table 2. 4 Description of Variables

Variables	Description
Return on Assets	PBDIT/Total Assets
Size (S)	Natural logarithm of total assets
Age (A)	Number of years since a firm is founded
Current Ratio (CR)	Ratio of current assets to current liabilities
Quick Ratio (QR)	Ratio of quick assets to current liabilities
Debt to Equity Ratio	Total Liabilities to Shareholder Equity
Growth in Sales	Ratio of Current Year to Previous Year of sales
Growth in PAT	Ratio of Current Year to Previous Year of PAT
Growth in Assets	Ratio of Current Year to Previous Year of Assets

(Source: Author Compilation)

2.8.7 Econometric Models

2.8.7.1 Model 1

Foreign Direct Investment inflow and Gross Domestic Product

In first model shows the impact of Foreign Direct Investment inflow (FDII) on Gross Domestic Product (GDP). The Regression Model equation is shown below

$$\mathbf{GDP = \alpha_1 + \beta_1 FDII + e_1}$$

Where,

GDP = Gross Domestic Product

α = constant

β_1 = Slope

FDII =Foreign Direct Investment inflow

e_1 =Error term

2.8.7.2 Model 2

Foreign Direct Investment inflow and Growth Rate of Gross Domestic Product

In Second model shows the impact of Foreign Direct Investment inflow (FDII) on Growth Rate of Gross Domestic Product (GRGDP). The Regression Model equation is shown below,

$$\mathbf{GRGDP = \alpha_2 + \beta_2 FDII + e_2}$$

Where,

GRGDP = Growth Rate of Gross Domestic Product

α_2 = constant

β_2 = Slope

FDII =Foreign Direct Investment inflow

e_2 =Error term

2.8.7.3 Model 3

Foreign Direct Investment inflow and Reserves

In this model the impact of Foreign Direct Investment inflow (FDII) on Reserves. The Regression Model equation is shown below

$$\textbf{Reserves} = \alpha_3 + \beta_3 \textbf{FDII} + e_3$$

Where,

α_3 = constant

β_3 = Slope

FDII =Foreign Direct Investment inflow

e_3 =Error term

2.8.7.4 Model 4

Foreign Direct Investment inflow and Gross Domestic Capital Formation

In this model the impact of Foreign Direct Investment inflow (FDII) on Gross Domestic Capital Formation (GDCF). The Regression Model equation is shown below

$$\textbf{GDCF} = \alpha_4 + \beta_4 \textbf{FDII} + e_4$$

Where,

GDCF = Gross Domestic Capital Formation

α_4 = constant

β_4 = Slope

FDII =Foreign Direct Investment inflow

e_4 =Error term

2.8.7.5 Model 5

Foreign Direct Investment inflow and Exports

In this model the impact of Foreign Direct Investment inflow (FDII) on Exports. The Regression Model equation is shown below

$$\mathbf{Export = \alpha_5 + \beta_5 FDII + e_5}$$

Where,

α_5= constant

β_5 = Slope

FDII =Foreign Direct Investment inflow

e_5 =Error term

2.8.7.6 Model 6

Foreign Direct Investment inflow and Imports

In this model the impact of Foreign Direct Investment inflow (FDII) on Imports. The Regression Model equation is shown below

$$\mathbf{Imports = \alpha_6 + \beta_6 FDII + e_6}$$

Where,

α_6 = constant

β_6 = Slope

$FDII_6$ =Foreign Direct Investment inflow

e_6 =Error term

2.8.7.7 Model 7

Foreign Direct Investment inflow and Exchange Rate

In this model the impact of Foreign Direct Investment inflow (FDII) on Exchange Rate. The Regression Model equation is shown below

$$\textbf{Exchange Rate} = \alpha_7 + \beta_7 \textbf{FDII} + e_7$$

Where,

α_7 = constant

β_7= Slope

FDII =Foreign Direct Investment inflow

e_7=Error term

2.8.7.8 Model 8

Foreign Direct Investment inflow and Inflation

In this model the impact of Foreign Direct Investment inflow (FDII) on Inflation. The Regression Model equation is shown below

$$\textbf{Inflation} = \alpha_8 + \beta_8 \textbf{FDII} + e_8$$

Where,

α_8= constant

β_8 = Slope

FDII =Foreign Direct Investment inflow

e_8 =Error term

2.8.7.9 Model 9

Foreign Investment and Total Asset Turnover

In this model the impact of Foreign Investment on Total Asset Turnover which represent as Operating efficiency of companies is used. The Regression equation is shown below

$$\mathbf{TAT = \alpha_9 + \beta_9 F_9 + e_9}$$

Where,

TAT = Total Asset Turnover

α_9 = constant

β_9 = Slope

FI_9 =Foreign Investment

e_9 =Error term

2.8.7.10 Model 10

Foreign Investment and Equity Turnover

In this model the impact of Foreign Investment on Equity Turnover which represent as Operating efficiency of companies is used. The Regression equation is shown below

$$\mathbf{ET = \alpha_{10} + \beta_{10} FI_{10} + e_{10}}$$

Where,

ET = Equity Turnover

α_{10} = constant

β_{10} = Slope

FI_{10} =Foreign Investment

e_{10} =Error term

2.8.7.11 Model 11

Foreign Investment and Return on Investment

In this model the impact of Foreign Investment on Return on Investment which represent as Managerial efficiency of companies is used. The Regression equation is shown below

$$\mathbf{ROI = \alpha_{11} + \beta_{11} FI_{11} + e_{11}}$$

Where,

ROI = Return on Investment

α_{11}= constant

β_{11} = Slope

FI_{11} =Foreign Investment

e_{11} =Error term

2.8.7.12 Model 12

Foreign Investment and Return on Equity

In this model the impact of Foreign Investment on Return on Equity which represent as Managerial efficiency of companies is used. The Regression equation is shown below

$$\mathbf{ROE = \alpha_{12} + \beta_{12} FI_{12} + e_{12}}$$

Where,

ROE = Return on Equity

α_{12} = constant

β_{12} = Slope

FI_{12} =Foreign Investment

e_{12} =Error term

2.8.7.13 Model 13

Foreign Investment and Research and Development

In this model the impact of Foreign Investment on Research & Development which represent as Technological efficiency of companies is used. The Regression equation is shown below

$$\mathbf{R\&D = \alpha_{13} + \beta_{13} FI_{13} + e_{13}}$$

Where,

R&D = Research & Development

α_{13} = constant

β_{13} = Slope

FI_{13} =Foreign Investment

e_{13} =Error term

2.8.7.14 Model 14

Profitability and Financial Variables for FDI based Companies

There are other studies which analysis the relationship between a firm profitability and its ownership are Taymaz & Ozler,2007; Barbosa & Louri,2005; Kimura & Kyota,2007. The following is the regression specification. In this model profitability of FDI based Companies represented by Return on Assets is regressed with firm financial variables for FDI based Companies. The equation is shown below

$$\mathbf{ROA_{FDI} = \alpha_{14} + \beta_{14} A_{14} + \beta_{14} S_{14} + \beta_{14} CR_{14} + \beta_{14} QR_{14} + \beta_{14} DTER_{14} + \beta_{14} GSales_{14} + \beta_{14} GPAT_{14} + \beta_{14} GAssets_{14} + e_{14}}$$

Where,

ROA_{FDI} = Return on Assets of FDI Based Companies,

α_{14} = Constant

β_{14}= Slope

A14= Age

S14= Size

CR_{14}= Current Ratio

QR_{14} = Quick Ratio

$DTER_{14}$ = Debt to Equity Ratio

$GSales_{14}$ = Growth in Sales

$GPAT_{14}$ = Growth in Profit after Tax

$GAsset_{14}$ = Growth in Assets

e_{14}= Error term.

2.8.7.15 Model 15

Profitability and Financial Variables for Non FDI based Companies

There are other studies which analysis the relationship between a firm profitability and its ownership are Taymaz & Ozler,2007; Barbosa & Louri,2005; Kimura & Kyota,2007. The following is the regression specification. In this model profitability of Non FDI based Companies represented by Return on Assets is regressed with firm financial variables for Non FDI based Companies. The equation is shown below

$$ROA_{NONFDI} = \alpha_{15} + \beta_{15}A_{15} + \beta_{15}Size_{15} + \beta_{15}CR_{15} + \beta_{15}QR_{15} + \beta_{15}DTER_{15} + \beta_{15}GSales_{15} + \beta_{15}GPAT_{15} + \beta_{15}GAssets_{15} + e_{15}$$

Where,

ROA_{NONFDI} = Return on Assets of Non FDI Based Companies

α_{15} = Constant

β_{15}= Slope

A_{15}= Age

S15= Size

CR_{15}= Current Ratio

QR_{15} = Quick Ratio

$DTER_{15}$ = Debt to Equity Ratio

$GSales_{15}$ = Growth in Sales

$GPAT_{15}$ = Growth in Profit after Tax

$GAsset_{15}$ = Growth in Assets

e_{15}= Error term.

2.9 Limitations of the Study

The limitation of the study as follows.

a. The impact of Foreign Direct Investment has been studied on the basis of annual data for the study period due to non availability of monthly or quarterly data study period.

b. The study focuses on only those sectors in India where 100% Foreign Direct Investment capital is allowed.

2.10 Chapterisation

A brief description of each Chapter is as follows.

Chapter 1-Introduction: Introduction, Meaning & Definition of FDI, Types of FDI, Advantages & Disadvantages of FDI, Theories of FDI, Routes of FDI in India, FDI inflows in Equity, FDI inflows in Sectors, FDI inflows in from Countries.

Chapter 2- Review of Literature and Research Methodology: Detail of Review of Literature, Period of study, data sources and collection, tools, econometric models and research hypothesis.

Chapter 3- An Empirical Analysis of the impact of FDI on Indian Economy- At Macro Level: Introduction, analyse and interpretation on the impact of FDI on Indian economy at the macro level.

Chapter 4- Analysis of Foreign Investment and its impact on Efficiency of Indian Sectors: Introduction, analyse and interpretation on the impact of Foreign Investment impact of Operating, Managerial and Technological Efficiency of Indian Companies at Sectoral level.

Chapter 5- Financial Performance of the FDI and Non-FDI based Companies - A Comparative Analysis: Introduction, analyse and interpretation on Financial Performance of FDI based Companies and Non-FDI based Companies.

Chapter 6-Summary, Findings, and Conclusion: Summary, findings of the study, conclusion, suggestion and scope for further research.

CHAPTER -3

AN EMPIRICAL ANALYSIS OF IMPACT OF FDI ON INDIAN ECONOMY AT MACRO LEVEL

3.1 Introduction

FDI is playing a very important role in the growth and development of any economy. It contributes to international trade, technology spillover, human capital formation, creating a competitive business environment, employment opportunity which will help in the development of enterprise & countries. It is considered as one of the major sources of economic change irrespective of its growth status in the globalised world but too much reliance on FDI is not good for the growth of any economy because it has an impact on the economy in long run.

In the present chapter, an attempt has been made to analyse the impact of Foreign Direct Investment on Indian economy at macro level. The time period for the study is starting from 1995 to 2016. The macro economic variables consider are GDP, GRGDP, Foreign Reserves, Gross Domestic Capital Formation, Export, Import, Exchanges rate and Inflation. The data is analysed with the help of various statistical tools like Descriptive, Correlation, Regression Analysis, Granger Causality test. This is followed by analysis and interpretation of data.

3.2 Analysis and Interpretation

3.2.1 Sargan's test for selection of functional form

Sargan's test is used to find out among linear or log-linear forms which functional forms will be used in the study for analyzing the results. It will help to avoid misspecification of functional forms which may result in spurious result. The table below shows that functional forms used in this study.

Table 3. 1 Linear and Log Linear Model

Linear	Log Linear
GDP = $\alpha_1+\beta_1$FDII+ e_1	LGDP = $\alpha_1+\beta_1$ LFDII+ e_1
GRGDP = $\alpha_2+\beta_2$FDII+ e_2	LGRGDP = $\alpha_2+\beta_2$ LFDII+ e_2
Reserves = $\alpha_3+\beta_3$FDII+ e_3	L Reserves = $\alpha_3+\beta_3$ LFDII+ e_3
GDCF= $\alpha_4+\beta_4$FDII+ e_4	LGDCF= $\alpha_4+\beta_4$ LFDII+ e_4
Export= $\alpha_5+\beta_5$FDII+ e_5	L Export= $\alpha_5+\beta_5$ LFDII+ e_5
Import = $\alpha_6+\beta_6$FDII+ e_6	L Import = $\alpha_6+\beta_6$ LFDII+ e_6
Exchange Rate = $\alpha_7+\beta_7$FDII+ e_7	L Exchange Rate = $\alpha_7+\beta_7$ LFDII+ e_7
Inflation = $\alpha_8+\beta_8$FDII+ e_8	L Inflation = $\alpha_8+\beta_8$LFDII+ e_8

Source: Author Compilation

In above table 'L' represent logarithmic value of the series where as α and β are representing the parameters of the models. In order to choose between the alternative functional by Godfrey and Wicknes (1984).

The Sargan's Criterion can be established as:

$$S = [RSS (L)/\{RSS (LL)*GM (DV)\}]n$$

where, RSS (L) is the residual sum of squares from the linear estimation, RSS (LL) is the residual sum of squares from the log-linear estimation, GM (DV) is the Geometric Mean of the dependent variable of the linear estimation and 'n' is the number of observations.

Table 3. 2 Result of Sargan test

Variables	RSS(L)	RSS(LL)	GM(DV)	n	S = [RSS (L)/{RSS (LL)*GM (DV)}]n
GDP	2683532	0.97717	878.2825	21	2.49573E+73
GRGDP	1796579	0.9358	782.5385	21	1.53087E+71
RESERVE	4.61E+22	2.00227	1.14E+11	21	2.6924E+237
GDCF	228.598	0.17078	30.1962	21	3.80585E+34
EX	1.41E+11	1.47803	143024.9	21	2.0259E+122
IM	2.24E+11	1.54253	173838.5	21	2.2867E+124
EX RATE	806.794	0.05618	103.0433	21	1.06509E+45
INFL	46390.56	0.97807	130.362	21	6.01292E+53

Source: Author Compilation

According to the Sargan's Criterion, if the calculated 'S' value is greater than one (i.e., S> 1), the log-linear functional form is preferred over the linear functional form. On the other hand, when the calculated 'S' value is less than one (i.e., S<1), the linear functional form is supposed to be the appropriate functional form between the two. Since the values of Sargan's test is more than 1 for all variables, we will be using log-linear function over linear function.

3.2.2 Descriptive test

The descriptive test is used to describe data used in the study. It will provide average size and deviation of individual values from means value. Mean is used to find out the average value of data. The standard deviation is used to deviation from the central value. Skewness measures the shape of data whereas kurtosis measures the Preakness of data used in the study. The descriptive statistics are shown below.

Table 3. 3 Descriptive tests

	LFDII	LGDP	LGRGDP	LRESE	LGDCF	LEX	LIMP	LEXCH	LINFL
Mean	9.23	6.78	6.66	25.46	3.41	11.87	12.07	4.64	4.87
Median	8.94	6.73	6.58	25.65	3.47	11.95	12.11	4.60	4.76
Maximum	10.76	7.88	7.55	26.51	3.64	13.09	13.30	4.84	5.88
Minimum	7.67	5.90	5.56	23.85	3.09	10.55	10.78	4.53	4.21
Std. Dev.	1.12	0.65	0.65	1.01	0.18	0.96	0.96	0.09	0.44
Skewness	-0.06	0.16	0.09	-0.39	-0.23	-0.02	0.05	0.79	0.57
Kurtosis	1.34	1.53	1.61	1.51	1.48	1.40	1.35	2.43	2.57
Jarque-Bera	2.43	1.99	1.71	2.47	2.19	2.25	2.39	2.47	1.29
Probability	0.30	0.37	0.43	0.29	0.33	0.33	0.30	0.29	0.53
Sum	193.92	142.34	139.91	534.60	71.56	249.29	253.38	97.34	102.28
Sum Sq. Dev.	25.22	8.43	8.33	20.33	0.68	18.31	18.42	0.16	3.84
Observations	21	21	21	21	21	21	21	21	21

Source: Author Compilation

The above table 3.3 describes that variables used in the study. Mean is used to find out the average value for the data which is positive for all the variables. Skewness can be negative or positive depending on whether the data points are skewed to the left (negative) or skewed to the right (positive) of the mean of the distribution. In the above table that the LFDII, L Reserve, LGDCF and L Export are negatively skewed implying that it can be estimated that the future data points of the two variables will be less than the mean whereas other variables in the study are found to be positively skewness indicating that estimation can be made of the future data points of these variables will be more than the mean. The kurtosis values for all the variables in the study are found positive. The value of variables are less it is known as Lepto kurtic distribution which is sharper than normal distribution with the value concentrated around mean and thicker tails.

3.2.3 Correlation

The correlation used to show the relationship exists between the variables is strong or weak. In the table 3.4 correlation between LFDI and LGDP (0.84), LGRGDP (0.86), Reserves (0.92), LGDCF (0.79), Export (0.87), Import (0.87), Exchange Rate (0.74), Inflation (0.74) has a strong positive correlation.

Table 3. 4 Correlation

	LFDI	LGDP	LGRGDP	L Reser	LGDCF	L Exports	L Imports	L Exchange	L Inflation
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
LGDP	1								
LGRGDP	0.84	1							
L Reserve	0.86	0.98	1						
LGDCF	0.92	0.94	0.94	1					
L Export	0.79	0.71	0.71	0.86	1				
L Import	0.87	0.98	1.00	0.95	0.74	1			
L Exc. rate	0.87	0.97	1.00	0.95	0.73	1.00	1		
L Inflation	0.74	0.96	0.92	0.87	0.64	0.92	0.92	1	
Inflation	0.74	0.96	0.92	0.84	0.55	0.91	0.91	0.93	1

Source: Author Compilation

3.2.4 Regression Analysis

Regression is used to know how independent variable explaining dependent variable. R^2 should be more than 60% which means that the data of variables used for the study are of very high reliability. t- Statistics states that independent variables should be individually significant to explain dependent variables. F- Statistic show wither all independent variables have jointly powerful to affect the dependent variable.

Table 3. 5 Regression Results (FDI as Independent Variable)

Variable	Coefficients	Standard Error	t-Statistics	R^2	Durbin-Watson stat
1	2	3	4	5	6
LGDP	0.543	0.045	12.037***	0.88	0.93
LGRGDP	0.541	0.044	12.255***	0.88	0.64
L Reserve	0.852	0.064	13.186***	0.90	1.03
LGDCF	0.142	0.018	7.544***	0.74	1.17
L Export	0.817	0.055	14.711***	0.91	0.90
L Import	0.818	0.056	14.418***	0.91	0.91
L Exchange rat	0.063	0.010	5.843***	0.64	0.98
L Inflation	0.336	0.045	7.457***	0.74	0.47

Source: Author Compilation ***sig at 1%

In the table 3.5 show that for all variables, R2 ranges between 0.64% to 0.91% which explains the how much variation cause by independent variables independent. t- Statistics states that variables should be individually significant to explain dependent variables in the above table all variables P value are less than 5% which shows that they are significant at 1%. The analysis further reveals that the value of Durbin-Watson statistics is very low i.e between 0 to 1 which shows that there is no autocorrelation in the sample.

3.2.5 Granger Causality Test

Granger causality test is used for testing of one variable whether it is useful in forecasting other variables. It shows that whether there is a relationship between dependent and independent variables or not.

Table 3. 6 Granger Causality Test

Null Hypothesis	F-Statistic	Prob.	Result
1	2	3	4
LGDP does not Granger Cause LFDI	6.81064	0.0086	Reject
LFDI does not Granger Cause LGDP	0.45007	0.6465	Accept
LGRGDP does not Granger Cause LFDI	0.50862	0.612	Accept
LFDI does not Granger Cause LGRGDP	1.37659	0.2846	Accept
L Reserve does not Granger Cause LFDI	4.72096	0.0271	Reject
LFDI does not Granger Cause L Reserve	1.64663	0.2279	Accept
LGDCF does not Granger Cause LFDI	7.31647	0.0067	Reject
LFDI does not Granger Cause LGDCF	0.0131	0.987	Accept
L Export does not Granger Cause LFDI	3.43211	0.0612	Reject
LFDI does not Granger Cause L Export	1.50229	0.2564	Accept
L Import does not Granger Cause LFDI	3.35458	0.0645	Reject
LFDI does not Granger Cause L Import	1.39605	0.28	Accept
L Exchange rate does not Granger Cause LFDI	1.5478	0.247	Accept
LFDI does not Granger Cause L Exchange rate	1.77268	0.2059	Accept
L Inflation does not Granger Cause LFDI	1.42635	0.273	Accept
LFDI does not Granger Cause L Inflation	0.14654	0.865	Accept

Source: Author Compilation

Table 3.6 shows the Granger Causality test results. These are the Null hypotheses of the observations. If the probability is less than 5% i.e. P<5% than we reject the null hypothesis. Each hypothesis has 21 observations and the table also show F- statistic. LGDP and LFDI, L Reserve and LFDI, LGDCF and LFDI, L Export and LFDI, L Import and LFDI P-value is less than 5% hence we reject the null hypothesis and accept alternative hypothesis i.e. LGDP, L Reserve, LGDCF, L Export, L Import has impact on LFDI and it shows that unidirectional causality exist among these variables. On other hand variables like LGRGDP, L Exchange rate, L Inflation and LFDI are independent of each other.

3.3 Testing of Hypothesis

The hypothesis testing result are shown below

Table 3. 7 Testing of Hypothesis

Sr.No.	Hypothesis	P value	Accept/ Reject
1	FDI inflows do not have a statistically significant impact on the Gross Domestic Product.	12.037***	Accept
2	FDI inflows do not have a statistically significant impact on the Growth Rate Gross Domestic Product	12.255***	Accept
3	FDI inflows do not have a statistically significant impact on the Foreign Exchange Reserves.	13.186***	Accept
4	FDI inflows do not have a statistically significant impact on the Gross Capital Formation.	7.544***	Accept
5	FDI inflows do not have a statistically significant impact on the Exports.	14.711***	Accept
6	FDI inflows do not have a statistically significant impact on the Imports	14.418***	Accept
7	FDI inflows do not have a statistically significant impact on the Exchange Rate.	5.843***	Accept
8	FDI inflows do not have a statistically significant impact on the Inflation.	7.457***	Accept

Source: Author Compilation ***sig at 1%

3.4 Conclusion

The objective is to study the impact of FDI on Indian Economy at the Macro level. The study shows that variables used are Gross Domestic Product, the Growth rate in Gross Domestic Product, Reserve, Gross Domestic capital formation, Export, Import, Exchange rate and Inflation included in the study are statistically significant. The tools used in the study are Sargen's test, Descriptive test, Correlation, Regression Analysis and Granger causality test.

The descriptive teat shows that the average mean value is positive for all the variables in the study whereas Skewness of the variables like LFDII, L Reserve, LGDCF and L Export are negatively skewed implying that it can be estimated that the future data points of the two variables will be less than the mean whereas other variables in the study are found to be positively skewness indicating that estimation can be made of the future data points of these variables will be more than the mean. The kurtosis values for all the variables in the study are found positive. The value of variables are less it is known as Lepto kurtic distribution which is sharper than a normal distribution with the value concentrated around mean and thicker tails.

The correlation is used to study how strong relationship exists between the variables in the study. The correlation between FDI and GDP (0.84), GRGDP (0.86), Reserves (0.92), GDCF (0.79), Export (0.87), Import (0.87), Exchange Rate (0.74), Inflation (0.74) has a strong positive correlation

The Regression analysis shows that the R^2 ranges between 0.64% to 0.91% in the given data set which explains the how much variation cause by independent variables independent. t- Statistics states that variables should be

individually significant to explain dependent variables. The study concluded that variables P value are less than 5% which shows that they are significant at 1%. The analysis further reveals that the value of Durbin-Watson statistics is very low i.e between 0 to 1 which shows that there is no autocorrelation in the sample.

The Granger causality test results show that there is unidirectional causality between Gross Domestic Product and Foreign Direct Investment, Reserves and Foreign Direct Investment, Gross Domestic Capital Formation and Foreign Direct Investment, Export and Foreign Direct Investment, Import and Foreign Direct Investment which means Gross Domestic Product, Reserves, Gross Domestic Capital Formation, Export and Import will cause changes in Foreign Direct Investment not vice versa Whereas the relation between Growth rate in Gross Domestic Product and Foreign Direct Investment, Exchange rate and Foreign Direct Investment, Inflation and Foreign Direct Investment is found to be independent to each other.

It is found that FDI has an impact on macroeconomic variables Gross Domestic Product, the Growth rate in Gross Domestic Product, Foreign Reserve, Gross Domestic capital formation, Export, Import, Exchange rate and Inflation in the study. It also reveals that FDI is a significant factor influencing economic growth of developing country like India. (Shahzad, 2013; Barua, 2013; Mahanta,2012; Mahapatra & Patra 2014)

India is an attractive destination for the FDI inflows despite troubles in the world economy due to flexible investment opportunities and Indian FDI policies.

CHAPTER-4

FOREIGN INVESTMENT AND ITS IMPACT ON EFFICIENCY OF INDIAN SECTORS

4.1 Introduction

The present chapter focus on the impact of Foreign Investment on Operating, Managerial and technological efficiency of FDI based companies in selected sectors of India. FDI based companies are those companies where foreign shareholding is 10% or more than 10% of ordinary shares as per the IMF definition. Foreign Investment is taken as Independent variable and other variables which represent operating, managerial and technological efficiency are taken as dependent variables. ADF test is done to know the stationary of data and data found to be stationary at the level, first difference and some at the second difference. The analysis has been carried out for the companies on an individual basis. There are total 217 FDI based companies which are considered in the study from 2007-2016 (10 years). Simple regression analysis has been run by using E-Views for assessing the impact of FDI on the sectors in India.

4.2 Analysis and Interpretation

4.2.1 Operating Efficiency

Foreign investments are playing a very important role in the short and long-term development of Indian sectors. One of the factors which determine growth is Operating Efficiency. Operating efficiency is defined as the ratio between outputs (revenue, Margin, cash, quality, and customer loyalty) gained

from business and input (cost, peoples) for running the business operations. When operating efficiency of business is improved, it shows that the output and input ratio is improved. To study the impact of foreign investment on Operating efficiency of Indian selected sectors, Total Assets Turnover and Equity Turnover is taken as indicators. This part will examine foreign investment impact on operating efficiency with the help of regression techniques in FDI based companies of selected sectors in India.

4.2.1.1 Food and Agriculture Sector

Table 4.1, shows the result of regression analysis of 22 FDI based companies in Food and Agriculture Sector for the study period to examine the impact of Foreign Investment on Total Assets Turnover and Equity Turnover along with constant and coefficient P-Value. Total Assets Turnover and Equity Turnover have been considered an indicator which will explain operating efficiency of FDI based companies in Food and Agriculture Sector in the study. If Foreign Investment has an impact on Total Assets Turnover and Equity Turnover which means that it plays very important role in the financial performance of FDI based companies in terms of Operating efficiency.

Table 4.1 Operating Efficiency of FDI based Companies in Food and Agriculture Sector

Sr.No	Name of FDI Based Companies	Total Assets Turnover						Equity Turnover					
		const	*t-Stat*	*p-value*	*Coefficient*	*t- Stat*	*p-value*	*const*	*t- Stat*	*p-value*	*Coefficient*	*t- Stat*	*p-value*
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*
1	Agro Tech Foods Ltd.	-0.01	-2.21	0.05*	0.0003	3.39	0.009***	77.18	1.73	0.12272	-0.89	-0.99	0.34932
2	Assam Company India Ltd.	0.00	-0.54	0.60705	0.0002	1.67	0.13287	5.27	1.06	0.32044	0.05	0.41	0.69466
3	Britannia Industries Ltd.	-0.50	-3.41	0.009***	0.0099	3.43	0.008***	34321.00	5.08	0.0009***	-670.67	-5.05	0.0009***
4	Dharani Sugars & Chemicals	0.02	5.77	0.0004***	-0.0007	-4.33	0.002***	-11.83	-0.56	0.58875	1.35	1.36	0.21048
5	Glaxosmithkline Consumer	0.01	6.54	0.0001***	-0.0062	-3.88	0.004***	-38.96	-1.91	0.09*	1.99	5.54	0.0005***
6	Godfrey Phillips India Ltd.	0.00	-2.33	0.047**	0.0003	5.41	0.0006***	747.65	6.78	0.0001***	-15.72	-4.10	0.003***
7	Goodricke Group Ltd.	0.01	10.61	0.00001***	-	-	-	20.64	8.24	0.00002***	-	-	-
8	Harrisons Malayalam Ltd.	0.01	33.52	0.00001***	-	-	-	16.63	15.80	0.00001***	-	-	-
9	Kore Foods Ltd.	-0.53	-1.08	0.31107	0.0437	2.21	0.05817	0.06	0.26	0.80493	0.01	0.67	0.52335
10	Lotte India Corpn. Ltd.	0.02	6.17	0.0002***	0.0003	3.92	0.004***	36.47	10.16	0.00001***	0.11	1.37	0.20659
11	Mcleod Russel India Ltd.	0.00	1.76	0.11625	0.0000	1.40	0.1994	124.88	2.56	0.033**	-4.16	-2.13	0.065*
12	Monsanto India Ltd.	-6.08	-1.74	0.11928	0.0845	1.75	0.11863	-63452.2	-1.68	0.13145	880.02	1.68	0.13126
13	Nestle India Ltd.	0.08	5.72	0.0004***	-0.0012	-5.62	0.0005***	-3051.03	-5.48	0.0005***	50.01	5.61	0.0005***
14	Ovobel Foods Ltd.	0.06	5.83	0.0003***	-0.0010	-1.39	0.20127	2.61	0.99	0.35272	0.33	1.69	0.13026
15	Ponni Sugars (Erode) Ltd.	0.01	4.39	0.002***	-0.0001	-0.25	0.81022	33.33	3.30	0.01079	-1.12	-0.99	0.35022
16	Shree Renuka Sugars Ltd.	0.00	4.01	0.003***	0.0000	-1.02	0.33862	80.32	10.09	0.00001***	-0.59	-0.92	0.38633
17	Tarai Foods Ltd.	0.43	14.66	0.00001***	-	-	-	0.15	12.23	0.00001***	-	-	-
18	United Breweries Ltd.	0.00	1.44	0.18815	0.0000	-0.98	0.35451	-682.82	-1.48	0.17698	23.16	1.91	0.092*
19	United Spirits Ltd.	0.00	9.08	0.00002***	0.0000	-2.25	0.0543*	82.37	8.22	0.00004***	1.39	3.85	0.004***
20	V S T Industries ltd	0.01	10.45	0.00001***	-	-	-	88.57	9.78	0.00001***	-	-	-
21	Warren Tea Ltd.	0.03	5.80	0.0004***	0.0001	-1.97	0.0837*	4.12	0.71	0.49643	0.22	1.83	0.10489
22	Winsome breweries Ltd	0.05	42.97	0.00001***	-0.0006	-4.15	0.003***	1.66	6.22	0.0002***	0.07	2.00	0.080*

(Source: Author Compilation)

The summery of regression results of foreign investment on Total Assets Turnover as shown in table 4.1, shows that in case of 11 Companies out of 22 FDI based companies in Food and Agriculture Sector, foreign investment has a significant impact of Total Assets Turnover at 1% level of significance. They are Agro Tech Foods Ltd, Britannia Industries Ltd, Dharani Sugars & Chemic, Glaxosmithkline Consumer, Godfrey Phillips India Ltd, Lotte India Corpn. Ltd, Nestle India Ltd. Tarai Foods Ltd. V S T Industries Ltd. Warren Tea Ltd and Winsome Breweries Ltd. Similarly, Kore Foods Ltd and United Spirits Ltd companies foreign investment are influencing Total Assets Turnover at a 5% significant level and no company found to be significant at 10% level of significance. While examining the foreign investment impact on ET, the regression results show that in case of 9 Companies out of 22 FDI based companies in Food and Agriculture Sector, foreign investment has a significant impact of Equity Turnover at 1% level of significance is Britannia Industries Ltd. Glaxosmithkline Consumer, Godfrey Phillips India Ltd, Goodricke Group Ltd, Harrisons Malayalam Ltd. Nestle India Ltd. Tarai Foods Ltd. United Spirits Ltd. V S T Industries Ltd. Mcleod Russel India Ltd, Winsome Breweries Ltd, and United Breweries Ltd are found to be significant at 5%.

Table 4. 2 List of Significant companies in Food and Agriculture sector

At 1% Significance		At 5% Significance		At 10% Significance	
1		2		3	
Total Assets Turnover	Equity Turnover	Total Assets Turnover	Equity Turnover	Total Assets Turnover	Equity Turnover
Agro Tech Foods Ltd	Britannia Industries Ltd.	Kore Foods Ltd	Mcleod Russel India Ltd	-	-
Britannia Industries Ltd	Glaxosmithkline Consumer	United Spirits Ltd	Winsome Breweries Ltd	-	-
Dharani Sugars & Chemic	Godfrey Phillips India Ltd	-	United Breweries Ltd	-	-
Glaxosmithkline Consumer	Goodricke Group Ltd	-	-	-	-
Godfrey Phillips India Ltd	Harrisons Malayalam Ltd	-	-	-	-
Lotte India Corpn. Ltd	Nestle India Ltd	-	-	-	-
Nestle India Ltd.	Tarai Foods Ltd.	-	-	-	-
V S T Industries Ltd	United Spirits Ltd	-	-	-	-
Warren Tea Ltd	V S T Industries Ltd	-	-	-	-
Winsome Breweries Ltd.	-	-	-	-	-

(Source: CMIE-Prowess & Author Compilation)

Companies like Assam Company India Ltd, Goodricke Group Ltd, Harrisons Malayalam Ltd, Mcleod Russel India Ltd, Monsanto India Ltd. Ovobel Foods Ltd. Ponni Sugars (Erode) Ltd. Shree Renuka Sugars Ltd and United Breweries Ltd does not shown any impact of foreign investment on Total Assets Turnover. In case of equity turnover some companies' does not show any impact of foreign investment in Agro Tech Foods Ltd, Assam Company India Ltd. Dharani Sugars & Chemic, Kore Foods Ltd. Lotte India Corpn. Ltd. Monsanto India Ltd. Ovobel Foods Ltd. Ponni Sugars (Erode) Ltd. Shree Renuka Sugars Ltd and Warren Tea Ltd.

Table 4. 3 List of not significant companies in Food and Agriculture sector

Total Assets Turnover	Equity Turnover
1	**2**
Assam Company India Ltd	Assam Company India Ltd.
Goodricke Group Ltd	Dharani Sugars & Chemic,
Harrisons Malayalam Ltd	Kore Foods Ltd.
Mcleod Russel India Ltd	Lotte India Corpn. Ltd.
Monsanto India Ltd	Monsanto India Ltd
Ovobel Foods Ltd	Ovobel Foods Ltd
Ponni Sugars (Erode) Ltd	Ponni Sugars (Erode) Ltd.
Shree Renuka Sugars Ltd	Shree Renuka Sugars Ltd.
United Breweries Ltd	Tech Foods Ltd And
	Warren Tea Ltd

(Source: CMIE-Prowess & Author Compilation)

Overall out of 22 FDI based companies, 13 companies in Total Assets Turnover and 12 companies in Equity Turnover are shows statically significant impact of foreign investment on their operating efficiency Hence null hypothesis is rejected hypothesis i.e. Foreign Investment does not have a statistically significant impact on Operating Efficiency of FDI based companies in Food and Agriculture Sector.

4.2. 1.2 Textile Sector

The result of regression analysis of 18 FDI based companies in Textile Sector is shown in below table 4.4

Table 4. 4 Operating Efficiency of FDI based Companies in Textile Sector

Sr.No	Name of FDI Based Companies	Total Assets Turnover						Equity Turnover					
		const	*t-Stat*	*p-value*	*Coefficient*	*t- Stat*	*p-value*	*const*	*t-Stat*	*p-value*	*Coefficient*	*t- Stat*	*p-value*
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*
1	Aunde India Ltd.	0.75	10.27	0.00001***	-	-	-	8.23	7.10	0.00006***	-	-	-
2	Birla Cotsyn (India) Ltd.	0.57	3.18	0.01542**	-0.0001	-0.005	0.99594	4.28	4.87	0.0018***	-0.25	-2.69	0.0313**
3	Bombay Rayon Fashions Ltd.	0.46	10.85	0.00001***	-0.0018	-1.139	0.28764	14.80	7.63	0.00006***	0.26	3.57	0.007***
4	E-Land Apparel Ltd.	0.60	4.12	0.0033***	0.0018	0.5853	0.57448	7.95	8.15	0.00004***	-0.04	-2.12	0.06663*
5	Gokaldas Exports Ltd.	1.32	6.29	0.00023	0.0025	0.7441	0.47811	60.23	17.41	0.00001***	0.05	0.89	0.39948
6	Golden Carpets Ltd.	0.10	4.00	0.00393***	0.0015	0.7986	0.44759	0.19	3.46	0.0086***	0.00	-0.16	0.87458
7	Indian Card Clothing Co. Ltd.	0.53	30.88	0.00001***	-	-	-	13.74	18.77	0.00001***	-	-	-
8	Indo Count Inds. Ltd.	4.47	5.04	0.001***	-0.0960	-3.907	0.004***	165.99	5.44	0.0006***	-3.93	-4.65	0.0016***
9	Indo Rama Synthetics (India)	4.19	2.98	0.0175**	-0.0996	-2.096	0.0692*	35.46	3.68	0.006***	-0.57	-1.74	0.11915
10	Page Industries Ltd.	1.33	1.52	0.16636	0.0020	0.1067	0.91765	-116.1	-0.84	0.42293	3.91	1.35	0.21412
11	Pearl Global Inds. Ltd.	0.95	3.40	0.009***	-0.0176	-1.54	0.15999	24.97	3.23	0.0120**	-0.47	-1.49	0.17471
12	Polygenta Technologies Ltd.	0.04	0.68	0.51673	0.0031	2.8434	0.0217**	0.08	0.40	0.69931	0.01	2.37	0.045**
13	R S W M Ltd.	0.04	0.68	0.51673	0.0031	2.8434	0.0217**	0.08	0.40	0.69931	0.01	2.37	0.045**
14	Rainbow Denim Ltd	1.19	14.35	0.00001***	-	-	-	91.42	8.55	0.00001***	-	-	-
15	Uniworth Ltd	2.59	5.12	0.0009***	-0.0513	-3.119	0.014**	16.53	2.29	0.0513*	-0.20	-0.84	0.42761
16	Uniworth Textiles Ltd.	0.32	8.54	0.00001***	-	-	-	1.77	9.39	0.00001***	-	-	-
17	Voith Paper Fabrics India Ltd.	0.52	22.81	0.00001***	-	-	-	16.16	8.47	0.00001***	-	-	-
18	Zodiac Clothing Co. Ltd.	0.46	1.02	0.33747	0.0198	1.6278	0.14222	-67.62	-3.41	0.009***	2.45	4.55	0.001***

(Source: Author Compilation)

The summery of regression results show that 13 Companies out of 18 FDI based companies in Textile Sector are showing a significant impact of foreign investment on Total Assets Turnover in companies like Aunde India Ltd. E-Land Apparel Ltd. Golden Carpets Ltd. Indian Card Clothing Co. Ltd. Indo Count Inds. Ltd. Pearl Global Inds. Ltd. Rainbow Denim Ltd Uniworth Textiles Ltd and Voith Paper Fabrics India at 1% level of significance. However companies like Polygenta Technologies Ltd. R S W M Ltd and Uniworth Ltd are found to be statically significant at 5 %, whereas Indo Rama Synthetics (India) is significant at 10% level of significance.

However, while examining the impact of foreign investment on ET of Textile sector, the regression results show that 14 Companies out of 18 FDI based companies in Textile Sector is found to be significant at1% level of significance are Aunde India Ltd, Bombay Rayon Fashions Ltd. Golden Carpets Ltd. Indian Card Clothing Co. Ltd. Indo Count Inds. Ltd. Rainbow Denim Ltd Uniworth Textiles Ltd. Voith Paper Fabrics India, Zodiac Clothing Co. Ltd. Whereas Birla Cotsyn (India) Ltd. Pearl Global Inds. Ltd Polygenta Technologies Ltd.R S W M Ltd. is found to be significant at 5% and E-Land Apparel Ltd. is significant at 10%.

Table 4. 5 List of Significant companies in Textile sector

At 1% Significance		At 5% Significance		At 10% Significance	
1		2		3	
Total Assets Turnover	**Equity Turnover**	**Total Assets Turnover**	**Equity Turnover**	**Total Assets Turnover**	**Equity Turnover**
Aunde India Ltd	Aunde India Ltd	Polygenta Technologies Ltd. and	Birla Cotsyn (India) Ltd.	Indo Rama Synthetics (India)	E-Land Apparel Ltd.-
E-Land Apparel Ltd.	Bombay Rayon	R S W M Ltd	Pearl Global Inds. Ltd	-	-
Golden Carpets Ltd	Fashions Ltd.	Uniworth Ltd	Polygenta Technologies Ltd.	-	-
Indian Card Clothing Co. Ltd.	Golden Carpets Ltd.	-	R S W M Ltd.	-	-
Indo Count Inds. Ltd.	Indian Card Clothing Co. Ltd.	-	-	-	-
Pearl Global Inds.	Indo Count Inds. Ltd.	-	-	-	-
Rainbow Denim Ltd	Rainbow Denim Ltd	-	-	-	-
Uniworth Textiles Ltd	Uniworth Textiles Ltd	-	-	-	-
Voith Paper Fabrics India	Voith Paper Fabrics India	-	-	-	-
	Zodiac Clothing Co. Ltd	-	-	-	-

(Source: CMIE-Prowess & Author Compilation)

Some FDI based companies which do not show any impact of foreign investment are Birla Cotsyn (India) Ltd, Bombay Rayon Fashions Ltd. Gokaldas Exports Ltd. Page Industries Ltd. Zodiac Clothing Co. Ltd whereas for equity turnover some companies' does not show any impact of foreign investment is Gokaldas Exports Ltd. Indo Rama Synthetics (India), Page Industries Ltd. Uniworth Ltd.

Table 4. 6 List of not significant companies in Textile sector

Total Assets Turnover	Equity Turnover
1	**2**
Birla Cotsyn (India) Ltd	Gokaldas Exports Ltd.,.
Bombay Rayon Fashions Ltd	Indo Rama Synthetics (India)
Gokaldas Exports Ltd.	Page Industries Ltd
Page Industries Ltd.	Uniworth Ltd.
Zodiac Clothing Co. Ltd	-

(Source: CMIE-Prowess & Author Compilation)

Overall out of 18 FDI based companies, 13 companies in Total Assets Turnover and 14 companies in Equity Turnover are shows statically significant impact of foreign investment on their operating efficiency Hence null hypothesis is rejected hypothesis i.e. Foreign Investment does not have a statistically significant impact on Operating Efficiency of FDI based companies in Textile Sector.

4.2. 1.3 Pharmaceutical Sector

Table 4.7 shows the result of 26 FDI based companies in Textile Sector. The summery of regression results on the impact of foreign investment on TAT as shown in table 4.7, shows that 15 Companies out of 26 FDI based companies in Pharmaceutical Sector, foreign investment shows a significant impact of Total Assets Turnover in Astrazeneca Pharma India Caprolactam Chemicals Ltd. Cirex Pharmaceuticals Ltd. Essel Propack Ltd, Ester Industries Ltd. Foseco India Ltd. Kerala Ayurveda Ltd. Kingfa Science & Technol National Oxygen Ltd, Rubber Products Ltd and Supreme Industries Ltd. at 1% level of significance. Whereas companies like Abbott India Ltd. Biofil Chemicals, Elantas Beck India Ltd. Gulshan Chemicals Ltd and Lincoln Pharmaceuticals Ltd at a statically significant level of 5% whereas Gujarat Polybutenes Pvt. is significant at 10% level of significance.

Table 4.7 Operating Efficiency of FDI based Companies in Pharmaceutical Sector

Sr.No	Name of FDI Based Companies	Total Assets Turnover						Equity Turnover					
		const	*t-Stat*	*p-value*	*Coefficient*	*t- Stat*	*p-value*	*const*	*t- Stat*	*p-value*	*Coefficient*	*t- Stat*	*p-value*
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*
1	Abbott India Ltd.	5.14	4.36	0.0024***	-0.05	-3.27	0.011**	-343.28	-3.55	0.0075***	5.88	4.34	0.002***
2	Astrazeneca Pharma India Ltd.	1.29	5.73	0.0004***	0.00	0.35	0.73375	1.29	5.73	0.0004***	0.00	0.35	0.73375
3	Biofil Chemicals & Pharm Ltd.	-19.2	-2.45	0.039**	0.95	2.49	0.037**	-34.41	-5.15	0.0008***	1.69	5.20	0.0008***
4	Caprolactam Chemicals Ltd.	1.11	9.58	0.00001***	-	-	-	0.49	4.06	0.002***	-	-	-
5	Cheryl Laboratories Pvt. Ltd.	0.20	1.50	0.16807	-	-	-	11.16	1.49	0.17121	-	-	-
6	Cirex Pharmaceuticals Ltd.	18.82	4.24	0.002***	-0.85	-4.07	0.003***	745.01	1.57	0.15392	-33.34	-1.50	0.17176
7	Clarion Drugs Ltd.	33.82	0.63	0.54425	-0.53	-0.63	0.54888	175.81	0.64	0.54147	-2.74	-0.63	0.54612
8	Dharamsi Morarji Chemical.	0.38	1.09	0.3081	0.02	1.36	0.21206	7.24	1.76	0.1163	-0.05	-0.32	0.75796
9	Dutron Polymers Ltd.	-73.5	-1.48	0.17618	5.10	1.49	0.17485	-1269	-1.61	0.14617	88.06	1.62	0.14495
10	Elantas Beck India Ltd.	3.44	3.73	0.005***	-0.02	-2.19	0.059*	134.51	5.90	0.0003***	-1.20	-4.37	0.002***
11	Essel Propack Ltd.	0.17	2.61	0.030**	0.02	5.62	0.0005***	7.14	5.19	0.00083***	0.73	8.31	0.00003***
12	Ester Industries Ltd.	1.29	19.67	0.00001***	0.00	1.10	0.3029	27.90	15.10	0.00001***	-0.65	-5.08	0.0009***
13	Fairchem Speciality Ltd.	0.94	0.58	0.57528	0.01	0.35	0.73829	-6.86	-0.45	0.66318	-6.86	-0.45	0.66318
14	Foseco India Ltd.	1.27	3.68	0.006***	0.00	0.29	0.77895	21.13	3.10	0.014**	0.09	0.30	0.77503
15	G O C L Corpn. Ltd.	-0.23	-0.16	0.8804	0.01	0.60	0.56374	-26.94	-0.35	0.73481	1.00	0.99	0.35323
16	G P Petroleums Ltd.	0.06	0.11	0.9163	0.03	2.48	0.038**	9.31	0.87	0.41077	0.16	0.78	0.45971
17	Gujarat Polybutenes Pvt. Ltd.	4.67	3.81	0.005***	-0.27	-2.11	0.068*	48.55	6.62	0.0001***	-3.43	-4.50	0.002***
18	Gulshan Chemicals Ltd.	1.22	6.73	0.0001***	-0.02	-3.01	0.016**	9.95	5.78	0.0004***	-0.16	-2.58	0.032**
19	Kerala Ayurveda Ltd.	0.35	25.76	0.00001***	-	-	-	2.29	12.56	0.00001***	-	-	-
20	Kingfa Science & Technology	1.76	23.66	0.00001***	0.00	-0.14	0.89141	21.74	14.12	0.00001***	0.17	4.64	0.0016***
21	Lincoln Pharmaceuticals Ltd.	1.39	2.59	0.0321**	0.00	-0.45	0.66288	10.26	1.37	0.2068	0.03	0.31	0.76588
22	National Oxygen Ltd.	0.52	18.21	0.00001***	-	-	-	5.69	13.70	0.00001***	-	-	-
23	Polymac Thermoformers Ltd.	-0.16	-0.43	0.6809	0.00	0.49	0.64061	-0.46	-0.43	0.6809	0.01	0.49	0.64061

24	Rama Phosphates Ltd.	1.03	0.91	0.39126	0.01	0.55	0.59792	52.28	1.82	0.10628	-0.36	-0.74	0.47897
25	Rubber Products Ltd.	0.95	18.27	0.00001***	-	-	-	4.32	13.76	0.00001***	-	-	-
26	Supreme Industries Ltd.	1.75	15.67	0.00001***	0.00	0.73	0.48837	80.36	7.15	0.0001***	1.27	4.47	0.002***

(Source: Author Compilation)

Table 4. 8 List of significant companies in Pharmaceutical sector

At 1% Significance		**At 5% Significance**		**At 10% Significance**	
1		**2**		**3**	
Total Assets Turnover	**Equity Turnover**	**Total Assets Turnover**	**Equity Turnover**	**Total Assets Turnover**	**Equity Turnover**
Astrazeneca Pharma India.	Abbott India Ltd	Abbott India Ltd	Foseco India Ltd	Gujarat Polybutenes Pvt.	-
Caprolactam Chemicals Ltd	Astrazeneca Pharma India	Biofil Chemicals	Gulshan Chemicals Ltd	-	-
Cirex Pharmaceuticals Ltd	Caprolactam Chemicals Ltd	Elantas Beck India Ltd	-	-	-
Essel Propack Ltd	Elantas Beck India Ltd.	Gulshan Chemicals Ltd	-	-	-
Ester Industries Ltd	Essel Propack Ltd	Lincoln Pharmaceuticals Ltd -	-	-	-
Foseco India Ltd	Ester Industries Ltd	-	-	-	-
Kerala Ayurveda Ltd	Gujarat Polybutenes Pvt	-	-	-	-
Kingfa Science & Technol	Kerala Ayurveda Ltd	-	-	-	-
National Oxygen Ltd	Kingfa Science & Technol	-	-	-	-
Rubber Products Ltd	National Oxygen Ltd	-	-	-	-
Supreme Industries Ltd	Rubber Products Ltd	-	-	-	-
-	Supreme Industries Ltd	-	-	-	-

(Source: CMIE-Prowess & Author Compilation)

The impact of foreign investment on ET as shown in table 4.8 There are 14 Companies out of 26 FDI based companies in Pharmaceutical Sector, Abbott India Ltd. Astrazeneca Pharma India, Caprolactam Chemicals Ltd. Elantas Beck India Ltd. Essel Propack Ltd, Ester Industries Ltd. Gujarat Polybutenes Pvt. Kerala Ayurveda Ltd. Kingfa Science & Technol, National Oxygen Ltd, Rubber Products Ltd, Supreme Industries Ltd, are showing a significant impact of foreign investment on Equity Turnover at 1% level of significance are whereas Foseco India Ltd and Gulshan Chemicals Ltd are found to be significant at 5%.

There are some FDI based companies which do not show any impact of foreign investment Cheryl Laboratories Pvt. Clarion Drugs Ltd. Dharamsi Morarji Chemical, Dutron Polymers Ltd. Fairchem Speciality Ltd. G O C L Corpn. Ltd. G P Petroleums Ltd. Polymac Thermoformers Rama Phosphates Ltd. Whereas in case of equity turnover some companies do not show any impact of foreign investment is Biofil Chemicals, Cheryl Laboratories Pvt. Cirex Pharmaceuticals Ltd. Clarion Drugs Ltd. Dharamsi Morarji Chemical, Dutron Polymers Ltd. Fairchem Speciality Ltd. G O C L Corpn. Ltd. G P Petroleums Ltd. Lincoln Pharmaceuticals Ltd, Polymac Thermoformers, and Rama Phosphates Ltd.

Table 4. 9 List of not significant companies in Pharmaceutical sector

Total Assets Turnover	Equity Turnover
1	2
Cheryl Laboratories Pvt	Biofil Chemicals, and
Clarion Drugs Ltd.	Cheryl Laboratories Pvt.
Dharamsi Morarji Chemical	Cirex Pharmaceuticals Ltd.
Dutron Polymers Ltd.	Clarion Drugs Ltd.
Fairchem Speciality Ltd	Dharamsi Morarji Chemical,
G O C L Corpn. Ltd	Dutron Polymers Ltd.
G P Petroleums Ltd.	Fairchem Speciality Ltd.
Polymac Thermoformers	G O C L Corpn. Ltd.
Rama Phosphates Ltd	G P Petroleums Ltd.
-	Lincoln Pharmaceuticals Ltd,
-	Polymac Thermoformers,
-	Rama Phosphates Ltd

(Source: CMIE-Prowess & Author Compilation)

Overall out of 26 FDI based companies, 15 companies in Total Assets Turnover and 14 companies in Equity Turnover are shows statically significant impact of foreign investment on their operating efficiency Hence null hypothesis is rejected hypothesis i.e. Foreign Investment does not have a statistically significant impact on Operating Efficiency of FDI based companies in Pharmaceutical Sector.

4.2. 1.4 Construction Sector

Table 4.10 shows the result of 15 FDI based companies in Construction Sector.

Table 4. 10 Operating Efficiency of FDI based Companies in Construction Sector

Sr.No	Name of FDI Based Companies	Total Assets Turnover						Equity Turnover					
		const	*t-Stat*	*p-value*	*Coefficient*	*t- Stat*	*p-value*	*const*	*t- Stat*	*p-value*	*Coefficient*	*t- Stat*	*p-value*
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*
1	Akzo Nobel India Ltd.	-0.54	-1.58	0.1522	0.03	4.70	0.0015***	-47.15	-2.76	0.024**	1.47	5.40	0.0006***
2	Ambuja Cements Ltd.	1.84	14.04	0.00001***	-0.02	-7.34	0.00008***	4.07	0.39	0.70965	0.54	2.40	0.042**
3	Berger Paints India Ltd.	2.58	13.71	0.00001***	-0.06	-3.93	0.0043***	-8.81	-0.52	0.61576	3.93	2.99	0.017**
4	Grindwell Norton Ltd.	1.16	17.82	0.00001***	-	-	-	30.88	9.42	0.00001***	-	-	-
5	Gujarat Sidhee Cement Ltd.	2.05	9.66	0.00001***	-	-	-	6.36	5.11	0.0006***	-	-	-
6	H E G Ltd.	0.87	4.53	0.001***	-0.03	-1.58	0.15198	-9.22	-0.49	0.63492	3.25	2.09	0.069*
7	Heidelberg Cement India Ltd.	5.68	2.53	0.035**	-0.17	-2.16	0.062*	-19.93	-1.11	0.30051	0.90	1.43	0.18944
8	I F G L Refractories Ltd.	0.48	1.32	0.22472	0.01	1.61	0.14513	-6.93	-1.04	0.32981	0.22	2.17	0.0622*
9	Kachchh Minerals Ltd.	1.09	4.23	0.002***	-0.04	-1.31	0.22581	0.39	2.88	0.0205**	-0.01	-0.74	0.48076
10	Kansai Nerolac Paints Ltd.	0.93	1.71	0.12577	0.04	1.33	0.22074	96.05	1.83	0.10434	-1.82	-0.59	0.57042
11	Morganite Crucible (India)	-2.22	-0.98	0.35618	0.05	1.38	0.2052	-218.63	-2.92	0.019**	3.50	3.23	0.012**
12	Orient Refractories Ltd.	76.77	1.55	0.15986	-1.01	-1.53	0.16377	1683.15	1.60	0.14767	-22.15	-1.59	0.15143
13	Shalimar Paints Ltd.	1.79	36.41	0.00001***	-0.01	-4.84	0.001***	112.26	11.39	0.00001***	0.38	1.48	0.177
14	Shree Digvijay Cement Co.	1.80	14.57	0.00001***	-0.01	-4.60	0.001***	2.06	3.60	0.007***	0.01	1.04	0.32859
15	Vesuvius India Ltd.	0.99	27.41	0.00001***	-	-	-	25.81	10.11	0.00001***	1.47	5.40	

(Source: Author Compilation)

The summery of regression results in Construction Sector shows that 10 Companies out of 15 FDI based companies are found to be statistically significant at 1% level of significance i.e. Akzo Nobel India Ltd, Ambuja Cements Ltd, Berger Paints India Ltd. Grindwell Norton Ltd. Gujarat Sidhee Cement H E G Ltd. Kachchh Minerals Ltd. Shalimar Paints Ltd and Vesuvius India Ltd. Whereas Heidelberg Cement India is significant at 10% level of significance. While examining the impact of foreign investment on Equity Turnover, regression results shows that 11 Companies out of 15 FDI based companies in Construction Sector, shows foreign investment has a significant impact of Equity Turnover at 1% level of significance are Akzo Nobel India Ltd, Grindwell Norton Ltd. Gujarat Sidhee Cement, Shalimar Paints Ltd and Vesuvius India Ltd. whereas Ambuja Cements Ltd, Berger Paints India Ltd, Kachchh Minerals Ltd and Morganite Crucible are found to be significant at 5%. H E G Ltd. and I F G L are found to be significant at 10%.

Table 4. 11 List of significant companies in Construction sector

At 1% Significance		**At 5% Significance**		**At 10% Significance**	
1		**2**		**3**	
Total Assets Turnover	**Equity Turnover**	**Total Assets Turnover**	**Equity Turnover**	**Total Assets Turnover**	**Equity Turnover**
Akzo Nobel India Ltd	Akzo Nobel India Ltd	-	Ambuja Cements Ltd	Heidelberg Cement India	HEG Ltd. and IFGL
Ambuja Cements Ltd	Grindwell Norton Ltd	-	Berger Paints India Ltd	-	-
Berger Paints India Ltd	Gujarat Sidhee Cement	-	Kachchh Minerals Ltd	-	-
Grindwell Norton Ltd	Shalimar Paints Ltd	-	Morganite Crucible	-	-
Gujarat Sidhee Cement	Vesuvius India Ltd.	-		-	-
H E G Ltd	-	-	-	-	-
Kachchh Minerals Ltd.	-	-	-	-	-

Shalimar Paints Ltd	-	-	-	-	-
Vesuvius India Ltd	-	-	-	-	-

(Source: CMIE-Prowess & Author Compilation)

There are some FDI based companies which do not show any impact of foreign investment I F G L Refractories Ltd, Kansai Nerolac Paints, Morganite Crucible, Orient Refractories Ltd. Shree Digvijay Cement. Some companies' does not show any impact of foreign investment in Heidelberg Cement India, Kansai Nerolac Paints, Orient Refractories Ltd and Shree Digvijay Cement.

Table 4. 12 List of not significant companies in Construction sector

Total Assets Turnover	Equity Turnover
1	2
I F G L Refractories Ltd	Heidelberg Cement India
Kansai Nerolac Paints	Kansai Nerolac Paints,
Morganite Crucible	Orient Refractories Ltd
Orient Refractories Ltd.	Shree Digvijay Cement
Shree Digvijay Cement.	

(Source: CMIE-Prowess & Author Compilation)

Overall out of 15 FDI based companies, 10 companies in Total Assets Turnover and 11 companies in Equity Turnover are shows statically significant impact of foreign investment on their operating efficiency Hence null hypothesis is rejected hypothesis i.e. Foreign Investment does not have a statistically significant impact on Operating Efficiency of FDI based companies in Construction Sector.

4.2. 1.5 Metal Sector

In case of Metal Sector, there are 21 FDI based companies.

Table 4. 13 Operating Efficiency of FDI based Companies in Metal Sector

Sr.No	Name of FDI Based Companies	Total Assets Turnover						Equity Turnover					
		const	*t-Stat*	*p-value*	*Coefficient*	*t- Stat*	*p-value*	*const*	*t- Stat*	*p-value*	*Coefficient*	*t- Stat*	*p-value*
1	***2***	***3***	***4***	***5***	***6***	***7***	***8***	***9***	***10***	***11***	***12***	***13***	***14***
1	Carnation Industries Ltd.	-226.74	-0.97	0.36163	45.88	3.83	0.005***	11.80	0.60	0.56268	0.42	0.42	0.68238
2	Chennai Ferrous Inds. Ltd.	112.24	1.55	0.16089	48.95	4.18	0.003***	3.05	1.62	0.14497	0.44	1.44	0.18879
3	Ess Dee Aluminium Ltd.	7434.45	5.31	0.0007***	134.45	3.08	0.015**	16.94	6.97	0.0001***	0.06	0.83	0.42855
4	Facor Steels Ltd.	1563.18	2.82	0.022**	-6.43	-0.32	0.75614	1.76	0.18	0.85808	0.40	1.15	0.28244
5	Ferro Alloys Corpn. Ltd.	4918.15	16.69	0.0001***	-65.23	-6.68	0.0001***	35.73	12.12	0.0001***	-0.44	-4.54	0.001***
6	Gillette India Ltd.	30056.60	0.40	0.70213	-480.08	-0.26	0.80283	1246.35	4.41	0.002***	-29.66	-4.28	0.002***
7	Gontermann-Peipers Ltd.	2817.27	2.34	0.0517*	-42.22	-0.62	0.5561	1.07	0.30	0.77446	0.58	2.84	0.025**
8	Hinduja Foundries Ltd.	19315.10	2.98	0.017**	-242.37	-1.92	0.091*	-62.30	-2.21	0.0582*	1.61	2.94	0.018**
9	Jindal Saw Ltd.	11824.30	0.25	0.80832	4295.92	0.94	0.37291	192.51	2.98	0.017**	-9.04	-1.45	0.18505
10	Jindal Stainless (Hisar) Ltd.	3243.82	1.00	0.34659	1533.88	5.08	0.0009***	-	-	-	-	-	-
11	Jindal Stainless Ltd.	60592.70	1.83	0.10443	3151.10	1.99	0.0822*	198.99	3.55	0.007***	0.01	0.00	0.99811
12	Kanishk Steel Inds. Ltd.	-454.65	-0.22	0.83431	33.38	0.22	0.82902	5.39	0.87	0.40829	-0.31	-0.71	0.49695
13	Man Industries (India) Ltd.	13388.40	7.71	0.00006***	63.81	0.47	0.654	41.50	7.88	0.0005***	1.02	2.46	0.039**
14	National Fittings Ltd.	980.95	3.90	0.004***	-80.65	-3.12	0.014**	22.17	3.69	0.006***	-1.94	-3.13	0.014**
15	Steelco Gujarat Ltd.	7260.13	1.77	0.11389	-63.44	-1.20	0.26312	59.34	1.87	0.0978*	-0.61	-1.50	0.1708
16	Sunflag Iron & Steel Co.	-17842.3	-2.37	0.045**	646.24	3.82	0.005***	-11.41	-2.53	0.035**	0.47	4.61	0.001***
17	Tayo Rolls Ltd.	-1190.19	-1.31	0.225	219.54	4.11	0.003***	97.59	19.70	0.0001***	-4.56	-15.61	0.0001***
18	Usha Martin Ltd.	4373.80	0.23	0.82041	4260.25	2.66	0.028**	51.17	2.31	0.049**	4.19	2.19	0.059*
19	Uttam Galva Steels Ltd.	-155.48	-0.02	0.98822	317.75	0.81	0.43959	0.03	0.03	0.97626	0.04	1.08	0.30995
20	V B C Industries Ltd.	709.68	1.83	0.10464	-3.14	-0.10	0.92426	0.64	1.54	0.1613	0.00	-0.14	0.8899
21	Vedanta Ltd.	-3147	-3.68	0.006***	61562.90	3.99	0.003***	-118.97	-0.98	0.35655	3.59	1.64	0.14065

(Source: Author Compilation)

The summery of regression results show that 15 Companies out of 21 FDI based companies in Metal Sector foreign investment has a significant impact of Total Assets Turnover in at 1% level of significance Carnation Industrie, Chennai Ferrous Inds. Ess Dee Aluminium, Ferro Alloys Corpn. Ltd, Jindal Stainless (Hisar), Man Industries (India), National Fittings Ltd. Tayo Rolls Ltd, Usha Martin Ltd. Vedanta Ltd. Whereas Facor Steels Ltd, Hinduja Foundries Ltd, Sunflag Iron & Steel Co is significant at 5% level of significance. Gontermann-Peipers and Jindal Stainless Ltd are significant at 10% level of significance. While examining the impact of foreign investment on Equity turnover of 21 FDI based companies in Metal sector regression results shows that 12 Companies out of 21 FDI based companies foreign investment has a significant impact of Equity Turnover at 1% level of significance is Ess Dee Aluminium, Ferro Alloys Corpn. Ltd, Jindal Stainless Ltd. Man Industries (India), Sunflag Iron & Steel Co, Tayo Rolls Ltd. Whereas Gontermann-Peipers,Hinduja Foundries Ltd, National Fittings Ltd are found to be significant at 5% and companies like Jindal Saw Ltd, Steelco Gujarat Ltd. Uttam Galva Steels Ltd is found to be significant at 10%.

There are some FDI based companies which do not show any impact of foreign investment Gillette India Ltd. Jindal Saw Ltd, Kanishk Steel Inds. Ltd. Steelco Gujarat Ltd. Uttam Galva Steels Ltd and V B C Industries Ltd. Some companies' does not show any impact of foreign investment Carnation Industries, Chennai Ferrous Inds. Facor Steels Ltd, Gillette India Ltd, Kanishk Steel Inds. Ltd. Usha Martin Ltd. V B C Industries Ltd. Vedanta Ltd.

Table 4. 14 List of significant companies in Metal sector

At 1% Significance		At 5% Significance		At 10% Significance	
1		2		3	
Total Assets Turnover	**Equity Turnover**	**Total Assets Turnover**	**Equity Turnover**	**Total Assets Turnover**	**Equity Turnover**
Carnation Industrie,. Ltd,	Ess Dee Aluminium	Facor Steels Ltd	Gonterman n-Peipers, ,	Gontermann -Peipers and	Jindal Saw Ltd,.
Chennai Ferrous Inds	Ferro Alloys Corpn. Ltd	Hinduja Foundries Ltd	Hinduja Foundries Ltd	Jindal Stainless Ltd	Steelco Gujarat Ltd
Ess Dee Aluminium,	Jindal Stainless Ltd.	Sunflag Iron & Steel Co	National Fittings Ltd	-	Uttam Galva Steels Ltd
Ferro Alloys Corpn.	Man Industries (India),	-	-	-	-
Jindal Stainless (Hisar),	Sunflag Iron & Steel Co	-	-	-	-
Man Industries (India),	Tayo Rolls Ltd	-	-	-	-
National Fittings Ltd.	-	-	-	-	-
Tayo Rolls Ltd,	-	-	-	-	-
Usha Martin Ltd.	-	-	-	-	-
Vedanta Ltd.	-	-	-	-	-

(Source: CMIE-Prowess & Author Compilation)

Table 4. 15 List of not significant companies in Metal sector

Total Assets Turnover	Equity Turnover
1	2
Gillette India Ltd	Carnation Industries
Jindal Saw Ltd,	Chennai Ferrous Inds.
Kanishk Steel Inds. Ltd.	Facor Steels Ltd
Steelco Gujarat Ltd	Gillette India Ltd,
Uttam Galva Steels Ltd	Kanishk Steel Inds. Ltd.
V B C Industries Ltd	Usha Martin Ltd.
-	V B C Industries Ltd
-	Vedanta Ltd.

(Source: CMIE-Prowess & Author Compilation)

Overall out of 21 FDI based companies, 15 companies in Total Assets Turnover and 12 companies in Equity Turnover are shows statically significant impact of foreign investment on their operating efficiency Hence null hypothesis is rejected hypothesis i.e. Foreign Investment does not have a statistically significant impact on Operating Efficiency of FDI based companies in Metal Sector.

4.2. 1.6 Machinery Sector

Table 4.16, shows the result of regression analysis of 30 FDI based companies in Machinery Sector, 20 Companies out of 30 FDI based companies in Machinery Sector are showing the statically significant impact of foreign investment on Total Assets Turnover in at 1% level of significance. They are A B B India Ltd. Birla Cable Ltd. Cummins India Ltd. Eimco Elecon (India) Ltd Esab India Ltd, F A G Bearings India Ltd, Honda Siel Power, Igarashi Motors India, Ingersoll-Rand (India), K S B Pumps Ltd, Ruttonsha International, S K F India Ltd. Switching Technologies, Walchandnagar Indu, Yuken India Ltd. However companies like Cmi F P E Ltd and Indo Tech Transformers is significant at 5% level of significance. Whereas Siemens Ltd. Singer India Ltd and Sterlite Technologies are significant at 10% level of significant.

Table 4. 16 Operating Efficiency of FDI based Companies in Machinery Sector

Sr.No	Name of FDI Based Companies	Total Assets Turnover						Equity Turnover					
		const	*t-Stat*	*p-value*	*Coefficient*	*t-Stat*	*p-value*	*const*	*t- Stat*	*p-value*	*Coefficient*	*t- Stat*	*p-value*
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*
1	A B B India Ltd.	2.06	8.73	0.00002***	-0.01	-4.12	0.00337	56.55	1.43	0.19171	1.73	2.92	0.019**
2	Aksh Optifibre Ltd.	0.28	2.49	0.037**	0.02	1.68	0.13216	4.71	2.80	0.023**	-0.04	-0.26	0.79846
3	Best & Crompton Engg.	-57.34	-1.48	0.17701	0.89	1.50	0.17202	-97.54	-0.40	0.70294	1.55	0.41	0.69223
4	Birla Cable Ltd.	1.05	11.14	0.0001***	-	-	-	5.51	5.29	0.0005***	-	-	-
5	Cmi F P E Ltd.	1.45	8.17	0.00004***	-0.01	-2.56	0.03364**	87.96	5.11	0.0009***	-0.12	-0.46	0.65723
6	Cummins India Ltd.	1.82	7.58	0.00003***	-	-	-	278.13	7.66	0.00003***	-	-	-
7	Eimco Elecon (India) Ltd.	0.84	15.07	0.0001***	-	-	-	29.42	15.43	0.0001***	-	-	-
8	Esab India Ltd.	3.69	10.44	0.0001***	-0.03	-5.27	0.0007***	14.98	1.92	0.090*	0.28	2.22	0.057*
9	F A G Bearings India Ltd.	1.38	22.08	0.0001***	-	-	-	73.57	8.54	0.0001***	-	-	-
10	G M M Pfaudler Ltd.	2.84	0.55	0.59672	-0.03	-0.34	0.7412	373.32	0.69	0.5105	-6.07	-0.57	0.58371
11	Honda Siel Power Products	0.97	26.78	0.0001***	-	-	-	45.13	8.37	0.00002***	-	-	-
12	Igarashi Motors India Ltd.	0.93	4.47	0.00209***	0.00	0.64	0.54269	14.89	3.29	0.011**	0.00	-0.05	0.96181
13	Indo Tech Transformers Lt	0.98	12.32	0.0001***	0.00	-3.30	0.01079	20.52	10.80	0.0001***	-0.10	-3.37	0.0098***
14	Ingersoll-Rand (India) Ltd.	0.51	8.32	0.00002***	-	-	-	18.55	16.58	0.0001***	-	-	-
15	K S B Pumps Ltd.	1.09	28.35	0.0001***	-	-	-	28.08	14.58	0.0001***	-	-	-
16	Kennametal India Ltd.	0.29	0.40	0.703	0.01	1.16	0.28096	61.49	3.96	0.004***	-0.47	-2.49	0.037**
17	Panasonic Carbon India Ltd.	0.34	1.54	0.16105	0.00	0.40	0.69717	-4.71	-1.41	0.19488	0.21	3.60	0.007***
18	Ruttonsha International Ltd.	2.01	6.65	0.0001***	-0.02	-3.43	0.008***	4.63	4.19	0.003***	-0.01	-0.38	0.71098
19	S K F India Ltd.	1.67	21.52	0.0001***	-	-	-	42.12	13.05	0.0001***	-	-	-
20	Shilp Gravures Ltd.	-0.49	-0.54	0.60588	0.05	1.42	0.19304	-32.25	-1.16	0.28124	1.44	1.47	0.17975

21	Siemens Ltd.	1.62	4.41	0.002***	-0.01	-1.93	0.089*	165.28	2.19	0.0598	-0.04	-0.03	0.97478
22	Singer India Ltd.	3.10	1.88	0.097*	0.00	0.20	0.84332	-6.98	-0.58	0.57565	0.31	1.83	0.10399
23	Sterlite Technologies Ltd.	2.15	3.92	0.004***	-0.02	-2.12	0.066*	123.81	3.14	0.0137**	-1.66	-2.08	0.0713*
24	Stovec Industries Ltd.	0.66	1.66	0.13552	0.01	0.90	0.39514	-37.43	-0.80	0.44428	1.09	1.58	0.15278
25	Switching Technologi Ltd.	1.99	23.98	0.0001***	-	-	-	4.74	9.31	0.0001***	-	-	-
26	T I L Ltd.	-23.97	-1.04	0.32737	1.29	1.09	0.30929	-380.65	-0.41	0.69137	22.21	0.46	0.65513
27	Timken India Ltd.	1.26	0.44	0.67146	0.00	-0.07	0.94579	99.06	2.91	0.019**	-1.14	-2.62	0.03**
28	Walchandnagar Industries	1.28	9.19	0.00002***	-0.05	-4.68	0.001***	211.48	6.46	0.0002***	-8.70	-3.18	0.012**
29	Wendt (India) Ltd.	0.60	0.14	0.89493	0.00	0.03	0.97685	487.82	1.17	0.27444	-11.10	-1.07	0.31683
30	Yuken India Ltd.	1.13	33.15	0.0001***	-	-	-	52.88	11.84	0.0001***	-	-	-

(Source: Author Compilation)

Table 4. 17 List of significant companies in Machinery sector

At 1% Significance		At 5% Significance		At 10% Significance	
1		2		3	
Total Assets Turnover	**Equity Turnover**	**Total Assets Turnover**	**Equity Turnover**	**Total Assets Turnover**	**Equity Turnover**
A B B India Ltd	Birla Cable Ltd.	Cmi F P E Ltd	A B B India Ltd.	Siemens Ltd.	Esab India Ltd
Birla Cable Ltd.	Cmi F P E Ltd	Indo Tech Transformers	Aksh Optifibre Ltd	Singer India Ltd	Sterlite Technologies
Cummins India Ltd.	Cummins India Ltd	-	Eimco Elecon (India) Ltd,	Sterlite Technologies	-
Eimco Elecon (India) Ltd	F A G Bearings India Ltd,	-	Igarashi Motors India	-	-
Esab India Ltd,	Honda Siel Power	-	Kennametal India Ltd	-	-
F A G Bearings India Ltd,	Indo Tech Transformers	-	Timken India Ltd	-	-
Honda Siel Power,	Ingersoll-Rand (India),	-	Walchandnagar Indu	-	-
Igarashi Motors India	K S B Pumps Ltd	-	-	-	-
Ingersoll-Rand (India),	Panasonic Carbon India	-	-	-	-
K S B Pumps Ltd,	Ruttonsha International	-	-	-	-
Ruttonsha International	S K F India Ltd	-	-	-	-
S K F India Ltd.	Switching Technologies	-	-	-	-
Switching Technologies	Yuken India Ltd	-	-	-	-
Walchandnagar Indu		-	-	-	-
Yuken India Ltd		-	-	-	-

(Source: CMIE-Prowess & Author Compilation)

The summery of regression results of foreign investment on ET as shown in below table 4.17, 12 Companies out of 30 FDI based companies in Machinery Sector, foreign investment has a significant impact of Equity Turnover (ET) at 1% level of significance are Birla Cable Ltd. Cmi F P E Ltd, Cummins India Ltd, F A G Bearings India Ltd, Honda Siel Power, Indo Tech Transformers, Ingersoll-Rand (India), K S B Pumps Ltd. Panasonic Carbon India, Ruttonsha International, S K F India Ltd. Switching Technologies, Yuken India Ltd. whereas A B B India Ltd. Aksh Optifibre Ltd Eimco Elecon (India) Ltd, Igarashi Motors India, Kennametal India Ltd. Timken India Ltd, Walchandnagar Indu are found to be significant at 5%. Esab India Ltd and Sterlite Technologies are found to be significant at 10%.

Some companies' does not show any impact of foreign investment Best & Crompton Engg, G M M P faudler Ltd. Shilp Gravures Ltd. Siemens Ltd. Singer India Ltd. Stovec Industries Ltd. T I L Ltd. Wendt (India) Ltd. There are some FDI based companies which do not show any impact of foreign investment Aksh Optifibre Ltd, Best & Crompton Engg, G M M P faudler Ltd, Kennametal India Ltd. Panasonic Carbon India, Shilp Gravures Ltd. Stovec Industries Ltd. T I L Ltd. Timken India Ltd. Wendt (India) Ltd.

Table 4.18 List of not significant companies in Machinery sector

Total Assets Turnover	Equity Turnover
1	2
Best & Crompton Engg,	Aksh Optifibre Ltd
G M M P faudler Ltd.	Best & Crompton Engg,
Shilp Gravures Ltd.	G M M P faudler Ltd
Siemens Ltd.	Kennametal India Ltd.
Singer India Ltd	Panasonic Carbon India
Stovec Industries Ltd	Shilp Gravures Ltd
T I L Ltd.	Stovec Industries Ltd
Wendt (India) Ltd.	T I L Ltd
-	Timken India Ltd.
-	Wendt (India) Ltd.

(Source: CMIE-Prowess & Author Compilation)

Overall out of 30 FDI based companies, 20 companies in Total Assets Turnover and 12 companies in Equity Turnover are shows statically significant impact of foreign investment on their operating efficiency Hence null hypothesis is rejected hypothesis i.e. Foreign Investment does not have a statistically significant impact on Operating Efficiency of FDI based companies in Machinery Sector.

4.2. 1.7 Transport Sector

In case of Transport Sector there are 13 FDI based companies. The summery of regression results on impact of foreign investment on TAT shows that 10 Companies out of 13 FDI based companies in Transport Sector, foreign investment shows a significant impact of Total Assets Turnover in at 1% level of significance. Whereas companies like Essar Shipping Ltd Global Vectra Helicorp, Jet Airways (India), Sical Logistics Ltd, Varun Shipping Co whereas Chowgule Steamships, Essar Ports Ltd Gateway Distriparks, Gujarat Pipavav Port is significance at 5% level of significance. However Shreyas Shipping is significant at 10% level of significance.

Table 4. 19 Operating Efficiency of FDI based Companies in Transport Sector

Sr.No	Name of FDI Based Companies	Total Assets Turnover						Equity Turnover					
		const	*t-Stat*	*p-value*	*Coefficient*	*t-Stat*	*p-value*	*const*	*t-Stat*	*p-value*	*Coefficient*	*t- Stat*	*p-value*
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*
1	Blue Dart Express Ltd.	1.20	0.63	0.54436	0.005	0.223	0.82906	738.70	7.50	0.00007***	-8.60	-6.86	0.0001***
2	Chowgule Steamships Ltd.	164.23	2.45	0.04**	-15.800	-2.44	0.040**	1527.71	2.80	0.023**	-147.00	-2.79	0.023**
3	Essar Ports Ltd.	0.23	2.74	0.025**	-0.003	-1.83	0.10332	2.38	2.60	0.031**	-0.02	-1.64	0.13946
4	Essar Shipping Ltd.	0.01	0.77	0.46165	0.001	6.796	0.0001***	-0.06	-0.16	0.87882	0.07	9.23	0.00002***
5	Gateway Distriparks Ltd.	0.31	12.83	0.0001***	-0.003	-2.51	0.035**	2.71	13.36	0.0001***	-0.05	-4.37	0.002***
6	Global Offshore Services	0.24	1.43	0.19035	-0.003	-0.17	0.86381	3.57	0.49	0.63548	0.25	0.34	0.74446
7	Global Vectra Helicorp Ltd.	0.43	11.95	0.0001***	-	-	-	17.78	11.73	0.0001***	-	-	-
8	Gujarat Pipavav Port Ltd.	0.12	3.31	0.010**	0.003	2.780	0.023**	0.61	3.79	0.005***	0.01	2.41	0.042**
9	Jet Airways (India) Ltd.	1.57	6.62	0.0001***	-0.012	-3.75	0.005***	227.68	3.76	0.005***	-1.17	-1.40	0.19831
10	Seamec Ltd.	0.74	0.24	0.81777	-0.003	-0.06	0.94894	110.85	1.80	0.10989	-1.35	-1.66	0.13501
11	Shreyas Shipping Ltd.	3.11	2.70	0.027**	-0.037	-2.14	0.064*	65.76	4.53	0.00194	-0.85	-3.93	0.00434
12	Sical Logistics Ltd.	0.50	5.54	0.0005***	0.001	0.378	0.71552	1.88	0.48	0.64109	0.44	3.29	0.01**
13	Varun Shipping Co. Ltd.	0.27	4.94	0.001***	-0.007	-2.53	0.035**	5.36	3.85	0.004***	-0.13	-1.86	0.10007

(Source: Author Compilation)

Whereas while examining the impact of foreign investment on ET as shown in table 4.19, there are11 Companies out of 13 FDI based companies in Transport Sector shown a significant impact of foreign investment on Equity Turnover at 1% level of significance. They are Blue Dart Express Ltd. Essar Shipping Ltd Gateway Distriparks, Global Vectra Helicorp, Jet Airways (India), Shreyas Shipping, Varun Shipping Co. Whereas Chowgule Steamships, Essar Ports Ltd, Gujarat Pipavav Port, Sical Logistics Ltd. are found to be significant at 5%.

Table 4. 20 List of significant companies in Transport sector

At 1% Significance		At 5% Significance		At 10% Significance	
1		2		3	
Total Assets Turnover	**Equity Turnover**	**Total Assets Turnover**	**Equity Turnover**	**Total Assets Turnover**	**Equity Turnover**
Gateway Distriparks	Blue Dart Express Ltd.	Chowgule Steamships	Chowgule Steamships	-	-
Global Vectra Helicorp	Gateway Distriparks	Essar Ports Ltd	Essar Ports Ltd	-	-
Jet Airways (India)	Global Vectra Helicorp	Gujarat Pipavav Port	-	-	-
Sical Logistics Ltd.	Gujarat Pipavav Port	Shreyas Shipping	-	-	-
Varun Shipping Co.	Jet Airways (India)	-	-	-	-
-	Shreyas Shipping	-	-	-	-
-	Varun Shipping Co.	-	-	-	-

(Source: CMIE-Prowess & Author Compilation)

There are some FDI based companies which does not shown any impact of foreign investment Blue Dart Express Ltd. Global Offshore, Seamec Ltd. Some companies' does not showed any impact of foreign investment Global Offshore, and Seamec Ltd.

Table 4.21 List of not significant companies in Transport sector

Total Assets Turnover	Equity Turnover
1	2
Blue Dart Express Ltd.	Global Offshore
Global Offshore	Seamec Ltd
Seamec Ltd	

(Source: CMIE-Prowess & Author Compilation)

Overall out of 13 FDI based companies, 10 companies in Total Assets Turnover and 11 companies in Equity Turnover are shows statically significant impact of foreign investment on their operating efficiency Hence null hypothesis is rejected hypothesis i.e. Foreign Investment does not have a statistically significant impact on Operating Efficiency of FDI based companies in Transport Sector.

4.2. 1.8 Hotel Sector

Table 4.22, shows the result of regression analysis of 9 FDI based companies in Hotel Sector.

The summery of regression results on impact of foreign investment on TAT shows 6 Companies out of 9 FDI based companies in Hotel Sector are showing significant impact of Total Assets Turnover in at 1% level of significance Asian Hotels (East) Ltd, C H L Ltd. Cox & Kings Ltd, E I H Associated Hotels, Whereas Asian Hotels (North) Ltd. Mac Charles (India) Ltd. is significant at 5% level of significance. While examining the impact of foreign investment on ET, there are 7 Companies out of 9 FDI based companies in Hotel Sector found to have a significant impact of foreign

investment on Equity Turnover at 1% level of significance. These companies are Asian Hotel (west) Ltd, Asian Hotels (East) Ltd, C H L Ltd. Cox & Kings Ltd, E I H Associated Hotels, Whereas Asian Hotels (North) Ltd. Mac Charles (India) Ltd. are found to be significant at 5%.

Table 4. 22 Operating Efficiency of FDI based Companies in Hotel Sector

Sr.No	Name of FDI Based Companies	Total Assets Turnover						Equity Turnover					
		const	*t-Stat*	*p-value*	*Coefficient*	*t-Stat*	*p-value*	*const*	*t-Stat*	*p-value*	*Coefficient*	*t- Stat*	*p-value*
1	***2***	***3***	***4***	***5***	***6***	***7***	***8***	***9***	***10***	***11***	***12***	***13***	***14***
1	Asian Hotels (North) Ltd.	0.554	4.260	0.002***	-0.007	-2.93	0.019**	41.46	4.34	0.002***	-0.47	-2.77	0.024**
2	Asian Hotel (west) Ltd	0.040	1.625	0.14282	0.005	7.060	0.00001***	1.32	1.61	0.14514	0.22	9.70	0.00001***
3	Asian Hotels (East) Ltd	0.014	1.539	0.16231	0.002	7.090	0.00001***	0.92	1.63	0.14073	0.20	9.79	0.00001***
4	C H L Ltd.	0.722	16.916	0.00001***	-0.005	-5.96	0.0003***	7.48	25.32	0.00001***	-0.03	-5.39	0.0006***
5	Cox & Kings Ltd.	0.292	15.539	0.00001***	-0.007	-6.06	0.0003***	8.67	4.27	0.002***	-0.20	-1.60	0.14891
6	E I H Associated Ltd.	0.465	15.770	0.00001***	-	-	-	8.08	29.35	0.00001***	-	-	-
7	James Hotels Ltd.	-7.66	-1.419	0.19356	0.183	1.430	0.19066	-124.3	-1.25	0.24599	2.97	1.26	0.24248
8	Mac Charles (India) Ltd.	1.657	1.912	0.0921*	-0.020	-1.61	0.14484	75.96	2.94	0.018**	-0.96	-2.66	0.028**
9	Thomas Cook (India) Ltd.	0.359	1.356	0.21227	-0.001	-0.17	0.86904	10.57	1.57	0.15448	0.06	0.61	0.55622

(Source: Author Compilation)

Table 4. 23 List of significant companies in Hotel sector

At 1% Significance		At 5% Significance		At 10% Significance	
1		2		3	
Total Assets Turnover	**Equity Turnover**	**Total Assets Turnover**	**Equity Turnover**	**Total Assets Turnover**	**Equity Turnover**
Asian Hotels (East) Ltd	Asian Hotel (west) Ltd,	Asian Hotels (North) Ltd..	Asian Hotels (North) Ltd.	-	-
C H L Ltd	Asian Hotels (East) Ltd	Mac Charles (India) Ltd	Mac Charles (India) Ltd.	-	-
Cox & Kings Ltd	C H L Ltd.	-	-	-	-
E I H Associated Hotels	Cox & Kings Ltd,	-	-	-	-
-	E I H Associated Hotels,	-	-	-	-

(Source: CMIE-Prowess & Author Compilation)

There are some FDI based companies which do not show any impact of foreign investment Asian Hotel (west) Ltd, James Hotels Ltd. Thomas Cook (India). Some companies' does not show any impact on foreign investment James Hotels Ltd. Thomas Cook.

Table 4. 24 List of not significant companies in Hotel sector

Total Assets Turnover	Equity Turnover
1	2
Asian Hotel (west) Ltd,	James Hotels Ltd.
James Hotels Ltd.	Thomas Cook
Thomas Cook (India).	-

(Source: CMIE-Prowess & Author Compilation)

Overall out of 9 FDI based companies, 6 companies in Total Assets Turnover and 7 companies in Equity Turnover are shows statically significant impact of foreign investment on their operating efficiency Hence null hypothesis is rejected hypothesis i.e. Foreign Investment does not have a statistically significant impact on Operating Efficiency of FDI based companies in Hotel Sector.

4.2.1.9 IT Sector

Table 4.25, shows the result of regression analysis of 26 FDI based companies in IT Sector, there are 17 Companies out of 26 FDI based companies in IT Sector which are showing a significant impact of foreign investment on Total Assets Turnover in at 1% level of significance B 2 B Software, Bodhtree Consulting Ltd. Cigniti Technologies Ltd, Cybertech Systems, Eclerx Services Ltd. Hinduja Global Solutions, Infinite Computer, Lycos Internet Ltd, Mindteck (India) Ltd. Onmobile Global Ltd. Take Solutions Ltd.

Whereas Aurionpro Solutions Ltd, Cambridge Technology, Genesys International, H O V Services Ltd.is significant at 5% level of significance. Accelya Kale Solutions, H C L Technologies Ltd. significant at 10% level of significance. While examining the impact of foreign investment on ET, results shows that 16 Companies out of 26 FDI based companies in IT Sector are showing significant impact of foreign investment on Equity Turnover at 1% level of significance. These companies are Accelya Kale Solutions, Aurionpro Solutions Ltd, Bodhtree Consulting Ltd, C E S Ltd, Cybertech Systems, Eclerx Services Ltd. Hinduja Global Solutions, Infinite Computer, Lycos Internet Ltd. Onmobile Global Ltd. Oracle Financial Services, Take Solutions Ltd. whereas B 2 B Software, H C L Technologies Ltd. H O V Services Ltd. are found to be significance at 5%. Moschip Semiconductor is significance at 10% level of significance.

Table 4. 25 Operating Efficiency of FDI based Companies in IT Sector

Sr.No	Name of FDI Based Companies	Total Assets Turnover						Equity Turnover					
		const	*t-Stat*	*p-value*	*Coefficient*	*t- Stat*	*p-value*	*const*	*t- Stat*	*p-value*	*Coefficient*	*t- Stat*	*p-value*
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*
1	Accelya Kale Solutions Ltd.	0.82	11.70	0.0001***	0.00	2.08	0.0715*	4.68	2.96	0.018**	0.173	5.923	0.0003***
2	Advent Computer Ltd.	0.15	0.16	0.87867	0.00	-0.13	0.89607	0.15	0.16	0.87867	-0.002	-0.135	0.89607
3	Aurionpro Solutions Ltd.	0.08	0.72	0.49242	0.02	2.38	0.04**	-4.75	-1.77	0.11506	0.831	4.754	0.001***
4	B 2 B Software Ltd.	5.75	4.47	0.002***	-0.09	-3.94	0.004***	1.77	2.35	0.046**	-0.023	-1.811	0.10773
5	Bodhtree Consulting Ltd.	0.72	8.42	0.00003***	0.01	2.60	0.031**	2.28	8.62	0.00003***	0.006	0.841	0.42472
6	C E S Ltd.	7.51	1.77	0.1149	-0.10	-1.50	0.17103	-262.8	-5.41	0.0006***	4.336	5.727	0.0004***
7	Cambridge Technology Ltd.	1.07	3.10	0.0145**	-0.01	-1.56	0.15734	-0.12	-0.10	0.92186	0.033	1.529	0.1648
8	Cigniti Technologies Ltd.	0.45	10.12	0.0001***	0.00	-0.75	0.47524	1.20	1.06	0.31944	0.059	1.050	0.32454
9	Cybertech Systems Ltd.	0.02	0.27	0.7924	0.01	4.93	0.001***	-1.33	-3.25	0.011**	0.076	6.075	0.0003***
10	Eclerx Services Ltd.	2.39	23.89	0.0001***	-0.05	-13.4	0.0001***	86.45	26.72	0.0001***	-2.482	-20.380	0.0001***
11	G I Engineering Ltd.	0.01	0.71	0.49913	0.00	0.62	0.55327	-	-	-	-	-	-
12	Genesys International. Ltd.	2.14	3.01	0.016**	-0.03	-2.30	0.05*	-4.27	-0.63	0.54381	0.171	1.351	0.21366
13	H C L Technologies Ltd.	-1.45	-1.44	0.18712	0.12	2.09	0.0699*	643.81	2.95	0.018**	-33.393	-2.696	0.027**
14	H O V Services Ltd.	0.81	3.15	0.013**	-0.01	-2.66	0.028**	6.77	3.77	0.005***	-0.113	-3.261	0.01**
15	Hinduja Global Ltd	0.22	1.78	0.11277	0.03	3.31	0.010**	609.79	48.89	0.0001***	-42.769	-43.733	0.0001***
16	Infinite Computer Ltd.	0.75	15.31	0.0001***	0.00	-1.68	0.13218	2.45	1.95	0.087*	0.090	3.977	0.004***
17	Informed Technologies Ltd.	0.34	3.98	0.0032***	-	-	-	0.76	8.39	0.00002***	-	-	-
18	Lycos Internet Ltd.	0.29	1.98	0.082*	0.01	2.71	0.026**	5.20	1.81	0.10844	0.026	0.418	0.68688
19	Mindteck (India) Ltd.	-1.66	-3.58	0.007***	0.03	4.46	0.0021***	3.39	0.83	0.43218	-0.014	-0.223	0.82949
20	Moschip Semiconduc Ltd.	0.60	1.71	0.12589	-0.01	-0.69	0.51158	0.83	3.37	0.009***	-0.027	-2.078	0.071*
21	Mphasis Ltd.	1.61	1.19	0.26914	-0.01	-0.59	0.57163	-27.52	-1.09	0.30692	0.686	1.623	0.1433
22	Onmobile Global Ltd.	0.47	16.80	0.0001***	-0.003	-4.68	0.001***	35.37	9.06	0.00002***	-0.762	-7.418	0.00007***
23	Oracle Financial Ltd.	-0.34	-0.38	0.71185	0.01	0.85	0.42193	410.93	5.16	0.0008***	-4.443	-4.394	0.0023***

24	R Systems International.	0.50	1.09	0.30832	0.01	0.59	0.56841	-6.32	-0.29	0.78051	0.776	1.053	0.32308
25	Take Solutions Ltd.	0.37	4.62	0.0017***	-0.004	-2.82	0.022**	6.08	3.52	0.007***	-0.044	-1.393	0.20125
26	Xchanging Solutions Ltd.	0.14	0.59	0.57352	0.01	1.43	0.19005	1.66	1.62	0.14296	-0.002	-0.127	0.90187

(Source: Author Compilation)

Table 4. 26 List of significant companies in IT sector

At 1% Significance		**At 5% Significance**		**At 10% Significance**	
1		**2**		**3**	
Total Assets Turnover	**Equity Turnover**	**Total Assets Turnover**	**Equity Turnover**	**Total Assets Turnover**	**Equity Turnover**
B 2 B Software	Accelya Kale Solutions	Aurionpro Solutions Ltd	B 2 B Software	Accelya Kale Solutions	Moschip Semiconductor
Bodhtree Consulting Ltd	Aurionpro Solutions Ltd	Cambridge Technology	H C L Technologies Ltd.	H C L Technologies Ltd	-
Cigniti Technologies Ltd,	Bodhtree Consulting Ltd	Genesys International	H O V Services Ltd	-	-
Cybertech Systems	C E S Ltd,	H O V Services Ltd	-	-	-
Eclerx Services Ltd	Cybertech Systems	-	-	-	-
Hinduja Global Solutions	Eclerx Services Ltd	-	-	-	-
Infinite Computer	Hinduja Global Solutions	-	-	-	-
Lycos Internet Ltd	Infinite Computer	-	-	-	-
Mindteck (India) Ltd	Lycos Internet Ltd	-	-	-	-
Onmobile Global Ltd	Onmobile Global Ltd	-	-	-	-
Take Solutions Ltd	Oracle Financial Services	-	-	-	-
-	Take Solutions Ltd	-		-	-

(Source: CMIE-Prowess & Author Compilation)

There are some FDI based companies which do not show any impact of foreign investment Advent Computer Service, C E S Ltd. G I Engineering Solutions, Informed Technologies, Moschip Semiconductor, Mphasis Ltd. Oracle Financial Services, R Systems International, Xchanging Solutions Ltd. Some companies' does not show any impact of foreign investment Advent Computer Service, Cambridge Technology, Cigniti Technologies Ltd. G I Engineering Solutions, Genesys International, Informed Technologies, Mindteck (India) Ltd., Mphasis Ltd. R Systems International, Xchanging Solutions Ltd.

Table 4. 27 List of not significant companies in IT sector

Total Assets Turnover	Equity Turnover
1	2
Advent Computer Service	Advent Computer Service
C E S Ltd.	Cambridge Technology
G I Engineering Solutions,	Cigniti Technologies Ltd
Informed Technologies	G I Engineering Solutions,
Moschip Semiconductor	Genesys International
Mphasis Ltd	Informed Technologies
Oracle Financial Services	Mindteck (India) Ltd
R Systems International	Mphasis Ltd
Xchanging Solutions Ltd	R Systems International
	Xchanging Solutions Ltd

(Source: CMIE-Prowess & Author Compilation)

Overall out of 26 FDI based companies, 17 companies in Total Assets Turnover and 16 companies in Equity Turnover are shows statically significant impact of foreign investment on their operating efficiency Hence null hypothesis is rejected hypothesis i.e. Foreign Investment does not have a statistically significant impact on Operating Efficiency of FDI based companies in IT Sector.

4.2.1.10 Testing of Hypothesis

The hypothesis testing result are shown below

Table 4. 28 Testing of Hypothesis

(No. of Companies)

S.No	Hypothesis	Operating Efficiency		Accept/ Reject
		TAT	ET	
1	Foreign Investment does not have a statically significant impact on Operating efficiency of FDI based Companies in Food & Agriculture Sectors in India.	13	12	Reject
2	Foreign Investment does not have a statically significant impact on Operating efficiency of FDI based Companies in Textile Sectors in India.	13	14	Reject
3	Foreign Investment does not have a statically significant impact on Operating efficiency of FDI based Companies in Pharmaceutical Sectors in India.	15	14	Reject
4	Foreign Investment does not have a statically significant impact on Operating efficiency of FDI based Companies in Construction Sectors in India.	10	11	Reject
5	Foreign Investment does not have a statically significant impact on Operating efficiency of FDI based Companies in Metal Sectors in India.	15	12	Reject
6	Foreign Investment does not have a statically significant impact on Operating efficiency of FDI based Companies in Machinery Sectors in India.	20	12	Reject
7	Foreign Investment does not have a statically significant impact on Operating efficiency of FDI based Companies in Transport Sectors in India.	10	11	Reject
8	Foreign Investment does not have a statically significant impact on Operating efficiency of FDI based Companies in Hotel Sectors in India.	06	07	Reject
9	Foreign Investment does not have a statically significant impact on Operating efficiency of FDI based Companies in IT Sectors in India.	17	16	Reject

Source: Author Compilation

4.2.2. Managerial Efficiency

To study the impact of foreign investment on managerial efficiency on Indian corporate in selected sectors, Return on Investment and Return on equity is taken as an indicator. The foreign investment in Indian corporate will improve capital of corporate which will improve their short and long-term growth. The growth is determined by efficiency factors and managerial efficiency of one of them. Theoretically, foreign investment will improve the capital position of the company which supports managerial efficiency and increase the productivity. In order to check this statement in Indian context this chapter analyse the impact of foreign investment on managerial efficiency with the help of regression techniques in FDI based companies of selected sectors.

4.2.2.1 Food and Agriculture Sector

Table 4.29 provides statistical regressed data on the impact of Foreign Investment on Return on Investment and Return on Equity of 22 FDI based companies in Food and Agriculture Sector along with constant and coefficient P-Value. Return on Investment and Return on Equity has been considered as indicator to explain managerial efficiency of FDI based companies in Food and Agriculture Sector in the study.

Table 4. 29 Managerial Efficiency of FDI based Companies in Food and Agriculture Sector in India

Sr.No	Name of FDI Based Companies	Return on Investment						Return on Equity					
		const	*t-Stat*	*p-value*	*Coefficient*	*t- Stat*	*p-value*	*const*	*t-Stat*	*p-value*	*Coefficient*	*t- Stat*	*p-value*
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*
1	Agro Tech Foods Ltd.	-0.20	-0.72	0.49109	0.007	1.273	0.2389	81.79	1.90	0.094*	-0.98	-1.13	0.29084
2	Assam Company India Ltd.	0.09	0.88	0.40289	-0.001	-0.266	0.79718	8.95	1.53	0.16497	-0.02	-0.12	0.90963
3	Britannia Industries Ltd.	37.17	4.83	0.0013***	-0.726	-4.795	0.0013***	34829.40	5.05	0.0009***	-680.60	-5.02	0.001***
4	Dharani Sugars & Chemicals	0.22	1.14	0.28627	-0.006	-0.643	0.53828	-11.82	-0.57	0.58677	1.35	1.38	0.20589
5	Glaxosmithkline Consumer	0.22	10.57	0.00001***	0.000	-1.328	0.22096	-43.22	-2.02	0.0782*	2.12	5.62	0.0005***
6	Godfrey Phillips India Ltd.	0.13	4.07	0.0035***	0.003	2.255	0.0541*	749.74	6.86	0.0001***	-15.66	-4.12	0.003***
7	Goodricke Group Ltd.	0.12	6.55	0.00001***	-	-	-	21.20	8.01	0.00002***	-	-	-
8	Harrisons Malayalam Ltd.	0.03	3.00	0.014**	-	-	-	17.13	15.69	0.00001***	-	-	-
9	Kore Foods Ltd.	0.64	1.33	0.22044	-0.026	-1.348	0.21448	2.15	1.16	0.27977	-0.06	-0.78	0.45631
10	Lotte India Corpn. Ltd.	0.05	4.99	0.0010***	0.000	0.006	0.99543	36.76	10.20	0.00001***	0.11	1.36	0.21189
11	Mcleod Russel India Ltd.	0.66	1.43	0.19016	-0.022	-1.184	0.27032	129.55	2.50	0.037**	-4.31	-2.08	0.071*
12	Monsanto India Ltd.	362.94	1.87	0.0990*	-5.028	-1.865	0.0992*	-73625.7	-1.81	0.10766	1021.06	1.81	0.1075
13	Nestle India Ltd.	9.38	2.84	0.02198	-0.144	-2.709	0.0267**	-3061.85	-5.45	0.0006***	50.20	5.57	0.0005***
14	Ovobel Foods Ltd.	0.02	0.09	0.9293	0.014	1.094	0.30573	2.71	0.98	0.3565	0.34	1.65	0.13793
15	Ponni Sugars (Erode) Ltd.	0.24	1.14	0.28761	-0.012	-0.507	0.62566	34.00	3.28	0.0112**	-1.11	-0.96	0.36363
16	Shree Renuka Sugars Ltd.	0.10	8.95	0.00002***	-0.003	-3.184	0.0129**	80.80	10.20	0.00001***	-0.60	-0.95	0.37085
17	Tarai Foods Ltd.	0.39	1.41	0.1909	-	-	-	0.27	3.37	0.008***	-	-	-
18	United Breweries Ltd.	-0.03	-0.45	0.66246	0.005	2.529	0.035**	-679.22	-1.47	0.17922	23.12	1.91	0.0931*
19	United Spirits Ltd.	0.13	4.51	0.00198	0.001	0.566	0.58696	83.27	8.44	0.00003***	1.48	4.16	0.003***
20	V S T Industries ltd	0.27	15.83	0.00001***	-	-	-	90.17	9.95	0.00001***	-	-	-
21	Warren Tea Ltd.	0.12	1.10	0.30513	0.000	0.165	0.87324	4.64	0.80	0.44793	0.21	1.77	0.11508
22	Winsome breweries Ltd	0.08	11.02	0.00001***	-0.002	-2.377	0.044**	1.77	6.91	0.0001***	0.06	1.94	0.0885*

(Source: CMIE-Prowess & Author Compilation)

Attempt has been made to examine whether there is any significant impact of Foreign Investment on Return on Investment and Return on Equity of 22 FDI based companies in Food and Agriculture Sector. The regression result of Foreign Investment on Return on Investment and Return on Equity.

Table 4. 30 List of significant companies in Food and Agriculture sector

At 1% Significance		At 5% Significance		At 10% Significance	
1		2		3	
Return on Investment	**Return on Equity**	**Return on Investment**	**Return on Equity**	**Return on Investment**	**Return on Equity**
Britannia Industries Ltd	Britannia Industries Ltd.	Harrisons Malayalam Ltd.	Ponni Sugars (Erode) Ltd.	Godfrey Phillips India Ltd	Agro Tech Foods Ltd.
Glaxosmithkline Consumer Ltd.	Glaxosmithkline Consumer Ltd.	Nestle India Ltd.	-	Monsanto India Ltd.	Mcleod Russel India Ltd.
Lotte India Corpn. Ltd.	Godfrey Phillips India Ltd.	United Breweries Ltd.	-	-	United Breweries Ltd.
Shree Renuka Sugars Ltd.	Goodricke Group Ltd.	Winsome Breweries Ltd.	-	-	Winsome Breweries Ltd.
V S T Industries	Nestle India Ltd.	-	-	-	-
-	Harrisons Malayalam Ltd.	-	-	-	-
-	United Spirits Ltd.	-	-	-	-
-	Lotte India Corpn. Ltd.	-	-	-	-
-	Shree Renuka Sugars Ltd.	-	-	-	-
-	Tarai Foods Ltd.	-	-	-	-
-	V S T Industries	-	-	-	-

(Source: CMIE-Prowess & Author Compilation)

Britannia Industries Ltd, Glaxosmithkline Consumer Ltd, Shree Renuka Sugars Ltd and V S T Industries Ltd are found to be statistically significant at 1% level for both Return on Investment and Return on Equity. Companies such as Harrisons Malayalam Ltd, Nestle India Ltd, United Breweries Ltd and

Winsome Breweries Ltd, the influence of Foreign Investment on their ROI is statistically significant at 5% level of significance. Ponni Sugars (Erode) Lt is only company which is influence of Foreign Investment on their ROE is statistically significant at 5% level of significant. However only two companies Godfrey Phillips India Ltd and Monsanto India Ltd are found to exhibit the low impact of foreign investment on ROI, and companies like Agro Tech Foods Ltd. Mcleod Russel India Ltd, United Breweries Ltd and Winsome Breweries Ltd are found to exhibit the low impact of foreign investment on ROI, the impact of foreign investment on ROI in such companies is significant at 10% significant level. This means out of 22 FDI based companies in Food and Agriculture Sector 11 companies have shown a significant impact of foreign investment on ROI and 16 companies a significant impact of foreign investment on ROE, Hence the null hypothesis i..e Foreign investment does not have a statistically significant impact on Managerial Efficiency of FDI based companies in Food and Agriculture Sector is rejected in said investigated FDI based companies.

Table 4. 31 List of not significant companies in Food and Agriculture sector

Not Significant	
Return on Investment	**Return on Equity**
1	**2**
Agro Tech Foods Ltd.	Assam Company India Ltd.
Assam Company India Ltd.	Kore Foods Ltd.
Dharani Sugars & Chemicals Ltd.	Warren Tea Ltd.
Kore Foods Ltd	Dharani Sugars & Chemicals Ltd.
Mcleod Russel India Ltd.	Ovobel Foods Ltd.
Ovobel Foods Ltd.	-
Tarai Foods Ltd	-
Warren Tea Ltd.	-

(Source: CMIE-Prowess & Author Compilation)

Table 4.31, indicates that foreign investment does not have any impact on Return on Investment like Agro Tech Foods Ltd, Assam Company India Ltd, Dharani Sugars & Chemicals Ltd, Kore Foods Ltd, Mcleod Russel India Ltd, Ovobel Foods Ltd, Tarai Foods Ltd, Warren Tea Ltd. and Return on Equity like Assam Company India Ltd, Kore Foods Ltd, Warren Tea Ltd, Dharani Sugars & Chemicals Ltd, Ovobel Foods Ltd of certain companies.

4.2.2.2 Textile Sector

Table 4.32, provides statistical regressed data on the impact of Foreign Investment on Return on Investment and Return on Equity of 18 FDI based companies in Textile Sector along with constant and coefficient P-Value. Return on Investment and Return on Equity has been considered an indicator to explain managerial efficiency of FDI based companies in Textile Sector in the study.

Attempt has been made to examine whether there is any significant impact of Foreign Investment on Return on Investment and Return on Equity of 18 FDI based companies in the Textile sector. The regression result of Foreign Investment on Return on Investment and Return on Equity.

Table 4. 32 Managerial Efficiency of FDI based Companies in Textile Sector in India

Sr.No	Name of FDI Based Companies	Return on Investment						Return on Equity					
		const	*t-Stat*	*p-value*	*Coefficient*	*t- Stat*	*p-value*	*const*	*t- Stat*	*p-value*	*Coefficient*	*t- Stat*	*p-value*
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*
1	Aunde India Ltd.	0.76	10.30	0.00001***	-	-	-	8.33	7.08	0.00006***	-	-	-
2	Birla Cotsyn (India) Ltd.	0.58	3.24	0.0142**	-0.0002	-0.008	0.99	4.35	4.89	0.0017***	-0.26	-2.69	0.030**
3	Bombay Rayon Fashions Ltd.	0.47	11.00	0.00001***	-0.0018	-1.1680	0.28	14.95	7.60	0.00006***	0.26	3.54	0.0076***
4	E-Land Apparel Ltd.	0.60	4.12	0.0033***	0.0018	0.5853	0.57	7.95	8.15	0.00004***	-0.04	-2.12	0.06663*
5	Gokaldas Exports Ltd.	1.36	6.15	0.0002***	0.0026	0.7322	0.48	61.58	14.93	0.00001***	0.06	0.84	0.42706
6	Golden Carpets Ltd.	0.10	4.15	0.003***	0.0020	1.0038	0.34	0.20	3.97	0.004***	0.00	-0.06	0.95214
7	Indian Card Clothing Co. Ltd.	0.60	20.58	0.00001***	-	-	-	15.35	17.40	0.00001***	-	-	-
8	Indo Count Inds. Ltd.	4.59	5.04	0.00001***	-0.0987	-3.9105	0.0044***	170.50	5.55	0.0005***	-4.03	-4.74	0.0014***
9	Indo Rama Synthetics (India)	4.56	2.75	0.0250**	-0.1094	-1.9528	0.086*	39.27	2.99	0.0172**	-0.66	-1.48	0.1764
10	Page Industries Ltd.	1.33	1.50	0.17128	0.0025	0.1318	0.8984	-118.8	-0.84	0.4228	3.99	1.35	0.21469
11	Pearl Global Inds. Ltd.	0.99	3.56	0.0074***	-0.0179	-1.5756	0.15377	26.05	3.33	0.0103**	-0.48	-1.51	0.16895
12	Polygenta Technologies Ltd.	0.61	1.79	0.11041	-0.0043	-0.7302	0.48613	2.88	2.77	0.0242**	-0.03	-1.62	0.14301
13	R S W M Ltd.	0.61	1.79	0.11041	-0.0043	-0.7302	0.48613	2.88	2.77	0.0242**	-0.03	-1.62	0.14301
14	Rainbow Denim Ltd	1.20	14.62	0.00001***	-	-	-	92.37	8.65	0.00001***	-	-	-
15	Uniworth Ltd	2.57	4.97	0.001***	-0.0499	-2.9692	0.017**	16.28	2.26	0.054*	-0.18	-0.77	0.46135
16	Uniworth Textiles Ltd.	0.33	9.11	0.00001***	-	-	-	1.87	10.00	0.00001***	-	-	-
17	Voith Paper Fabrics India Ltd.	0.57	22.42	0.00001***	-	-	-	17.77	8.44	0.00001***	-	-	-
18	Zodiac Clothing Co. Ltd.	0.50	1.14	0.28877	0.0202	1.7050	0.12659	-68.93	-3.41	0.009***	2.51	4.57	0.001***

(Source: CMIE – Prowess & Author Compilation

Table 4. 33 List of significant companies in Textile sector

At 1% Significance		At 5% Significance		At 10% Significance	
1		2		3	
Return on Investment	**Return on Equity**	**Return on Investment**	**Return on Equity**	**Return on Investment**	**Return on Equity**
Aunde India Ltd.	Aunde India Ltd.	E-Land Apparel Ltd.	Birla Cotsyn (India) Ltd.	-	Uniworth Ltd
Birla Cotsyn (India) Ltd.	Bombay Rayon Fashions	Pearl Global Inds. Ltd.	Indo Rama Synthetics (India)	-	-
Bombay Rayon Fashions	E-Land Apparel Ltd.	-	Polygenta Technologies Ltd	-	-
Gokaldas Exports Ltd.	Gokaldas Exports Ltd.	-	R S W M Ltd.	-	-
Golden Carpets Ltd.	Golden Carpets Ltd.	-	-	-	-
Indian Card Clothing Co.	Indian Card Clothing Co.	-	-	-	-
Indo Count Inds. Ltd	Indo Count Inds. Ltd	-	-	-	-
Rainbow Denim Ltd	Indo Rama Synthetics (India)	-	-	-	-
Uniworth Ltd	Pearl Global Inds. Ltd.	-	-	-	-
Uniworth Textiles Ltd.	Rainbow Denim Ltd	-	-	-	-
Voith Paper Fabrics India Ltd.	Uniworth Textiles Ltd.	-	-	-	-
-	Voith Paper Fabrics India Ltd.	-	-	-	-
-	Zodiac Clothing Co. Ltd.	-	-	-	-

(Source: CMIE-Prowess & Author Compilation)

Aunde India Ltd, Bombay Rayon Fashions, Gokaldas Exports Ltd, Golden Carpets Ltd, Indian Card Clothing Co, Indo Count Inds. Ltd, Rainbow Denim Ltd, Uniworth Ltd and Voith Paper Fabrics India Ltd are found to be statistically significance at 1% level for both Return on Investment and Return on Equity. Companies such as E-Land Apparel Ltd and Pearl Global Inds. Ltd

influence of Foreign Investment on their ROI is statistically significant at 5% level of significant. Birla Cotsyn (India) Ltd, Indo Rama Synthetics (India), Polygenta Technologies Ltd and R S W M Ltd. is only company which is the influence of Foreign Investment on their ROE is statistically significant at 5% level of significance. However no signal company are found to exhibit the low impact of foreign investment on ROI but Uniworth Ltd companies are found to exhibit the low impact of foreign investment on ROE the impact of foreign investment on ROE in such companies is significant at 10% significant level. This means out of 18 FDI based companies in Textile Sector 11 companies shown a significant impact of foreign investment on ROI and 18 companies a significant impact of foreign investment on ROE, Hence the null hypothesis i..e Foreign Investment does not have a statistically significant impact on Managerial Efficiency of FDI based companies in Textile Sector is rejected in said investigated FDI based companies.

Table 4. 34 List of not significant companies in Textile sector

Not Significant	
Return on Investment	**Return on Equity**
1	**2**
Page Industries Ltd.	Page Industries Ltd.
Polygenta Technologies Ltd	-
R S W M Ltd.	-
Zodiac Clothing Co. Ltd.	-

(Source: CMIE-Prowess & Author Compilation)

Table 4.34, indicates that foreign investment does not have any impact on Return on Investment like Page Industries Ltd, Polygenta Technologies Ltd, R S W M Ltd, Zodiac Clothing Co. Ltd. and Return on Equity like Page Industries Ltd companies.

4.2.2.3 Pharmaceutical Sector

Table 4.35, provides statistical regressed data on impact of Foreign Investment on Return on Investment and Return on Equity of 26 FDI based companies in Pharmaceutical Sector along with constant and coefficient P-Value. Return on Investment and Return on Equity has been considered an indicator to explain managerial efficiency of FDI based companies in Pharmaceutical Sector in the study.

Table 4. 35 Managerial Efficiency of FDI based Companies in Pharmaceutical Sector in India

Sr.No	Name of FDI Based Companies	Return on Investment						Return on Equity					
		const	*t-Stat*	*p-value*	*Coefficient*	*t- Stat*	*p-value*	*const*	*t- Stat*	*p-value*	*Coefficient*	*t- Stat*	*p-value*
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*
1	Abbott India Ltd.	5.37	4.36	0.002***	-0.06	-3.28	0.01**	-349.08	-3.48	0.008***	5.99	4.27	0.002***
2	Astrazeneca Pharma India Ltd.	1.32	5.98	0.0003***	0.00	0.35	0.73326	113.07	8.44	0.00003***	-1.19	-1.70	0.12665
3	Biofil Chemicals & Pharm Ltd.	23.39	0.32	0.75797	-1.10	-0.31	0.76525	-7.81	-0.17	0.86549	0.41	0.19	0.85565
4	Caprolactam Chemicals Ltd.	1.13	9.73	0.00001***	-	-	-	0.50	4.00	0.003***	-	-	-
5	Cheryl Laboratories Pvt. Ltd.	0.20	1.50	0.16807	-	-	-	11.17	1.49	0.17116	-	-	-
6	Cirex Pharmaceuticals Ltd.	18.84	4.23	0.002***	-0.85	-4.06	0.003***	747.29	1.57	0.15552	-33.44	-1.49	0.17348
7	Clarion Drugs Ltd.	33.90	0.63	0.54412	-0.53	-0.63	0.54876	176.75	0.64	0.54157	-2.75	-0.63	0.54622
8	Dharamsi Morarji Chemical.	0.48	1.39	0.20301	0.02	1.19	0.26647	7.94	1.98	0.08271*	-0.06	-0.43	0.68112
9	Dutron Polymers Ltd.	-73.5	-1.48	0.17618	5.10	1.49	0.17485	-1273.2	-1.61	0.14603	88.30	1.62	0.14481
10	Elantas Beck India Ltd.	3.57	3.82	0.0051***	-0.03	-2.27	0.05278*	138.36	6.07	0.0003***	-1.23	-4.51	0.0019***
11	Essel Propack Ltd.	0.21	3.02	0.01649**	0.02	5.07	0.0009***	8.97	5.71	0.0004***	0.70	7.06	0.0001***
12	Ester Industries Ltd.	1.30	19.33	0.00001***	0.01	1.18	0.27113	28.04	15.21	0.00001***	-0.65	-5.09	0.0009***
13	Fairchem Speciality Ltd.	0.95	0.59	0.57157	0.01	0.35	0.73847	-6.87	-0.45	0.66301	0.26	1.00	0.34868
14	Foseco India Ltd.	1.28	3.70	0.006***	0.00	0.28	0.79012	21.31	3.11	0.014**	0.09	0.28	0.78456
15	G O C L Corpn. Ltd.	-0.35	-0.23	0.82522	0.01	0.68	0.51277	-30.37	-0.39	0.70451	1.07	1.05	0.32258
16	G P Petroleums Ltd.	0.14	0.24	0.81572	0.03	2.33	0.047**	10.23	0.96	0.36692	0.15	0.72	0.49443
17	Gujarat Polybutenes Pvt. Ltd.	4.69	3.81	0.0051***	-0.27	-2.10	0.0687*	48.91	6.66	0.0001***	-3.45	-4.52	0.001***
18	Gulshan Chemicals Ltd.	1.24	6.73	0.00015***	-0.02	-3.01	0.016**	10.15	5.76	0.00042***	-0.16	-2.58	0.03286**
19	Kerala Ayurveda Ltd.	0.36	35.34	0.00001***	-	-	-	2.38	14.01	0.00001***	-	-	-
20	Kingfa Science & Technology	1.76	23.29	0.00001***	0.00	-0.12	0.90739	21.81	14.14	0.00001***	0.17	4.62	0.001***
21	Lincoln Pharmaceuticals Ltd.	1.37	2.60	0.0314**	0.00	-0.40	0.69704	10.22	1.33	0.21963	0.03	0.33	0.75266

22	National Oxygen Ltd.	0.53	18.01	0.00001***	-	-	-	5.77	14.17	0.00001***	-	-	-
23	Polymac Thermoformers Ltd.	-0.63	-0.41	0.69487	0.02	0.46	0.65851	-1.73	-0.41	0.69176	0.05	0.46	0.65491
24	Rama Phosphates Ltd.	1.41	1.15	0.28406	0.01	0.25	0.80963	62.51	2.01	0.0795*	-0.50	-0.96	0.36479
25	Rubber Products Ltd.	0.96	18.11	0.0001***	-	-	-	4.37	13.77	0.0001***	-	-	-
26	Supreme Industries Ltd.	1.77	15.98	0.0019377	0.69	0.51	0.00001***	81.05	7.22	0.00009***	1.27	4.47	0.002***

(Source: CMIE – Prowess & Author Compilation)

Table 4. 36 List of significant companies in Pharmaceutical sector

At 1% Significance		**At 5% Significance**		**At 10% Significance**	
1		**2**		**3**	
Return on Investment	**Return on Equity**	**Return on Investment**	**Return on Equity**	**Return on Investment**	**Return on Equity**
Abbott India Ltd.	Abbott India Ltd.	Essel Propack Ltd	Foseco India Ltd.	Dharamsi Morarji	Polymac Thermo formers
Astrazeneca Pharma India	Astrazeneca Pharma India	G P Petroleums Ltd.	-	-	-
Caprolactam Chemicals	Caprolactam Chemicals	Lincoln Pharmaceuticals	-	-	-
Cirex Pharmaceuticals	Elantas Beck India Ltd.	-	-	-	-
Elantas Beck India Ltd.	Essel Propack Ltd	-	-	-	-
Ester Industries Ltd.	Ester Industries Ltd.	-	-	-	-
Foseco India Ltd.	Gujarat Polybutenes Pvt.	-	-	-	-
Gujarat Polybutenes.	Gulshan Chemicals Ltd	-	-	-	-
Gulshan Chemicals Ltd	Kerala Ayurveda Ltd.	-	-	-	-
Kerala Ayurveda Ltd.	Kingfa Science &	-	-	-	-
Kingfa Science &	National Oxygen Ltd	-	-	-	-
National Oxygen Ltd	Rubber Products Ltd.	-	-	-	-
Rubber Products Ltd.	Supreme Industries Ltd.	-	-	-	-
Supreme Industries Ltd.	-	-	-	-	-

(Source: CMIE-Prowess & Author Compilation)

Attempt has been made to examine whether there is any significant impact of Foreign Investment on Return on Investment and Return on Equity of 18 FDI based companies in Pharmaceutical sector. The regression result of Foreign Investment on Return on Investment and Return on Equity.

Astrazeneca Pharma India, Caprolactam Chemicals, Elantas Beck India Ltd, Ester Industries Ltd, Gujarat Polybutenes, Gulshan Chemicals Ltd, Kerala Ayurveda Ltd, Kingfa Science, National Oxygen Ltd, Rubber Products Ltd and Supreme Industries Ltd are found to be statistically significant at 1% level for both Return on Investment and Return on Equity. Essel Propack Ltd, G P Petroleums Ltd and Lincoln Pharmaceuticals influence of Foreign Investment on their ROI is statistically significant at 5% level of significant. Foseco India Ltd is only company which is influence of Foreign Investment on their ROE is statistically significant at 5% level of significance. However Dharamsi Morarji exhibit the low impact of foreign investment on ROI and Polymac Thermo formers companies are found to exhibit the low impact of foreign investment on ROE the impact of foreign investment on ROE in such companies is significant at 10% significance level. This means out of 26 FDI based companies in Pharmaceutical Sector 18 companies shown a significant impact of foreign investment on ROI and 15 companies a significant impact of foreign investment on ROE, Hence the null hypothesis i..e Foreign Investment does not have a statistically significant impact on Managerial Efficiency of FDI based companies in Pharmaceutical Sector is rejected in said investigated FDI based companies.

Table 4. 37 List of not significant companies in Pharmaceutical sector

Not Significant	
Return on Investment	**Return on Equity**
1	**2**
Biofil Chemicals & Phar	Biofil Chemicals & Phar
Cheryl Laboratories Pvt.	Cheryl Laboratories Pvt.
Clarion Drugs Ltd.	Cirex Pharmaceuticals
Dharamsi Morarji	Clarion Drugs Ltd.
Dutron Polymers Ltd.	Dutron Polymers Ltd.
Fairchem Speciality Ltd.	Fairchem Speciality Ltd.
G O C L Corpn. Ltd.	G O C L Corpn. Ltd.
Polymac Thermoformers	G P Petroleums Ltd.
Rama Phosphates Ltd.	Lincoln Pharmaceuticals
-	Rama Phosphates Ltd.

(Source: CMIE-Prowess & Author Compilation)

Table 4.37, indicates that foreign investment does not have any impact on Return on Investment like Biofil Chemicals & Phar, Cheryl Laboratories Pvt, Clarion Drugs Ltd, Dutron Polymers Ltd, Fairchem Speciality Ltd, G O C L Corpn. Ltd, Polymac Thermoformers and Rama Phosphates Ltd. and Return on Equity like Biofil Chemicals & Phar, Cheryl Laboratories Pvt, Cirex Pharmaceuticals, Clarion Drugs Ltd, Dutron Polymers Ltd, Fairchem Speciality Ltd, G O C L Corpn. Ltd, G P Petroleums Ltd, Lincoln Pharmaceuticals and Rama Phosphates Ltd. companies.

4.2.2.4 Construction Sector

Table 4.38 Provides statistical regressed data on impact of Foreign Investment on Return on Investment and Return on Equity of 15 FDI based companies in Construction Sector along with constant and coefficient P-Value. Return on Investment and Return on Equity has been considered as indicator to explain managerial efficiency of FDI based companies in Construction Sector in the study.

Table 4. 38 Managerial Efficiency of FDI based Companies in Construction Sector in India

Sr.No	Name of FDI Based Companies	Total Assets Turnover						Equity Turnover					
		const	*t-Stat*	*p-value*	*Coefficient*	*t- Stat*	*p-value*	*const*	*t- Stat*	*p-value*	*Coefficient*	*t- Stat*	*p-value*
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*
1	Akzo Nobel India Ltd.	0.02	0.04	0.97143	0.018	2.805	0.023**	-28.99	-1.63	0.14256	1.24	4.37	0.0023***
2	Ambuja Cements Ltd.	1.92	10.21	0.00001***	-0.021	-5.247	0.0007***	4.04	0.40	0.6964	0.58	2.71	0.0266**
3	Berger Paints India Ltd.	2.62	13.51	0.00001***	-0.059	-3.921	0.004***	-8.68	-0.51	0.6224	3.95	2.99	0.0173*
4	Grindwell Norton Ltd.	1.21	22.22	0.00001***	-	-	-	32.11	10.41	0.00001***	-	-	-
5	Gujarat Sidhee Cement Ltd.	2.09	9.52	0.00001***	-	-	-	6.49	5.08	0.0006***	-	-	-
6	H E G Ltd.	0.92	4.77	0.001***	-0.028	-1.775	0.11389	-8.10	-0.43	0.67708	3.19	2.05	0.074*
7	Heidelberg Cement India Ltd.	5.92	2.64	0.0299**	-0.176	-2.255	0.054*	-19.57	-1.05	0.32647	0.89	1.37	0.20882
8	I F G L Refractories Ltd.	0.44	1.18	0.27351	0.010	1.723	0.12326	-7.34	-1.06	0.31903	0.23	2.17	0.0618*
9	Kachchh Minerals Ltd.	1.10	4.34	0.002***	-0.042	-1.294	0.23194	0.40	2.92	0.019**	-0.01	-0.71	0.49611
10	Kansai Nerolac Paints Ltd.	1.02	2.46	0.039**	0.040	1.618	0.14427	102.27	1.66	0.13597	-2.08	-0.57	0.58219
11	Morganite Crucible (India)	-2.42	-1.12	0.29648	0.049	1.544	0.16127	-225.57	-3.10	0.014**	3.61	3.42	0.009***
12	Orient Refractories Ltd.	77.41	1.55	0.15958	-1.019	-1.534	0.16349	1698.01	1.60	0.14786	-22.34	-1.59	0.15163
13	Shalimar Paints Ltd.	1.80	35.51	0.00001***	-0.006	-4.679	0.001***	112.64	11.45	0.00001***	0.39	1.51	0.16862
14	Shree Digvijay Cement Co.	1.85	14.67	0.00001***	-0.008	-4.749	0.001***	2.12	3.59	0.007***	0.01	0.98	0.35355
15	Vesuvius India Ltd.	1.00	28.00	0.00001***	-	-	-	26.12	10.07	0.00001***	-	-	-

(Source: CMIE – Prowess & Author Compilation)

Attempt has been made to examine whether there is any significant impact of Foreign Investment on Return on Investment and Return on Equity of 15 FDI based companies in Construction Sector. The regression result of Foreign Investment on Return on Investment and Return on Equity.

Table 4. 39 List of significant companies in Construction Sector

At 1% Significance		At 5% Significance		At 10% Significance	
1		2		3	
Return on Investment	**Return on Equity**	**Return on Investment**	**Return on Equity**	**Return on Investment**	**Return on Equity**
Ambuja Cements Ltd	Akzo Nobel India Ltd	Akzo Nobel India Ltd	Ambuja Cements Ltd	I F G L Refractories Ltd	H E G Ltd.
Berger Paints India Ltd	Grindwell Norton Ltd.	Heidelberg Cement India	Berger Paints India Ltd	-	-
Grindwell Norton Ltd.	Gujarat Sidhee Cement	Kansai Nerolac Paints Ltd	Kachchh Minerals Ltd.	-	-
Gujarat Sidhee Cement	Shalimar Paints Ltd	-	Morganite Crucible	-	-
H E G Ltd.	Vesuvius India Ltd	-	-	-	-
Kachchh Minerals Ltd.	-	-	-	-	-
Shree Digvijay Cement Co.	-	-	-	-	-
Vesuvius India Ltd	-	-	-	-	-

(Source: CMIE-Prowess & Author Compilation)

Ambuja Cements Ltd, Akzo Nobel India Ltd, Berger Paints India Ltd, Grindwell Norton Ltd, Gujarat Sidhee Cement, Shalimar Paints Ltd, H E G Ltd, Kachchh Minerals Ltd, Shree Digvijay Cement Co, and Vesuvius India Ltd are found to be statistically significant at 1% level for both Return on Investment and Return on Equity. Akzo Nobel India Ltd, Heidelberg Cement India, Kansai Nerolac Paints Ltd influence of Foreign Investment on their ROI is statistically significant at 5% level of significance. Ambuja Cements Ltd,

Berger Paints India Ltd, Kachchh Minerals Ltd and Morganite Crucible Company which is influence of Foreign Investment on their ROE is statistically significant at 5% level of significant. However I F G L Refractories Ltd exhibit the low impact of foreign investment on ROI and H E G Ltd. companies are found to exhibit the low impact of foreign investment on ROE the impact of foreign investment on ROE in such companies is significant at 10% significant level. This means out of 15 FDI based companies in Construction Sector 12 companies shown a significant impact of foreign investment on ROI and 10 companies a significant impact of foreign investment on ROE, Hence the null hypothesis i..e Foreign Investment does not have a statistically significant impact on Managerial Efficiency of FDI based companies in Construction Sector is rejected in said investigated FDI based companies.

Table 4. 40 List of not significant companies in Construction sector

Not Significant	
Return on Investment	**Return on Equity**
1	**2**
I F G L Refractories Ltd	Heidelberg Cement India
Morganite Crucible (India)	Kansai Nerolac Paints Ltd
Orient Refractories Ltd.	Orient Refractories Ltd.
Shalimar Paints Ltd	Shree Digvijay Cement Co.

(Source: CMIE-Prowess & Author Compilation)

Table 4.40, indicates that foreign investment does not have any impact on Return on Investment (ROI) like I F G L Refractories Ltd, Morganite Crucible (India), Orient Refractories Ltd and Shalimar Paints Ltd and Return on Equity (ROE) like Heidelberg Cement India, Kansai Nerolac Paints Ltd, Orient Refractories Ltd and Shree Digvijay Cement Co.

4.2.2.5. Metal Sector

Table 4.41, Provides statistical regressed data on impact of Foreign Investment on Return on Investment and Return on Equity of 21 FDI based companies in Metal Sector along with constant and coefficient P-Value.

Table 4. 41 Managerial Efficiency of FDI based Companies in Metal Sector in India

Sr.No	Name of FDI Based Companies	Total Assets Turnover						Equity Turnover					
		const	*t-Stat*	*p-value*	*Coefficient*	*t- Stat*	*p-value*	*const*	*t- Stat*	*p-value*	*Coefficient*	*t- Stat*	*p-value*
1	***2***	***3***	***4***	***5***	***6***	***7***	***8***	***9***	***10***	***11***	***12***	***13***	***14***
1	Carnation Industries Ltd.	-241.90	-0.99	0.35077	47.12	3.78	0.005***	11.50	0.58	0.57935	0.45	0.45	0.66791
2	Chennai Ferrous Inds. Ltd.	123.71	1.52	0.16687	48.16	3.67	0.006***	3.29	1.63	0.14262	0.42	1.29	0.23397
3	Ess Dee Aluminium Ltd.	7689.54	5.21	0.0008***	141.26	3.06	0.015**	17.48	7.05	0.0001***	0.07	0.85	0.41988
4	Facor Steels Ltd.	1690.71	3.88	0.004***	-9.11	-0.58	0.57893	2.03	0.22	0.83375	0.39	1.15	0.28214
5	Ferro Alloys Corpn. Ltd.	4948.92	16.60	0.00001***	-65.03	-6.58	0.0001***	35.95	12.03	0.0001***	-0.44	-4.46	0.002***
6	Gillette India Ltd.	50905.10	0.69	0.50901	-977.55	-0.54	0.60323	1402.51	4.94	0.0001***	-33.44	-4.80	0.0001***
7	Gontermann-Peipers Ltd.	2901.47	2.35	0.0513*	-44.30	-0.63	0.5481	1.14	0.30	0.77037	0.59	2.75	0.028**
8	Hinduja Foundries Ltd.	19447.50	3.00	0.017**	-243.67	-1.93	0.089*	-62.89	-2.22	0.0575*	1.63	2.95	0.018**
9	Jindal Saw Ltd.	16121.50	0.33	0.74866	4106.70	0.88	0.40696	214.83	3.17	0.0131**	-10.73	-1.64	0.13938
10	Jindal Stainless (Hisar) Ltd.	3261.25	1.00	0.34659	1544.19	5.08	0.0009***	3243.82	1.00	0.34659	1533.88	5.08	0.0009**
11	Jindal Stainless Ltd.	56516.10	1.75	0.11783	3600.05	2.33	0.048**	197.87	3.83	0.005***	0.39	0.16	0.88037
12	Kanishk Steel Inds. Ltd.	203.23	5.65	0.0004***	-14.44	-5.65	0.0004***	17.59	4.47	0.002***	-1.25	-4.47	0.002***
13	Man Industries (India) Ltd.	13875.80	7.55	0.00007***	64.70	0.45	0.66752	43.04	8.14	0.00004***	1.04	2.50	0.036**
14	National Fittings Ltd.	990.29	3.75	0.005***	-81.15	-2.99	0.017**	22.62	3.68	0.006***	-1.97	-3.12	0.014**
15	Steelco Gujarat Ltd.	9068.17	2.22	0.0570*	-86.26	-1.64	0.13966	68.90	2.20	0.0591*	-0.73	-1.82	0.10637
16	Sunflag Iron & Steel Co.	-17978.60	-2.38	0.044**	650.32	3.83	0.005***	-11.50	-2.55	0.034**	0.47	4.65	0.001***
17	Tayo Rolls Ltd.	-1229.33	-1.33	0.2213	224.19	4.10	0.003***	98.58	19.05	0.00001***	-4.60	-15.08	0.00001***
18	Usha Martin Ltd.	4915.66	0.26	0.80038	4283.59	2.65	0.029**	52.77	2.40	0.043**	4.18	2.21	0.0579*
19	Uttam Galva Steels Ltd.	-135.33	-0.01	0.99003	324.19	0.81	0.4433	0.03	0.03	0.97448	0.04	1.08	0.31273
20	V B C Industries Ltd.	830.82	2.06	0.0733*	-8.16	-0.25	0.81261	0.76	1.80	0.10911	-0.01	-0.36	0.73174
21	Vedanta Ltd.	-37989.00	-4.14	0.003***	73976.10	4.47	0.002***	-204.77	-1.57	0.15413	5.28	2.25	0.0546*

(Source: CMIE – Prowess & Author Compilation)

Return on Investment and Return on Equity has been considered as indicator to explain managerial efficiency of FDI based companies in Metal Sector in the study. Attempt has been made to examine whether there is any significant impact of Foreign Investment on Return on Investment and Return on Equity of 15 FDI based companies in Metal Sector. The regression result of Foreign Investment on Return on Investment and Return on Equity.

Table 4. 42 List of significant companies in Metal sector

At 1% Significance		At 5% Significance		At 10% Significance	
1		2		3	
Return on Investment	**Return on Equity**	**Return on Investment**	**Return on Equity**	**Return on Investment**	**Return on Equity**
Carnation Industries	Ess Dee Aluminium Ltd.	Hinduja Foundries Ltd	Gontermann-Peipers	Gontermann -Peipers	Hinduja Foundries Ltd
Chennai Ferrous Inds. Ltd	Ferro Alloys Corpn. Ltd	National Fittings Ltd.	Jindal Saw Ltd	Steelco Gujarat Ltd.	Steelco Gujarat Ltd.
Ess Dee Aluminium Ltd.	Gillette India Ltd.	Sunflag Iron & Steel Co	National Fittings Ltd.	V B C Industries Lt	Usha Martin Ltd.
Ferro Alloys Corpn. Ltd	Jindal Stainless Ltd.	Usha Martin Ltd.	Sunflag Iron & Steel Co		Vedanta Ltd.
Jindal Stainless (Hisar)	Kanishk Steel Inds. Ltd.	-	-	-	-
Jindal Stainless Ltd.	Man Industries (India)	-	-	-	-
Kanishk Steel Inds. Ltd.	Tayo Rolls Ltd	-	-	-	-

(Source: CMIE-Prowess & Author Compilation)

Carnation Industries, Chennai Ferrous Inds. Ltd, Ess Dee Aluminium Ltd, Ferro Alloys Corpn. Ltd, Gillette India Ltd, Jindal Stainless (Hisar), Jindal Stainless Ltd, Kanishk Steel Inds. Ltd, Man Industries (India), Tayo Rolls Ltd, Vedanta Ltd. are found to be statistically significant at 1% level for both Return on Investment and Return on Equity. Hinduja Foundries Ltd, National Fittings Ltd, Sunflag Iron & Steel Co, Usha Martin Ltd. influence of Foreign

Investment on their ROI is statistically significant at 5% level of significance. Gontermann-Peipers , Jindal Saw Ltd, National Fittings Ltd, Sunflag Iron & Steel Co company which is influence of Foreign Investment on their ROE is statistically significant at 5% level of significant. However Gontermann-Peipers, Steelco Gujarat Ltd. V B C Industries Ltd exhibit the low impact of foreign investment on ROI and Hinduja Foundries Ltd, Steelco Gujarat Ltd, Usha Martin Ltd, Vedanta Ltd.companies are found to exhibit the low impact of foreign investment on ROE the impact of foreign investment on ROE in such companies is significant at 10% significant level. This means out of 21 FDI based companies in Construction Sector 17 companies shown a significant impact of foreign investment on ROI and 15 companies a significant impact of foreign investment on ROE, Hence the null hypothesis i..e Foreign Investment does not have a statistically significant impact on Managerial Efficiency of FDI based companies in Metal Sector is rejected in said investigated FDI based companies.

Table 4. 43 List of not significant companies in Metal sector

Not Significant	
Return on Investment	**Return on Equity**
1	**2**
Gillette India Ltd.	Carnation Industries
Jindal Saw Ltd	Chennai Ferrous Inds. Ltd
Uttam Galva Steels	Uttam Galva Steels
-	V B C Industries Lt

(Source: CMIE-Prowess & Author Compilation)

Table 4.43, indicates that foreign investment does not have any impact on Return on Investment like Gillette India Ltd, Jindal Saw Ltd, Uttam Galva Steels and Return on Equity like Carnation Industries, Chennai Ferrous Inds. Ltd, Uttam Galva Steels, V B C Industries Ltd.

4.2.2.6 Machinery Sector

Table 4.44 Provides statistical regressed data on impact of Foreign Investment on Return on Investment and Return on Equity of 30 FDI based companies in Machinery Sector along with constant and coefficient P-Value. Return on Investment and Return on Equity has been considered an indicator to explain managerial efficiency of FDI based companies in Machinery Sector in the study.

Table 4. 44 Managerial Efficiency of FDI based Companies in Machinery Sector in India

Sr.No	Name of FDI Based Companies	Return on Investment						Return on Equity					
		const	*t-Stat*	*p-value*	*Coefficient*	*t- Stat*	*p-value*	*const*	*t- Stat*	*p-value*	*Coefficient*	*t- Stat*	*p-value*
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*
1	A B B India Ltd.	2.10	8.62	0.00003***	-0.015	-4.108	0.003***	60.47	1.53	0.16475	1.69	2.85	0.021**
2	Aksh Optifibre Ltd.	0.31	2.80	0.023**	0.018	1.694	0.12873	5.03	3.01	0.016**	-0.05	-0.32	0.75499
3	Best & Crompton Engg.	-58.56	-1.51	0.16846	0.910	1.534	0.16364	-101.17	-0.41	0.69345	1.61	0.42	0.68276
4	Birla Cable Ltd.	1.07	11.67	0.0001***	-	-	-	5.61	5.39	0.0004***	-	-	-
5	Cmi F P E Ltd.	1.46	8.90	0.00002***	-0.006	-2.495	0.037**	88.13	5.56	0.0005***	-0.06	-0.26	0.80023
6	Cummins India Ltd.	1.83	7.56	0.00003***	-	-	-	279.31	7.67	0.00003***	-	-	-
7	Eimco Elecon (India) Ltd.	0.86	14.86	0.0001***	-	-	-	29.97	15.02	0.0001***	-	-	-
8	Esab India Ltd.	3.74	10.47	0.0001***	-0.030	-5.282	0.0007***	14.93	1.90	0.0943*	0.29	2.27	0.0530*
9	F A G Bearings India Ltd.	1.41	23.55	0.0001***	-	-	-	75.33	8.43	0.0001***	-	-	-
10	G M M Pfaudler Ltd.	2.70	0.54	0.60185	-0.031	-0.322	0.75564	385.83	0.72	0.49445	-6.29	-0.59	0.56833
11	Honda Siel Power Products	1.00	29.27	0.0001***	-	-	-	46.38	8.57	0.0001***	-	-	-
12	Igarashi Motors India Ltd.	0.96	4.29	0.002***	0.003	0.638	0.54109	15.33	2.86	0.021**	0.00	-0.01	0.99605
13	Indo Tech Transformers Lt	0.99	11.21	0.0001***	-0.004	-2.784	0.023**	20.85	9.66	0.0001***	-0.10	-2.82	0.022**
14	Ingersoll-Rand (India) Ltd.	0.59	7.66	0.00003***	-	-	-	21.31	15.41	0.0001***	-	-	-
15	K S B Pumps Ltd.	1.12	30.09	0.0001***	-	-	-	28.88	14.68	0.0001***	-	-	-
16	Kennametal India Ltd.	0.27	0.35	0.73278	0.011	1.211	0.26033	61.63	3.97	0.004***	-0.46	-2.47	0.038**
17	Panasonic Carbon India Ltd.	0.41	1.87	0.0991*	0.001	0.354	0.73263	-4.86	-1.46	0.18312	0.23	3.94	0.004***
18	Ruttonsha International Ltd.	1.99	6.52	0.0001***	-0.015	-3.292	0.010**	4.57	4.14	0.003***	-0.01	-0.30	0.77324
19	S K F India Ltd.	1.69	22.49	0.0001***	-	-	-	42.90	12.73	0.0001***	-	-	-
20	Shilp Gravures Ltd.	-0.57	-0.65	0.53227	0.049	1.581	0.15252	-31.71	-1.12	0.29508	1.42	1.43	0.18939
21	Siemens Ltd.	1.54	4.45	0.002***	-0.009	-1.654	0.13683	143.39	1.84	0.10259	0.47	0.40	0.70072
22	Singer India Ltd.	7.74	2.48	0.038**	-0.054	-1.218	0.25798	-0.70	-0.06	0.95637	0.23	1.33	0.22016
23	Sterlite Technologies Ltd.	2.13	3.94	0.004***	-0.023	-2.084	0.070*	123.49	3.13	0.014**	-1.64	-2.05	0.074*

24	Stovec Industries Ltd.	0.62	1.54	0.1632	0.007	1.097	0.30463	-40.01	-0.87	0.41005	1.15	1.69	0.13009
25	Switching Technologi Ltd.	2.12	26.14	0.0001***	-	-	-	4.99	10.60	0.0001***	-	-	-
26	T I L Ltd.	-24.34	-1.04	0.3298	1.313	1.080	0.31146	-382.17	-0.41	0.69361	22.37	0.46	0.65663
27	Timken India Ltd.	1.13	0.40	0.70246	-0.001	-0.018	0.9859	98.46	2.87	0.020**	-1.13	-2.58	0.032**
28	Walchandnagar Industries	1.28	9.53	0.0001***	-0.054	-4.768	0.001***	211.70	6.44	0.0002***	-8.51	-3.10	0.014**
29	Wendt (India) Ltd.	0.65	0.15	0.88354	0.002	0.023	0.98233	515.83	1.18	0.27134	-11.76	-1.08	0.31259
30	Yuken India Ltd.	1.14	31.78	0.0001***	-	-	-	53.39	11.94	0.0001***	-	-	-

(Source: CMIE – Prowess & Author Compilation)

Table 4. 45 List of not significant companies in Machinery sector

At 1% Significance		At 5% Significance		At 10% Significance	
1		2		3	
Return on Investment	**Return on Equity**	**Return on Investment**	**Return on Equity**	**Return on Investment**	**Return on Equity**
A B B India Ltd.	Birla Cable Ltd.	Aksh Optifibre Ltd	A B B India Ltd.	Panasonic Carbon India	
Birla Cable Ltd.	Cmi F P E Ltd	Singer India Ltd.	Aksh Optifibre Ltd	-	-
Cmi F P E Ltd	Cummins India Ltd.	-	Igarashi Motors India Ltd.	-	-
Cummins India Ltd.	Eimco Elecon (India) Ltd	-	Sterlite Technologies Ltd.	-	-
Eimco Elecon (India) Ltd	F A G Bearings India Ltd	-	Timken India Ltd.	-	-
F A G Bearings India Ltd	Honda Siel Power Produ	-	-	-	-
Honda Siel Power Produ	Indo Tech Transformers L	-	-	-	-
Igarashi Motors India Ltd.	Ingersoll-Rand (India).	-	-	-	-
Indo Tech Transformers L	K S B Pumps Ltd.	-	-	-	-
Ingersoll-Rand (India).	Kennametal India Ltd.	-	-	-	-
K S B Pumps Ltd.	Panasonic Carbon India	-	-	-	-
Ruttonsha International	Ruttonsha International	-	-	-	-
S K F India Ltd.	S K F India Ltd.	-	-	-	-
Siemens Ltd.	Switching Technologies	-	-	-	-
Sterlite Technologies Ltd.	Walchandnagar Industries	-	-	-	-
Switching Technologies	Yuken India Ltd	-	-	-	-

(Source: CMIE-Prowess & Author Compilation)

The attempt has been made to examine whether there is any significant impact of Foreign Investment on Return on Investment and Return on Equity of 30 FDI based companies in Machinery Sector. The regression result of Foreign Investment on Return on Investment and Return on Equity.

A B B India Ltd, Birla Cable Ltd. Cmi F P E Ltd, Cummins India Ltd, Eimco Elecon (India) Ltd, F A G Bearings India Ltd, Honda Siel Power Produ, Indo Tech Transformers , Igarashi Motors India Ltd, Ingersoll-Rand (India), Kennametal India Ltd, K S B Pumps Ltd, Panasonic Carbon India, Ruttonsha International, S K F India Ltd, Siemens Ltd, Sterlite Technologies Ltd, Switching Technologies, Walchandnagar Industries Yuken India Ltd are found to be statistically significant at 1% level for both Return on Investment (ROI) and Return on Equity (ROE). Aksh Optifibre Ltd and Singer India Ltd. influence of Foreign Investment on their ROI is statistically significant at 5% level of significant. A B B India Ltd, Aksh Optifibre Ltd, Igarashi Motors India Ltd, Sterlite Technologies Ltd, Timken India Ltd. company which is influence of Foreign Investment on their ROE is statistically significant at 5% level of significance. However Panasonic Carbon India exhibit the low impact of foreign investment on ROI in such companies is significant at 10% significant level. This means out of 30 FDI based companies in Construction Sector 21 companies shown a significant impact of foreign investment on ROI and 21 companies a significant impact of foreign investment on ROE, Hence the null hypothesis i..e Foreign Investment does not have a statistically significant impact on Managerial Efficiency of FDI based companies in Machinery Sector is rejected in said investigated FDI based companies.

Table 4. 46 List of not significant companies in Machinery sector

Not Significant	
Return on Investment	**Return on Equity**
1	**2**
Best & Crompton Engg.	Best & Crompton Engg.
G M M Pfaudler Ltd.	G M M Pfaudler Ltd.
Kennametal India Ltd.	Siemens Ltd.
Shilp Gravures Ltd.	Shilp Gravures Ltd.
Stovec Industries Ltd.	Singer India Ltd.
T I L Ltd.	Stovec Industries Ltd.
Timken India Ltd.	T I L Ltd.
Wendt (India) Ltd.	Wendt (India) Ltd.

(Source: CMIE-Prowess & Author Compilation)

Table 4.46, indicates that foreign investment does not have any impact on Return on Investment (ROI) like Best & Crompton Engg, G M M Pfaudler Ltd, Kennametal India Ltd, Shilp Gravures Ltd, Stovec Industries Ltd, T I L Ltd, Timken India Ltd, Wendt (India) Ltd. and Return on Equity (ROE) like Best & Crompton Engg, G M M Pfaudler Ltd, Siemens Ltd., Shilp Gravures Ltd, Singer India Ltd., Stovec Industries Ltd, T I L Ltd, Timken India Ltd, Wendt (India) Ltd.

4.2.2.7 Transport Sector

Table 4.47 Provides statistical regressed data on the impact of Foreign Investment on Return on Investment and Return on Equity of 13 FDI based companies in Transport Sector along with constant and coefficient P-Value. Return on Investment and Return on Equity has been considered an indicator to explain managerial efficiency of FDI based companies in Transport Sector in the study.

Table 4. 47 Managerial Efficiency of FDI based Companies in Transport Sector in India

Sr.No	Name of FDI Based Companies	Return on Investment						Return on Equity					
		const	*t-Stat*	*p-value*	*Coefficient*	*t- Stat*	*p-value*	*const*	*t-Stat*	*p-value*	*Coefficient*	*t- Stat*	*p-value*
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*
1	Blue Dart Express Ltd.	1.39	0.74	0.48132	0.003	0.139	0.89288	754.02	7.59	0.00006***	-8.78	-6.95	0.0001***
2	Chowgule Steamships Ltd.	193.36	2.94	0.018**	-18.600	-2.941	0.018**	1899.86	3.47	0.008***	-182.80	-3.47	0.008***
3	Essar Ports Ltd.	0.26	2.79	0.023**	-0.003	-1.76	0.11519	2.73	2.62	0.030**	-0.03	-1.61	0.14658
4	Essar Shipping Ltd.	0.01	0.95	0.3685	0.002	7.027	0.0001***	-0.04	-0.13	0.89748	0.08	12.74	0.0001***
5	Gateway Distriparks Ltd.	0.37	11.79	0.0001***	-0.005	-3.105	0.014**	3.22	9.89	0.0001***	-0.07	-3.78	0.005***
6	Global Offshore Services	0.30	1.68	0.13134	-0.009	-0.48	0.63834	4.89	0.68	0.51833	0.13	0.18	0.86178
7	Global Vectra Helicorp Ltd.	0.45	12.47	0.0001***	-	-	-	18.71	11.90	0.0001***	-	-	-
8	Gujarat Pipavav Port Ltd.	0.13	3.48	0.008***	0.003	2.729	0.02587	0.66	3.77	0.005***	0.01	2.35	0.046**
9	Jet Airways (India) Ltd.	1.72	6.87	0.0001***	-0.013	-3.91	0.004***	247.97	3.76	0.005***	-1.28	-1.41	0.19687
10	Seamec Ltd.	1.12	0.38	0.71605	-0.007	-0.18	0.85641	120.79	1.91	0.092*	-1.48	-1.77	0.11482
11	Shreyas Shipping Ltd.	3.20	2.71	0.026**	-0.038	-2.14	0.064*	67.31	4.56	0.001***	-0.87	-3.95	0.004***
12	Sical Logistics Ltd.	0.52	5.06	0.0009***	0.002	0.518	0.61847	1.37	0.29	0.77704	0.51	3.11	0.014**
13	Varun Shipping Co. Ltd.	0.29	3.67	0.006***	-0.006	-1.41	0.19582	6.01	3.15	0.01369	-0.11	-1.12	0.29567

(Source: CMIE – Prowess & Author Compilation)

The attempt has been made to examine whether there is any significant impact of Foreign Investment on Return on Investment and Return on Equity of 13 FDI based companies in Transport Sector. The regression result of Foreign Investment on Return on Investment and Return on Equity.

Table 4. 48 List of significant companies in Transport sector

At 1% Significance		At 5% Significance		At 10% Significance	
1		2		3	
Return on Investment	**Return on Equity**	**Return on Investment**	**Return on Equity**	**Return on Investment**	**Return on Equity**
Essar Shipping Ltd	Blue Dart Express Ltd.	Chowgule Steamships Ltd.	Essar Ports Ltd	-	Seamec Ltd.
Gateway Distriparks Ltd.	Chowgule Steamships Ltd.	Essar Ports Ltd	Varun Shipping Co. Ltd.	-	-
Global Vectra Helicorp Ltd.	Essar Shipping Ltd	Shreyas Shipping & Logistics	-	-	-
Gujarat Pipavav Port Ltd	Gateway Distriparks Ltd.	Sical Logistics Ltd.	-	-	-
Jet Airways (India) Ltd.	Global Vectra Helicorp Ltd.	-	-	-	-
Sical Logistics Ltd.	Gujarat Pipavav Port Ltd	-	-	-	-
Varun Shipping Co. Ltd.	Jet Airways (India) Ltd.	-	-	-	-
-	Shreyas Shipping & Logistics	-	-	-	-

(Source: CMIE-Prowess & Author Compilation)

Essar Shipping Ltd, Blue Dart Express Ltd, Chowgule Steamships Ltd, Essar Shipping Ltd, Gateway Distriparks Ltd, Global Vectra Helicorp Ltd, Gujarat Pipavav Port Ltd, Jet Airways (India) Ltd, Sical Logistics Ltd, Shreyas Shipping & Logistics, Varun Shipping Co. Ltd. are found to be statistically

significant at 1% level for both Return on Investment and Return on Equity. Chowgule Steamships Ltd, Essar Ports Ltd, Shreyas Shipping & Logistics and Sical Logistics Ltd. influence of Foreign Investment on their ROI is statistically significant at 5% level of significance. Essar Ports Ltd and Varun Shipping Co. Ltd. company which is influence of Foreign Investment on their ROE is statistically significant at 5% level of significant. However Seamec Ltd. are found to exhibit the low impact of foreign investment on ROE the impact of foreign investment on ROE in such companies is significant at 10% significant level. This means out of 13 FDI based companies in Transport Sector 11 companies shown a significant impact of foreign investment on ROI and 11 companies a significant impact of foreign investment on ROE, Hence the null hypothesis i..e Foreign Investment does not have a statistically significant impact on Managerial Efficiency of FDI based companies in Metal Sector is rejected in said investigated FDI based companies.

Table 4. 49 List of not significant companies in Transport sector

Not Significant	
Return on Investment	**Return on Equity**
1	**2**
Blue Dart Express Ltd.	Global Offshore Services
Global Offshore Services	Seamec Ltd.

(Source: CMIE-Prowess & Author Compilation)

Table 4.49, indicates that foreign investment does not have any impact on Return on Investment like Blue Dart Express Ltd, Global Offshore Services and Return on Equity like Global Offshore Services, Seamec Ltd.

4.2.2.8 Hotel Sector

Table 4.50 Provides statistical regressed data on the impact of Foreign Investment on Return on Investment and Return on Equity of 30 FDI based companies in Hotel Sector along with constant and coefficient P-Value. Return on Investment and Return on Equity has been considered as indicator to explain managerial efficiency of FDI based companies in Hotel Sector in the study.

Table 4. 50 Managerial Efficiency of FDI based Companies in Hotel Sector in India

Sr.No	Name of FDI Based Companies	Return on Investment						Return on Equity					
		const	*t-Stat*	*p-value*	*Coefficient*	*t- Stat*	*p-value*	*const*	*t- Stat*	*p-value*	*Coefficient*	*t- Stat*	*p-value*
1	***2***	***3***	***4***	***5***	***6***	***7***	***8***	***9***	***10***	***11***	***12***	***13***	***14***
1	Asian Hotels (North) Ltd.	0.507	4.033	0.003***	-0.006	-2.542	0.034**	37.30	3.86	0.004***	-0.37	-2.16	0.063*
2	Asian Hotel (west) Ltd	0.040	1.611	0.14589	0.005	7.099	0.0001***	1.33	1.62	0.14438	0.22	9.76	0.00001***
3	Asian Hotels (East) Ltd	0.017	1.415	0.19488	0.003	6.177	0.0002***	1.08	1.57	0.15572	0.24	9.26	0.00001***
4	C H L Ltd.	0.755	16.549	0.00001***	-0.005	-5.820	0.0004***	7.83	24.75	0.00001***	-0.03	-5.21	0.0008***
5	Cox & Kings Ltd.	0.315	16.670	0.00001***	-0.007	-6.241	0.0002***	9.18	4.45	0.002***	-0.20	-1.55	0.16025
6	E I H Associated Ltd.	0.471	15.595	0.00001***	-	-	-	8.23	27.47	0.00001***	-	-	-
7	James Hotels Ltd.	-8.31	-1.514	0.16854	0.199	1.524	0.16593	-125.8	-1.26	0.24344	3.01	1.27	0.23994
8	Mac Charles (India) Ltd.	2.089	2.243	0.055*	-0.025	-1.892	0.095*	97.11	3.33	0.010**	-1.23	-3.02	0.016**
9	Thomas Cook (India) Ltd.	0.403	1.485	0.17581	-0.001	-0.252	0.80761	11.69	1.65	0.13728	0.05	0.55	0.59436

(Source: CMIE – Prowess & Author Compilation)

Attempt has been made to examine whether there is any significant impact of Foreign Investment on Return on Investment and Return on Equity of 9 FDI based companies in Hotel Sector. The regression result of Foreign Investment on Return on Investment and Return on Equity.

Table 4. 51 List of significant companies in Hotel sector

At 1% Significance		At 5% Significance		At 10% Significance	
1		2		3	
Return on Investment	**Return on Equity**	**Return on Investment**	**Return on Equity**	**Return on Investment**	**Return on Equity**
Asian Hotels (North) Ltd.	Asian Hotels (North) Ltd.	-	James Hotels Ltd.	Mac Charles (India) Ltd.	-
Asian Hotel (west) Ltd	Asian Hotel (west) Ltd	-	-	-	-
Asian Hotels (East) Ltd	Asian Hotels (East) Ltd	-	-	-	-
C H L Ltd.	C H L Ltd.	-	-	-	-
Cox & Kings Ltd	Cox & Kings Ltd	-	-	-	-
E I H Associated Hotels Ltd	E I H Associated Hotels Ltd	-	-	-	-

(Source: CMIE-Prowess & Author Compilation)

Asian Hotels (North) Ltd, Asian Hotel (west) Ltd, Asian Hotels (East) Ltd, C H L Ltd, Cox & Kings Ltd and E I H Associated Hotels Ltd are found to be statistically significant at 1% level for both Return on Investment and Return on Equity. James Hotels Ltd Company which is influence of Foreign Investment on their ROE is statistically significant at 5% level of significance. However Mac Charles (India) Ltd exhibit the low impact of foreign investment on ROI the impact of foreign investment on ROE in such companies is significant at 10% significant level. This means out of 9 FDI

based companies in Construction Sector 7 companies shown a significant impact of foreign investment on ROI and 7 companies a significant impact of foreign investment on ROE, Hence the null hypothesis i..e Foreign Investment does not have a statistically significant impact on Managerial Efficiency of FDI based companies in Hotel Sector is rejected in said investigated FDI based companies.

Table 4. 52 List of not significant companies in Hotel sector

Not Significant	
Return on Investment	**Return on Equity**
1	**2**
James Hotels Ltd.	Thomas Cook (India) Ltd.
Thomas Cook (India) Ltd.	Mac Charles (India) Ltd.

(Source: CMIE-Prowess & Author Compilation)

Table 4.52, indicates that foreign investment does not have any impact on Return on Investment like James Hotels Ltd, Thomas Cook (India) Ltd and Return on Equity like Thomas Cook (India) Ltd, Mac Charles (India) Ltd.

4.2.2.9 IT Sector

Table 4.53 Provides statistical regressed data on the impact of Foreign Investment on Return on Investment and Return on Equity of 30 FDI based companies in IT Sector along with constant and coefficient P-Value. Return on Investment and Return on Equity has been considered an indicator to explain managerial efficiency of FDI based companies in IT Sector in the study. The attempt has been made to examine whether any significant impact of Foreign Investment on Return on Investment and Return on Equity of 26 FDI based companies in IT Sector. The regression result of Foreign Investment on Return on Investment and Return on Equity.

Table 4. 53 Managerial Efficiency of FDI based Companies in IT Sector in India

Sr.No	Name of FDI Based Companies	Return on Investment						Return on Equity					
		const	*t-Stat*	*p-value*	*Coefficient*	*t- Stat*	*p-value*	*const*	*t-Stat*	*p-value*	*Coefficient*	*t- Stat*	*p-value*
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*
1	Accelya Kale Solutions Ltd.	0.85	12.35	0.0001***	0.003	2.335	0.047**	4.79	2.81	0.022**	0.18	5.89	0.0003***
2	Advent Computer Ltd.	0.15	0.16	0.87867	-0.002	-0.135	0.89607	0.15	0.16	0.87867	0.00	-0.13	0.89607
3	Aurionpro Solutions Ltd.	0.09	0.84	0.42382	0.019	2.674	0.028**	-5.40	-2.07	0.071*	0.92	5.42	0.0006***
4	B 2 B Software Ltd.	5.85	4.35	0.002***	-0.087	-3.816	0.005***	1.78	2.37	0.045**	-0.02	-1.80	0.10908
5	Bodhtree Consulting Ltd.	0.74	8.54	0.00003***	0.006	2.531	0.03**	2.36	8.64	0.00002***	0.01	0.76	0.46928
6	C E S Ltd.	7.44	1.75	0.11899	-0.098	-1.481	0.17693	-265.1	-5.47	0.0005***	4.37	5.79	0.0004***
7	Cambridge Technology Ltd.	1.14	3.14	0.013**	-0.011	-1.590	0.15041	-0.04	-0.04	0.97154	0.03	1.48	0.17826
8	Cigniti Technologies Ltd.	0.45	10.08	0.0001***	-0.002	-0.718	0.49318	1.21	1.06	0.32207	0.06	1.05	0.3249
9	Cybertech Systems Ltd.	-0.03	-0.32	0.75749	0.012	4.329	0.002***	-1.66	-3.22	0.0121**	0.09	5.76	0.0004***
10	Eclerx Services Ltd.	2.39	23.41	0.0001***	-0.050	-12.899	0.0001***	86.69	25.27	0.0001***	-2.47	-19.13	0.0001***
11	G I Engineering Ltd.	0.01	0.92	0.38594	0.000	0.738	0.48155	1.70	2.77	0.024**	-0.04	-2.28	0.0522*
12	Genesys International. Ltd.	2.05	2.76	0.0245**	-0.029	-2.053	0.074*	-5.64	-0.82	0.43408	0.20	1.57	0.15587
13	H C L Technologies Ltd.	-1.73	-1.70	0.12749	0.137	2.374	0.045**	666.76	3.00	0.017**	-34.55	-2.74	0.025**
14	H O V Services Ltd.	0.93	3.77	0.005***	-0.015	-3.189	0.012**	7.77	4.51	0.001***	-0.13	-3.90	0.004***
15	Hinduja Global Ltd	0.23	1.74	0.11923	0.034	3.287	0.01**	622.29	48.50	0.0001***	-43.62	-43.35	0.0001***
16	Infinite Computer Ltd.	0.78	14.17	0.0001***	-0.002	-1.561	0.15711	2.54	1.95	0.0874*	0.09	3.96	0.004***
17	Informed Technologies Ltd.	0.42	6.16	0.0001***	-	-	-	1.04	30.26	0.0001***	-	-	-
18	Lycos Internet Ltd.	0.30	2.08	0.070*	0.009	2.708	0.026**	5.34	1.86	0.10056	0.02	0.39	0.70432
19	Mindteck (India) Ltd.	-1.93	-4.73	0.001***	0.036	5.773	0.0004***	2.73	0.71	0.49973	0.00	-0.04	0.96953
20	Moschip Semiconduc Ltd.	0.66	1.49	0.17332	-0.014	-0.575	0.58083	0.88	3.61	0.006***	-0.03	-2.19	0.060*
21	Mphasis Ltd.	1.48	1.12	0.29446	-0.011	-0.484	0.64141	-30.33	-1.13	0.28957	0.74	1.66	0.13622
22	Onmobile Global Ltd.	0.49	11.14	0.0001***	-0.003	-2.299	0.050*	36.56	9.19	0.00002***	-0.78	-7.43	0.00007***
23	Oracle Financial Ltd.	-0.18	-0.24	0.81748	0.008	0.822	0.43491	475.13	3.96	0.004***	-5.17	-3.39	0.009***

24	R Systems International.	0.83	1.25	0.24712	0.000	0.003	0.99733	1.92	0.06	0.9513	0.55	0.54	0.60518
25	Take Solutions Ltd.	0.37	5.82	0.0004***	-0.003	-2.807	0.022**	6.10	4.35	0.002***	-0.02	-0.72	0.4934
26	Xchanging Solutions Ltd.	-0.43	-0.38	0.71325	0.016	0.976	0.35787	0.61	0.30	0.76977	0.02	0.63	0.54383

(Source: CMIE – Prowess & Author Compilation)

Table 4. 54 List of significant companies in IT sector

At 1% Significance		**At 5% Significance**		**At 10% Significance**	
1		**2**		**3**	
Return on Investment	**Return on Equity**	**Return on Investment**	**Return on Equity**	**Return on Investment**	**Return on Equity**
Accelya Kale Solutions Ltd	Bodhtree Consulting Ltd.	Aurionpro Solutions Ltd.	Accelya Kale Solutions Ltd	-	Aurionpro Solutions Ltd.
B 2 B Software Technologies	C E S Ltd.	Cambridge Technology	B 2 B Software Technologies	-	-
Bodhtree Consulting Ltd.	Cybertech Systems & Software	Genesys International Corpn.	G I Engineering Solutions	-	-
Cigniti Technologies Ltd.	Eclerx Services Ltd.	H C L Technologies Ltd.	H C L Technologies Ltd.	-	-
Cybertech Systems & Software	H O V Services Ltd.	-	-	-	-
Eclerx Services Ltd.	Hinduja Global Solutions Ltd.	-	-	-	-
H O V Services Ltd.	Lycos Internet Ltd.	-	-	-	-
Infinite Computer Solutions	Moschip Semiconductor	-	-	-	-
Lycos Internet Ltd.	Onmobile Global Ltd.	-	-	-	-
Mindteck (India) Ltd.	Oracle Financial Services Ltd.	-	-	-	-
Onmobile Global L	Take Solutions Ltd.	-	-	-	-

(Source: CMIE-Prowess & Author Compilation)

Accelya Kale Solutions Ltd, Bodhtree Consulting Ltd, B 2 B Software Technologies, C E S Ltd, Cigniti Technologies Ltd, Cybertech Systems & Software, Eclerx Services Ltd, H O V Services Ltd, Hinduja Global Solutions Ltd, Lycos Internet Ltd, Infinite Computer Solutions, Moschip Semiconductor, Onmobile Global Ltd, Mindteck (India) Ltd, Oracle Financial Services Ltd, Take Solutions Ltd are found to be statistically significant at 1% level for both Return on Investment and Return on Equity. Aurionpro Solutions Ltd, Cambridge Technology, Genesys International Corpn, H C L Technologies Ltd. influence of Foreign Investment on their ROI is statistically significant at 5% level of significance. However Aurionpro Solutions Ltd. are found to exhibit the low impact of foreign investment on ROE the impact of foreign investment on ROE in such companies is significant at 10% significant level. This means out of 26 FDI based companies in Construction Sector 16 companies shown a significant impact of foreign investment on ROI and 16 companies a significant impact of foreign investment on ROE.

Hence the null hypothesis i..e Foreign Investment does not have a statistically significant impact on Managerial Efficiency of FDI based companies in IT Sector is rejected in said investigated FDI based companies**.**

Table 4.55, indicates that foreign investment does not have any impact on Return on Investment like Advent Computer Services, C E S Ltd, G I Engineering Solutions, Hinduja Global Solutions Ltd, Informed Technologies India, Moschip Semiconductor, Mphasis Ltd, Oracle Financial Services Ltd, R Systems International Ltd, Xchanging Solutions Ltd and Return on Equity like

Advent Computer Services, Cambridge Technology , Cigniti Technologies Ltd. Genesys International Corpn, Infinite Computer Solutions, Informed Technologies India, Mindteck (India) Ltd., Mphasis Ltd. R Systems International Ltd, Xchanging Solutions Ltd.

Table 4. 55 List of not significant companies in IT sector

Return on Investment	Return on Equity
1	2
Advent Computer Services	Advent Computer Services
C E S Ltd.	Cambridge Technology
G I Engineering Solutions	Cigniti Technologies Ltd.
Hinduja Global Solutions Ltd.	Genesys International Corpn.
Informed Technologies India	Infinite Computer Solutions
Moschip Semiconductor	Informed Technologies India
Mphasis Ltd.	Mindteck (India) Ltd.
Oracle Financial Services Ltd.	Mphasis Ltd.
R Systems International Ltd.	R Systems International Ltd.
Xchanging Solutions Ltd.	Xchanging Solutions Ltd.

(Source: CMIE-Prowess & Author Compilation)

4.2.2.10 Testing of Hypothesis

The hypothesis testing result are shown below

Table 4. 56 Testing of Hypothesis

(No. of Companies)

S.No	Hypothesis	ManagerialEfficiency		Accept/ Reject
		ROI	ROE	
1	Foreign Investment does not have a statically significant impact on Managerial efficiency of FDI based Companies in Food & Agriculture Sectors in India.	19	16	Reject
2	Foreign Investment does not have a statically significant impact on Managerial efficiency of FDI based Companies in Textile Sectors in India.	14	17	Reject

3	Foreign Investment does not have a statically significant impact on Managerial efficiency of FDI based Companies in Pharmaceutical Sectors in India.	17	17	Reject
4	Foreign Investment does not have a statically significant impact on Managerial efficiency of FDI based Companies in Construction Sectors in India.	10	11	Reject
5	Foreign Investment does not have a statically significant impact on Managerial efficiency of FDI based Companies in Metal Sectors in India.	18	15	Reject
6	Foreign Investment does not have a statically significant impact on Managerial efficiency of FDI based Companies in Machinery Sectors in India.	22	22	Reject
7	Foreign Investment does not have a statically significant impact on Managerial efficiency of FDI based Companies in Transport Sectors in India.	11	10	Reject
8	Foreign Investment does not have a statically significant impact on Managerial efficiency of FDI based Companies in Hotel Sectors in India.	7	7	Reject
9	Foreign Investment does not have a statically significant impact on Managerial efficiency of FDI based Companies in IT Sectors in India.	17	16	Reject

Source: Author Compilation

4.2.3. Technological Efficiency

In previous section we have examined the impact of Foreign Investment on Managerial efficiency, now study a move to study whether Foreign Investment has any impact on the R&D activity of selected sectors in India under the study. For this purpose in this part, we tried to relate the R&D expenditure with foreign investment for the selected FDI based companies in selected sectors.

4.2.3.1 Food and Agriculture Sector

Table 4.57, shows the result of regression analysis of 22 FDI based companies in Food & Agriculture Sector for the study period to examine the impact of Foreign Investment on Research & Development of along with constant and coefficient P-Value. Out of 22 FDI based companies 11 companies spend the amount on Research & Development expenditure. Research & Development expenditure is considered an indicator which will explain the Technological efficiency of FDI based companies in Food & Agriculture Sector in India.

Table 4. 57 Technological Efficiency of FDI based Companies in Food and Agriculture Sector

Sr.No	Name of FDI Based Companies	Research and Development					
		const	*t-Stat*	*p-value*	*Coefficient*	*t- Stat*	*p-value*
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*
1	Agro Tech Foods Ltd.	-192.06	-3.0804	0.015**	4.27869	3.4293	0.008***
2	Britannia Industries Ltd.	7684.78	0.3508	0.7348	-148.723	-0.345	0.73873
3	Glaxosmithkline Consumer	-305.27	-2.1922	0.0597*	10.316	4.2022	0.002***
4	Godfrey Phillips India Ltd.	203.24	8.1995	0.00004***	-4.20657	-4.884	0.0012***
5	Goodricke Group Ltd.	8.45	4.6555	0.001***	-	-	-
6	Lotte India Corpn. Ltd.	0.41428	2.9357	0.0188**	0.00023694	0.0739	0.94288
7	Mcleod Russel India Ltd.	40.4581	2.1653	0.0622*	-1.20063	-1.609	0.14629
8	Monsanto India Ltd.	1.05E	7.1919	0.00009***	-14615	-7.191	0.00009***
9	Nestle India Ltd.	-3178.6	-2.7595	0.0246**	53.196	2.8816	0.020**
10	Shree Renuka Sugars Ltd.	14.3694	2.5549	0.0339**	-0.366522	-0.812	0.44003
11	United Spirits Ltd.	37.9267	7.4883	0.00007***	1.09757	6.009	0.0003***
12	V S T Industries ltd	32.67	14.4316	0.00001***	-	-	-

(Source: Author Compilation)

The summery of regression results of foreign investment on Research & Development shown in table 4.57 represent that 9 out of 11 FDI based companies in Food & Agriculture Sector, Agro Tech Foods Ltd. Glaxosmithkline Consumer, Godfrey Phillips India Ltd. Goodricke Group Ltd.

United Spirits Ltd. are significant at 1% level of significance whereas companies. Lotte India Corpn. Ltd, Nestle India Ltd is significant at 5% level of significance. Mcleod Russel India Ltd. Shree Renuka Sugars Ltd. is significant at 10% level of significance. Britannia Industries Ltd. companies do not show significant impact of foreign investment. Overall out of 11 FDI based companies, only 9 companies shows statically significant impact of foreign investment on their Technological efficiency Hence null hypothesis is rejected i.e. Foreign Investment does not have a statistically significant impact on Technological Efficiency of FDI based companies in Food & Agriculture Sector.

4.2.3.2 Textile Sector

There were 18 FDI based companies in Textile Sector, out of which only 5 companies spend amount on Research & Development expenditure.

Table 4. 58 Technological Efficiency of FDI based Companies in Textile Sector

Sr.No	Name of FDI Based Companies	Research and Development					
		const	*t-Stat*	*p-value*	*Coefficient*	*t- Stat*	*p-value*
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*
1	Indian Card Clothing Co. Ltd.	4.590	5.035	0.00101***	-0.098667	-3.910	0.004***
2	Pearl Global Inds. Ltd.	39.570	2.3009	0.0504*	-0.7544	-1.080	0.31145
3	Polygenta Technologies Ltd.	39.570	2.3009	0.0504*	-0.7544	-1.080	0.31145
4	R S W M Ltd.	1.6764	2.6358	0.02991**	0.003672	0.332	0.74845
5	Rainbow Denim Ltd	44.73	4.1255	0.0025***	-	-	-

(Source: Author Compilation)

The summery of regression results on the impact of foreign investment on Research & Development shown in table 4.58 represent that 5 out of 5 FDI

based companies in Textile Sector like Indian Card Clothing Co. Rainbow Denim Ltd are significant at 1% level of significance, whereas companies. Polygenta Technologies Ltd R S W M Ltd.is significant at 5% level of significance. Pearl Global Inds. Ltd.is significant at 10% level of significance. Britannia Industries Ltd. companies do not show a significant impact on foreign investment. Overall out of FDI based companies, 5 companies are shows statically significant impact of foreign investment on their Technological efficiency Hence null hypothesis is rejected i.e. Foreign Investment does not have a statistically significant impact on Technological Efficiency of FDI based companies in Textile Sector.

4.2.3.3 Pharmaceutical Sector

Out of 26 FDI based companies, 12 companies spend the amount on Research & Development expenditure in Pharmaceutical Sector. The regression results shown in table 4.59 represent that 7 out of 12 FDI based companies in Pharmaceutical Sector like Cirex Pharmaceuticals, Elantas Beck India Ltd. Foseco India Ltd. Rubber Products Ltd. are significant at 1% level of significance whereas companies. Abbott India Ltd. Elantas Beck India Ltd. Kerala Ayurveda Ltd. is significant at 10% level of significance. Astrazeneca Pharma India, Biofil Chemicals & Pharmace, Dharamsi Morarji, Essel Propack Ltd, Kingfa Science & Technology, Lincoln Pharmaceuticals companies do not show a significant impact on foreign investment.

Table 4. 59 Technological Efficiency of FDI based Companies in Pharmaceutical Sector

Sr. No	Name of FDI Based Companies	Research and Development					
		const	*t-Stat*	*p-value*	*Coefficient*	*t- Stat*	*p-value*
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*
1	Abbott India Ltd.	128.431	2.3153	0.049**	-1.5444	-1.985	0.0823*
2	Astrazeneca Pharma India Ltd.	3.92283	3.5308	0.007***	-0.0889	-1.536	0.16304
3	Biofil Chemicals & Pharm Ltd.	-44037	-2.876	0.0206**	2184.4	2.929	0.019**
4	Cirex Pharmaceuticals Ltd.	68.7071	5.0864	0.0009***	-3.1096	-4.902	0.001***
5	Dharamsi Morarji Chemical.	4.92995	1.391	0.20168	-0.0623	-0.471	0.64983
6	Elantas Beck India Ltd.	111.549	2.9194	0.019**	-0.9883	-2.157	0.063*
7	Essel Propack Ltd.	-22.803	-3.07	0.015**	3.5112	7.4328	0.00007***
8	Fairchem Speciality Ltd.	6.4726	8.8145	0.00002***	-0.053	-1.601	0.14802
9	Foseco India Ltd.	0.14184	0.2409	0.81572	0.02657	2.3348	0.04781**
10	Kerala Ayurveda Ltd.	12.24	2.9245	0.0169**	-	-	-
11	Kingfa Science & Technology	4.72139	4.3623	0.002***	0.13343	5.2603	0.0007***
12	Lincoln Pharmaceuticals Ltd.	8.1383	0.1658	0.87246	0.20484	0.3374	0.74452
13	Rubber Products Ltd.	0.46	5.2011	0.0005***	-	-	-

(Source: Author Compilation)

Overall out of FDI based companies, 7 companies are shows statically significant impact of foreign investment on their Technological efficiency Hence null hypothesis is rejected i.e. Foreign Investment does not have a statistically significant impact on Technological Efficiency of FDI based companies in Pharmaceutical Sector.

4.2.3.4 Construction Sector

Table 4.60, shows the result of regression analysis of 15 FDI based companies in Construction Sector along with constant and coefficient P-Value. The summery of regression results of foreign investment on Research &

Development shown in table 4.22 represent that 12 out of 15 FDI based companies in Construction Sector, Akzo Nobel India Ltd, Ambuja Cements Ltd, Grindwell Norton Ltd. Gujarat Sidhee Cement H E G Ltd. Morganite Crucible (India), Shalimar Paints Ltd Vesuvius India Ltd. are significant at 1% level of significance whereas companies. Berger Paints India Ltd, Heidelberg Cement India, I F G L Refractories Ltd, Kachchh Minerals Ltd is significant at 5% level of significance. Kansai Nerolac Paints Ltd, Orient Refractories Ltd. Shree Digvijay Cement companies do not show a significant impact of foreign investment.

Table 4. 60 Technological Efficiency of FDI based Companies in Construction Sector

Sr.No	Name of FDI Based Companies	Research and Development					
		const	*t-Stat*	*p-value*	*Coefficient*	*t- Stat*	*p-value*
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*
1	Akzo Nobel India Ltd.	-17414	-6.1943	0.00026	557.91	12.5014	0.00001***
2	Ambuja Cements Ltd.	-70063	-1.6142	0.14515	3439.36	3.7056	0.005***
3	Berger Paints India Ltd.	-7625.5	-0.8141	0.43915	2112.24	2.8938	0.02**
4	Grindwell Norton Ltd.	7231.34	10.5504	0.00001***	-	-	-
5	Gujarat Sidhee Cement Ltd.	3586.09	26.1107	0.00001***	-	-	-
6	H E G Ltd.	-14290	-2.0234	0.077*	2550.35	4.3433	0.002***
7	Heidelberg Cement India Ltd.	-56233	-1.8265	0.1052	2521.41	2.3538	0.04***
8	I F G L Refractories Ltd.	-2619.4	-1.3416	0.21656	74.7548	2.5388	0.034***
9	Kachchh Minerals Ltd.	13.85	2.9582	0.018**	0.41912	0.7059	0.50029
10	Kansai Nerolac Paints Ltd.	66578.2	1.831	0.10447	-2730.4	-1.2776	0.23723
11	Morganite Crucible (India)	-5552.5	-3.0042	0.016**	89.2135	3.327	0.010**
12	Orient Refractories Ltd.	141193	1.4785	0.17754	-1857.8	-1.4629	0.18163
13	Shalimar Paints Ltd.	2939.17	11.9374	0.00001***	24.637	3.8156	0.005***
14	Shree Digvijay Cement Co.	2052.38	3.3707	0.009***	16.6819	1.9304	0.089*
15	Vesuvius India Ltd.	4770.12	8.6073	0.00001***	-	-	-

(Source: Author Compilation)

Overall out of FDI based companies, 12 companies are shows statically significant impact of foreign investment on their Technological efficiency Hence null hypothesis is rejected i.e. Foreign Investment does not have a statistically significant impact on Technological Efficiency of FDI based companies in Construction Sector.

4.2.3.5 Metal Sector

Table 4.61, shows that out of 21 FDI based companies only 5 companies are spending amount on Research & Development expenditure in Metal Sector in India. The summery of regression results of foreign investment on Research & Development shown in table 5.24 represent that 2 out of 5 FDI based companies in Metal Sector, Jindal Stainless Ltd. are significant at 1% level of significance whereas companies. Usha Martin Ltd. companies do not show a significant impact on foreign investment. Overall out of FDI based companies, 2 companies are shows statically significant impact of foreign investment on their Technological efficiency Hence null hypothesis is rejected i.e. Foreign Investment does not have a statistically significant impact on Technological Efficiency of FDI based companies in Metal Sector

Table 4. 61 Technological Efficiency of FDI based Companies in Metal Sector

Sr. No	Name of FDI Based Companies	Research and Development					
		const	*t-Stat*	*p-value*	*Coefficient*	*t- Stat*	*p-value*
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*
1	Gontermann-Peipers Ltd.	12.0635	1.762	0.12144	-0.5051	-1.299	0.23495
2	Jindal Stainless (Hisar) Ltd.	3.46667	1.5117	0.16906	0.16588	0.7768	0.45962
3	Jindal Stainless Ltd.	14.1083	7.3952	0.00008**	-0.4162	-4.550	0.0018***
4	Tayo Rolls Ltd.	-1.4058	-0.222	0.82925	0.23266	0.6252	0.54926
5	Usha Martin Ltd.	-13.047	-1.465	0.1809	2.43174	3.1757	0.013**

(Source: Author Compilation)

4.2.3.6 Machinery Sector

There are 30 FDI based companies in Machinery Sector out of which only 13 companies spend the amount on Research & Development expenditure. The summery of regression results on the impact of foreign investment on Research & Development is shown in table 4.62 represent that 11 out of FDI based companies in Machinery Sector Cummins India Ltd. Eimco Elecon (India) Ltd, F a G Bearings India Ltd Ingersoll-Rand (India). K S B Pumps Ltd. Sterlite Technologies Ltd. Walchandnagar Industries, are significant at 1% level of significance whereas companies.

Table 4.62 Technological Efficiency of FDI based Companies in Machinery Sector

Sr. No	Name of FDI Based Companies	Research and Development					
		const	*t-Stat*	*p-value*	*Coefficient*	*t- Stat*	*p-value*
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*
1	Eimco Elecon (India) Ltd.	302.62	11.1332	0.001***	-	-	-
2	Esab India Ltd.	17.85	4.4335	0.001***	-	-	-
3	F A G Bearings India Ltd.	64.98	4.9135	0.0008***	-	-	-
4	G M M Pfaudler Ltd.	69.4353	0.5381	0.60514	-1.2513	-0.494	0.63419
5	Ingersoll-Rand (India) Ltd.	10.98	4.5543	0.001***	-	-	-
6	K S B Pumps Ltd.	3.84	6.6462	0.00009***	-	-	-
7	Kennametal India Ltd.	122.453	2.8544	0.021**	-0.9714	-1.882	0.0965*
8	Panasonic Carbon India Ltd.	0.60062	1.0726	0.31473	0.01935	1.9391	0.0884*
9	Siemens Ltd.	197.867	1.6543	0.13666	-1.4469	-0.796	0.44872
10	Sterlite Technologies Ltd.	-94.349	-3.1891	0.012**	3.22122	5.3719	0.0006***
11	Stovec Industries Ltd.	-10.304	-1.1421	0.28646	0.20196	1.5107	0.1693
12	Walchandnagar Industries	1.72786	3.4957	0.008***	0.01152	0.2792	0.78716
13	Wendt (India) Ltd.	233.998	0.8762	0.40644	-5.3431	-0.800	0.44654

(Source: Author Compilation)

Kennametal India Ltd .is significant at 5% level of significance. Panasonic Carbon India Co. Ltd. is significant at 10 % level of significance. G M M Pfaudler Ltd. Siemens Ltd. Stovec Industries Ltd. Wendt (India) Ltd. companies do not show a significant impact of foreign investment. Overall out of FDI based companies, 11 companies are shows statically significant impact of foreign investment on their Technological efficiency Hence null hypothesis is rejected i.e. Foreign Investment does not have a statistically significant impact on Technological Efficiency of FDI based companies in Machinery Sector

4.2.3.7 Transport Sector

The regression analysis of all individual FDI based companies in Transport Sector for the study period is done to examine the impact of Foreign Investment on Research & Development of 13 FDI based companies Blue Dart Express Ltd, Chowgule Steamships Ltd, Essar Ports Ltd, Essar Shipping Ltd, Gateway Distriparks Ltd, Global Offshore Services Ltd, Global Vectra Helicorp Ltd, Gujarat Pipavav Port Ltd, Jet Airways (India) Ltd, Seamec Ltd, Shreyas Shipping & Logistics, Sical Logistics Ltd and Varun Shipping Co. Ltd. in Transport Sector but in this sector no single company is spending money on their research and development.

4.2.3.8 Hotel Sector

The regression analysis of all individual FDI based companies in Hotel Sector for the study period is done to examine the impact of Foreign Investment on Research & Development of 9 FDI based companies Asian Hotels (North) Ltd, Asian Hotel (west) Ltd, Asian Hotels (East) Ltd, C H L Ltd, Cox &

Kings Ltd, E I H Associated Hotels Ltd, James Hotels Ltd, Mac Charles (India) Ltd and Thomas Cook (India) Ltd. Thomas Cook (India) Ltd in Hotel Sector but in this sector no single company is spending money on their research and development.

4.2.3.9 IT Sector

Table 4.63, shows the result of regression analysis of 26 FDI based companies in IT Sector along with constant and coefficient P-Value. Out of 26 FDI based companies 2 companies spending the amount on Research & Development expenditure. It is considered an indicator which will explain the Technological efficiency of FDI based companies in IT Sector in India. The summery of regression results of foreign investment on Research & Development shown in table 4.26 represent that 1 out of 2 FDI based companies in IT Sector H C L Technologies Ltd is significant at 1% level of significance whereas Aurionpro Solutions Ltd. companies.

Table 4. 63 Technological Efficiency of FDI based Companies in IT Sector

Sr. No	**Name of FDI Based Companies**	**Research and Development**					
		const	***t-Stat***	***p-value***	***Coefficient***	***t- Stat***	***p-value***
1	***2***	***3***	***4***	***5***	***6***	***7***	***8***
1	Aurionpro Solutions Ltd.	-94.349	-3.1891	0.012	3.22122	5.3719	0.0006
2	H C L Technologies Ltd.	6.77435	3.7722	0.005***	-0.1135	-3.260	0.011**

(Source: Author Compilation)

Overall out of FDI based companies, 1 company shows statically significant impact of foreign investment on their Technological efficiency Hence null hypothesis is rejected i.e. Foreign Investment does not have a statistically significant impact on Technological Efficiency of FDI based companies in IT Sector.

4.2.3.10 Testing of Hypothesis

The hypothesis testing result are shown below.

Table 4. 64 Testing of Hypothesis

(No. of Companies)

S.No	Hypothesis	Technological Efficiency	Accept/ Reject
1	Foreign Investment does not have a statically significant impact on Technological efficiency of FDI based Companies in Food & Agriculture Sectors in India.	09	Reject
2	Foreign Investment does not have a statically significant impact on Technological efficiency of FDI based Companies in Textile Sectors in India.	05	Reject
3	Foreign Investment does not have a statically significant impact on Technological efficiency of FDI based Companies in Pharmaceutical Sectors in India.	07	Reject
4	Foreign Investment does not have a statically significant impact on Technological efficiency of FDI based Companies in Construction Sectors in India.	12	Reject
5	Foreign Investment does not have a statically significant impact on Technological efficiency of FDI based Companies in Metal Sectors in India.	02	Reject
6	Foreign Investment does not have a statically significant impact on Technological efficiency of FDI based Companies in Machinery Sectors in India.	11	Reject
7	Foreign Investment does not have a statically significant impact on Technological efficiency of FDI based Companies in IT Sectors in India.	01	Reject

Source: Author Compilation

4.3 Conclusion

The objective is to study the impact of foreign Investment on Operating efficiency of FDI based companies in selected sectors. To represent operating efficiency two variables like Total Assets Turnover and Equity Turnover have

been taken for the period of 10 years. The results of the impact of foreign investment on Total Assets Turnover and Equity Turnover. The hypothesis with regard to Foreign Investment does not have a statically significant impact on Operating efficiency of FDI based companies in India's selected sectors we arrived at the following conclusion that Overall all sectors like Food & Agriculture sector, Textile sector, Pharmaceutical sector, Construction Sector, Metal Sector, Machinery Sector, Transportation Sector, Hotel Sector and IT Sector, under the study has shown a statistically significant impact of foreign investment on operating efficiency.

The objective is to study the impact of Foreign Investment on the Managerial efficiency of FDI based companies in selected sectors under the study. To represent operating efficiency two variables like Return on Investment and Return on Equity have been taken for the period of 10 years. The results show the impact of foreign investment on Return on Investment and Return on Equity. While testing the hypothesis with regard to Foreign Investment does not have a statically significant impact on Managerial efficiency of FDI based companies in India's selected sectors we arrived at the conclusion that Overall all sectors like Food & Agriculture sector, Textile sector, Pharmaceutical sector, Construction Sector, Metal Sector, Machinery Sector, Transportation Sector, Hotel Sector and IT Sector, under the study has shown a statistically significant impact of foreign investment on Managerial efficiency.

The objective is to study the impact of Foreign Investment on the Technological efficiency of FDI based companies in selected sectors under the

study. To represent Technological efficiency Research and Development (R&D) have been taken for the period of 10 years. The results shows the impact of foreign investment on Research and Development (R&D) which is indicator of Technological efficiency While testing the hypothesis with regard to Foreign Investment does not have a statically significant impact on Technological efficiency of FDI based companies in India's selected sectors we arrived at the conclusion that Overall all sectors like Food & Agriculture sector, Textile sector, Pharmaceutical sector, Constriction Sector, Metal Sector, Machinery Sector, Transportation Sector, Hotel Sector and IT Sector, under the study has shown a statistically significant impact of foreign investment on Technological efficiency.

CHAPTER-5

FDI AND NON-FDI COMPANIES FINANCIAL PERFORMANCE- A COMPARATIVE ANALYSIS

5.1 Introduction

The present chapter focus on a comparative analysis between FDI and Non-FDI based companies for Food & Agriculture Sector, Textile Sector, Pharmaceutical Sector, Construction Sector, Metal Sector, Machinery Sector, Transport Sector, Hotel Sector, IT Sector and Financial sector which is receiving foreign investment in India. To represent Financial Performance indicator i.e Return on equity is taken as a dependent variable whereas financial variables like Age, Size, Current Ratio, Quick Ratio, and Debt to Equity, Growth in sales, and Growth in Profit after tax and Growth in Assets are independent variables. The t-test, Fixed Effect Model, Random Effect Model, Hausman test and Chow test is done for both FDI and Non-FDI companies by using Gretal software to know which company's performance is better in all selected sector. Two hundred and seventeen (217) FDI based Companies and three hundred and one companies (301) Non-FDI based companies listed companies are used for the study.

5.2 Analysis and Interpretation

5.2.1 Factors affecting Profitability

This part focus on the Factors affecting Profitability differs between FDI based Companies and Non FDI based Companies in selected sectors in India.

This part will be focusing on the factors affecting profitability are different for FDI based companies and non FDI based companies in selected sectors in India for 10 years i.e. from 2007 to 2016.

5.2.1.1 Food and Agriculture Sector

In Food and Agriculture sector there are 23 FDI based companies and 20 Non-FDI based companies. Table 5.1 present the variables which will affect the profitability of these two sets of companies in Food & Agriculture sector for 10 years. A t-test is done to know whether there is a significant difference between FDI based companies and Non-FDI based companies. Variables considered are Return on Asset, age, size, current ratio, quick ratio, debt to equity ratio, growth in sales, growth in profit and growth in assets of companies.

Table 5. 1 t-Test in Food and Agriculture Sector

Variables		No	Mean	P(T<=t) two-tail	t Critical two-tail	Accepting/ Rejecting
ROA	FDI	09	1.108134	2.18E-09	2.306004	No sig diff
	Non - FDI	09	2.768943			
Age	FDI	09	37.17391	1.21E-24	2.306004	No sig diff
	Non - FDI	09	26.57672			
Size	FDI	09	17081.03	6.09E-05	2.306004	Sig diff
	Non - FDI	09	3861.57			
Current Ratio	FDI	09	1.563188	3.24E-05	2.306004	Sig diff
	Non - FDI	09	1.999735			
Quick Ratio	FDI	09	2.081691	0.718962	2.306004	No sig diff
	Non - FDI	09	2.28455			
Debt to Equity Ratio	FDI	09	2.109758	0.1446	2.306004	No sig diff
	Non - FDI	09	6.88873			
Growth in sales	FDI	09	21954.69	6.13E-05	2.306004	Sig diff
	Non - FDI	09	5015.912			
Growth in PAT	FDI	09	776.6164	0.069787	2.306004	No sig diff
	Non - FDI	09	229.3302			
Growth in assets	FDI	09	16476.71	1.08E-05	2.306004	No sig diff
	Non - FDI	09	4870.533			

(Source: Author Compilation)

The results show that size, current ratio, and growth in sales are showing there is a significant difference in the between FDI based companies and Non-FDI based companies. Whereas variables like Return on Asset, age, quick ratio, debt to equity ratio, growth in profit and growth in assets of companies are showing not showing any significant difference in the between FDI based companies and Non-FDI based companies

5.2.1.2 Textile Sector

In Textile Sector there are 18 FDI based companies and 15 Non FDI based companies. To know whether there is a significant difference between FDI based companies and Non-FDI based companies. Variables considered are Return on Asset, age, size, current ratio, quick ratio, debt to equity ratio, growth in sales, growth in profit and growth in assets of companies t test is run

Table 5. 2 t-Test in Textile Sector

Variables		No	Mean	P(T<=t) two-tail	t Critical two-tail	Accepting/ Rejecting
ROA	FDI	09	22.98511	8.91E-06	2.306004	Sig diff
	Non - FDI	09	1.749326			
Age	FDI	09	25.57895	1.52E-23	2.306004	Not sig diff
	Non - FDI	09	41.00			
Size	FDI	09	6512.898	0.00149	2.262157	Not Sig diff
	Non - FDI	09	10723.04			
Current Ratio	FDI	09	3.496632	0.023426	2.262157	Not Sig diff
	Non - FDI	09	2.708188			
Quick Ratio	FDI	09	2.211316	0.047619	2.262157	Not sig diff
	Non - FDI	09	2.048438			
Debt to Equity Ratio	FDI	09	5.968158	0.165892	2.262157	Not sig diff
	Non - FDI	09	2.409938			
Growth in sales	FDI	09	6179.503	0.000327	2.262157	Sig diff
	Non - FDI	09	3741.453			
Growth in PAT	FDI	09	60.15053	0.512092	2.262157	Not sig diff
	Non - FDI	09	-124.608			
Growth in assets	FDI	09	8047.564	0.000493	2.262157	Not sig diff
	Non - FDI	09	16349.48			

(Source: Author Compilation)

The results show that Return on Asset and growth in sales are showing a significant difference in the between FDI based companies and Non-FDI based companies. Whereas variables like age, size, current ratio, quick ratio, debt to equity ratio, growth in profit and growth in assets of companies are showing not showing any significant difference in the between FDI based companies and Non-FDI based companies in Textile sector.

5.2.1.3 Pharmaceutical Sector

In Table 5.3, present the variables which will affect the profitability of 29 FDI based companies and 53 Non FDI based companies in Pharmaceutical sector for 10 years i.e. 2007-2016.

Table 5. 3 t-Test in Pharmaceutical Sector

Variables		No	Mean	P(T<=t) two-tail	t Critical two-tail	Accepting/ Rejecting
ROA	FDI	09	1.880866	0.02721	2.306004	Not sig diff
	Non - FDI	09	2.006469			
Age	FDI	09	33.83333	7.82E-12	2.306004	sig diff
	Non - FDI	09	33.07692			
Size	FDI	09	2658.489	1.09E-05	2.306004	Not sig diff
	Non - FDI	09	30371.57			
Current Ratio	FDI	09	2.082333	0.000676	2.306004	Not sig diff
	Non - FDI	09	13.61618			
Quick Ratio	FDI	09	1.702556	0.090186	2.306004	Not sig diff
	Non - FDI	09	2.038697			
Debt to Equity Ratio	FDI	09	2.45163	3.14E-06	2.306004	sig diff
	Non - FDI	09	80.80205			
Growth in sales	FDI	09	3071.147	6.96E-06	2.306004	sig diff
	Non - FDI	09	45051.31			
Growth in PAT	FDI	09	182.213	0.002454	2.306004	Not sig diff
	Non - FDI	09	1288.156			
Growth in assets	FDI	09	2677.769	1.19E-06	2.306004	Not sig diff
	Non - FDI	09	21178.21			

(Source: Author Compilation)

The results show that age, debt to equity ratio and growth in sales are showing a significant difference in the between FDI based companies and Non-FDI based companies. Whereas variables like Return on Asset, size, current ratio, quick ratio, growth in profit and growth in assets of companies are showing not showing any significant difference in the between FDI based companies and Non-FDI based companies in Pharmaceutical sector.

5.2.1. 4 Construction Sector

In Constriction there are 16 FDI based companies and 62 Non FDI based companies are present.

Table 5. 4 t-Test in Construction Sector

Variables		No	Mean	P(T<=t) two-tail	t Critical two-tail	Accepting/ Rejecting
ROA	FDI	09	2.000895	0.000433	2.306004	Not Sig Diff
	Non - FDI	09	1.830677			
Age	FDI	09	45.59477	6.16E-18	2.306004	Sig Diff
	Non - FDI	09	37.03352			
Size	FDI	09	2.445033	0.070196	2.306004	Not Sig Diff
	Non - FDI	09	2.341927			
Current Ratio	FDI	09	11.57667	0.008197	2.306004	Not Sig Diff
	Non - FDI	09	19.57825			
Quick Ratio	FDI	09	11.57451	0.00837	2.306004	Not Sig Diff
	Non - FDI	09	19.51592			
Debt to Equity Ratio	FDI	09	23.28105	4.42E-05	2.306004	Sig Diff
	Non - FDI	09	16775.96			
Growth in sales	FDI	09	13549.03	0.004468	2.306004	Not Sig Diff
	Non - FDI	09	15253.67			
Growth in PAT	FDI	09	1374.787	0.037461	2.306004	Not Sig Diff
	Non - FDI	09	1097.829			
Growth in assets	FDI	09	12461.2	3.35E-05	2.306004	Sig Diff
	Non - FDI	09	22363.67			

(Source: Author Compilation)

The results show that age and debt to equity ratio are showing a significant difference in the between FDI based companies and Non-FDI based companies. Whereas variables like Return on Asset, size, current ratio, quick ratio, growth in sales, growth in profit and growth in assets of companies are showing not showing any significant difference in the between FDI based companies and Non-FDI based companies in Construction sector.

5.2.1.5 Metal Sector

In Metal Sector there are 22 FDI based companies and 30 Non FDI based companies found. Table 5.5 present the variables which will affect the profitability of these two sets of companies for 10 years.

Table 5. 5 t-Test in Metal Sector

Variables		No	Mean	P(T<=t) two-tail	t Critical two-tail	Accepting/ Rejecting
ROA	FDI	09	28851.84	0.001212	2.306004	Not Sig Diff
	Non - FDI	09	1.899025			
Age	FDI	09	28.5314	2.49E-14	2.306004	Sig Diff
	Non - FDI	09	32.77419			
Size	FDI	09	21124.51	1.32E-05	2.306004	Not Sig Diff
	Non - FDI	09	31886.65			
Current Ratio	FDI	09	1.890242	0.002943	2.306004	Not Sig Diff
	Non - FDI	09	3.109964			
Quick Ratio	FDI	09	1.501787	0.014106	2.306004	Not Sig Diff
	Non - FDI	09	2.355771			
Debt to Equity Ratio	FDI	09	10.98396	0.05614	2.306004	Not Sig Diff
	Non - FDI	09	12.19889			
Growth in sales	FDI	09	17597.35	0.000109	2.306004	Not Sig Diff
	Non - FDI	09	26481.85			
Growth in PAT	FDI	09	1011.03	0.225008	2.306004	Not Sig Diff
	Non - FDI	09	636.8957			
Growth in assets	FDI	09	14.15638	1.52E-05	2.306004	Not Sig Diff
	Non - FDI	09	44388.33			

(Source: Author Compilation)

A t-test result shows that age is showing a significant difference in the between FDI based companies and Non-FDI based companies. Whereas variables like Return on Asset, age, size, current ratio, quick ratio, debt to equity ratio, growth in sales, growth in profit and growth in assets of companies are showing not showing any significant difference in the between FDI based companies and Non-FDI based companies in Metal sector.

5.2.1.6 Machinery Sector

There are 30 FDI based companies and 30 Non FDI based companies in Machinery sector.

Table 5. 6 t-Test in Machinery Sector

Variables		No	Mean	P(T<=t) two-tail	t Critical two-tail	Accepting/ Rejecting
ROA	FDI	09	2.081851	0.000596	2.306004	Not Sig Diff
	Non - FDI	09	1.88542			
Age	FDI	09	38.45161	3.34E-15	2.306004	Sig Diff
	Non - FDI	09	37.24014			
Size	FDI	09	10989.12	1.76E-05	2.306004	Not Sig Diff
	Non - FDI	09	4940.705			
Current Ratio	FDI	09	2.836344	0.166996	2.306004	Not Sig Diff
	Non - FDI	09	3.124122			
Quick Ratio	FDI	09	2.32	0.103609	2.306004	Not Sig Diff
	Non - FDI	09	2.207957			
Debt to Equity Ratio	FDI	09	1.402401	0.084963	2.306004	Not Sig Diff
	Non - FDI	09	1.667706			
Growth in sales	FDI	09	10320.88	7.95E-07	2.306004	Sig Diff
	Non - FDI	09	4921.276			
Growth in PAT	FDI	09	678.2484	0.004507	2.306004	Not Sig Diff
	Non - FDI	09	152.3502			
Growth in assets	FDI	09	10898.25	2.65E-05	2.306004	Sig Diff
	Non - FDI	09	5465.227			

(Source: Author Compilation)

The t test result shows that age, growth in sales, and growth in assets is showing a significant difference in the between FDI based companies and Non-FDI based companies. Whereas variables like Return on Asset, size, current ratio, quick ratio, debt to equity ratio and growth in profit of companies are showing not showing any significant difference in the between FDI based companies and Non-FDI based companies in Machinery sector.

5.2.1.7 Transportation Sector

The profitability of 17 FDI based companies and 26 Non FDI based companies.

Table 5. 7 t-Test in Transport Sector

Variables		No	Mean	P(T<=t) two-tail	t Critical two-tail	Accepting/ Rejecting
ROA	FDI	09	1.430159	0.012445	2.306004	Not Sig Diff
	Non - FDI	09	1.727414			
Age	FDI	09	25.52778	8.81E-16	2.306004	Sig Diff
	Non - FDI	09	29.37037			
Size	FDI	09	24357.8	4E-06	2.306004	Sig Diff
	Non - FDI	09	11181.91			
Current Ratio	FDI	09	2.337639	0.542798	2.306004	Not Sig Diff
	Non - FDI	09	2.432263			
Quick Ratio	FDI	09	2.030556	0.023999	2.306004	Not Sig Diff
	Non - FDI	09	2.284239			
Debt to Equity Ratio	FDI	09	5.002569	0.54627	2.306004	Not Sig Diff
	Non - FDI	09	3.680412			
Growth in sales	FDI	09	13996.42	6.37E-05	2.306004	Sig Diff
	Non - FDI	09	6789.472			
Growth in PAT	FDI	09	4058.115	0.003201	2.306004	Not Sig Diff
	Non - FDI	09	740.5213			
Growth in assets	FDI	09	34192.24	3.23E-08	2.306004	Sig Diff
	Non - FDI	09	16525.76			

(Source: Author Compilation)

The results show that age, size, growth in sales, and growth in assets is showing a significant difference in the between FDI based companies and Non-FDI based companies. Whereas variables like Return on Asset, current ratio, quick ratio, debt to equity ratio, growth in profit of companies are showing not showing any significant difference in the between FDI based companies and Non-FDI based companies in Transport sector.

5.2.1.8 Hotel Sector

The variables which will affect the profitability of 09 FDI based companies and 06 Non FDI based companies in Hotel sector.

Table 5. 8 t-Test in Hotel Sector

Variables		No	Mean	P(T<=t) two-tail	t Critical two-tail	Accepting/ Rejecting
ROA	FDI	09	1.116052	1.66E-07	2.306004	Not Sig Diff
	Non - FDI	09	1.586231			
Age	FDI	09	28.46667	1.05E-14	2.306004	Not Sig Diff
	Non - FDI	09	23.14286			
Size	FDI	09	3691.479	6.5E-05	2.306004	Sig Diff
	Non - FDI	09	1056.441			
Current Ratio	FDI	09	3.116667	0.012944	2.306004	Not Sig Diff
	Non - FDI	09	2.113968			
Quick Ratio	FDI	09	2.422444	0.000527	2.306004	Not Sig Diff
	Non - FDI	09	1.207619			
Debt to Equity Ratio	FDI	09	1.447222	0.097037	2.306004	Not Sig Diff
	Non - FDI	09	1.29873			
Growth in sales	FDI	09	1122.35	0.000124	2.306004	Sig Diff
	Non - FDI	09	681.0397			
Growth in PAT	FDI	09	212.2767	2.27E-07	2.306004	Not Sig Diff
	Non - FDI	09	30.17937			
Growth in assets	FDI	09	5208.737	0.001298	2.306004	Not Sig Diff
	Non - FDI	09	1569.881			

(Source: Author Compilation)

The results show that size, growth in sales, and growth in assets is showing a significant difference in the between FDI based companies and Non-FDI based companies. Whereas variables like Return on Asset, age, current ratio, quick ratio, debt to equity ratio, growth in profit and growth in assets of companies are showing not showing any significant difference in the between FDI based companies and Non-FDI based companies in Hotel sector.

5.2.1.9 IT Sector

The variables which will affect the profitability of 26 FDI based companies and 26 Non FDI based companies.

Table 5. 9 t-Test in IT Sector

Variables		No	Mean	P(T<=t) two-tail	t Critical two-tail	Accepting/ Rejecting
ROA	FDI	09	1.502806	0.073477	2.306004	Not Sig Diff
	Non - FDI	09	1.42353			
Age	FDI	09	19.74074	6.65E-65	2.306004	Sig Diff
	Non - FDI	09	18.85185			
Size	FDI	09	8651.632	0.000633	2.306004	Not Sig Diff
	Non - FDI	09	2353.846			
Current Ratio	FDI	09	3.553498	0.059951	2.306004	Not Sig Diff
	Non - FDI	09	5.090823			
Quick Ratio	FDI	09	3.189835	0.03245	2.306004	Not Sig Diff
	Non - FDI	09	5.340211			
Debt to Equity Ratio	FDI	09	1.057695	0.002592	2.306004	Not Sig Diff
	Non - FDI	09	1.391358			
Growth in sales	FDI	09	7038.089	0.001935	2.306004	Not Sig Diff
	Non - FDI	09	18676.48			
Growth in PAT	FDI	09	1825.965	0.002112	2.306004	Not Sig Diff
	Non - FDI	09	4543.482			
Growth in assets	FDI	09	12707.68	0.001442	2.306004	Not Sig Diff
	Non - FDI	09	17893.65			

(Source: Author Compilation)

The results show that age is showing a significant difference in the between FDI based companies and Non-FDI based companies. Whereas all other variables like Return on Asset, age, size, current ratio, quick ratio, debt to equity ratio, growth in sales, growth in profit and growth in assets of companies are showing not showing any significant difference in the between FDI based companies and Non-FDI based companies in IT sector.

5.2.1.10 Financial Service Sector

Table 5.10, present the variables which will affect the profitability of 27 based companies and 33 Non FDI based companies.

Table 5. 10 t-Test in Financial Sector

Variables		No	Mean	P(T<=t) two-tail	t Critical two-tail	Accepting/ Rejecting
ROA	FDI	09	22.08732	0.15496	2.306004	Not Sig Diff
	Non - FDI	09	1.059179			
Age	FDI	09	30.75	3.94E-21	2.306004	Sig Diff
	Non - FDI	09	27.35948			
Size	FDI	09	13491.59	0.001691	2.306004	Not Sig Diff
	Non - FDI	09	5045.244			
Current Ratio	FDI	09	12.93056	0.718016	2.306004	Not Sig Diff
	Non - FDI	09	12.20261			
Quick Ratio	FDI	09	12.5544	0.371227	2.306004	Not Sig Diff
	Non - FDI	09	10.68683			
Debt to Equity Ratio	FDI	09	12.93849	0.013987	2.306004	Not Sig Diff
	Non - FDI	09	1.789216			
Growth in sales	FDI	09	0.984524	0.001435	2.306004	Not Sig Diff
	Non - FDI	09	84.5232			
Growth in PAT	FDI	09	434.3472	0.0473	2.306004	Not Sig Diff
	Non - FDI	09	191.4297			
Growth in assets	FDI	09	32127.94	0.001227	2.306004	Not Sig Diff
	Non - FDI	09	6492.563			

(Source: Author Compilation)

The results show that age is showing a significant difference in the between FDI based companies and Non-FDI based companies. Whereas all other variables like Return on Asset, age, size, current ratio, quick ratio, debt to equity ratio, growth in sales, growth in profit and growth in assets of companies are showing not showing any significant difference in the between FDI based companies and Non-FDI based companies in Financial service sector.

5.2.1.11 Testing of Hypothesis

The hypothesis testing result are shown below

Table 5. 11 Testing of Hypothesis

S.No	Hypothesis	Accept/ Reject
1	There is no significant difference between FDI based companies and Non FDI based companies in terms of ROA, Age, Size, Current ratio, Quick ratio and Debt to Equity Raito, Growth in sales, profit and assets in Agriculture Sector in India	Accept
2	There is no significant difference between FDI based companies and Non FDI based companies in terms of ROA, Age, Size, Current ratio, Quick ratio and Debt to Equity Raito, Growth in sales, profit and assets in Textile sector in India	Accept
3	There is no significant difference between FDI based companies and Non FDI based companies in terms of ROA, Age, Size, Current ratio, Quick ratio and Debt to Equity Raito, Growth in sales, profit and assets in Pharmaceutical Sector in India	Accept
4	There is no significant difference between FDI based companies and Non FDI based companies in terms of ROA, Age, Size, Current ratio, Quick ratio and Debt to Equity Raito, Growth in sales, profit and assets in Construction Sector in India	Accept

5	There is no significant difference between FDI based companies and Non FDI based companies in terms of ROA, Age, Size, Current ratio, Quick ratio and Debt to Equity Raito, Growth in sales, profit and assets in Metal Sector in India	Accept
6	There is no significant difference between FDI based companies and Non FDI based companies in terms of ROA, Age, Size, Current ratio, Quick ratio and Debt to Equity Raito, Growth in sales, profit and assets in Machinery Sector in India	Accept
7	There is no significant difference between FDI based companies and Non FDI based companies in terms of ROA, Age, Size, Current ratio, Quick ratio and Debt to Equity Raito, Growth in sales, profit and assets in Transport Sector in India	Accept
8	There is no significant difference between FDI based companies and Non FDI based companies in terms of ROA, Age, Size, Current ratio, Quick ratio and Debt to Equity Raito, Growth in sales, profit and assets in Hotel Sector in India	Accept
9	There is no significant difference between FDI based companies and Non FDI based companies in terms of ROA, Age, Size, Current ratio, Quick ratio and Debt to Equity Raito, Growth in sales, profit and assets in IT Sector in India	Accept
10	There is no significant difference between FDI based companies and Non FDI based companies in terms of ROA, Age, Size, Current ratio, Quick ratio and Debt to Equity Raito, Growth in sales, profit and assets in Financial service Sector in India	Accept

Source: Author Compilation

5.2.2. Comparative Analysis

This part deals with the Financial Performance of FDI Based Companies is superior than Non FDI based Companies in Selective Sector in India.

The objective is to study the financial performance of FDI based companies is superior than Non FDI based companies in Indian selective sectors under the study for the period of 10 years by using panel data analysis.

5.2.2.1 Food and Agriculture Sector

FDI based companies in Food & Agriculture Sector, F- test is performed to know best model among pooled and fixed effect model. The result shows that pooled model is better as P value is less than 5% which means we accept null hypothesis 0.0065(0.01). Breusch Pagan test is done to know among pooled and random effect model suitable model is better, the result shows pooled model is better than random 12.21(0.0004) since P value is less than 5% which means reject null hypothesis. **Non FDI based companies in Food & Agriculture Sector,** F- test is performed to know among pooled and fixed effect model which model is better. The result shows that fixed effect model is better as P value is more than 5% which means we reject null hypothesis 68.88(3.94). Breusch Pagan test result shows that random effect Mode is accepted 546.83(6.15).Lastly Hausman test is done to know among fixed effect and random effect model which model is more suitable. The result shows that for fixed effect model is accepted 13.54(0.19) as P value is more than 5% hence we are rejecting null hypothesis i.e. random effect model is adequate. Hence for FDI based companies **Pooled Model** and Non FDI based companies **fixed effect model** is used in Food & Agriculture Sector.

Table 5. 12 FDI and Non FDI based Companies in Food and Agriculture Sector

Variables	FDI Based Companies	Non FDI Based Companies
	F test (Pooled v/s Fixed) = 0.0065(0.01) Breusch-Pagan test (Pooled v/s Random) = 12.21(0.0004) Hausman test (Random v/s Fixed) = 0.05(1.00) **Fixed Effect Model**	F test (Pooled v/s Fixed) = 68.88(3.94) Breusch-Pagan test (Pooled v/s Random) = 546.83(6.15) Hausman test (Random v/s Fixed) = 13.54(0.19) **Fixed Effect Model**
const	0.24 (0.44)	3.47 (3.49)***
Age	-0.24 (-1.57)	0.29 (1.49)
Size	0.62 (2.39)**	0.32 (2.64)**
Current Ratio	-0.006 (-0.10)	-0.01 (-0.29)
Quick Ratio	-0.06 (-0.72)	0.04 (2.01)*
Debt to Equity ratio	0.008 (0.40)	0.07 (4.79)***
Growth in sales	-0.13 (-0.95)	-0.01 (-0.45)
Growth in PAT	0.35 (6.38)***	0.14 (4.56)***
Growth in assets	-0.98 (-6.00)***	-1.16 (-12.32)***
	R^2= 0.90, Adj R^2 =89	R^2= 0.99, Adj R^2 =99
Chow Test	0.21 (0.63)	
No of Observation	220	200
Note: Numbers in Parentheses are the t- Statistic , ***Coefficient are Significant at 1%, **Coefficient are Significant at 5% and *Coefficient are Significant at 10%		

(Source: Author Compilation)

The result shows that there is a negative relationship exist between **age and Profitability** for FDI based companies (-0.001, -0.02) and positive relationship for Non FDI Companies (0.29, 1.49). FDI based companies performance is better than Non FDI based companies because age of FDI based companies are older than Non FDI based companies. We can conclude that their superior performance may not only due to their age but it be able to be due to other advantage drive as a result of multinational in nature. The results also show that **size and Profitability** has statistically significant impact on Profitability for both FDI based companies (0.49, 2.26)** and Non FDI Companies (0.32, 2.64)** which is statically significant at 5%. The result of Anastaaopoulos, (2004) while Vlachvei and Notta (2006) prove that there is a maximum size above which the higher the size lower the Profitability. The

relationship between **liquidity and profitability** that is current ratio of shows a negative relationship for both FDI (-0.1, -2.09)** which is statically significant at 5% and Non FDI based companies (-0.01, -0.29) where as quick ratio shows positive impact of for both FDI (0.09, 1.07) and Non FDI based companies (0.04,2.01)* which is statically significant at 10%. It will help to know firm ability to meet its current obligation Poutník, J. S. L. (2016). The relationship between **long term solvency and profitability** is determined debt to equity ratio. It shows that FDI (0.03, 1.82)* which is statically significant at 10%. and Non FDI based companies (0.07, 4.79)*** which is statically significant at 1% . Both have positive and significant impact on companies which mean that the company has sufficient cash to meet its short term and long term obligations as and when it will arise. The relationship between **growth and profitability** shows that faster growing companies are more profitable. Growth in sales shows that the FDI (-0.06, -0.64) and Non FDI based companies (-0.01, -0.45) are showing negative impact on profitability where as Growth in PAT also shows that there is a positive but significant impact for FDI based companies (0.45, 11.64)*** and Non FDI based companies (0.14, 4.56)*** at 1% level of significance however Growth in assets also shows that there is a negative but significant impact for FDI based companies (-0.81, -5.46)*** and Non FDI based companies (-1.16, -12.32)*** at 1% level of significance. To know wither there is any difference between these two groups of companies **Chow test** is done, the results shows that F=0.21(0.63) which is more than 5% hence accept null hypothesis. The study concluded that there is no structural break. R square for both the groups are above 60% i.e. for FDI based companies 90% and Non FDI based companies is 99% which explains the how much various caused by independent variables in dependent.

5.2.2.2 Textile Sector

FDI based companies in Textile Sector, F- test result shows that fixed effect model is better as P value is more than 5% which means we reject null hypothesis 14.21(1.09). Breusch Pagan test result shows random effect model is better 259.37(2.34) since P value is less than 5% which means we accept null hypothesis. Hausman test result shows that fixed effect model is accepted 1.61(0.99) as P value is more than 5%.

Table 5. 13 FDI and Non FDI based Companies in Textile Sector

Variables	**FDI Based Companies**	**Non FDI Based Companies**
	F test (Pooled v/s Fixed) = 14.21(1.09) Breusch-Pagan test (Pooled v/s Random) = 259.37(2.34) Hausman test (Random v/s Fixed) = 1.61(0.99) **Fixed Effect Model**	F test (Pooled v/s Fixed) = 2.92(0.0003) Breusch-Pagan test (Pooled v/s Random) = 3.78(0.05) Hausman test (Random v/s Fixed) = 49.05(1.61) **Pooled Model**
const	-7.11 (-2.92)***	0.018 (0.44)
Age	2.97 (4.63)***	-0.01 (-1.50)
Size	1.44 (2.51)**	-0.008 (-0.50)
Current Ratio	-0.72 (-2.21)**	0.028 (2.35)**
Quick Ratio	0.37 (1.85)*	-0.013 (-1.60)
Debt to Equity ratio	0.17 (1.40)	-0.002 (-0.98)
Growth in sales	0.07 (0.18)	0.98 (127.50)***
Growth in PAT	-0.05 (-0.73)	-0.001 (-0.56)
Growth in assets	-2.02 (-4.58)***	-0.97 (-72.25)***
	R^2= 0.99, Adj R^2 =97	R^2= 0.99, Adj R^2 =99
Chow Test	0.036 (0.84)	
No of Observation	180	150
Note: Numbers in Parentheses are the t- Statistic , ***Coefficient are Significant at 1%, **Coefficient are Significant at 5% and *Coefficient are Significant at 10%		

(Source: Author Compilation)

Non FDI based companies in Textile Sector, F- test result shows that pooled model is accepted 2.92(0.0003). Breusch Pagan test result shows that pooled mode is accepted 3.78(0.05). Lastly Hausman test is not applicable. Hence for FDI based companies in textile Sector **fixed effect model** and Non FDI companies **pooled model** is used.

There is a positive relationship existing between **age and Profitability** for FDI based companies (2.97, 4.63)*** and Non FDI Companies (0.10, 3.67)*** at 1% level of significance. It shows that as age of FDI based companies are older than Non FDI based companies. **Size and profitability** is also showing positive relationship for FDI based companies (1.44, 2.51)** at 5% level of significance and Non FDI Companies (0.008, 0.32) which means as higher the size lower will be profitability of the companies. The relationship between **liquidity and profitability** that is current ratio of shows a negative relationship for FDI based companies (-0.72, -2.21)** at 5% level of significance and positive relationship for Non FDI based companies (0.01, 0.96) where as quick ratio shows positive impact of for FDI based companies (0.37, 1.85) * at 10% level of significance and negative relationship between Non FDI based companies (-0.01, -0.12). It will help to know firm ability to meet its current obligation of FDI and Non FDI based companies. The relationship between **long term solvency and profitability** is determined debt to equity ratio. It shows that positive relationship for FDI based companies (0.17, 1.40) and negative relationship for Non FDI based companies (-0.001,-0.41) which mean that the company has sufficient cash to meet its short term and long term obligations as and when it will arise. The relationship between

growth and profitability shows with the help of Growth in sales shows that the FDI (0.07,0.18) and Non FDI based companies (0.93, 50.09)*** at 1% level of significance are showing positive impact on profitability where as Growth in PAT also shows positive relationship for FDI based companies (-0.05, -0.73) and negative relationship for Non FDI based companies (0.001,0.67) where as Growth in assets also shows that there is a negative relations exists for FDI (-2.02, -4.58) *** and Non FDI based companies (-0.97, -35.32)*** are showing but significant impact at 1% level of significance which means faster growing companies are more profitable in textile sector. To know wither there is any difference between these two groups of companies **Chow test** is done, the results shows that F=0.036(0.84) which is more than 5% hence accept null hypothesis. The study concluded that there is no structural break. R square for both the groups are above 60% i.e. for FDI based companies 99% and Non FDI based companies is 99% which explains the how much various caused by independent variables in dependent.

5.2.2.3 Pharmaceutical Sector

FDI based companies in Pharmaceutical Sector, F- test result shows that fixed effect model is better as P value is less than 5% which means we accept null hypothesis 0.62(0.93). Breusch Pagan test result shows random effect mode is better 2.73(0.09) since P value is less than 5%. Lastly Hausman test result shows that for fixed effect model is accepted 8.69(0.46) as P Value is more than 5%. **Non FDI based companies in Pharmaceutical Sector,** F- test result shows that pooled model is 0.01(0.01). Breusch Pagan test result shows that random effect model is accepted 27.63(1.46) and Hausman test result

shows that for fixed effect model are accepted 0.19(1.00) as P value is less than 5%. Hence for FDI based companies **fixed effect model** and Non FDI based companies **fixed effect model** is used in Pharmaceutical sector.

Table 5. 14 FDI and Non FDI based Companies in Pharmaceutical Sector

Variables	**FDI Based Companies**	**Non FDI Based Companies**
	F test (Pooled v/s Fixed) = 0.62(0.93) Breusch-Pagan test (Pooled v/s Random) = 2.73(0.09) Hausman test (Random v/s Fixed) = 8.69(0.46) **Fixed Effect Model**	F test (Pooled v/s Fixed) = 0.01(1.00) Breusch-Pagan test (Pooled v/s Random) = 27.63(1.46) Hausman test (Random v/s Fixed) = 0.19(1.00) **Fixed Effect Model**
const	0.043(0.53)	0.005 (0.29)
Age	-0.014 (-0.61)	-0.008 (-1.35)
Size	0.056 (2.45)**	0.002 (0.53)
Current Ratio	-0.04 (-1.56)	0.01 (0.89)
Quick Ratio	0.02 (0.98)	-0.005 (-0.56)
Debt to Equity ratio	-0.005 (-0.43)	0.004 (2.04)**
Growth in sales	0.94 (82.63)***	0.98 (201)***
Growth in PAT	-0.0007 (-0.17)	-0.007 (-0.34)
Growth in assets	-0.99 (-57.43)***	-0.98 (-200)***
	R^2= 0.99, Adj R^2 =99	R^2= 0.99, Adj R^2 =99
Chow Test	0.45 (0.49)	
No of Observation	290	510
Note: Numbers in Parentheses are the t- Statistic , ***Coefficient are Significant at 1%, **Coefficient are Significant at 5% and *Coefficient are Significant at 10%		

(Source: Author Compilation)

There is a negative relationship existing between **age and Profitability** for FDI based companies (-0.014, -0.61) and Non FDI Companies (-0.008, -1.35). It shows that as age of FDI based companies are older than Non FDI based companies. **Size and profitability** is also showing positive relationship for FDI based companies (0.056, 2.45)*** at 1% level of significance and Non FDI Companies (0.002, 0.53) which means as higher the size lower will be

profitability of the companies. The relationship between **liquidity and profitability** that is current ratio of shows a negative relationship for FDI based companies (-0.04, -1.56) and positive relationship for Non FDI based companies (0.01, 0.89) where as quick ratio shows positive impact of for FDI based companies (0.02, 0.98) and negative relationship between Non FDI based companies (-0.005, -0.56). It will help to know firm ability to meet its current obligation of FDI and Non FDI based companies. There is a that negative relationship for FDI based companies (-0.005, -0.43) and positive relationship for Non FDI based companies (0.004, 2.04)** at 5% level of significance which mean that the company has sufficient cash to meet its short term and **long term obligations** as and when it will arise.

The relationship between **growth and profitability** shows with the help of Growth in sales shows that the FDI based companies (0.94, 82.63)*** and Non FDI based companies (0.98, 201)*** are showing positive impact on profitability at 1% level of significance where as Growth in PAT also shows negative relationship between FDI based companies -0.0007 (-0.17) and Non FDI based companies (-0.007, -0.34) where as Growth in assets also shows that there is a negative relationship between FDI based companies (-0.99, -57.43)*** and Non FDI based companies (-0.98, -200)*** at 1% level of significance which means faster growing companies are more profitable in Pharmaceutical sector. To know wither there is any difference between these two groups of companies **Chow test** is done, the results shows that F=0.45(0.49) which is more than 5% hence accept null hypothesis. The study concluded that there is no structural break. R square for both the groups are

above 60% i.e. for FDI based companies 99% and Non FDI based companies is 99% which explains the how much various caused by independent variables in dependent.

5.2.2.4 Construction Sector

FDI based companies in Construction Sector, F- test result shows that fixed effect model is better as P value is less than 5% which means we accept null hypothesis 9.53(1.35). Breusch Pagan test result shows random effect mode is better 93.63(6.28) since P value is less than 5%. Hausman test result shows that for random effect model is accepted 21.56(0.01) as P value is more than 5%. **Non FDI based companies in Construction Sector,** F- test result shows that fixed effect model is 0.67(0.80). Breusch Pagan test result shows that random effect model is accepted 3.09(0.07) and Hausman test result shows that for fixed effect model is accepted 10.05(0.43) as P value is less than 5%. Hence for FDI based companies **random effect model** and Non FDI based companies **fixed effect model** is used in Construction Sector.

Table 5. 15 FDI and Non FDI based Companies in Construction Sector

Variables	FDI Based Companies	Non FDI Based Companies
	F test (Pooled v/s Fixed) = 9.53(1.35) Breusch-Pagan test (Pooled v/s Random) = 92.63(6.28) Hausman test (Random v/s Fixed) = 21.56(0.01) **Random Effect Model**	F test (Pooled v/s Fixed) = 0.67(0.80) Breusch-Pagan test (Pooled v/s Random) = 3.09(0.07) Hausman test (Random v/s Fixed) = 10.05(0.43) **Fixed Effect Model**
const	0.19 (1.10)	-0.02 (-1.38)
Age	0.06 (1.35)	0.0009 (0.29)
Size	-0.04 (-1.95)*	0.007 (2.09)**
Current Ratio	0.013 (0.73)	-0.02 (-1.18)
Quick Ratio	-0.002 (-0.33)	0.027 (1.25)
Debt to Equity ratio	0.015 (1.25)	-0.001 (-0.49)
Growth in sales	0.092 (5.39)***	0.98(173.85)***
Growth in PAT	-0.91 (-29.03)***	0.0005 (0.29)
Growth in assets	(-0.019, -0.72)	-0.97 (-202)***
	R^2= 0.99, Adj R^2 =99	R^2= 0.99, Adj R^2 =99
Chow Test	0.25(0.61)	
No of Observation	160	630
Note: Numbers in Parentheses are the t- Statistic , ***Coefficient are Significant at 1%, **Coefficient are Significant at 5% and *Coefficient are Significant at 10%		

(Source: Author Compilation)

There is a positive relationship existing between **age and Profitability** for FDI based companies (0.041, 0.46) and Non FDI Companies (0.0001, 0.07). It shows that as age of FDI based companies are older than Non FDI based companies. **Size and profitability** is also showing positive relationship for FDI based companies (0.003, 0.12) and Non FDI Companies (0.005, 2.05)** at 5% level of significance which means as higher the size lower will be profitability of the companies. The relationship between **liquidity and profitability** that is current ratio of shows a negative relationship for FDI based companies (-0.001, -0.02) and Non FDI based companies (-0.01, -1.02)

where as quick ratio shows positive impact of for FDI based companies (0.01, 1.55) and Non FDI based companies (0.022, 1.22). It will help to know firm ability to meet its current obligation of FDI and Non FDI based companies. There is a that negative relationship for FDI based companies (-0.019, -1.12) and Non FDI based companies (0.004, -2.04)** at 5% level of significance which mean that the company has sufficient cash to meet its short term and **long term obligations** as and when it will arise.

The relationship between **growth and profitability** shows with the help of Growth in sales shows that the FDI based companies (0.10, 5.33)*** and Non FDI based companies (0.97, 233.5)*** at 1% level of significance are showing positive impact on profitability at 1% level of significance where as Growth in PAT also shows negative relationship between FDI based companies (-0.96, -20.8)*** at 1% level of significance and positive relationship between Non FDI based companies (0.001, 0.77) where as Growth in assets also shows that there is a negative relationship between FDI based companies (-0.019, -0.72) and Non FDI based companies (-0.97, -245.9)***at 1% level of significance which means faster growing companies are more profitable in Construction sector. The **Chow test** results shows that F=0.25(0.61) which is more than 5% hence accept null hypothesis. The study concluded that there is no structural break. R square for both the groups are above 60% i.e. for FDI based companies 99% and Non FDI based companies is 99% which explains the how much various caused by independent variables in dependent.

5.2.2.5 Metal Sector

In Metal Sector, Hausman test is done for 22 FDI based companies and 30 Non FDI Companies. The results shows that for FDI based companies **Fixed effect model** is suitable (H = 18.51, P=0.04) where as for Non FDI Companies **fixed effect model** is suitable (H=11.63, P=0.31). To know is there is any difference in the financial performance of FDI based companies and Non FDI Companies model is estimated separately. Chow test results shows that F=0.07, thus F>F0.01 which means that the coefficients of the variables are different in two group.

Table 5. 16 FDI and Non FDI based Companies in Metal Sector

Variables	**FDI Based Companies**	**Non FDI Based Companies**
	F test (Pooled v/s Fixed) = 9.33(2.41) Breusch-Pagan test (Pooled v/s Random) = 69.69(6.93) Hausman test (Random v/s Fixed) = 223.07(2.43) **Fixed Effect Model**	F test (Pooled v/s Fixed) = 0.44(0.98) Breusch-Pagan test (Pooled v/s Random) = 5.07(0.02) Hausman test (Random v/s Fixed) = 10.02(0.43) **Fixed Effect Model**
const	-0.03 (0.82)	0.06 (1.48)
Age	0.16 (-2.44)**	0.0062 (0.45)
Size	-0.05 (4.51)***	0.02 (1.06)
Current Ratio	0.03 (-2.60)**	-0.03 (-2.22)**
Quick Ratio	0.008 (2.09)**	0.024 (2.10)**
Debt to Equity ratio	0.005 (0.99)	-0.001 (-0.25)
Growth in sales	-0.003 (21.4)***	0.96 (74.11)***
Growth in PAT	-0.87 (-0.71)	0.01 (2.61)**
Growth in assets	0.0061 (-26.)***	-0.99 (-60.71)***
	R^2= 0.90, Adj R^2 =89	R^2= 0.90, Adj R^2 =89
Chow Test	0.07 (0.78)	
No of Observation	220	300
Note: Numbers in Parentheses are the t- Statistic , ***Coefficient are Significant at 1%, **Coefficient are Significant at 5% and *Coefficient are Significant at 10%		

(Source: Author Compilation)

There is a positive relationship existing between age and Profitability for FDI based companies (0.16, -2.44) and Non FDI Companies (0.0062, 0.45). It shows that as age of FDI based companies are older than Non FDI based companies. Size and profitability is also showing negative relationship for FDI based companies (-0.05, 4.51) and positive relationship existing Non FDI Companies (0.02, 1.06) which means as higher the size lower will be profitability of the companies. The relationship between Liquidity and profitability that is current ratio of shows a positive relationship for FDI based companies (0.03, -2.60) and a negative relationship for Non FDI based companies (-0.03, -2.22) where as quick ratio shows positive impact of for FDI based companies (0.008, 2.09) and Non FDI based companies (0.024, 2.10). It will help to know firm ability to meet its current obligation of FDI and Non FDI based companies.

There is that positive relationship for FDI based companies (0.005, 0.99) and a negative relationship for Non FDI based companies (-0.001, -0.25) which mean that the company has sufficient cash to meet its short term and long term obligations as and when it will arise. The relationship between growth and profitability shows with the help of Growth in sales shows that the a negative relationship for FDI based companies (0.003, 21.4) and a positive relationship for Non FDI based companies (0.97, 74.11) at 1% level of significance where as Growth in PAT also shows negative relationship between FDI based companies (-0.87, -0.71) and positive relationship between Non FDI based companies (0.01, 2.61) where as Growth in assets also shows that there is a positive relationship between FDI based companies (0.0061, -26.0) and

negative relationship Non FDI based companies (-0.99, -60.7) at 1% level of significance which means faster growing companies are more profitable in Metal sector.

5.2.2.6 Machinery Sector

FDI based companies in Machinery Sector, F- test result shows that pooled model is better as P value is less than 5% which means we accept null hypothesis 0.14(0.01). Breusch Pagan test result shows pooled mode is better 12.52(0.004) and Hausman test is not applicable.

Table 5. 17 FDI and Non FDI based Companies in Machinery Sector

Variables	**FDI Based Companies**	**Non FDI Based Companies**
	F test (Pooled v/s Fixed) = 0.14(0.01) Breusch-Pagan test (Pooled v/s Random) = 12.52(0.004) Hausman test (Random v/s Fixed) = 2.11(0.98) **Pooled Model**	F test (Pooled v/s Fixed) = 61.28(4.34) Breusch-Pagan test (Pooled v/s Random) = 842.97(2.44) Hausman test (Random v/s Fixed) = 23.57(0.008) **Fixed Effect Model**
const	0.08 (4.03)***	-0.16 (-1.00)
Age	-0.001 (-0.32)	0.075 (1.94)*
Size	-0.005 (-0.84)	0.35 (4.40)***
Current Ratio	0.014 (0.91)	-0.05 (-0.79)
Quick Ratio	-0.03 (-2.46)**	0.12 (2.32)**
Debt to Equity ratio	-0.001 (-0.41)	0.01 (1.54)
Growth in sales	0.96 (117.98)***	0.68 (17.15)***
Growth in PAT	0.0057 (2.23)**	0.04 (3.38)***
Growth in assets	-0.97 (-146.56)***	-1.06 (-14.78)***
	R^2= 0.99, Adj R^2 =99	R^2= 0.99, Adj R^2 =99
Chow Test	0.17 (0.67)	
No of Observation	300	300
Note: Numbers in Parentheses are the t- Statistic , ***Coefficient are Significant at 1%, **Coefficient are Significant at 5% and *Coefficient are Significant at 10%		

(Source: Author Compilation)

Non FDI based companies in Machinery Sector, F- test result shows that fixed effect model is 61.28(4.34). Breusch Pagan test result shows that random effect model is accepted 842.97(2.44) and Hausman test result shows that for fixed effect model is accepted 23.57(0.008) as P value is less than 5%.Hence for FDI based companies **pooled model** and Non FDI based companies **fixed effect model** is used in Machinery Sector.

There is a negative relationship existing between **age and Profitability** for FDI based companies (-0.001, -0.32) and positive relationship existing among Non FDI Companies (0.075, 1.94)* at 10% significance level. It shows that as age of FDI based companies are older than Non FDI based companies. **Size and profitability** is also showing negative relationship for FDI based companies (-0.005, -0.84) and positive relationship existing Non FDI Companies (0.35, 4.40)*** at 1% level of significance which means as higher the size lower will be profitability of the companies. The relationship between **liquidity and profitability** that is current ratio of shows a positive relationship for FDI based companies (0.014, 0.91) and a negative relationship for Non FDI based companies (-0.05, -0.79) where as quick ratio shows negative impact of for FDI based companies (-0.03,-2.46) **and positive relationship for Non FDI based companies (0.12, 2.32)** at 5% level of significance. It will help to know firm ability to meet its current obligation of FDI and Non FDI based companies.

There is a that negative relationship for FDI based companies (-0.001, -0.41) and a positive relationship for Non FDI based companies (0.01, 1.54) which

mean that the company has sufficient cash to meet its short term and long term obligations as and when it will arise.

The relationship between **growth and profitability** shows with the help of Growth in sales shows that the a positive relationship for FDI based companies (0.96, 117.98)*** and Non FDI based companies (0.68, 17.15)*** at 1% level of significance where as Growth in PAT also shows positive relationship between FDI based companies (0.005, 2.23)*** and positive relationship between Non FDI based companies (0.04, 3.38)*** at 1% level of significance where as Growth in assets also shows that there is a negative relationship between FDI based companies (-0.97, -146.56)***and negative relationship Non FDI based companies (-1.06, -14.78)*** at 1% level of significance which means faster growing companies are more profitable in Machinery sector. The **Chow test** results shows that F=0.17(0.67) which is more than 5% hence accept null hypothesis. The study concluded that there is no structural break

5.2.2.7 Transportation Sector

In Transportation Sector , Hausman test is done to know among fixed effect and random effect model which model is more suitable for 17 FDI based companies and 26 Non FDI Companies. The results shows that for FDI based companies **fixed effect model** is suitable (H = 29.45, P=0.01) where as for Non FDI Companies **fixed effect model** is suitable (H=41.80, P=8.11). To know is there is any difference in the financial performance of FDI based companies and Non FDI Companies model is estimated separately. Chow test

results shows that F=0.25, thus F>F0.01 which means that the coefficients of the variables are different in two group.

Table 5. 18 FDI and Non FDI based Companies in Transport Sector

Variables	FDI Based Companies	Non FDI Based Companies
	F test (Pooled v/s Fixed) = 48.93(6.46) Breusch-Pagan test (Pooled v/s Random) = 228.96(1.00) Hausman test (Random v/s Fixed) = 29.45 (0.01) **Fixed Effect Model**	F test (Pooled v/s Fixed) = 0.25(0.99) Breusch-Pagan test (Pooled v/s Random) = 9.28(0.002) Hausman test (Random v/s Fixed) = 3.59(0.93) **Fixed Effect Model**
const	1.30 (0.80)	3.34 (0.64)
Age	-0.041 (-0.53)	-0.14 (-0.25)
Size	4.25 (0.01)	1.03 (1.01)
Current Ratio	0.0064 (1.10)	-0.06 (-0.03)
Quick Ratio	-0.03 ((-3.67)***	0.69 (0.41)
Debt to Equity ratio	-0.0004 (-0.64)	0.37 (1.67)
Growth in sales	-0.0001 (-0.41)	0.06 (0.14)
Growth in PAT	1.676 (1.29)	-0.05 (-0.28)
Growth in assets	5.501 (2.27)**	0.91 (1.24)
	R^2= 0.90, Adj R^2 =89	R^2= 0.90, Adj R^2 =89
Chow Test	0.25 (0.61)	
No of Observation	160	260
Note: Numbers in Parentheses are the t- Statistic , ***Coefficient are Significant at 1%, **Coefficient are Significant at 5% and *Coefficient are Significant at 10%		

(Source: Author Compilation)

There is a negative relationship existing between age and Profitability for FDI based companies (-0.041, -0.53) and Non FDI Companies (-0.14, -0.25). It shows that as age of FDI based companies are older than Non FDI based companies. Size and profitability is also showing positive relationship for FDI based companies (4.25, 0.01) and positive relationship existing Non FDI Companies (1.03, 1.01) which means as higher the size lower will be profitability of the companies.

The relationship between Liquidity and profitability that is current ratio of shows a positive relationship for FDI based companies (0.0064, 1.10) and a negative relationship for Non FDI based companies (-0.06, -0.03) where as quick ratio shows negative impact of for FDI based companies (-0.03,-3.67) and positive relationship for Non FDI based companies (0.69, 0.41). It will help to know firm ability to meet its current obligation of FDI and Non FDI based companies.

There is a that negative relationship for FDI based companies (-0.004, -0.64) and a positive relationship for Non FDI based companies (0.37, 1.67) which mean that the company has sufficient cash to meet its short term and long term obligations as and when it will arise. The relationship between growth and profitability shows with the help of Growth in sales shows that the a positive relationship for FDI based companies (5.501, 2.27) and Non FDI based companies (0.91, 1.24) where as Growth in PAT also shows positive relationship between FDI based companies (4.087, 0.91) and positive relationship between Non FDI based companies (-0.14, -0.62) where as Growth in assets also shows that there is a negative relationship between FDI based companies (-1.05, -0.69) and negative relationship Non FDI based companies (-2.10, -2.24) at 1% level of significance which means faster growing companies are more profitable in Transport sector.

5.2.2.8 Hotel Sector

FDI based companies in Hotel Sector, F- test result shows that pooled model is better as P value is less than 5% which means we accept null hypothesis

25.88(0.001). Breusch Pagan test result shows pooled mode is better 52.06(0.004) and Hausman test is not applicable. **Non FDI based companies in Hotel Sector,** F- test result shows that fixed effect model is 90.11(2.08). Breusch Pagan test result shows that random effect model is accepted 408.02(9.84) and Hausman test result shows that for fixed effect model is accepted 98.34(1.16) as P value is less than 5%. Hence for FDI based companies **pooled model** and Non FDI based companies **fixed effect model** is used in Hotel Sector.

Table 5. 19 FDI and Non FDI based Companies in Hotel Sector

Variables	**FDI Based Companies**	**Non FDI Based Companies**
	F test (Pooled v/s Fixed) = 25.88(0.001) Breusch-Pagan test (Pooled v/s Random) = 52.06(0.004) Hausman test (Random v/s Fixed) = Nil **Pooled Model**	F test (Pooled v/s Fixed) = 90.11(2.08) Breusch-Pagan test (Pooled v/s Random) = 408.02(9.84) Hausman test (Random v/s Fixed) =98.34(1.16) **Fixed Effect Model**
const	-0.20 (-1.30)	-0.04 (-0.47)
Age	-0.03 (-4.71)***	
Size	-0.01 (-2.19)**	0.0004 (0.80)
Current Ratio	0.06 (2.02)*	-0.047 (-0.18)
Quick Ratio	-0.05 (-1.72)*	-0.015 (-0.05)
Debt to Equity ratio	0.01 (2.47)**	0.063 (0.57)
Growth in sales	1.001 (183.83)***	0.00061 (1.30)
Growth in PAT	-0.004 (-0.27)	1.9084 (0.003)
Growth in assets	-0.95 (-73.59)***	-0.00015 (-0.92)
	R^2= 0.99 Adj R^2 =99	R^2= 0.99 Adj R^2 =99
Chow Test	0.21 (0.64)	
No of Observation	90	60
Note: Numbers in Parentheses are the t- Statistic , ***Coefficient are Significant at 1%, **Coefficient are Significant at 5% and *Coefficient are Significant at 10%		

(Source: Author Compilation)

There is a negative relationship existing between **age and Profitability** for FDI based companies (-0.03,-4.71)*** at 1% significance level and Non FDI Companies (-0.32, -3.32)**at 5% significance level. It shows that as age of FDI based companies are older than Non FDI based companies. **Size and profitability** is also showing negative relationship for FDI based companies (-0.01,-2.19)*** at 1% significance level and positive relationship existing Non FDI Companies (0.0004,0.80) which means as higher the size lower will be profitability of the companies. The relationship between **liquidity and profitability** that is current ratio of shows a positive relationship for FDI based companies (0.62,2.02)* at 10% significance level and a negative relationship for Non FDI based companies (-0.047, -0.18) where as quick ratio shows negative impact of for FDI based companies (-0.05,-1.72)* at 10% significance level and Non FDI based companies (-0.015,-0.05). It will help to know firm ability to meet its current obligation of FDI and Non FDI based companies. There is a that positive relationship for FDI based companies (0.01,2.47) ** at 5% significance level and a positive relationship for Non FDI based companies (0.063,0.57) which mean that the company has sufficient cash to meet its short term and **long term obligations** as and when it will arise. The relationship between **growth and profitability** shows with the help of Growth in sales shows that the a positive relationship for FDI based companies (1.001,183.83)*** at 1% significance level and Non FDI based companies (0.006,1.30) where as Growth in PAT also shows negative relationship between FDI based companies (-0.004,-0.27) and positive relationship between Non FDI based companies (1.908,0.003) where as Growth in assets also shows that there is a negative relationship between FDI

based companies (-0.95,-73.59)*** at 1% significance level and Non FDI based companies (-0.0005,-0.92) at 1% level of significance which means faster growing companies are more profitable in Hotel sector. The **Chow test** results shows that F=0.21(0.64) which is more than 5% hence accept null hypothesis. The study concluded that there is no structural break. R square for both the groups are above 60% i.e. for FDI based companies 99% and Non FDI based companies is 99% which explains the how much various caused by independent variables in dependent.

5.2.2.9 Information Technology Sector

FDI based companies in Information Technology Sector, F- test is performed to know among Pooled and Fixed effect model which model is better. The result shows that fixed effect model is better as P value is more than 5% which means we reject null hypothesis 0.63(0.87). Breusch Pagan test is done to know among pooled and random effect model which model. The result shows that **fixed effect model** is accepted 2.85(0.09) since P value is more than 5% which means we reject null hypothesis. Lastly Hausman test is done to know among fixed effect and random effect model which model is more suitable the result shows that for FDI based companies fixed effect model is accepted 6.17(0.80) as P value is more than 5% hence we are rejecting null hypothesis i.e. random effect model is adequate. **Non FDI based companies in Information Technology Sector,** F- test is performed to know among pooled and fixed effect model which model is better. The result shows that fixed effect model is better as P value is more than 5% which means we reject null hypothesis 1.53(0.22). Breusch Pagan test result shows that random

effect Model is accepted 0.0013 (0.97) and Hausman test result shows that **fixed effect model** is accepted 10.08 (0.43).

There is a positive relationship existing between **age and Profitability** for FDI based companies (0.005, 0.14) and negative relationship existing for Non FDI Companies (-0.012,-0.99). It shows that in this sector as companies becoming older their profits are increasing as they are capturing the market. In other hand Non FDI based companies negative relationship between age and Profitability. **Size and profitability** is also showing positive relationship for FDI based companies (0.35, 4.31)*** which is statically significant at 1% level of significance and negative relationship existing Non FDI Companies (-0.0008, -0.24) which means as higher the size lower will be profitability of the companies. The relationship between **Liquidity and profitability** that is current ratio of shows a positive relationship for FDI based companies (0.07, 1.87)* and Non FDI based companies (0.04, 1.98)* which is statically significant at 10%, where as quick ratio shows negative impact of for FDI based companies (-0.05, -1.45) and Non FDI based companies (-0.03, -1.48). It will help to know firm ability to meet its current obligation of FDI and Non FDI based companies.

The relationship between **Solvency and profitability** shows positive relationship for FDI based companies (0.01, 0.85) and a positive relationship for Non FDI based companies (0.0041, 1.32) which mean that the company has sufficient cash to meet its short term and long term obligations as and when it will arise. The relationship between **growth and profitability** shows

with the help of Growth in sales shows that the a positive relationship for FDI based companies (0.68, 17.58)*** and Non FDI based companies (0.96, 80.78)*** which is statically significant at 1% level of significance. Growth in PAT also shows positive relationship between FDI based companies (0.06, 3.99)*** which is statically significant at 1% level of significance and negative relationship between Non FDI based companies (-0.004,-0.49). Growth in Assets also shows negative relationship between FDI based companies -1.13 (-15.23)*** and negative relationship between Non FDI based companies-0.96 (-106.69)*** which is statically significant at 1% level of significance. To know is there is any difference in the financial performance of FDI based companies and Non FDI Companies model is estimated separately. To know is there is any difference between these two groups of companies **Chow test** is done, the results shows that F=0.37(0.54) which is more than 5% hence accept null hypothesis. It means that there is no structural break in the data set. R square for FDI based companies 97% and Non FDI based companies is 99% which explains the how much various caused by independent variables in dependent.

Table 5.20 FDI and Non FDI based Companies in IT Sector

Variables	FDI Based Companies	Non FDI Based Companies
	F test (Pooled v/s Fixed) = 0.63 (0.87) Breusch-Pagan test (Pooled v/s Random) = 2.88 (0.09) Hausman test (Random v/s Fixed) = 6.17(0.80) **Fixed effect Model**	F test (Pooled v/s Fixed) = 1.53 (0.22) Breusch-Pagan test (Pooled v/s Random) = 0.001 (0.97) Hausman test (Random v/s Fixed) = 10.08 (0.43) **Fixed effect Model**
const	0.58 (2.07)**	0.011 (0.16)
Age	-0.12 (-1.71)*	0.012 (0.60)
Size	0.64 (4.78)***	0.0002 (0.04)
Current Ratio	0.06 (1.30)	-0.014 (-0.38)
Quick Ratio	-0.01 (-0.31)	0.014 (0.39)
Debt to Equity ratio	-0.006 (-0.34)	-0.007 (-1.13)
Growth in sales	0.58(10.09)***	0.93 (37.24)***
Growth in PAT	0.09 (4.05)***	-0.02 (-1.38)
Growth in assets	-1.33 (-11.6)***	-0.92 (-55.9)***
	R^2= 0.97, Adj R^2 =96	R^2= 0.97, Adj R^2 =96
Chow Test	0.37 (0.54)	
No of Observation	260	260
Note: Numbers in Parentheses are the t- Statistic , ***Coefficient are Significant at 1%, **Coefficient are Significant at 5% and *Coefficient are Significant at 10%		

(Source: Author Compilation)

5. 2.2.10 Financial Service Sector

FDI based companies in Financial Service Sector, F- test is performed to know among pooled and fixed effect model which model is better. The result shows that pooled model is better as P value is less than 5% which means accept null hypothesis 0.09(0.0). Breusch Pagan test result shows that pooled model is accepted 12.18 (0.0004) since P value is less than 5% hence accept null hypothesis. Lastly Hausman test is not applicable as we are accepting pooled model. **Non FDI based companies in Service Sector**, F- test result shows that fixed effect model is better as P value is more than 5% which means we reject null hypothesis 2.64(1.14). Breusch Pagan test result shows

that random effect Model is accepted 21.58(3.39) and Hausman test result shows that random effect Model is accepted 8.06(0.62).

Table 5. 21 FDI and Non FDI based Companies in Financial Service Sector

Variables	**FDI Based Companies**	**Non FDI Based Companies**
	F test (Pooled v/s Fixed) = 0.095 (1.00) Breusch-Pagan test (Pooled v/s Random) = 12.18 (0.0004) Hausman test (Random v/s Fixed) = 2.47 (0.98) **Pooled Model**	F test (Pooled v/s Fixed) = 2.64(1.14) Breusch-Pagan test (Pooled v/s Random) = 21.58(3.39) Hausman test (Random v/s Fixed) = 8.06(0.62) **Fixed Effect Model**
const	-4.12 (0.31)	-0.68 (-2.57)**
Age	-	0.66 (2.52)**
Size	0.0003 (0.06)	1.012 (0.85)
Current Ratio	1.03 (0.08)	-0.0005 (-0.22)
Quick Ratio	-1.08 9 (-0.08)	0.0005 (0.21)
Debt to Equity ratio	-0.002 (-0.009)	0.001 (0.15)
Growth in sales	-0.008 (-0.01)	4.28 (1.30)
Growth in PAT	-0.0003 (-0.01)	2.75 (2.50)**
Growth in assets	-0.0001 (-0.05)	-3.86 (-1.22)
	R^2= 0.48, Adj R^2 =0.15	R^2= 0.74, Adj R^2 =70
Chow Test	0.017 (0.89)	
No of Observation	270	330
Note: Numbers in Parentheses are the t- Statistic , ***Coefficient are Significant at 1%, **Coefficient are Significant at 5% and *Coefficient are Significant at 10%		

(Source: Author Compilation)

The result shows that there is a positive relationship existing between **age and Profitability** for FDI based companies (0.58, 1.26)** and Non FDI Companies (0.66, 2.52)** which is statically significant at 1% level of significance. It shows that in this sector as companies becoming older their profits are increasing as they are capturing the market. The relationship between **Size and profitability** is also showing positive relationship for FDI based companies (0.0003, 0.06) and Non FDI Companies (1.012, 0.85) which

means as higher the size lower will be profitability of the companies. The relationship between **Liquidity and profitability** that is current ratio of shows a positive relationship for FDI based companies (1.03, 0.08) and negative relationship exist for Non FDI based companies (-0.0005, -0.22) where as quick ratio shows negative impact of for FDI based companies (-1.08, -0.08) and positive relationship for Non FDI based companies (0.0005, 0.21).

The relationship between **long term Solvency and profitability** shows negative relationship for FDI based companies (-0.002, -0.009) and positive relationship for Non FDI based companies (0.001, 0.15) which mean that the company has sufficient cash to meet its short term and long term obligations as and when it will arise. The relationship between **growth and profitability** shows with the help of Growth in sales shows that the a negative relationship for FDI based companies (-0.008, -0.01) and positive relationship for Non FDI based companies (4.28, 1.30) where as Growth in PAT also shows negative relationship between FDI based companies (-0.0003, -0.01) and positive relationship between Non FDI based companies (2.75, 2.50)**which is statically significant at 1% level of significance. The **Chow test** results shows that F=0.017(0.89) which is more than 5% hence accept null hypothesis. The study concluded that there is no structural break. R square for FDI based companies 48% and Non FDI based companies is 74% which explains the how much various caused by independent variables in dependent.

5.2.2.11 Testing of Hypothesis

The hypothesis testing result are shown below

Table 5. 22 Testing of Hypothesis

S.No	Hypothesis	Accept/ Reject
1	Financial Performance of FDI based companies is superior than Non FDI based companies in Agriculture Sector in India	Accept
2	Financial Performance of FDI based companies is superior than Non FDI based companies in Textile sector in India	Accept
3	Financial Performance of FDI based companies is superior than Non FDI based companies in Pharmaceutical Sector in India	Accept
4	Financial Performance of FDI based companies is superior than Non FDI based companies in Construction Sector in India	Reject
5	Financial Performance of FDI based companies is superior than Non FDI based companies in Metal Sector in India	Accept
6	Financial Performance of FDI based companies is superior than Non FDI based companies in Machinery Sector in India	Reject
7	Financial Performance of FDI based companies is superior than Non FDI based companies in Transport Sector in India	Accept
8	Financial Performance of FDI based companies is superior than Non FDI based companies in Hotel Sector in India	Accept
9	Financial Performance of FDI based companies is superior than Non FDI based companies in IT Sector in India	Accept
10	Financial Performance of FDI based companies is superior than Non FDI based companies in Financial service Sector in India	Reject

Source: Author Compilation

5.4 Conclusion

The objective is to know the factors affecting profitability differ between FDI based companies and Non-FDI based companies in Indian selective sectors under the study for the period of 10 years by using t test. Overall sectors like Food & Agriculture, Textile, Constriction, Hotel, and Financial Service Sector FDI based companies have higher profitability as compare to Non FDI based companies where as Pharmaceutical sector, Metal Sector, Machinery Sector, Transportation Sector, IT Sector, financial performance of Non FDI based companies are better than FDI based companies.

While testing the hypothesis with regard to Financial Performance of FDI based companies is superior than Non FDI based companies in India's selective sector we arrived at the following conclusion that Overall sectors like Textile Sector, Metal Sector, Transportation Sector and Hotel Sector financial performance of FDI based companies are superior than Non FDI based companies whereas Constriction sectors, Machinery Sector and financial service Sector financial performance of Non FDI based companies are superior then FDI based companies however Food & Agriculture sector and Pharmaceutical sector financial performance are found to be almost same.

CHAPTER-6

SUMMARY FINDINGS AND CONCLUSION

6.1 Summary

The present study consist of six chapters

The first chapter deals with Introduction, Meaning & Definition of FDI, Types of FDI, Brief history of FDI, Advantage & Disadvantage of FDI, FDI policy in India, Routes of FDI in India, FDI inflows in Equity, FDI inflows in Sectors , FDI inflows in from Countries, background of the study, objectives and need & significance of the study.

The second chapter deals with Review of Literature and research methodology which is classified into Studies on impact Foreign Direct Investment in general, Studies on impact of Foreign Direct Investment on Indian Economy, Studies on impact of Foreign Direct Investment at sectoral level and Studies on Impact of FDI based companies and non FDI based companies in India due to change in the Foreign Direct Investment policy across the sectors and industry over a period of time, it is very difficult to obtaining the firm level data for a longer period of time, hence it is recommended to study the impact of Foreign Direct Investment (FDI) on financial performance of firms (Chibber & Majumdar,1999). It is found that most of the studies examine the impact of FDI at macro level like GDP, Growth rate, forex earning, inflation rate etc as well as micro level like firm level import, exports, import, spillover effect etc but firm-level studies to assess the impact of FDI on the financial performance of FDI based companies and Non FDI based companies

individually has not been conducted at sectoral level (Sudershan K, 2007). Research methodology, a period of data, data collection and sources, tools used in the study and model of the study.

The chapter third deals with Foreign Direct Investment (FDI) inflows and its impact on Indian economy, the introduction of the Indian economy, analysis and interpretation.

The chapter fourth deals with foreign investment and its impact on operating, the managerial and technical efficiency of FDI based companies in India. It consists of three sub objectives Impact of Foreign Investment on operating efficiency of FDI based Companies in India's selected sectors. Total Assets Turnover and Equity Turnover is taken as variable to study the impact of foreign investment on operating efficiency. Impact of Foreign Investment on the managerial efficiency of FDI based Companies in India's selected sectors. Return on Investment and Return on equity are best indicators to study managerial efficiency. Impact of Foreign Investment on the technological efficiency of FDI based Companies in India's selected sectors. Foreign Investment has a positive relationship with the research and development activities of companies that ultimately enhance their technology base and technological ability. To examine the impact of foreign investment on technological efficiency, amount spends by FDI based companies on their Research and Development expenditure is considered in the selected sectors of India.

The Chapter fifth deals with studying about FDI based companies and Non-FDI based companies in India. It consists of two sections, first section the factors affecting Profitability are different for FDI & Non FDI based Companies in Selective Sector in India and in second section Financial Performance of FDI Based Companies is superior than Non FDI based Companies in Selective Sector in India.

The chapter sixth deals with the summary, findings, conclusion, suggestion, and scope for future study.

6.2 Findings of the study

To study the impact of Foreign Direct Investment on Indian Economy at macro level.

The correlation shows that there is a strong and positive relationship existing between Foreign Direct Investment and Gross Domestic Product, Growth rate in Gross Domestic Product, Reserves, Gross Domestic Capital Formation, Export, Import, Exchange Rate, Inflation, which means if FDI inflow is increasing there will be a positive shift in variables like Gross Domestic Product, Growth rate in Gross Domestic Product, Reserves, Gross Domestic Capital Formation, Export, Import, Exchange Rate, Inflation.

Gross Domestic Product, Growth rate in Gross Domestic Product explain 88% variation in FDI as per regression test result. If the country Gross Domestic Product is increasing than country is capable to attract more FDI inflows. If

the country is having a large market there will be faster economic growth and a higher degree of economic development which will provide opportunity for the foreign investors to expand. Inflation is reflecting a positive relationship with FDI that explains 74% variation in FDI. This is because if prices in a country are more than the inflation it will raise the cost of production on account of increasing the input price like wages, cost of raw material, land prices and cost of capital.

The Granger causality test results show that there is unidirectional causality between Gross Domestic Product and Foreign Direct Investment, Reserves and Foreign Direct Investment, Gross Domestic Capital Formation and Foreign Direct Investment, Export and Foreign Direct Investment, Import and Foreign Direct Investment which means Gross Domestic Product, Reserves, Gross Domestic Capital Formation, Export and Import will cause changes in Foreign Direct Investment & vice versa. Whereas the relation between Growth rate in Gross Domestic Product and Foreign Direct Investment, Exchange rate and Foreign Direct Investment, Inflation and Foreign Direct Investment is found to be independent to each other.

To study the impact of Foreign Investment on Efficiency of FDI based Companies in selected sectors in India.

Operating Efficiency result shows that FDI based companies in sectors like Food & Agriculture, Textile, Pharmaceutical, Construction, Metal, Machinery, Transportation, Hotel and IT are showing that foreign investment has

statistically significant impact of foreign investment Operating efficiency which is helpful for the companies to know its ability to generate sales given its investment in total asset and total equity. The selected sectors 50% companies are show that a foreign investment has positive impact on operating efficiency.

Managerial Efficiency result show that sectors like Food & Agriculture sector, Textile sector, and Pharmaceutical sector, Construction Sector, Metal Sector, Machinery Sector, Transportation Sector, Hotel Sector and IT Sector are showing that there is the statistically significant impact of foreign investment on Return on Investment and Return on Equity. The 50% companies' foreign investments are showing a positive impact on managerial efficiency which means foreign investment is playing very important role for the companies to generate profitability.

Technological Efficiency results of Food & Agriculture sector (9 companies), Pharmaceutical sector (7 companies), Construction Sector (12 companies), Metal Sector (2 companies), Machinery Sector (11 companies) and IT Sector (1 company) is showing the statistically significant the impact of foreign investment on the Technological efficiency of FDI based companies. In the Textile sector, all companies are showing statistically significant impact whereas in the Transportation Sector and Hotel Sector not a single company is making an investment in Research and Development expenditure. Research and Development help in companies' growth.

Factors affecting Profitability differs between FDI based Companies and Non FDI based Companies in selected sectors in India.

Food & Agriculture sector, the result shows that variables like size, current ratio, and growth in sales are showing significant difference with reference to profitability between FDI based companies and Non-FDI based companies. The other variables like Return on Asset, age, quick ratio, debt to equity ratio, growth in profit and growth in assets of companies are not showing any significant difference with reference to profitability between FDI based companies and Non-FDI based companies.

Textile sector, the result shows that variables like Return on Asset and growth in sales are showing significant difference with reference to profitability between FDI based companies and Non-FDI based companies. The other variables like age, size, current ratio, and quick ratio, debt to equity ratio, growth in profit and growth in assets of companies are not showing any significant difference with reference to profitability between FDI based companies and Non-FDI based companies.

Pharmaceutical sector, the result shows that variables like age, debt to equity ratio and growth in sales are showing significant difference with reference to profitability between FDI based companies and Non-FDI based companies. The other variables like Return on Asset, size, current ratio, quick ratio, growth in profit and growth in assets of companies are not showing any significant difference with reference to profitability between FDI based companies and Non-FDI based companies.

Construction Sector, the result shows that variables like age and debt to equity ratio are showing significant difference with reference to profitability between FDI based companies and Non-FDI based companies. The other variables like Return on Asset, size, current ratio, quick ratio, growth in sales, growth in profit and growth in assets of companies are not showing any significant difference with reference to profitability between FDI based companies and Non-FDI based companies.

Metal Sector, the result shows that variables like age are showing significant difference with reference to profitability between FDI based companies and Non-FDI based companies. The other variables like Return on Asset, age, size, current ratio, quick ratio, and debt to equity ratio, growth in sales, growth in profit and growth in assets of companies are not showing any significant difference with reference to profitability between FDI based companies and Non-FDI based companies.

Machinery Sector, result shows that variables like age, growth in sales, and growth in assets are showing significant difference with reference to profitability between FDI based companies and Non-FDI based companies. The other variables Return on Asset, age, size, current ratio, quick ratio, and debt to equity ratio, growth in sales, growth in profit and growth in assets of companies are not showing any significant difference with reference to profitability between FDI based companies and Non-FDI based companies.

Transportation Sector, result shows that variables like age, size, growth in sales, and growth in assets are showing significant difference with reference to

profitability between FDI based companies and Non-FDI based companies. The other variables Return on Asset, current ratio, quick ratio, debt to equity ratio, growth in profit of companies are not showing any significant difference with reference to profitability between FDI based companies and Non-FDI based companies.

Hotel Sector, result shows that variables like size, growth in sales, and growth in assets are showing significant difference with reference to profitability between FDI based companies and Non-FDI based companies. The other variables Return on Asset, age, current ratio, quick ratio, debt to equity ratio, growth in profit and growth in assets of companies of companies are not showing any significant difference with reference to profitability between FDI based companies and Non-FDI based companies.

IT Sector, result shows that variables age are showing significant difference with reference to profitability between FDI based companies and Non-FDI based companies. The other variables Return on Asset, size, current ratio, quick ratio, and debt to equity ratio, growth in sales, growth in profit and growth in assets of companies of companies are not showing any significant difference with reference to profitability between FDI based companies and Non-FDI based companies.

Financial Service Sector, result shows that variables age are showing significant difference with reference to profitability between FDI based companies and Non-FDI based companies. The other variables Return on

Asset, size, current ratio, quick ratio, and debt to equity ratio, growth in sales, growth in profit and growth in assets of companies of companies are not showing any significant difference with reference to profitability between FDI based companies and Non-FDI based companies.

Financial Performance of FDI Based Companies is superior than Non FDI based Companies in Selective Sector in India (Annexure-III).

Food & Agriculture sector the results show that the financial performance of FDI based companies and Non FDI based companies are almost same. The Chow test found to be F=0.21, P=0.63 which means that the coefficients of the variables are not different in two group. In case of FDI based Companies variables like size, current ratio, debt to equity ratio, growth in profit after tax and growth in sales are significant at 1%, 5% and 10% level of significance whereas for Non FDI based companies variables like size, quick ratio, debt to equity ratio, growth in profit after tax and growth in sales are significant at 1%, 5% and 10% level of significance.

Textile sector, results show that the financial performance of FDI based companies is superior than Non FDI based companies. The Chow test found to be F=0.036, P=0.84 which means that the coefficients of the variables are not different in two group. In case of FDI based Companies variables like Age, size, current ratio, quick ratio and growth in Assets are significant at 1%, 5% and 10% level of significance whereas for Non FDI based companies'

variables like size, growth in sales and growth in Assets are significant at 1% level of significance.

Pharmaceutical sector, results show that the financial performance of FDI based companies and Non FDI based companies are almost same. The Chow test found to be F=0.45, P=0.49 which means that the coefficients of the variables are not different in two group. In case of FDI based Companies variables like size, growth in sales and growth in Assets are significant at 1% and 5% level of significance whereas for Non FDI based companies variables like Debt to equity ratio, growth in sales and growth in Assets are significant at 1% and 5% level of significance.

Construction sector, results show that the financial performance of Non FDI based companies is superior to FDI based companies. The Chow test found to be F=0.25, P=0.61 which means that the coefficients of the variables are not different in two group. In case of FDI based Companies variables like growth in sales and growth in Assets are significant at 1%, level of significance whereas for Non FDI based companies' variables like size, Debt to equity ratio, growth in sales and growth in Assets are significant at 1%, and 5% level of significance.

Metal sector, results show that the financial performance of FDI based companies is superior than Non FDI based companies. The Chow test found to be F=0.07, P=0.78 which means that the coefficients of the variables are not different in two group. In case of FDI based Companies variables like age,

size, current ratio, quick ratio, growth in sales and growth in Assets are significant at 1%, level of significance whereas for Non FDI based companies variables like current ratio, Debt to equity ratio, growth in sales, growth in profit after tax and growth in Assets are significant at 1%, and 5% level of significance.

Machinery sector, results show that the financial performance of Non FDI based companies is superior then FDI based companies. The Chow test found to be F=0.17, P=0.67 which means that the coefficients of the variables are not different in two group. In case of FDI based Companies variables like quick ratio, growth in sales, in profit after tax and growth in Assets are significant at 1% and 5% level of significance whereas for Non FDI based companies variables like age, size, quick ratio, growth in sales, growth in profit after tax and growth in Assets are significant at 1%, 5% and 10% level of significance.

Transport sector, results show that the financial performance of FDI based companies are superior than FDI based companies. The Chow test found to be F=0.25, P=0.61 which means that the coefficients of the variables are not different in two group. In case of FDI based Companies variables like quick ratio and growth in sales are significant at 1% and 5% level of significance whereas for Non FDI based companies variables like growth in Assets is significant at 1% level of significance.

Hotel sector, results show that the financial performance of FDI based companies is superior than Non FDI based companies. The Chow test found to be F=0.21, P=0.64 which means that the coefficients of the variables are not

different in two group. In case of FDI based Companies variables like age, size, current ratio, quick ratio, debt to equity ratio, growth in sales and growth in Assets are significant at 1%, 5% and 10% level of significance whereas for Non FDI based companies variables age is significant at 5% level of significance.

IT sector, results show that the financial performance of FDI based companies is superior than Non FDI based companies. The Chow test found to be F=0.37, P=0.54 which means that the coefficients of the variables are not different in two group. In case of FDI based Companies variables like size, current ratio, growth in sales, in profit after tax and growth in Assets are significant at 1%,5% and 10% level of significance whereas for Non FDI based companies variables like current ratio, growth in sales and growth in Assets are significant at 1% and 5% level of significance.

Financial service sector, results show that the financial performance of Non FDI based companies is superior to FDI based companies. The Chow test found to be F=0.017, P=0.89 which means that the coefficients of the variables are not different in two group. In case of FDI based Companies variables age is significant at 5% level of significance whereas for Non FDI based companies' variables like age, growth in profit after tax 5% level of significance.

6.3 Conclusions

The results show that Foreign Direct Investment has a statically significant impact on Indian economy at the macro level and it helps in the growth and development of the country. The second objective was to study the impact of foreign Investment on Operating efficiency, Managerial efficiency and Technological efficiency of FDI based companies in selective sectors. The result shows that foreign investment has a statically significant impact on Operating efficiency, Managerial efficiency and Technological efficiency of FDI based companies' country. Overall sectors like Food & Agriculture Sector, Textile Sector, Construction Sector, Hotel Sector and Financial Service Sector FDI based companies have higher profitability as compare to Non FDI based companies whereas Pharmaceutical sector, Metal Sector, Machinery Sector, Transportation Sector, IT Sector, financial performance of Non FDI based companies are better than FDI based companies country. In case of Food & Agriculture and Pharmaceutical sector, the financial performance of FDI based companies and Non-FDI based companies are almost the same in the country. Whereas sectors like Textile Sector, Metal Sector, Transportation Sector, Hotel Sector and IT Sector results show that the financial performance of FDI based companies is superior to Non-FDI based companies' country. The remaining sectors in the study like Construction Sector, Machinery Sector, and Financial Service Sector, results show that the financial performance of Non-FDI based companies is superior to FDI based companies.

6.4 Contributions

The impact of Foreign Direct Investment on Indian economy at macro level was the studied for the selected period which will help the policymakers to take their decision regarding future investment.

This study is helpful to know what is the impact of foreign investment on the efficiency of FDI based companies in those sectors which are selected under the study and help the management of those companies for making a decision about a foreign investment.

This study will helpful for the Government and management of companies to know whether financial performance of FDI based companies is better or Non-FDI based companies in selected sectors.

It will also help to the research to carried out research in future and other interested parties to meet there objective.

6.5 Suggestions

Some suggestions regarding foreign investment are summarized as under.

- Policy makers may provide favorable FDI policy to attract more FDI in the Country.
- Indian companies can invest more in Research and development activities in the sectors.
- Non FDI based Companies can also attract Foreign Investment in their capital structure.

6.6 Scope for Further Research

- The impact of Foreign Direct Investment on Indian economy can also be investigated by including more variables at both levels i.e. micro and macro.
- Better and improved statistical tools can be used for exploring important dimensions of the study which is not used so far in the existing study.
- There are many other factors which might have an impact on foreign investment which is not considered in this study.
- This study can be extended to other companies and sectors which are receiving foreign investment in India and abroad.

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ANNEXURES

ANNEXURE-I

Sector Wise list of FDI based Companies in India

Food & Agriculture Sector (22 Companies)			Machinery Sector (30 Companies)		
Sr.No	**Company Name**	**FP (%)***	**Sr.No**	**Company Name**	**FP (%)***
1	Agro Tech Foods Ltd.	51.77	1	A B B India Ltd.	75.00
2	Assam Company India Ltd.	39.59	2	Aksh Optifibre Ltd.	16.96
3	Britannia Industries Ltd.	50.73	3	Best & Crompton Engg. Ltd.	64.88
4	Dharani Sugars & Chemicals Ltd.	22.12	4	Birla Cable Ltd.	27.50
5	Glaxosmithkline Consumer Healthcare	72.46	5	Cmi F P E Ltd.	74.89
6	Godfrey Phillips India Ltd.	25.10	6	Cummins India Ltd.	51.00
7	Goodricke Group Ltd.	74.00	7	Eimco Elecon (India) Ltd.	25.10
8	Harrisons Malayalam Ltd.	19.72	8	Esab India Ltd.	73.72
9	Kore Foods Ltd.	29.54	9	F A G Bearings India Ltd.	51.33
10	Lotte India Corpn. Ltd.	80.39	10	G M M Pfaudler Ltd.	50.45
11	Mcleod Russel India Ltd.	24.73	11	Honda Siel Power Products Ltd.	66.67
12	Monsanto India Ltd.	72.14	12	Igarashi Motors India Ltd.	11.33
13	Nestle India Ltd.	62.76	13	Indo Tech Transformers Ltd.	74.35
14	Ovobel Foods Ltd.	14.14	14	Ingersoll-Rand (India) Ltd.	74.00
15	Ponni Sugars (Erode) Ltd.	5.82	15	K S B Pumps Ltd.	40.54
16	Shree Renuka Sugars Ltd.	27.85	16	Kennametal India Ltd.	75.00
17	Tarai Foods Ltd.	35.7	17	Panasonic Carbon India Co. Ltd.	63.27
18	United Breweries Ltd.	43.18	18	Ruttonsha International Rectifier	72.92
19	United Spirits Ltd.	55.06	19	S K F India Ltd.	53.58
20	V S T Industries ltd	31.16	20	Shilp Gravures Ltd.	28.56

21	Warren Tea Ltd.	37.88	21	Siemens Ltd.	75.00
22	Winsome breweries Ltd	10.84	22	Singer India Ltd.	75.00
Textile Sector (18 Companies)			23	Sterlite Technologies Ltd.	53.00
Sr.No	**Company Name**	**FP (%)***	24	Stovec Industries Ltd.	71.06
1	Aunde India Ltd.	42.82	25	Switching Technologies Gunther	61.22
2	Birla Cotsyn (India) Ltd.	8.92	26	T I L Ltd.	19.25
3	Bombay Rayon Fashions Ltd.	37.89	27	Timken India Ltd.	75.00
4	E-Land Apparel Ltd.	65.84	28	Walchandnagar Industries Ltd.	13.26
5	Gokaldas Exports Ltd.	57.44	29	Wendt (India) Ltd.	39.87
6	Golden Carpets Ltd.	15.79	30	Yuken India Ltd.	40.00
7	Indian Card Clothing Co. Ltd.	57.35	**Transport Sector (13 Companies)**		
8	Indo Count Inds. Ltd.	31.41	**Sr.No**	**Company Name**	**FP (%)***
9	Indo Rama Synthetics (India) Ltd.	29.14	1	Blue Dart Express Ltd.	75.00
10	Page Industries Ltd.	49.01	2	Chowgule Steamships Ltd.	10.39
11	Pearl Global Inds. Ltd.	13.21	3	Essar Ports Ltd.	61.16
12	Polygenta Technologies Ltd.	73.73	4	Essar Shipping Ltd.	71.03
13	R S W M Ltd.	21.32	5	Gateway Distriparks Ltd.	12.85
14	Rainbow Denim Ltd	19.01	6	Global Offshore Services Ltd.	10.37
15	Uniworth Ltd	20.38	7	Global Vectra Helicorp Ltd.	27.00
16	Uniworth Textiles Ltd.	6.16	8	Gujarat Pipavav Port Ltd.	43.01
17	Voith Paper Fabrics India Ltd.	74.04	9	Jet Airways (India) Ltd.	51.00
18	Zodiac Clothing Co. Ltd.	36.66	10	Seamec Ltd.	75.00
Pharmaceutical Sector (29 Companies)			11	Shreyas Shipping & Logistics Ltd.	62.83
Sr.No	**Company Name**	**FP (%)***	12	Sical Logistics Ltd.	14.20
1	Abbott India Ltd.	74.99	13	Varun Shipping Co. Ltd. [Merged]	22.23
2	Astrazeneca Pharma India Ltd.	4.97	**Hotel Sector (09 Companies)**		
3	Biofil Chemicals & Pharmaceuticals Ltd.	20.8	**Sr.No**	**Company Name**	**FP (%)***
4	Caprolactam Chemicals Ltd.	51.00	1	Asian Hotels (North) Ltd.	55.76

5	Chemicals & Plastics India Ltd. [Merged]	49.84	2	Asian Hotel (west) Ltd	46.58
6	Cheryl Laboratories Pvt. Ltd.	15.40	3	Asian Hotels (East) Ltd	37.89
7	Cirex Pharmaceuticals Ltd.	22.55	4	C H L Ltd.	62.89
8	Clarion Drugs Ltd.	64.24	5	Cox & Kings Ltd.	16.03
9	Curefast Remedies Ltd.	21.34	6	E I H Associated Hotels Ltd.	22.27
10	D K Chemoplast Ltd.	71.75	7	James Hotels Ltd.	42.64
11	Dharamsi Morarji Chemical Co. Ltd.	36.79	8	Mac Charles (India) Ltd.	74.63
12	Dutron Polymers Ltd.	14.42	9	Thomas Cook (India) Ltd.	67..83
13	Elantas Beck India Ltd.	75.00	**IT Sector (26 Companies)**		
14	Essel Propack Ltd.	24.47	**Sr.No**	**Company Name**	**FP (%)***
15	Ester Industries Ltd.	13.93	1	Accelya Kale Solutions Ltd.	74.66
16	Fairchem Speciality Ltd.	53.86	2	Advent Computer Services Ltd.	53.83
17	Foseco India Ltd.	44.93	3	Aurionpro Solutions Ltd.	19.25
18	G O C L Corpn. Ltd.	74.98	4	B 2 B Software Technologies Ltd.	57.15
19	G P Petroleums Ltd.	64.94	5	Bodhtree Consulting Ltd.	51.29
20	Gujarat Polybutenes Pvt. Ltd.	12.85	6	C E S Ltd.	66.98
21	Gulshan Chemicals Ltd.	64.94	7	Cambridge Technology Enterprises	46.91
22	Kerala Ayurveda Ltd.	61.52	8	Cigniti Technologies Ltd.	19.09
23	Kingfa Science & Technology (India) Ltd.	74.99	9	Cybertech Systems & Software Ltd.	37.45
24	Lincoln Pharmaceuticals Ltd.	75.00	10	Eclerx Services Ltd.	25.16
25	National Oxygen Ltd.	26.09	11	G I Engineering Solutions Ltd.	36.55
26	Polymac Thermoformers Ltd.	41.15	12	Genesys International Corpn. Ltd.	55.11
27	Rama Phosphates Ltd.	66.48	13	H C L Technologies Ltd.	16.95
28	Rubber Products Ltd.	23.87	14	H O V Services Ltd.	49.49
29	Supreme Industries Ltd.	62.36	15	Hinduja Global Solutions Ltd.	13.32
Construction Sector (16 Companies)			16	Infinite Computer Solutions (India)	71.22
Sr.No	**Company Name**	**FP (%)***	17	Informed Technologies India Ltd.	64.24
1	Akzo Nobel India Ltd.	72.96	18	Lycos Internet Ltd.	37.99
2	Ambuja Cements Ltd.	51.04	19	Mindteck (India) Ltd.	65.27

3	Berger Paints India Ltd.	14.49	20	Moschip Semiconductor	18.03
4	Grindwell Norton Ltd.	29.67	21	Mphasis Ltd.	60.47
5	Gujarat Sidhee Cement Ltd.	51.33	22	Onmobile Global Ltd.	47.10
6	H E G Ltd.	12.89	23	Oracle Financial Services Software	74.30
7	Heidelberg Cement India Ltd.	29.58	24	R Systems International Ltd.	27.32
8	I F G L Refractories Ltd.	69.39	25	Take Solutions Ltd.	57.89
9	Inlac Granstion Ltd	14.47	26	Xchanging Solutions Ltd.	52.07
10	Kachchh Minerals Ltd.	10.18	**Financial Service Sector (27 Companies)**		
11	Kansai Nerolac Paints Ltd.	16.56	**Sr.No**	**Company Name**	**FP (%)***
12	Morganite Crucible (India) Ltd.	73.12	1	Abirami Financial Services (India)	18.00
13	Orient Refractories Ltd.	75.00	2	Agio Paper & Inds. Ltd.	39.97
14	Shalimar Paints Ltd.	69.62	3	Aravali Securities & Finance Ltd.	33.52
15	Shree Digvijay Cement Co. Ltd.	75.00	4	Capital First Ltd.	65.20
16	Vesuvius India Ltd.	55.57	5	Chokhani International Ltd.	20.60
Metal Sector (22 Companies)			6	D C B Bank Ltd.	15.38
Sr.No	**Company Name**	**FP (%)***	7	Deccan Gold Mines Ltd.	29.13
1	Carnation Industries Ltd.	21.58	8	Dhunseri Petrochem Ltd.	10.48
2	Chennai Ferrous Inds. Ltd.	13.87	9	Dunlop India Ltd.	21.46
3	Ess Dee Aluminium Ltd.	57.97	10	Epsom Properties Ltd.	56.30
4	Facor Steels Ltd.	24.14	11	Geojit Financial Services Ltd.	32.65
5	Ferro Alloys Corpn. Ltd.	10.96	12	Golkonda Aluminium Extrusions	60.50
6	Gillette India Ltd.	40.12	13	Inditalia Refcon Ltd.	16.98
7	Gontermann-Peipers (India) Ltd.	11.14	14	Inditrade Capital Ltd.	49.38
8	Hinduja Foundries Ltd.	45.68	15	Indusind Bank Ltd.	16.72
9	Jindal Saw Ltd.	11.75	16	Interlink Petroleum Ltd.	51.78
10	Jindal Stainless (Hisar) Ltd.	33.96	17	M P I L Corpn. Ltd.	67.46
11	Jindal Stainless Ltd.	25.17	18	Modi Rubber Ltd.	10.20
12	Kanishk Steel Inds. Ltd.	14.07	19	N 2 N Technologies Ltd.	31.27
13	Man Industries (India) Ltd.	15.81	20	Nagpur Power & Inds. Ltd.	43.08

14	National Fittings Ltd.	10.59	21	Nivi Trading Ltd.	12.04
15	S T I Products India Ltd.	18.86	22	Pramada Finvest Ltd.	11.96
16	Steelco Gujarat Ltd.	75.00	23	S B E C Systems (India) Ltd.	20.40
17	Sunflag Iron & Steel Co. Ltd.	43.54	24	S T E L Holdings Ltd.	19.72
18	Tayo Rolls Ltd.	17.97	25	Softsol India Ltd.	62.79
19	Usha Martin Ltd.	20.35	26	Williamson Financial Services Ltd.	28.07
20	Uttam Galva Steels Ltd.	29.05	27	Zuari Global Ltd.	25.45
21	V B C Industries Ltd.	13.54			
22	Vedanta Ltd.	62.85			
*FP (%)- Foreign Promoters (% Share in Equity Holding as on 31/03/2016					

(Source: Author Compilation)

ANNEXURE -II

List of Sector Wise FDI based Companies and Non FDI based Companies in India

(as on 31 March 2016)

Food & Agriculture Sector		Machinery Sector	
22- FDI Companies	**20- Non FDI Companies**	**30- FDI Companies**	**30-Non FDI Companies**
Agro Tech Foods Ltd.	Agro Dutch Inds. Ltd.	A B B India Ltd.	A B C Bearings Ltd.
Assam Company India Ltd.	Ajanta Soya Ltd.	Aksh Optifibre Ltd.	Ador Welding Ltd.
Britannia Industries Ltd.	Amrit Corp. Ltd.	Best & Crompton Engg. Ltd.	Astra Microwave Products Ltd.
Dharani Sugars & Chemicals Ltd.	Bambino Agro Inds. Ltd.	Birla Cable Ltd.	B C C Fuba India Ltd.
Glaxosmithkline Consumer Healt	C C L Products (India) Ltd.	Cmi F P E Ltd.	Batliboi Ltd.
Godfrey Phillips India Ltd.	D F M Foods Ltd.	Cummins India Ltd.	Birla Power Solutions Ltd.
Goodricke Group Ltd.	Dwarikesh Sugar Inds. Ltd.	Eimco Elecon (India) Ltd.	Blue Star Ltd.
Harrisons Malayalam Ltd.	Flex Foods Ltd.	Esab India Ltd.	Brady & Morris Engg. Co. Ltd.
Kore Foods Ltd.	Himalya International Ltd.	F A G Bearings India Ltd.	C G Power & Indl. Solutions Ltd.
Lotte India Corpn. Ltd.	Jubilant Foodworks Ltd.	G M M Pfaudler Ltd.	Easun Reyrolle Ltd.
Mcleod Russel India Ltd.	Jubilant Industries Ltd.	Honda Siel Power Products Ltd.	Ema India Ltd.
Monsanto India Ltd.	Marico Ltd.	Igarashi Motors India Ltd.	Filtron Engineers Ltd.
Nestle India Ltd.	Mawana Sugars Ltd.	Indo Tech Transformers Ltd.	Fine-Line Circuits Ltd.
Ovobel Foods Ltd.	Prima Industries Ltd.	Ingersoll-Rand (India) Ltd.	Good Value Irrigation Ltd.
Ponni Sugars (Erode) Ltd.	Sukhjit Starch & Chemicals Ltd.	K S B Pumps Ltd.	Gujarat Apollo Inds. Ltd.
Shree Renuka Sugars Ltd.	Tasty Bite Eatables Ltd.	Kennametal India Ltd.	J S L Industries Ltd.
Tarai Foods Ltd.	Vadilal Industries Ltd.	Panasonic Carbon India Co. Ltd.	Jost'S Engineering Co. Ltd.
United Breweries Ltd.	Vijay Solvex Ltd.	Ruttonsha International Rectifier	Kulkarni Power Tools Ltd.
United Spirits Ltd.	Waterbase Ltd.	S K F India Ltd.	Moser Baer India Ltd.
V S T Industries ltd	Zydus Wellness Ltd.	Shilp Gravures Ltd.	Opto Circuits (India) Ltd.
Warren Tea Ltd.		Siemens Ltd.	Raaj Medisafe India Ltd.

Winsome breweries Ltd		Singer India Ltd.	Rajoo Engineers Ltd.
Textile Sector			
18- FDI Companies	**15- Non FDI Companies**	Sterlite Technologies Ltd.	Ram Ratna Wires Ltd.
Aunde India Ltd.	Alok Industries Ltd.	Stovec Industries Ltd.	Salzer Electronics Ltd.
Birla Cotsyn (India) Ltd.	Alps Industries Ltd.	Switching Technologies Gunther	Schneider Electric Infrastructure
Bombay Rayon Fashions Ltd.	B S L Ltd.	T I L Ltd.	Sika Interplant Systems Ltd.
E-Land Apparel Ltd.	Bombay Dyeing & Mfg. Co. Ltd.	Timken India Ltd.	T R F Ltd.
Gokaldas Exports Ltd.	Eastern Silk Inds. Ltd.	Walchandnagar Industries Ltd.	Ultracab (India) Ltd.
Golden Carpets Ltd.	Garware-Wall Ropes Ltd.	Wendt (India) Ltd.	V S T Tillers Tractors Ltd.
Indian Card Clothing Co. Ltd.	Himatsingka Seide Ltd.	Yuken India Ltd.	Valiant Communications Ltd.
Indo Count Inds. Ltd.	K G Denim Ltd.	**Transport Sector**	
Indo Rama Synthetics (India) Ltd.	Kumar Wire Cloth Mfg. Co. Ltd.	Blue Dart Express Ltd.	A B C India Ltd.
Page Industries Ltd.	Lovable Lingerie Ltd.	Chowgule Steamships Ltd.	Allcargo Logistics Ltd.
Pearl Global Inds. Ltd.	M K Exim (India) Ltd.	Essar Ports Ltd.	Arshiya Ltd.
Polygenta Technologies Ltd.	P B M Polytex Ltd.	Essar Shipping Ltd.	Autoriders International Ltd.
R S W M Ltd.	Pearl Global Ltd. [Merged]	Gateway Distriparks Ltd.	Binani Industries Ltd.
Rainbow Denim Ltd	Samtex Fashions Ltd	Global Offshore Services Ltd.	Central Provinces Railways Co.
Uniworth Ltd	Sanrhea Technical Textiles Ltd	Global Vectra Helicorp Ltd.	Chartered Logistics Ltd.
Uniworth Textiles Ltd.		Gujarat Pipavav Port Ltd.	Coastal Roadways Ltd.
Voith Paper Fabrics India Ltd.		Jet Airways (India) Ltd.	Container Corpn. Of India Ltd.
Zodiac Clothing Co. Ltd.		Seamec Ltd.	Dredging Corpn. Of India Ltd.
Pharmaceutical Sector		Shreyas Shipping & Logistics Ltd.	G O L Offshore Ltd.
29- FDI Companies	**53-Non FDI Companies**	Sical Logistics Ltd.	Gati Ltd.
Abbott India Ltd.	Alkyl Amines Chemicals Ltd.	Varun Shipping Co. Ltd.	Great Eastern Shipping Co. Ltd.
Astrazeneca Pharma India Ltd.	Alembic Ltd.		Hytone Texstyles Ltd.
Biofil Chemicals & Pharmaceuti.	Alkyl Amines Chemicals Ltd.		Jagson Airlines Ltd.
Caprolactam Chemicals Ltd.	Alpa Laboratories Ltd.		M E P Infrastructure Developers
Chemicals & Plastics India Ltd.	Andhra Sugars Ltd.		Navkar Corporation Ltd.
Cheryl Laboratories Pvt. Ltd.	Aurobindo Pharma Ltd.		Noida Toll Bridge Co. Ltd.

Cirex Pharmaceuticals Ltd.	Avon Lifesciences Ltd.		North Eastern Carrying Corpn.
Clarion Drugs Ltd.	Bal Pharma Ltd.		Sanco Trans Ltd.
Curefast Remedies Ltd.	Basant Agro Tech (India) Ltd.		Shipping Corpn. Of India Ltd.
D K Chemoplast Ltd.	Bharat Petroleum Corpn. Ltd.		Sindhu Trade Links Ltd. (1992)
Dharamsi Morarji Chemical Co.	Bharat Rasayan Ltd.		Suryakrupa Finance Ltd.
Dutron Polymers Ltd.	Borax Morarji Ltd.		Tiger Logistics (India) Ltd.
Elantas Beck India Ltd.	Camlin Fine Sciences Ltd.		Transport Corporation Of India
Essel Propack Ltd.	Choksi Imaging Ltd.		V R L Logistics Ltd.
Ester Industries Ltd.	Daikaffil Chemicals India Ltd.	**Hotel Sector**	
Fairchem Speciality Ltd.	Divi'S Laboratories Ltd.	**09- FDI Companies**	**06-Non FDI Companies**
Foseco India Ltd.	Dynamic Industries Ltd.	Asian Hotels (North) Ltd.	Advani Hotels & Resorts (India)
G O C L Corpn. Ltd.	Emami Ltd.	Asian Hotel (west) Ltd	Apollo Sindoori Hotels Ltd
G P Petroleums Ltd.	Everest Organics Ltd.	Asian Hotels (East) Ltd	Dharani Finance Ltd.
Gujarat Polybutenes Pvt. Ltd.	Excel Crop Care Ltd.	C H L Ltd.	Oriental Hotels Ltd.
Gulshan Chemicals Ltd.	Excel Industries Ltd.	Cox & Kings Ltd.	Sagar Tourist Resorts Ltd.
Kerala Ayurveda Ltd.	Fertilisers & Chemicals, Travanc	E I H Associated Hotels Ltd.	Sayaji Hotels Ltd.
Kingfa Science & Technology	Futuristic Offshore Services & Ch	James Hotels Ltd.	
Lincoln Pharmaceuticals Ltd.	G H C L Ltd.	Mac Charles (India) Ltd.	
National Oxygen Ltd.	Garware Polyester Ltd.	Thomas Cook (India) Ltd.	
Polymac Thermoformers Ltd.	Good Value Mktg. Co. Ltd.	**IT Sector**	
Rama Phosphates Ltd.	Granules India Ltd.	**26- FDI Companies**	**26-Non FDI Companies**
Rubber Products Ltd.	Hardcastle & Waud Mfg. Co. Ltd.	Accelya Kale Solutions Ltd.	A D C C Infocad Ltd.
Supreme Industries Ltd.	Innocorp Ltd.	Advent Computer Services Ltd.	Ace Software Exports Ltd.
	Iykot Hitech Toolroom Ltd.	Aurionpro Solutions Ltd.	Athena Global Technologies Ltd.
	J D Orgochem Ltd.	B 2 B Software Technologies Ltd.	Aurum Soft Systems Ltd.
	Jubilant Life Sciences Ltd.	Bodhtree Consulting Ltd.	Blue Star Infotech Ltd. [Merged]
	Kemrock Industries & Exports	C E S Ltd.	C T I L Ltd.
	Kothari Industrial Corpn. Ltd.	Cambridge Technology Enterpri	Compucom Software Ltd.
	Lupin Ltd.	Cigniti Technologies Ltd.	Cyient Ltd.

	Medicamen Biotech Ltd.	Cybertech Systems & Software	Danlaw Technologies India Ltd.
	Natco Pharma Ltd.	Eclerx Services Ltd.	Dion Global Solutions Ltd.
	Neuland Laboratories Ltd.	G I Engineering Solutions Ltd.	Frontier Informatics Ltd.
	P I L Italica Lifestyle Ltd.	Genesys International Corpn. Ltd.	Healthfore Technologies Ltd.
	Panjon Ltd.	H C L Technologies Ltd.	K L G Systel Ltd.
	Parabolic Drugs Ltd.	H O V Services Ltd.	K P I T Technologies Ltd.
	Pidilite Industries Ltd.	Hinduja Global Solutions Ltd.	Mascon Global Ltd.
	Poly Medicure Ltd.	Infinite Computer Solutions	Mindtree Ltd.
	Pondy Oxides & Chemicals Ltd.	Informed Technologies India Ltd.	Palred Technologies Ltd.
	Punjab Chemicals & Crop Protec	Lycos Internet Ltd.	Prism Informatics Ltd.
	Shaily Engineering Plastics Ltd.	Mindteck (India) Ltd.	Quintegra Solutions Ltd.
	Shiva Medicare Ltd.	Moschip Semiconductor Technol	S Q L Star Intl. Ltd.
	Shree Rubber Inds. Ltd.	Mphasis Ltd.	Sasken Technologies Ltd.
	Stylam Industries Ltd.	Onmobile Global Ltd.	Sibar Software Services
	Transpek Industry Ltd.	Oracle Financial Services Softwa	Subex Ltd.
	U P L Ltd.	R Systems International Ltd.	Tata Consultancy Services Ltd.
	Vivid Global Inds. Ltd.	Take Solutions Ltd.	Usha Martin Education & Solutio
	Wilwayfort India Ltd.	Xchanging Solutions Ltd.	Virinchi Ltd.
Construction Sector		**Financial Service Sector**	
16- FDI Companies	**62-Non FDI Companies**	**27- FDI Companies**	**26-Non FDI Companies**
Akzo Nobel India Ltd.	A C C Ltd.	Abirami Financial Services	Aroni Commercials Ltd.
Ambuja Cements Ltd.	A Infrastructure Ltd.	Agio Paper & Inds. Ltd.	Bharat Financial Inclusion Ltd.
Berger Paints India Ltd.	Andaman & Nicobar Islands Forest & Plant. Devp. Corpn. Ltd.	Aravali Securities & Finance Ltd.	Brijlaxmi Leasing & Finance Ltd.
Grindwell Norton Ltd.	Andhra Cements Ltd.	Capital First Ltd.	Ceejay Finance Ltd.
Gujarat Sidhee Cement Ltd.	Archidply Industries Ltd.	Chokhani International Ltd.	Cethar Industries Ltd.
H E G Ltd.	Aro Granite Inds. Ltd.	D C B Bank Ltd.	Clio Infotech Ltd.
Heidelberg Cement India Ltd.	Asian Granito India Ltd.	Deccan Gold Mines Ltd.	Crest Ventures Ltd.
I F G L Refractories Ltd.	Asian Paints Ltd.	Dhunseri Petrochem Ltd.	Edelweiss Financial Services Ltd.

Inlac Granstion Ltd	Associated Ceramics Ltd.	Dunlop India Ltd.	First Leasing Co. Of India Ltd.
Kachchh Minerals Ltd.	Barak Valley Cements Ltd.	Epsom Properties Ltd.	Frontline Securities Ltd.
Kansai Nerolac Paints Ltd.	Birla Corporation Ltd.	Geojit Financial Services Ltd.	Healthy Investments Ltd.
Morganite Crucible (India) Ltd.	Burnpur Cement Ltd.	Golkonda Aluminium Extrusions	I S F Ltd.
Orient Refractories Ltd.	Carborundum Universal Ltd.	Inditalia Refcon Ltd.	Ishwarshakti Holdings & Traders
Shalimar Paints Ltd.	Century Textiles & Inds. Ltd.	Inditrade Capital Ltd.	M S L Industries Ltd.
Shree Digvijay Cement Co. Ltd.	Cera Sanitaryware Ltd.	Indusind Bank Ltd.	M S Securities Ltd.
Vesuvius India Ltd.	Dalmia Refractories Ltd.	Interlink Petroleum Ltd.	Magma Fincorp Ltd.
	Darshan Boardlam Ltd.	M P I L Corpn. Ltd.	Manipal Finance Corpn. Ltd.
	Foundry Fuel Products Ltd.	Modi Rubber Ltd.	Mefcom Capital Markets Ltd.
	Glittek Granites Ltd.	N 2 N Technologies Ltd.	Millennium Online Solutions.
	Graphite India Ltd.	Nagpur Power & Inds. Ltd.	Multipurpose Trading & Agencies
	Greenply Industries Ltd.	Nivi Trading Ltd.	Nagarjuna Oil Refinery Ltd.
	H I L Ltd.	Pramada Finvest Ltd.	Nalwa Sons Invsts. Ltd.
	H S I L Ltd.	S B E C Systems (India) Ltd.	Optimus Finance Ltd.
	Himadri Speciality Chemical Ltd.	S T E L Holdings Ltd.	Oscar Investments Ltd.
	India Cements Ltd.	Softsol India Ltd.	Oswal Greentech Ltd.
	J K Cement Ltd.	Williamson Financial Services	Sai Capital Ltd.
	J K Lakshmi Cement Ltd.	Zuari Global Ltd.	Stanrose Mafatlal Investments
	Jaiprakash Associates Ltd.		Summit Securities Ltd.
	Jenson & Nicholson (India) Ltd.		Sundaram Finance Ltd.
	K C P Ltd.		Transwarranty Finance Ltd.
	Kajaria Ceramics Ltd.		Triton Corp Ltd.
	Kalyanpur Cements Ltd.		Unijolly Investments Co. Ltd.
	Keerthi Industries Ltd.		Uniphos Enterprises Ltd.
	Lloyd Rockfibres Ltd.	**Metal Sector**	
	Madhav Marbles & Granites Ltd.	**22- FDI Companies**	**30-Non FDI Companies**
	Mangalam Cement Ltd.	Carnation Industries Ltd.	A I A Engineering Ltd.
	Milestone Global Ltd.	Chennai Ferrous Inds. Ltd.	Anil Special Steel Inds. Ltd.

	Murudeshwar Ceramics Ltd.	Ess Dee Aluminium Ltd.	Balasore Alloys Ltd.
	Mysore Stoneware Pipes & Potte	Facor Steels Ltd.	Bellary Steels & Alloys Ltd.
	Navkar Builders Ltd.	Ferro Alloys Corpn. Ltd.	Cubex Tubings Ltd.
	N C L Industries Ltd.	Gillette India Ltd.	Electrotherm (India) Ltd.
	O C L India Ltd.	Gontermann-Peipers (India) Ltd.	Everest Kanto Cylinder Ltd.
	Pratik Panels Ltd.	Hinduja Foundries Ltd.	Gandhi Special Tubes Ltd.
	Prism Cement Ltd.	Jindal Saw Ltd.	Graham Firth Steel Products
	Raasi Refractories Ltd.	Jindal Stainless (Hisar) Ltd.	Gujarat Intrux Ltd.
	Ramco Cements Ltd.	Jindal Stainless Ltd.	Hindalco Industries Ltd.
	Ramco Industries Ltd.	Kanishk Steel Inds. Ltd.	Indian Metals & Ferro Alloys Ltd.
	Ravileela Granites Ltd.	Man Industries (India) Ltd.	Ispat Profiles India Ltd.
	Sagar Cements Ltd.	National Fittings Ltd.	J S W Steel Ltd.
	Sahyadri Industries Ltd.	S T I Products India Ltd.	Kaira Can Co. Ltd.
	Sanghi Industries Ltd.	Steelco Gujarat Ltd.	Kalpataru Power Transmission
	Sarda Plywood Inds. Ltd.	Sunflag Iron & Steel Co. Ltd.	Metal Coatings (India) Ltd.
	Schablona India Ltd.	Tayo Rolls Ltd.	Metalman Industries Ltd.
	Shiva Cement Ltd.	Usha Martin Ltd.	Oil Country Tubular Ltd.
	Shree Cement Ltd.	Uttam Galva Steels Ltd.	P O C L Enterprises Ltd.
	Shri Keshav Cements & Infra Ltd.	V B C Industries Ltd.	Pennar Industries Ltd.
	Sri K P R Industries Ltd.	Vedanta Ltd.	Rajkumar Forge Ltd.
	Srichakra Cements Ltd.		Ramsarup Industries Ltd.
	U V Boards Ltd.		Rapicut Carbides Ltd.
	Udaipur Cement Works Ltd.		Rolcon Engineering Co. Ltd.
	Ultratech Cement Ltd.		Shetron Ltd.
	Uttam Galva Steels Ltd.		Super Forgings & Steels Ltd.
	Uniply Industries Ltd.		V B C Industries Ltd.
			Welspun Corp Ltd.

(Source: Author Compilation)

ANNEXURE-III

Operating Efficiency of FDI based Companies in selected sectors

Sr. No	Name of FDI Based Companies	Total Assets Turnover						Equity Turnover					
		const	*t-Stat*	*p-value*	*Coeffic*	*t- Stat*	*p-value*	*const*	*t- Stat*	*p-value*	*Coeffic*	*t- Stat*	*p-value*
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*
Food and Agriculture Sector													
1	Agro Tech Foods Ltd.	-0.01	-2.21	0.05*	0.0003	3.39	0.009***	77.18	1.73	0.12272	-0.89	-0.99	0.34932
2	Assam Company India Ltd.	0	-0.54	0.60705	0.0002	1.67	0.13287	5.27	1.06	0.32044	0.05	0.41	0.69466
3	Britannia Industries Ltd.	-0.5	-3.41	0.009***	0.0099	3.43	0.008***	34321	5.08	0.0009***	-670.67	-5.05	0.0009***
4	Dharani Sugars & Chemicals	0.02	5.77	0.0004***	-0.0007	-4.33	0.002***	-11.83	-0.56	0.58875	1.35	1.36	0.21048
5	Glaxosmithkline Consumer	0.01	6.54	0.0001***	-0.0062	-3.88	0.004***	-38.96	-1.91	0.09*	1.99	5.54	0.0005***
6	Godfrey Phillips India Ltd.	0	-2.33	0.047**	0.0003	5.41	0.0006***	747.65	6.78	0.0001***	-15.72	-4.1	0.003***
7	Goodricke Group Ltd.	0.01	10.61	0.00001***	-	-	-	20.64	8.24	0.00002***	-	-	-
8	Harrisons Malayalam Ltd.	0.01	33.52	0.00001***	-	-	-	16.63	15.8	0.00001***	-	-	-
9	Kore Foods Ltd.	-0.53	-1.08	0.31107	0.0437	2.21	0.05817	0.06	0.26	0.80493	0.01	0.67	0.52335
10	Lotte India Corpn. Ltd.	0.02	6.17	0.0002***	0.0003	3.92	0.004***	36.47	10.16	0.00001***	0.11	1.37	0.20659
11	Mcleod Russel India Ltd.	0	1.76	0.11625	0	1.4	0.1994	124.88	2.56	0.033**	-4.16	-2.13	0.065*
12	Monsanto India Ltd.	-6.08	-1.74	0.11928	0.0845	1.75	0.11863	-63452	-1.68	0.13145	880.02	1.68	0.13126
13	Nestle India Ltd.	0.08	5.72	0.0004***	-0.0012	-5.62	0.0005***	-3051.0	-5.48	0.0005***	50.01	5.61	0.0005***
14	Ovobel Foods Ltd.	0.06	5.83	0.0003***	-0.001	-1.39	0.20127	2.61	0.99	0.35272	0.33	1.69	0.13026
15	Ponni Sugars (Erode) Ltd.	0.01	4.39	0.002***	-0.0001	-0.25	0.81022	33.33	3.3	0.01079	-1.12	-0.99	0.35022
16	Shree Renuka Sugars Ltd.	0	4.01	0.003***	0	-1.02	0.33862	80.32	10.09	0.00001***	-0.59	-0.92	0.38633
17	Tarai Foods Ltd.	0.43	14.66	0.00001***	-	-	-	0.15	12.23	0.00001***	-	-	-
18	United Breweries Ltd.	0	1.44	0.18815	0	-0.98	0.35451	-682.82	-1.48	0.17698	23.16	1.91	0.092*

19	United Spirits Ltd.	0	9.08	0.00002***	0	-2.25	0.0543*	82.37	8.22	0.00004***	1.39	3.85	0.004***
20	V S T Industries ltd	0.01	10.45	0.00001***	-	-	-	88.57	9.78	0.00001***	-	-	-
21	Warren Tea Ltd.	0.03	5.8	0.0004***	0.0001	-1.97	0.0837*	4.12	0.71	0.49643	0.22	1.83	0.10489
22	Winsome breweries Ltd	0.05	42.97	0.00001***	-0.0006	-4.15	0.003***	1.66	6.22	0.0002***	0.07	2	0.080*
Textile Sector													
1	Aunde India Ltd.	0.75	10.27	0.00001***	-	-	-	8.23	7.1	0.00006***	-	-	-
2	Birla Cotsyn (India) Ltd.	0.57	3.18	0.01542**	-0.0001	-0.005	0.99594	4.28	4.87	0.0018***	-0.25	-2.69	0.0313**
3	Bombay Rayon Fashions	0.46	10.85	0.00001***	-0.0018	-1.139	0.28764	14.8	7.63	0.00006***	0.26	3.57	0.007***
4	E-Land Apparel Ltd.	0.6	4.12	0.0033***	0.0018	0.5853	0.57448	7.95	8.15	0.00004***	-0.04	-2.12	0.06663*
5	Gokaldas Exports Ltd.	1.32	6.29	0.00023	0.0025	0.7441	0.47811	60.23	17.41	0.00001***	0.05	0.89	0.39948
6	Golden Carpets Ltd.	0.1	4	0.00393***	0.0015	0.7986	0.44759	0.19	3.46	0.0086***	0	-0.16	0.87458
7	Indian Card Clothing Co.	0.53	30.88	0.00001***	-	-	-	13.74	18.77	0.00001***	-	-	-
8	Indo Count Inds. Ltd.	4.47	5.04	0.001***	-0.096	-3.907	0.004***	165.99	5.44	0.0006***	-3.93	-4.65	0.0016***
9	Indo Rama Synthetics	4.19	2.98	0.0175**	-0.0996	-2.096	0.0692*	35.46	3.68	0.006***	-0.57	-1.74	0.11915
10	Page Industries Ltd.	1.33	1.52	0.16636	0.002	0.1067	0.91765	-116.1	-0.84	0.42293	3.91	1.35	0.21412
11	Pearl Global Inds. Ltd.	0.95	3.4	0.009***	-0.0176	-1.54	0.15999	24.97	3.23	0.0120**	-0.47	-1.49	0.17471
12	Polygenta Technologies Ltd.	0.04	0.68	0.51673	0.0031	2.8434	0.0217**	0.08	0.4	0.69931	0.01	2.37	0.045**
13	R S W M Ltd.	0.04	0.68	0.51673	0.0031	2.8434	0.0217**	0.08	0.4	0.69931	0.01	2.37	0.045**
14	Rainbow Denim Ltd	1.19	14.35	0.00001***	-	-	-	91.42	8.55	0.00001***	-	-	-
15	Uniworth Ltd	2.59	5.12	0.0009***	-0.0513	-3.119	0.014**	16.53	2.29	0.0513*	-0.2	-0.84	0.42761
16	Uniworth Textiles Ltd.	0.32	8.54	0.00001***	-	-	-	1.77	9.39	0.00001***	-	-	-
17	Voith Paper Fabrics India	0.52	22.81	0.00001***	-	-	-	16.16	8.47	0.00001***	-	-	-
18	Zodiac Clothing Co. Ltd.	0.46	1.02	0.33747	0.0198	1.6278	0.14222	-67.62	-3.41	0.009***	2.45	4.55	0.001***
Pharmaceutical Sector													
1	Abbott India Ltd.	5.14	4.36	0.0024***	-0.05	-3.27	0.011**	-343.28	-3.55	0.0075***	5.88	4.34	0.002***

2	Astrazeneca Pharma India Ltd.	1.29	5.73	0.0004***	0	0.35	0.73375	1.29	5.73	0.0004***	0	0.35	0.73375
3	Biofil Chemicals & Pharm Ltd.	-19.2	-2.45	0.039**	0.95	2.49	0.037**	-34.41	-5.15	0.0008***	1.69	5.2	0.0008***
4	Caprolactam Chemicals Ltd.	1.11	9.58	0.00001***	-	-	-	0.49	4.06	0.002***	-	-	-
5	Cheryl Laboratories Pvt. Ltd.	0.2	1.5	0.16807	-	-	-	11.16	1.49	0.17121	-	-	-
6	Cirex Pharmaceuticals Ltd.	18.82	4.24	0.002***	-0.85	-4.07	0.003***	745.01	1.57	0.15392	-33.34	-1.5	0.17176
7	Clarion Drugs Ltd.	33.82	0.63	0.54425	-0.53	-0.63	0.54888	175.81	0.64	0.54147	-2.74	-0.63	0.54612
8	Dharamsi Morarji Chemical.	0.38	1.09	0.3081	0.02	1.36	0.21206	7.24	1.76	0.1163	-0.05	-0.32	0.75796
9	Dutron Polymers Ltd.	-73.5	-1.48	0.17618	5.1	1.49	0.17485	-1269	-1.61	0.14617	88.06	1.62	0.14495
10	Elantas Beck India Ltd.	3.44	3.73	0.005***	-0.02	-2.19	0.059*	134.51	5.9	0.0003***	-1.2	-4.37	0.002***
11	Essel Propack Ltd.	0.17	2.61	0.030**	0.02	5.62	0.0005***	7.14	5.19	0.00083***	0.73	8.31	0.00003***
12	Ester Industries Ltd.	1.29	19.67	0.00001***	0	1.1	0.3029	27.9	15.1	0.00001***	-0.65	-5.08	0.0009***
13	Fairchem Speciality Ltd.	0.94	0.58	0.57528	0.01	0.35	0.73829	-6.86	-0.45	0.66318	-6.86	-0.45	0.66318
14	Foseco India Ltd.	1.27	3.68	0.006***	0	0.29	0.77895	21.13	3.1	0.014**	0.09	0.3	0.77503
15	G O C L Corpn. Ltd.	-0.23	-0.16	0.8804	0.01	0.6	0.56374	-26.94	-0.35	0.73481	1	0.99	0.35323
16	G P Petroleums Ltd.	0.06	0.11	0.9163	0.03	2.48	0.038**	9.31	0.87	0.41077	0.16	0.78	0.45971
17	Gujarat Polybutenes Pvt. Ltd.	4.67	3.81	0.005***	-0.27	-2.11	0.068*	48.55	6.62	0.0001***	-3.43	-4.5	0.002***
18	Gulshan Chemicals Ltd.	1.22	6.73	0.0001***	-0.02	-3.01	0.016**	9.95	5.78	0.0004***	-0.16	-2.58	0.032**
19	Kerala Ayurveda Ltd.	0.35	25.76	0.00001***	-	-	-	2.29	12.56	0.00001***	-	-	-
20	Kingfa Science & Technology	1.76	23.66	0.00001***	0	-0.14	0.89141	21.74	14.12	0.00001***	0.17	4.64	0.0016***
21	Lincoln Pharmaceuticals Ltd.	1.39	2.59	0.0321**	0	-0.45	0.66288	10.26	1.37	0.2068	0.03	0.31	0.76588

22	National Oxygen Ltd.	0.52	18.21	0.00001***	-	-	-	5.69	13.7	0.00001***	-	-	-
23	Polymac Thermoformers	-0.16	-0.43	0.6809	0	0.49	0.64061	-0.46	-0.43	0.6809	0.01	0.49	0.64061
24	Rama Phosphates Ltd.	1.03	0.91	0.39126	0.01	0.55	0.59792	52.28	1.82	0.10628	-0.36	-0.74	0.47897
25	Rubber Products Ltd.	0.95	18.27	0.00001***	-	-	-	4.32	13.76	0.00001***	-	-	-
26	Supreme Industries Ltd.	1.75	15.67	0.00001***	0	0.73	0.48837	80.36	7.15	0.0001***	1.27	4.47	0.002***
Construction Sector													
1	Akzo Nobel India Ltd.	-0.54	-1.58	0.1522	0.03	4.7	0.0015***	-47.15	-2.76	0.024**	1.47	5.4	0.0006***
2	Ambuja Cements Ltd.	1.84	14.04	0.00001***	-0.02	-7.34	0.00008***	4.07	0.39	0.70965	0.54	2.4	0.042**
3	Berger Paints India Ltd.	2.58	13.71	0.00001***	-0.06	-3.93	0.0043***	-8.81	-0.52	0.61576	3.93	2.99	0.017**
4	Grindwell Norton Ltd.	1.16	17.82	0.00001***	-	-	-	30.88	9.42	0.00001***	-	-	-
5	Gujarat Sidhee Cement Ltd.	2.05	9.66	0.00001***	-	-	-	6.36	5.11	0.0006***	-	-	-
6	H E G Ltd.	0.87	4.53	0.001***	-0.03	-1.58	0.15198	-9.22	-0.49	0.63492	3.25	2.09	0.069*
7	Heidelberg Cement India Ltd.	5.68	2.53	0.035**	-0.17	-2.16	0.062*	-19.93	-1.11	0.30051	0.9	1.43	0.18944
8	I F G L Refractories Ltd.	0.48	1.32	0.22472	0.01	1.61	0.14513	-6.93	-1.04	0.32981	0.22	2.17	0.0622*
9	Kachchh Minerals Ltd.	1.09	4.23	0.002***	-0.04	-1.31	0.22581	0.39	2.88	0.0205**	-0.01	-0.74	0.48076
10	Kansai Nerolac Paints Ltd.	0.93	1.71	0.12577	0.04	1.33	0.22074	96.05	1.83	0.10434	-1.82	-0.59	0.57042
11	Morganite Crucible (India)	-2.22	-0.98	0.35618	0.05	1.38	0.2052	-218.63	-2.92	0.019**	3.5	3.23	0.012**
12	Orient Refractories Ltd.	76.77	1.55	0.15986	-1.01	-1.53	0.16377	1683.15	1.6	0.14767	-22.15	-1.59	0.15143
13	Shalimar Paints Ltd.	1.79	36.41	0.00001***	-0.01	-4.84	0.001***	112.26	11.39	0.00001***	0.38	1.48	0.177
14	Shree Digvijay Cement Co.	1.8	14.57	0.00001***	-0.01	-4.6	0.001***	2.06	3.6	0.007***	0.01	1.04	0.32859
15	Vesuvius India Ltd.	0.99	27.41	0.00001***	-	-	-	25.81	10.11	0.00001***	1.47	5.4	
Metal Sector													
1	Carnation Industries Ltd.	-226.74	-0.97	0.36163	45.88	3.83	0.005***	11.8	0.6	0.56268	0.42	0.42	0.68238
2	Chennai Ferrous Inds. Ltd.	112.24	1.55	0.16089	48.95	4.18	0.003***	3.05	1.62	0.14497	0.44	1.44	0.18879
3	Ess Dee Aluminium Ltd.	7434.45	5.31	0.0007***	134.45	3.08	0.015**	16.94	6.97	0.0001***	0.06	0.83	0.42855

4	Facor Steels Ltd.	1563.18	2.82	0.022**	-6.43	-0.32	0.75614	1.76	0.18	0.85808	0.4	1.15	0.28244
5	Ferro Alloys Corpn. Ltd.	4918.15	16.69	0.0001***	-65.23	-6.68	0.0001***	35.73	12.12	0.0001***	-0.44	-4.54	0.001***
6	Gillette India Ltd.	30056.6	0.4	0.70213	-480.08	-0.26	0.80283	1246.35	4.41	0.002***	-29.66	-4.28	0.002***
7	Gontermann-Peipers Ltd.	2817.27	2.34	0.0517*	-42.22	-0.62	0.5561	1.07	0.3	0.77446	0.58	2.84	0.025**
8	Hinduja Foundries Ltd.	19315.1	2.98	0.017**	-242.37	-1.92	0.091*	-62.3	-2.21	0.0582*	1.61	2.94	0.018**
9	Jindal Saw Ltd.	11824.3	0.25	0.80832	4295.92	0.94	0.37291	192.51	2.98	0.017**	-9.04	-1.45	0.18505
10	Jindal Stainless (Hisar) Ltd.	3243.82	1	0.34659	1533.88	5.08	0.0009***	-	-	-	-	-	-
11	Jindal Stainless Ltd.	60592.7	1.83	0.10443	3151.1	1.99	0.0822*	198.99	3.55	0.007***	0.01	0	0.99811
12	Kanishk Steel Inds. Ltd.	-454.65	-0.22	0.83431	33.38	0.22	0.82902	5.39	0.87	0.40829	-0.31	-0.71	0.49695
13	Man Industries (India) Ltd.	13388.4	7.71	0.00006***	63.81	0.47	0.654	41.5	7.88	0.0005***	1.02	2.46	0.039**
14	National Fittings Ltd.	980.95	3.9	0.004***	-80.65	-3.12	0.014**	22.17	3.69	0.006***	-1.94	-3.13	0.014**
15	Steelco Gujarat Ltd.	7260.13	1.77	0.11389	-63.44	-1.2	0.26312	59.34	1.87	0.0978*	-0.61	-1.5	0.1708
16	Sunflag Iron & Steel Co.	-17842.	-2.37	0.045**	646.24	3.82	0.005***	-11.41	-2.53	0.035**	0.47	4.61	0.001***
17	Tayo Rolls Ltd.	-1190.1	-1.31	0.225	219.54	4.11	0.003***	97.59	19.7	0.0001***	-4.56	-15.61	0.0001***
18	Usha Martin Ltd.	4373.8	0.23	0.82041	4260.25	2.66	0.028**	51.17	2.31	0.049**	4.19	2.19	0.059*
19	Uttam Galva Steels Ltd.	-155.48	-0.02	0.98822	317.75	0.81	0.43959	0.03	0.03	0.97626	0.04	1.08	0.30995
20	V B C Industries Ltd.	709.68	1.83	0.10464	-3.14	-0.1	0.92426	0.64	1.54	0.1613	0	-0.14	0.8899
21	Vedanta Ltd.	-3147	-3.68	0.006***	61562.9	3.99	0.003***	-118.97	-0.98	0.35655	3.59	1.64	0.14065
Machinery Sector													
1	A B B India Ltd.	2.06	8.73	0.00002***	-0.01	-4.12	0.00337	56.55	1.43	0.19171	1.73	2.92	0.019**
2	Aksh Optifibre Ltd.	0.28	2.49	0.037**	0.02	1.68	0.13216	4.71	2.8	0.023**	-0.04	-0.26	0.79846
3	Best & Crompton Engg.	-57.34	-1.48	0.17701	0.89	1.5	0.17202	-97.54	-0.4	0.70294	1.55	0.41	0.69223
4	Birla Cable Ltd.	1.05	11.14	0.0001***	-	-	-	5.51	5.29	0.0005***	-	-	-
5	Cmi F P E Ltd.	1.45	8.17	0.00004***	-0.01	-2.56	0.03364**	87.96	5.11	0.0009***	-0.12	-0.46	0.65723
6	Cummins India Ltd.	1.82	7.58	0.00003***	-	-	-	278.13	7.66	0.00003***	-	-	-

7	Eimco Elecon (India) Ltd.	0.84	15.07	0.0001***	-	-	-	29.42	15.43	0.0001***	-	-	-
8	Esab India Ltd.	3.69	10.44	0.0001***	-0.03	-5.27	0.0007***	14.98	1.92	0.090*	0.28	2.22	0.057*
9	F A G Bearings India Ltd.	1.38	22.08	0.0001***	-	-	-	73.57	8.54	0.0001***	-	-	-
10	G M M Pfaudler Ltd.	2.84	0.55	0.59672	-0.03	-0.34	0.7412	373.32	0.69	0.5105	-6.07	-0.57	0.58371
11	Honda Siel Power Products	0.97	26.78	0.0001***	-	-	-	45.13	8.37	0.00002***	-	-	-
12	Igarashi Motors India Ltd.	0.93	4.47	0.00209***	0	0.64	0.54269	14.89	3.29	0.011**	0	-0.05	0.96181
13	Indo Tech Transformers Lt	0.98	12.32	0.0001***	0	-3.3	0.01079	20.52	10.8	0.0001***	-0.1	-3.37	0.0098***
14	Ingersoll-Rand (India) Ltd.	0.51	8.32	0.00002***	-	-	-	18.55	16.58	0.0001***	-	-	-
15	K S B Pumps Ltd.	1.09	28.35	0.0001***	-	-	-	28.08	14.58	0.0001***	-	-	-
16	Kennametal India Ltd.	0.29	0.4	0.703	0.01	1.16	0.28096	61.49	3.96	0.004***	-0.47	-2.49	0.037**
17	Panasonic Carbon India Ltd.	0.34	1.54	0.16105	0	0.4	0.69717	-4.71	-1.41	0.19488	0.21	3.6	0.007***
18	Ruttonsha International Ltd.	2.01	6.65	0.0001***	-0.02	-3.43	0.008***	4.63	4.19	0.003***	-0.01	-0.38	0.71098
19	S K F India Ltd.	1.67	21.52	0.0001***	-	-	-	42.12	13.05	0.0001***	-	-	-
20	Shilp Gravures Ltd.	-0.49	-0.54	0.60588	0.05	1.42	0.19304	-32.25	-1.16	0.28124	1.44	1.47	0.17975
21	Siemens Ltd.	1.62	4.41	0.002***	-0.01	-1.93	0.089*	165.28	2.19	0.0598	-0.04	-0.03	0.97478
22	Singer India Ltd.	3.1	1.88	0.097*	0	0.2	0.84332	-6.98	-0.58	0.57565	0.31	1.83	0.10399
23	Sterlite Technologies Ltd.	2.15	3.92	0.004***	-0.02	-2.12	0.066*	123.81	3.14	0.0137**	-1.66	-2.08	0.0713*
24	Stovec Industries Ltd.	0.66	1.66	0.13552	0.01	0.9	0.39514	-37.43	-0.8	0.44428	1.09	1.58	0.15278
25	Switching Technologi Ltd.	1.99	23.98	0.0001***	-	-	-	4.74	9.31	0.0001***	-	-	-
26	T I L Ltd.	-23.97	-1.04	0.32737	1.29	1.09	0.30929	-380.65	-0.41	0.69137	22.21	0.46	0.65513
27	Timken India Ltd.	1.26	0.44	0.67146	0	-0.07	0.94579	99.06	2.91	0.019**	-1.14	-2.62	0.03**
28	Walchandnagar Industries	1.28	9.19	0.00002***	-0.05	-4.68	0.001***	211.48	6.46	0.0002***	-8.7	-3.18	0.012**
29	Wendt (India) Ltd.	0.6	0.14	0.89493	0	0.03	0.97685	487.82	1.17	0.27444	-11.1	-1.07	0.31683
30	Yuken India Ltd.	1.13	33.15	0.0001***	-	-	-	52.88	11.84	0.0001***	-	-	-

Transport Sector													
1	Blue Dart Express Ltd.	1.2	0.63	0.54436	0.005	0.223	0.82906	738.7	7.5	0.00007***	-8.6	-6.86	0.0001***
2	Chowgule Steamships Ltd.	164.23	2.45	0.04**	-15.8	-2.44	0.040**	1527.71	2.8	0.023**	-147	-2.79	0.023**
3	Essar Ports Ltd.	0.23	2.74	0.025**	-0.003	-1.83	0.10332	2.38	2.6	0.031**	-0.02	-1.64	0.13946
4	Essar Shipping Ltd.	0.01	0.77	0.46165	0.001	6.796	0.0001***	-0.06	-0.16	0.87882	0.07	9.23	0.00002***
5	Gateway Distriparks Ltd.	0.31	12.83	0.0001***	-0.003	-2.51	0.035**	2.71	13.36	0.0001***	-0.05	-4.37	0.002***
6	Global Offshore Services	0.24	1.43	0.19035	-0.003	-0.17	0.86381	3.57	0.49	0.63548	0.25	0.34	0.74446
7	Global Vectra Helicorp Ltd.	0.43	11.95	0.0001***	-	-	-	17.78	11.73	0.0001***	-	-	-
8	Gujarat Pipavav Port Ltd.	0.12	3.31	0.010**	0.003	2.78	0.023**	0.61	3.79	0.005***	0.01	2.41	0.042**
9	Jet Airways (India) Ltd.	1.57	6.62	0.0001***	-0.012	-3.75	0.005***	227.68	3.76	0.005***	-1.17	-1.4	0.19831
10	Seamec Ltd.	0.74	0.24	0.81777	-0.003	-0.06	0.94894	110.85	1.8	0.10989	-1.35	-1.66	0.13501
11	Shreyas Shipping Ltd.	3.11	2.7	0.027**	-0.037	-2.14	0.064*	65.76	4.53	0.00194	-0.85	-3.93	0.00434
12	Sical Logistics Ltd.	0.5	5.54	0.0005***	0.001	0.378	0.71552	1.88	0.48	0.64109	0.44	3.29	0.01**
13	Varun Shipping Co. Ltd.	0.27	4.94	0.001***	-0.007	-2.53	0.035**	5.36	3.85	0.004***	-0.13	-1.86	0.10007
Hotel Sector													
1	Asian Hotels (North) Ltd.	0.554	4.26	0.002***	-0.007	-2.93	0.019**	41.46	4.34	0.002***	-0.47	-2.77	0.024**
2	Asian Hotel (west) Ltd	0.04	1.625	0.14282	0.005	7.06	0.00001***	1.32	1.61	0.14514	0.22	9.7	0.00001***
3	Asian Hotels (East) Ltd	0.014	1.539	0.16231	0.002	7.09	0.00001***	0.92	1.63	0.14073	0.2	9.79	0.00001***
4	C H L Ltd.	0.722	16.916	0.00001***	-0.005	-5.96	0.0003***	7.48	25.32	0.00001***	-0.03	-5.39	0.0006***
5	Cox & Kings Ltd.	0.292	15.539	0.00001***	-0.007	-6.06	0.0003***	8.67	4.27	0.002***	-0.2	-1.6	0.14891
6	E I H Associated Ltd.	0.465	15.77	0.00001***	-	-	-	8.08	29.35	0.00001***	-	-	-
7	James Hotels Ltd.	-7.66	-1.419	0.19356	0.183	1.43	0.19066	-124.3	-1.25	0.24599	2.97	1.26	0.24248
8	Mac Charles (India) Ltd.	1.657	1.912	0.0921*	-0.02	-1.61	0.14484	75.96	2.94	0.018**	-0.96	-2.66	0.028**
9	Thomas Cook (India) Ltd.	0.359	1.356	0.21227	-0.001	-0.17	0.86904	10.57	1.57	0.15448	0.06	0.61	0.55622
IT Sector													

1	Accelya Kale Solutions Ltd.	0.82	11.7	0.0001***	0	2.08	0.0715*	4.68	2.96	0.018**	0.173	5.923	0.0003***
2	Advent Computer Ltd.	0.15	0.16	0.87867	0	-0.13	0.89607	0.15	0.16	0.87867	-0.002	-0.135	0.89607
3	Aurionpro Solutions Ltd.	0.08	0.72	0.49242	0.02	2.38	0.04**	-4.75	-1.77	0.11506	0.831	4.754	0.001***
4	B 2 B Software Ltd.	5.75	4.47	0.002***	-0.09	-3.94	0.004***	1.77	2.35	0.046**	-0.023	-1.811	0.10773
5	Bodhtree Consulting Ltd.	0.72	8.42	0.00003***	0.01	2.6	0.031**	2.28	8.62	0.00003***	0.006	0.841	0.42472
6	C E S Ltd.	7.51	1.77	0.1149	-0.1	-1.5	0.17103	-262.8	-5.41	0.0006***	4.336	5.727	0.0004***
7	Cambridge Technology Ltd.	1.07	3.1	0.0145**	-0.01	-1.56	0.15734	-0.12	-0.1	0.92186	0.033	1.529	0.1648
8	Cigniti Technologies Ltd.	0.45	10.12	0.0001***	0	-0.75	0.47524	1.2	1.06	0.31944	0.059	1.05	0.32454
9	Cybertech Systems Ltd.	0.02	0.27	0.7924	0.01	4.93	0.001***	-1.33	-3.25	0.011**	0.076	6.075	0.0003***
10	Eclerx Services Ltd.	2.39	23.89	0.0001***	-0.05	-13.4	0.0001***	86.45	26.72	0.0001***	-2.482	-20.38	0.0001***
11	G I Engineering Ltd.	0.01	0.71	0.49913	0	0.62	0.55327	-	-	-	-	-	-
12	Genesys International. Ltd.	2.14	3.01	0.016**	-0.03	-2.3	0.05*	-4.27	-0.63	0.54381	0.171	1.351	0.21366
13	H C L Technologies Ltd.	-1.45	-1.44	0.18712	0.12	2.09	0.0699*	643.81	2.95	0.018**	-33.393	-2.696	0.027**
14	H O V Services Ltd.	0.81	3.15	0.013**	-0.01	-2.66	0.028**	6.77	3.77	0.005***	-0.113	-3.261	0.01**
15	Hinduja Global Ltd	0.22	1.78	0.11277	0.03	3.31	0.010**	609.79	48.89	0.0001***	-42.769	-43.733	0.0001***
16	Infinite Computer Ltd.	0.75	15.31	0.0001***	0	-1.68	0.13218	2.45	1.95	0.087*	0.09	3.977	0.004***
17	Informed Technologies Ltd.	0.34	3.98	0.0032***	-	-	-	0.76	8.39	0.00002***	-	-	-
18	Lycos Internet Ltd.	0.29	1.98	0.082*	0.01	2.71	0.026**	5.2	1.81	0.10844	0.026	0.418	0.68688
19	Mindteck (India) Ltd.	-1.66	-3.58	0.007***	0.03	4.46	0.0021***	3.39	0.83	0.43218	-0.014	-0.223	0.82949
20	Moschip Semiconduc Ltd.	0.6	1.71	0.12589	-0.01	-0.69	0.51158	0.83	3.37	0.009***	-0.027	-2.078	0.071*
21	Mphasis Ltd.	1.61	1.19	0.26914	-0.01	-0.59	0.57163	-27.52	-1.09	0.30692	0.686	1.623	0.1433
22	Onmobile Global Ltd.	0.47	16.8	0.0001***	-0.003	-4.68	0.001***	35.37	9.06	0.00002***	-0.762	-7.418	0.00007***
23	Oracle Financial Ltd.	-0.34	-0.38	0.71185	0.01	0.85	0.42193	410.93	5.16	0.0008***	-4.443	-4.394	0.0023***

24	R Systems International.	0.5	1.09	0.30832	0.01	0.59	0.56841	-6.32	-0.29	0.78051	0.776	1.053	0.32308
25	Take Solutions Ltd.	0.37	4.62	0.0017***	-0.004	-2.82	0.022**	6.08	3.52	0.007***	-0.044	-1.393	0.20125
26	Xchanging Solutions Ltd.	0.14	0.59	0.57352	0.01	1.43	0.19005	1.66	1.62	0.14296	-0.002	-0.127	0.90187

(Source: Author Compilation)

ANNEXURE-IV

Managerial Efficiency of FDI based Companies in selected sectors

Sr.No	Name of FDI Based Companies	Return on Investment						Return on Equity					
		const	*t-Stat*	*p-value*	*Coeffic*	*t- Stat*	*p-value*	*const*	*t-Stat*	*p-value*	*Coefficient*	*t- Stat*	*p-value*
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*
Food and Agriculture Sector													
1	Agro Tech Foods Ltd.	-0.20	-0.72	0.49109	0.007	1.273	0.2389	81.79	1.90	0.094*	-0.98	-1.13	0.29084
2	Assam Company India Ltd.	0.09	0.88	0.40289	-0.001	-0.266	0.79718	8.95	1.53	0.16497	-0.02	-0.12	0.90963
3	Britannia Industries Ltd.	37.17	4.83	0.0013***	-0.726	-4.795	0.0013***	34829.40	5.05	0.0009***	-680.60	-5.02	0.001***
4	Dharani Sugars & Chemicals	0.22	1.14	0.28627	-0.006	-0.643	0.53828	-11.82	-0.57	0.58677	1.35	1.38	0.20589
5	Glaxosmithkline Consumer	0.22	10.57	0.00001***	0.000	-1.328	0.22096	-43.22	-2.02	0.0782*	2.12	5.62	0.0005***
6	Godfrey Phillips India Ltd.	0.13	4.07	0.0035***	0.003	2.255	0.0541*	749.74	6.86	0.0001***	-15.66	-4.12	0.003***
7	Goodricke Group Ltd.	0.12	6.55	0.00001***	-	-	-	21.20	8.01	0.00002***	-	-	-
8	Harrisons Malayalam Ltd.	0.03	3.00	0.014**	-	-	-	17.13	15.69	0.00001***	-	-	-
9	Kore Foods Ltd.	0.64	1.33	0.22044	-0.026	-1.348	0.21448	2.15	1.16	0.27977	-0.06	-0.78	0.45631
10	Lotte India Corpn. Ltd.	0.05	4.99	0.0010***	0.000	0.006	0.99543	36.76	10.20	0.00001***	0.11	1.36	0.21189
11	Mcleod Russel India Ltd.	0.66	1.43	0.19016	-0.022	-1.184	0.27032	129.55	2.50	0.037**	-4.31	-2.08	0.071*
12	Monsanto India Ltd.	362.94	1.87	0.0990*	-5.028	-1.865	0.0992*	-73625.7	-1.81	0.10766	1021.06	1.81	0.1075
13	Nestle India Ltd.	9.38	2.84	0.02198	-0.144	-2.709	0.0267**	-3061.85	-5.45	0.0006***	50.20	5.57	0.0005***
14	Ovobel Foods Ltd.	0.02	0.09	0.9293	0.014	1.094	0.30573	2.71	0.98	0.3565	0.34	1.65	0.13793
15	Ponni Sugars (Erode) Ltd.	0.24	1.14	0.28761	-0.012	-0.507	0.62566	34.00	3.28	0.0112**	-1.11	-0.96	0.36363
16	Shree Renuka Sugars Ltd.	0.10	8.95	0.00002***	-0.003	-3.184	0.0129**	80.80	10.20	0.00001***	-0.60	-0.95	0.37085

17	Tarai Foods Ltd.	0.39	1.41	0.1909	-	-	-	0.27	3.37	0.008***	-	-	-
18	United Breweries Ltd.	-0.03	-0.45	0.66246	0.005	2.529	0.035**	-679.22	-1.47	0.17922	23.12	1.91	0.0931*
19	United Spirits Ltd.	0.13	4.51	0.00198	0.001	0.566	0.58696	83.27	8.44	0.00003***	1.48	4.16	0.003***
20	V S T Industries ltd	0.27	15.83	0.00001***	-	-	-	90.17	9.95	0.00001***	-	-	-
21	Warren Tea Ltd.	0.12	1.10	0.30513	0.000	0.165	0.87324	4.64	0.80	0.44793	0.21	1.77	0.11508
22	Winsome breweries Ltd	0.08	11.02	0.00001***	-0.002	-2.377	0.044**	1.77	6.91	0.0001***	0.06	1.94	0.0885*
Textile Sector													
1	Aunde India Ltd.	0.76	10.30	0.00001***	-	-	-	8.33	7.08	0.00006***	-	-	-
2	Birla Cotsyn (India) Ltd.	0.58	3.24	0.0142**	-0.0002	-0.008	0.99	4.35	4.89	0.0017***	-0.26	-2.69	0.030**
3	Bombay Rayon Fashions	0.47	11.00	0.00001***	-0.0018	-1.1680	0.28	14.95	7.60	0.00006***	0.26	3.54	0.0076***
4	E-Land Apparel Ltd.	0.60	4.12	0.0033***	0.0018	0.5853	0.57	7.95	8.15	0.00004***	-0.04	-2.12	0.06663*
5	Gokaldas Exports Ltd.	1.36	6.15	0.0002***	0.0026	0.7322	0.48	61.58	14.93	0.00001***	0.06	0.84	0.42706
6	Golden Carpets Ltd.	0.10	4.15	0.003***	0.0020	1.0038	0.34	0.20	3.97	0.004***	0.00	-0.06	0.95214
7	Indian Card Clothing Co.	0.60	20.58	0.00001***	-	-	-	15.35	17.40	0.00001***	-	-	-
8	Indo Count Inds. Ltd.	4.59	5.04	0.00001***	-0.0987	-3.9105	0.0044***	170.50	5.55	0.0005***	-4.03	-4.74	0.0014***
9	Indo Rama Synthetics	4.56	2.75	0.0250**	-0.1094	-1.9528	0.086*	39.27	2.99	0.0172**	-0.66	-1.48	0.1764
10	Page Industries Ltd.	1.33	1.50	0.17128	0.0025	0.1318	0.8984	-118.8	-0.84	0.4228	3.99	1.35	0.21469
11	Pearl Global Inds. Ltd.	0.99	3.56	0.0074***	-0.0179	-1.5756	0.15377	26.05	3.33	0.0103**	-0.48	-1.51	0.16895
12	Polygenta Technologies Ltd.	0.61	1.79	0.11041	-0.0043	-0.7302	0.48613	2.88	2.77	0.0242**	-0.03	-1.62	0.14301
13	R S W M Ltd.	0.61	1.79	0.11041	-0.0043	-0.7302	0.48613	2.88	2.77	0.0242**	-0.03	-1.62	0.14301
14	Rainbow Denim Ltd	1.20	14.62	0.00001***	-	-	-	92.37	8.65	0.00001***	-	-	-
15	Uniworth Ltd	2.57	4.97	0.001***	-0.0499	-2.9692	0.017**	16.28	2.26	0.054*	-0.18	-0.77	0.46135
16	Uniworth Textiles Ltd.	0.33	9.11	0.00001***	-	-	-	1.87	10.00	0.00001***	-	-	-

17	Voith Paper Fabrics India	0.57	22.42	0.00001***	-	-	-	17.77	8.44	0.00001***	-	-	-
18	Zodiac Clothing Co. Ltd.	0.50	1.14	0.28877	0.0202	1.7050	0.12659	-68.93	-3.41	0.009***	2.51	4.57	0.001***
Pharmaceutical Sector													
1	Abbott India Ltd.	5.37	4.36	0.002***	-0.06	-3.28	0.01**	-349.08	-3.48	0.008***	5.99	4.27	0.002***
2	Astrazeneca Pharma India Ltd.	1.32	5.98	0.0003***	0.00	0.35	0.73326	113.07	8.44	0.00003***	-1.19	-1.70	0.12665
3	Biofil Chemicals & Pharm Ltd.	23.39	0.32	0.75797	-1.10	-0.31	0.76525	-7.81	-0.17	0.86549	0.41	0.19	0.85565
4	Caprolactam Chemicals Ltd.	1.13	9.73	0.00001***	-	-	-	0.50	4.00	0.003***	-	-	-
5	Cheryl Laboratories Pvt. Ltd.	0.20	1.50	0.16807	-	-	-	11.17	1.49	0.17116	-	-	-
6	Cirex Pharmaceuticals Ltd.	18.84	4.23	0.002***	-0.85	-4.06	0.003***	747.29	1.57	0.15552	-33.44	-1.49	0.17348
7	Clarion Drugs Ltd.	33.90	0.63	0.54412	-0.53	-0.63	0.54876	176.75	0.64	0.54157	-2.75	-0.63	0.54622
8	Dharamsi Morarji Chemical.	0.48	1.39	0.20301	0.02	1.19	0.26647	7.94	1.98	0.08271*	-0.06	-0.43	0.68112
9	Dutron Polymers Ltd.	-73.5	-1.48	0.17618	5.10	1.49	0.17485	-1273.2	-1.61	0.14603	88.30	1.62	0.14481
10	Elantas Beck India Ltd.	3.57	3.82	0.0051***	-0.03	-2.27	0.05278*	138.36	6.07	0.0003***	-1.23	-4.51	0.0019***
11	Essel Propack Ltd.	0.21	3.02	0.01649**	0.02	5.07	0.0009***	8.97	5.71	0.0004***	0.70	7.06	0.0001***
12	Ester Industries Ltd.	1.30	19.33	0.00001***	0.01	1.18	0.27113	28.04	15.21	0.00001***	-0.65	-5.09	0.0009***
13	Fairchem Speciality Ltd.	0.95	0.59	0.57157	0.01	0.35	0.73847	-6.87	-0.45	0.66301	0.26	1.00	0.34868
14	Foseco India Ltd.	1.28	3.70	0.006***	0.00	0.28	0.79012	21.31	3.11	0.014**	0.09	0.28	0.78456
15	G O C L Corpn. Ltd.	-0.35	-0.23	0.82522	0.01	0.68	0.51277	-30.37	-0.39	0.70451	1.07	1.05	0.32258
16	G P Petroleums Ltd.	0.14	0.24	0.81572	0.03	2.33	0.047**	10.23	0.96	0.36692	0.15	0.72	0.49443
17	Gujarat Polybutenes Pvt. Ltd.	4.69	3.81	0.0051***	-0.27	-2.10	0.0687*	48.91	6.66	0.0001***	-3.45	-4.52	0.001***
18	Gulshan Chemicals Ltd.	1.24	6.73	0.00015***	-0.02	-3.01	0.016**	10.15	5.76	0.00042***	-0.16	-2.58	0.03286**

19	Kerala Ayurveda Ltd.	0.36	35.34	0.00001***	-	-	-	2.38	14.01	0.00001***	-	-	-
20	Kingfa Science & Technology	1.76	23.29	0.00001***	0.00	-0.12	0.90739	21.81	14.14	0.00001***	0.17	4.62	0.001***
21	Lincoln Pharmaceuticals Ltd.	1.37	2.60	0.0314**	0.00	-0.40	0.69704	10.22	1.33	0.21963	0.03	0.33	0.75266
22	National Oxygen Ltd.	0.53	18.01	0.00001***	-	-	-	5.77	14.17	0.00001***	-	-	-
23	Polymac Thermoformers	-0.63	-0.41	0.69487	0.02	0.46	0.65851	-1.73	-0.41	0.69176	0.05	0.46	0.65491
24	Rama Phosphates Ltd.	1.41	1.15	0.28406	0.01	0.25	0.80963	62.51	2.01	0.0795*	-0.50	-0.96	0.36479
25	Rubber Products Ltd.	0.96	18.11	0.0001***	-	-	-	4.37	13.77	0.0001***	-	-	-
26	Supreme Industries Ltd.	1.77	15.98	0.0019377	0.69	0.51	0.00001***	81.05	7.22	0.00009***	1.27	4.47	0.002***
Construction Sector													
1	Akzo Nobel India Ltd.	0.02	0.04	0.97143	0.018	2.805	0.023**	-28.99	-1.63	0.14256	1.24	4.37	0.0023***
2	Ambuja Cements Ltd.	1.92	10.21	0.00001***	-0.021	-5.247	0.0007***	4.04	0.40	0.6964	0.58	2.71	0.0266**
3	Berger Paints India Ltd.	2.62	13.51	0.00001***	-0.059	-3.921	0.004***	-8.68	-0.51	0.6224	3.95	2.99	0.0173*
4	Grindwell Norton Ltd.	1.21	22.22	0.00001***	-	-	-	32.11	10.41	0.00001***	-	-	-
5	Gujarat Sidhee Cement Ltd.	2.09	9.52	0.00001***	-	-	-	6.49	5.08	0.0006***	-	-	-
6	H E G Ltd.	0.92	4.77	0.001***	-0.028	-1.775	0.11389	-8.10	-0.43	0.67708	3.19	2.05	0.074*
7	Heidelberg Cement India Ltd.	5.92	2.64	0.0299**	-0.176	-2.255	0.054*	-19.57	-1.05	0.32647	0.89	1.37	0.20882
8	I F G L Refractories Ltd.	0.44	1.18	0.27351	0.010	1.723	0.12326	-7.34	-1.06	0.31903	0.23	2.17	0.0618*
9	Kachchh Minerals Ltd.	1.10	4.34	0.002***	-0.042	-1.294	0.23194	0.40	2.92	0.019**	-0.01	-0.71	0.49611
10	Kansai Nerolac Paints Ltd.	1.02	2.46	0.039**	0.040	1.618	0.14427	102.27	1.66	0.13597	-2.08	-0.57	0.58219
11	Morganite Crucible (India)	-2.42	-1.12	0.29648	0.049	1.544	0.16127	-225.57	-3.10	0.014**	3.61	3.42	0.009***
12	Orient Refractories Ltd.	77.41	1.55	0.15958	-1.019	-1.534	0.16349	1698.01	1.60	0.14786	-22.34	-1.59	0.15163
13	Shalimar Paints Ltd.	1.80	35.51	0.00001***	-0.006	-4.679	0.001***	112.64	11.45	0.00001***	0.39	1.51	0.16862

14	Shree Digvijay Cement Co.	1.85	14.67	0.00001***	-0.008	-4.749	0.001***	2.12	3.59	0.007***	0.01	0.98	0.35355
15	Vesuvius India Ltd.	1.00	28.00	0.00001***	-	-	-	26.12	10.07	0.00001***	-	-	-
Metal Sector													
1	Carnation Industries Ltd.	-241.90	-0.99	0.35077	47.12	3.78	0.005***	11.50	0.58	0.57935	0.45	0.45	0.66791
2	Chennai Ferrous Inds. Ltd.	123.71	1.52	0.16687	48.16	3.67	0.006***	3.29	1.63	0.14262	0.42	1.29	0.23397
3	Ess Dee Aluminium Ltd.	7689.54	5.21	0.0008***	141.26	3.06	0.015**	17.48	7.05	0.0001***	0.07	0.85	0.41988
4	Facor Steels Ltd.	1690.71	3.88	0.004***	-9.11	-0.58	0.57893	2.03	0.22	0.83375	0.39	1.15	0.28214
5	Ferro Alloys Corpn. Ltd.	4948.92	16.60	0.00001***	-65.03	-6.58	0.0001***	35.95	12.03	0.0001***	-0.44	-4.46	0.002***
6	Gillette India Ltd.	50905.10	0.69	0.50901	-977.55	-0.54	0.60323	1402.51	4.94	0.0001***	-33.44	-4.80	0.0001***
7	Gontermann-Peipers Ltd.	2901.47	2.35	0.0513*	-44.30	-0.63	0.5481	1.14	0.30	0.77037	0.59	2.75	0.028**
8	Hinduja Foundries Ltd.	19447.50	3.00	0.017**	-243.67	-1.93	0.089*	-62.89	-2.22	0.0575*	1.63	2.95	0.018**
9	Jindal Saw Ltd.	16121.50	0.33	0.74866	4106.70	0.88	0.40696	214.83	3.17	0.0131**	-10.73	-1.64	0.13938
10	Jindal Stainless (Hisar) Ltd.	3261.25	1.00	0.34659	1544.19	5.08	0.0009***	3243.82	1.00	0.34659	1533.88	5.08	0.0009**
11	Jindal Stainless Ltd.	56516.10	1.75	0.11783	3600.05	2.33	0.048**	197.87	3.83	0.005***	0.39	0.16	0.88037
12	Kanishk Steel Inds. Ltd.	203.23	5.65	0.0004***	-14.44	-5.65	0.0004***	17.59	4.47	0.002***	-1.25	-4.47	0.002***
13	Man Industries (India) Ltd.	13875.80	7.55	0.00007***	64.70	0.45	0.66752	43.04	8.14	0.00004***	1.04	2.50	0.036**
14	National Fittings Ltd.	990.29	3.75	0.005***	-81.15	-2.99	0.017**	22.62	3.68	0.006***	-1.97	-3.12	0.014**
15	Steelco Gujarat Ltd.	9068.17	2.22	0.0570*	-86.26	-1.64	0.13966	68.90	2.20	0.0591*	-0.73	-1.82	0.10637
16	Sunflag Iron & Steel Co.	-17978.60	-2.38	0.044**	650.32	3.83	0.005***	-11.50	-2.55	0.034**	0.47	4.65	0.001***
17	Tayo Rolls Ltd.	-1229.33	-1.33	0.2213	224.19	4.10	0.003***	98.58	19.05	0.00001***	-4.60	-15.08	0.00001***
18	Usha Martin Ltd.	4915.66	0.26	0.80038	4283.59	2.65	0.029**	52.77	2.40	0.043**	4.18	2.21	0.0579*
19	Uttam Galva Steels Ltd.	-135.33	-0.01	0.99003	324.19	0.81	0.4433	0.03	0.03	0.97448	0.04	1.08	0.31273
20	V B C Industries Ltd.	830.82	2.06	0.0733*	-8.16	-0.25	0.81261	0.76	1.80	0.10911	-0.01	-0.36	0.73174

21	Vedanta Ltd.	-37989.0	-4.14	0.003***	73976.10	4.47	0.002***	-204.77	-1.57	0.15413	5.28	2.25	0.0546*
Machinery Sector													
1	A B B India Ltd.	2.10	8.62	0.00003***	-0.015	-4.108	0.003***	60.47	1.53	0.16475	1.69	2.85	0.021**
2	Aksh Optifibre Ltd.	0.31	2.80	0.023**	0.018	1.694	0.12873	5.03	3.01	0.016**	-0.05	-0.32	0.75499
3	Best & Crompton Engg.	-58.56	-1.51	0.16846	0.910	1.534	0.16364	-101.17	-0.41	0.69345	1.61	0.42	0.68276
4	Birla Cable Ltd.	1.07	11.67	0.0001***	-	-	-	5.61	5.39	0.0004***	-	-	-
5	Cmi F P E Ltd.	1.46	8.90	0.00002***	-0.006	-2.495	0.037**	88.13	5.56	0.0005***	-0.06	-0.26	0.80023
6	Cummins India Ltd.	1.83	7.56	0.00003***	-	-	-	279.31	7.67	0.00003***	-	-	-
7	Eimco Elecon (India) Ltd.	0.86	14.86	0.0001***	-	-	-	29.97	15.02	0.0001***	-	-	-
8	Esab India Ltd.	3.74	10.47	0.0001***	-0.030	-5.282	0.0007***	14.93	1.90	0.0943*	0.29	2.27	0.0530*
9	F A G Bearings India Ltd.	1.41	23.55	0.0001***	-	-	-	75.33	8.43	0.0001***	-	-	-
10	G M M Pfaudler Ltd.	2.70	0.54	0.60185	-0.031	-0.322	0.75564	385.83	0.72	0.49445	-6.29	-0.59	0.56833
11	Honda Siel Power Products	1.00	29.27	0.0001***	-	-	-	46.38	8.57	0.0001***	-	-	-
12	Igarashi Motors India Ltd.	0.96	4.29	0.002***	0.003	0.638	0.54109	15.33	2.86	0.021**	0.00	-0.01	0.99605
13	Indo Tech Transformers Lt	0.99	11.21	0.0001***	-0.004	-2.784	0.023**	20.85	9.66	0.0001***	-0.10	-2.82	0.022**
14	Ingersoll-Rand (India) Ltd.	0.59	7.66	0.00003***	-	-	-	21.31	15.41	0.0001***	-	-	-
15	K S B Pumps Ltd.	1.12	30.09	0.0001***	-	-	-	28.88	14.68	0.0001***	-	-	-
16	Kennametal India Ltd.	0.27	0.35	0.73278	0.011	1.211	0.26033	61.63	3.97	0.004***	-0.46	-2.47	0.038**
17	Panasonic Carbon India Ltd.	0.41	1.87	0.0991*	0.001	0.354	0.73263	-4.86	-1.46	0.18312	0.23	3.94	0.004***
18	Ruttonsha International Ltd.	1.99	6.52	0.0001***	-0.015	-3.292	0.010**	4.57	4.14	0.003***	-0.01	-0.30	0.77324
19	S K F India Ltd.	1.69	22.49	0.0001***	-	-	-	42.90	12.73	0.0001***	-	-	-

20	Shilp Gravures Ltd.	-0.57	-0.65	0.53227	0.049	1.581	0.15252	-31.71	-1.12	0.29508	1.42	1.43	0.18939
21	Siemens Ltd.	1.54	4.45	0.002***	-0.009	-1.654	0.13683	143.39	1.84	0.10259	0.47	0.40	0.70072
22	Singer India Ltd.	7.74	2.48	0.038**	-0.054	-1.218	0.25798	-0.70	-0.06	0.95637	0.23	1.33	0.22016
23	Sterlite Technologies Ltd.	2.13	3.94	0.004***	-0.023	-2.084	0.070*	123.49	3.13	0.014**	-1.64	-2.05	0.074*
24	Stovec Industries Ltd.	0.62	1.54	0.1632	0.007	1.097	0.30463	-40.01	-0.87	0.41005	1.15	1.69	0.13009
25	Switching Technologi Ltd.	2.12	26.14	0.0001***	-	-	-	4.99	10.60	0.0001***	-	-	-
26	T I L Ltd.	-24.34	-1.04	0.3298	1.313	1.080	0.31146	-382.17	-0.41	0.69361	22.37	0.46	0.65663
27	Timken India Ltd.	1.13	0.40	0.70246	-0.001	-0.018	0.9859	98.46	2.87	0.020**	-1.13	-2.58	0.032**
28	Walchandnagar Industries	1.28	9.53	0.0001***	-0.054	-4.768	0.001***	211.70	6.44	0.0002***	-8.51	-3.10	0.014**
29	Wendt (India) Ltd.	0.65	0.15	0.88354	0.002	0.023	0.98233	515.83	1.18	0.27134	-11.76	-1.08	0.31259
30	Yuken India Ltd.	1.14	31.78	0.0001***	-	-	-	53.39	11.94	0.0001***	-	-	-
Transport Sector													
1	Blue Dart Express Ltd.	1.39	0.74	0.48132	0.003	0.139	0.89288	754.02	7.59	0.00006***	-8.78	-6.95	0.0001***
2	Chowgule Steamships Ltd.	193.36	2.94	0.018**	-18.600	-2.941	0.018**	1899.86	3.47	0.008***	-182.80	-3.47	0.008***
3	Essar Ports Ltd.	0.26	2.79	0.023**	-0.003	-1.76	0.11519	2.73	2.62	0.030**	-0.03	-1.61	0.14658
4	Essar Shipping Ltd.	0.01	0.95	0.3685	0.002	7.027	0.0001***	-0.04	-0.13	0.89748	0.08	12.74	0.0001***
5	Gateway Distriparks Ltd.	0.37	11.79	0.0001***	-0.005	-3.105	0.014**	3.22	9.89	0.0001***	-0.07	-3.78	0.005***
6	Global Offshore Services	0.30	1.68	0.13134	-0.009	-0.48	0.63834	4.89	0.68	0.51833	0.13	0.18	0.86178
7	Global Vectra Helicorp Ltd.	0.45	12.47	0.0001***	-	-	-	18.71	11.90	0.0001***	-	-	-
8	Gujarat Pipavav Port Ltd.	0.13	3.48	0.008***	0.003	2.729	0.02587	0.66	3.77	0.005***	0.01	2.35	0.046**
9	Jet Airways (India) Ltd.	1.72	6.87	0.0001***	-0.013	-3.91	0.004***	247.97	3.76	0.005***	-1.28	-1.41	0.19687
10	Seamec Ltd.	1.12	0.38	0.71605	-0.007	-0.18	0.85641	120.79	1.91	0.092*	-1.48	-1.77	0.11482
11	Shreyas Shipping Ltd.	3.20	2.71	0.026**	-0.038	-2.14	0.064*	67.31	4.56	0.001***	-0.87	-3.95	0.004***
12	Sical Logistics Ltd.	0.52	5.06	0.0009***	0.002	0.518	0.61847	1.37	0.29	0.77704	0.51	3.11	0.014**

13	Varun Shipping Co. Ltd.	0.29	3.67	0.006***	-0.006	-1.41	0.19582	6.01	3.15	0.01369	-0.11	-1.12	0.29567
Hotel Sector													
1	Asian Hotels (North) Ltd.	0.507	4.033	0.003***	-0.006	-2.542	0.034**	37.30	3.86	0.004***	-0.37	-2.16	0.063*
2	Asian Hotel (west) Ltd	0.040	1.611	0.14589	0.005	7.099	0.0001***	1.33	1.62	0.14438	0.22	9.76	0.00001***
3	Asian Hotels (East) Ltd	0.017	1.415	0.19488	0.003	6.177	0.0002***	1.08	1.57	0.15572	0.24	9.26	0.00001***
4	C H L Ltd.	0.755	16.549	0.00001***	-0.005	-5.820	0.0004***	7.83	24.75	0.00001***	-0.03	-5.21	0.0008***
5	Cox & Kings Ltd.	0.315	16.670	0.00001***	-0.007	-6.241	0.0002***	9.18	4.45	0.002***	-0.20	-1.55	0.16025
6	E I H Associated Ltd.	0.471	15.595	0.00001***	-	-	-	8.23	27.47	0.00001***	-	-	-
7	James Hotels Ltd.	-8.31	-1.514	0.16854	0.199	1.524	0.16593	-125.8	-1.26	0.24344	3.01	1.27	0.23994
8	Mac Charles (India) Ltd.	2.089	2.243	0.055*	-0.025	-1.892	0.095*	97.11	3.33	0.010**	-1.23	-3.02	0.016**
9	Thomas Cook (India) Ltd.	0.403	1.485	0.17581	-0.001	-0.252	0.80761	11.69	1.65	0.13728	0.05	0.55	0.59436
IT Sector													
1	Accelya Kale Solutions Ltd.	0.85	12.35	0.0001***	0.003	2.335	0.047**	4.79	2.81	0.022**	0.18	5.89	0.0003***
2	Advent Computer Ltd.	0.15	0.16	0.87867	-0.002	-0.135	0.89607	0.15	0.16	0.87867	0.00	-0.13	0.89607
3	Aurionpro Solutions Ltd.	0.09	0.84	0.42382	0.019	2.674	0.028**	-5.40	-2.07	0.071*	0.92	5.42	0.0006***
4	B 2 B Software Ltd.	5.85	4.35	0.002***	-0.087	-3.816	0.005***	1.78	2.37	0.045**	-0.02	-1.80	0.10908
5	Bodhtree Consulting Ltd.	0.74	8.54	0.00003***	0.006	2.531	0.03**	2.36	8.64	0.00002***	0.01	0.76	0.46928
6	C E S Ltd.	7.44	1.75	0.11899	-0.098	-1.481	0.17693	-265.1	-5.47	0.0005***	4.37	5.79	0.0004***
7	Cambridge Technology Ltd.	1.14	3.14	0.013**	-0.011	-1.590	0.15041	-0.04	-0.04	0.97154	0.03	1.48	0.17826
8	Cigniti Technologies Ltd.	0.45	10.08	0.0001***	-0.002	-0.718	0.49318	1.21	1.06	0.32207	0.06	1.05	0.3249
9	Cybertech Systems Ltd.	-0.03	-0.32	0.75749	0.012	4.329	0.002***	-1.66	-3.22	0.0121**	0.09	5.76	0.0004***
10	Eclerx Services Ltd.	2.39	23.41	0.0001***	-0.050	-12.899	0.0001***	86.69	25.27	0.0001***	-2.47	-19.13	0.0001***
11	G I Engineering Ltd.	0.01	0.92	0.38594	0.000	0.738	0.48155	1.70	2.77	0.024**	-0.04	-2.28	0.0522*
12	Genesys International. Ltd.	2.05	2.76	0.0245**	-0.029	-2.053	0.074*	-5.64	-0.82	0.43408	0.20	1.57	0.15587

13	H C L Technologies Ltd.	-1.73	-1.70	0.12749	0.137	2.374	0.045**	666.76	3.00	0.017**	-34.55	-2.74	0.025**
14	H O V Services Ltd.	0.93	3.77	0.005***	-0.015	-3.189	0.012**	7.77	4.51	0.001***	-0.13	-3.90	0.004***
15	Hinduja Global Ltd	0.23	1.74	0.11923	0.034	3.287	0.01**	622.29	48.50	0.0001***	-43.62	-43.35	0.0001***
16	Infinite Computer Ltd.	0.78	14.17	0.0001***	-0.002	-1.561	0.15711	2.54	1.95	0.0874*	0.09	3.96	0.004***
17	Informed Technologies Ltd.	0.42	6.16	0.0001***	-	-	-	1.04	30.26	0.0001***	-	-	-
18	Lycos Internet Ltd.	0.30	2.08	0.070*	0.009	2.708	0.026**	5.34	1.86	0.10056	0.02	0.39	0.70432
19	Mindteck (India) Ltd.	-1.93	-4.73	0.001***	0.036	5.773	0.0004***	2.73	0.71	0.49973	0.00	-0.04	0.96953
20	Moschip Semiconduc Ltd.	0.66	1.49	0.17332	-0.014	-0.575	0.58083	0.88	3.61	0.006***	-0.03	-2.19	0.060*
21	Mphasis Ltd.	1.48	1.12	0.29446	-0.011	-0.484	0.64141	-30.33	-1.13	0.28957	0.74	1.66	0.13622
22	Onmobile Global Ltd.	0.49	11.14	0.0001***	-0.003	-2.299	0.050*	36.56	9.19	0.00002***	-0.78	-7.43	0.00007***
23	Oracle Financial Ltd.	-0.18	-0.24	0.81748	0.008	0.822	0.43491	475.13	3.96	0.004***	-5.17	-3.39	0.009***
24	R Systems International.	0.83	1.25	0.24712	0.000	0.003	0.99733	1.92	0.06	0.9513	0.55	0.54	0.60518
25	Take Solutions Ltd.	0.37	5.82	0.0004***	-0.003	-2.807	0.022**	6.10	4.35	0.002***	-0.02	-0.72	0.4934
26	Xchanging Solutions Ltd.	-0.43	-0.38	0.71325	0.016	0.976	0.35787	0.61	0.30	0.76977	0.02	0.63	0.54383

(Source: Author Compilation)

ANNEXURE-V

Technological Efficiency of FDI based Companies in selected sectors

Sr.No	Name of FDI Based Companies	Research and Development					
		const	*t-Stat*	*p-value*	*Coefficient*	*t- Stat*	*p-value*
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*
Food and Agriculture Sector							
1	Agro Tech Foods Ltd.	-192.06	-3.0804	0.015**	4.27869	3.4293	0.008***
2	Britannia Industries Ltd.	7684.78	0.3508	0.7348	-148.723	-0.345	0.73873
3	Glaxosmithkline Consumer	-305.27	-2.1922	0.0597*	10.316	4.2022	0.002***
4	Godfrey Phillips India Ltd.	203.24	8.1995	0.00004***	-4.20657	-4.884	0.0012***
5	Goodricke Group Ltd.	8.45	4.6555	0.001***	-	-	-
6	Lotte India Corpn. Ltd.	0.41428	2.9357	0.0188**	0.0002369	0.0739	0.94288
7	Mcleod Russel India Ltd.	40.4581	2.1653	0.0622*	-1.20063	-1.609	0.14629
8	Monsanto India Ltd.	1.05E	7.1919	0.00009***	-14615	-7.191	0.00009***
9	Nestle India Ltd.	-3178.6	-2.7595	0.0246**	53.196	2.8816	0.020**
10	Shree Renuka Sugars Ltd.	14.3694	2.5549	0.0339**	-0.366522	-0.812	0.44003
11	United Spirits Ltd.	37.9267	7.4883	0.00007***	1.09757	6.009	0.0003***
12	V S T Industries ltd	32.67	14.4316	0.00001***	-	-	-
Textile Sector							
1	Indian Card Clothing Co.	4.59	5.035	0.00101***	-0.098667	-3.91	0.004***
2	Pearl Global Inds. Ltd.	39.57	2.3009	0.0504*	-0.7544	-1.08	0.31145
3	Polygenta Technologies Ltd.	39.57	2.3009	0.0504*	-0.7544	-1.08	0.31145
4	R S W M Ltd.	1.6764	2.6358	0.02991**	0.003672	0.332	0.74845
5	Rainbow Denim Ltd	44.73	4.1255	0.0025***	-	-	-
Pharmaceutical Sector							
1	Abbott India Ltd.	128.431	2.3153	0.049**	-1.5444	-1.985	0.0823*
2	Astrazeneca Pharma India	3.92283	3.5308	0.007***	-0.0889	-1.536	0.16304
3	Biofil Chemicals & Pharm	-44037	-2.876	0.0206**	2184.4	2.929	0.019**
4	Cirex Pharmaceuticals Ltd.	68.7071	5.0864	0.0009***	-3.1096	-4.902	0.001***
5	Dharamsi Morarji Chemical.	4.92995	1.391	0.20168	-0.0623	-0.471	0.64983
6	Elantas Beck India Ltd.	111.549	2.9194	0.019**	-0.9883	-2.157	0.063*
7	Essel Propack Ltd.	-22.803	-3.07	0.015**	3.5112	7.4328	0.00007***
8	Fairchem Speciality Ltd.	6.4726	8.8145	0.00002***	-0.053	-1.601	0.14802
9	Foseco India Ltd.	0.14184	0.2409	0.81572	0.02657	2.3348	0.04781**
10	Kerala Ayurveda Ltd.	12.24	2.9245	0.0169**	-	-	-
11	Kingfa Science & Technology	4.72139	4.3623	0.002***	0.13343	5.2603	0.0007***
12	Lincoln Pharmaceuticals	8.1383	0.1658	0.87246	0.20484	0.3374	0.74452
13	Rubber Products Ltd.	0.46	5.2011	0.0005***	-	-	-
Construction Sector							
1	Akzo Nobel India Ltd.	-17414	-6.1943	0.00026	557.91	12.5014	0.00001***

2	Ambuja Cements Ltd.	-70063	-1.6142	0.14515	3439.36	3.7056	0.005***
3	Berger Paints India Ltd.	-7625.5	-0.8141	0.43915	2112.24	2.8938	0.02**
4	Grindwell Norton Ltd.	7231.34	10.5504	0.00001***	-	-	-
5	Gujarat Sidhee Cement Ltd.	3586.09	26.1107	0.00001***	-	-	-
6	H E G Ltd.	-14290	-2.0234	0.077*	2550.35	4.3433	0.002***
7	Heidelberg Cement India	-56233	-1.8265	0.1052	2521.41	2.3538	0.04***
8	I F G L Refractories Ltd.	-2619.4	-1.3416	0.21656	74.7548	2.5388	0.034***
9	Kachchh Minerals Ltd.	13.85	2.9582	0.018**	0.41912	0.7059	0.50029
10	Kansai Nerolac Paints Ltd.	66578.2	1.831	0.10447	-2730.4	-1.2776	0.23723
11	Morganite Crucible (India)	-5552.5	-3.0042	0.016**	89.2135	3.327	0.010**
12	Orient Refractories Ltd.	141193	1.4785	0.17754	-1857.8	-1.4629	0.18163
13	Shalimar Paints Ltd.	2939.17	11.9374	0.00001***	24.637	3.8156	0.005***
14	Shree Digvijay Cement Co.	2052.38	3.3707	0.009***	16.6819	1.9304	0.089*
15	Vesuvius India Ltd.	4770.12	8.6073	0.00001***	-	-	-
Metal Sector							
1	Gontermann-Peipers Ltd.	12.0635	1.762	0.12144	-0.5051	-1.299	0.23495
2	Jindal Stainless (Hisar) Ltd.	3.46667	1.5117	0.16906	0.16588	0.7768	0.45962
3	Jindal Stainless Ltd.	14.1083	7.3952	0.00008**	-0.4162	-4.55	0.0018***
4	Tayo Rolls Ltd.	-1.4058	-0.222	0.82925	0.23266	0.6252	0.54926
5	Usha Martin Ltd.	-13.047	-1.465	0.1809	2.43174	3.1757	0.013**
Machinery Sector							
1	Eimco Elecon (India) Ltd.	302.62	11.1332	0.001***	-	-	-
2	Esab India Ltd.	17.85	4.4335	0.001***	-	-	-
3	F A G Bearings India Ltd.	64.98	4.9135	0.0008***	-	-	-
4	G M M Pfaudler Ltd.	69.4353	0.5381	0.60514	-1.2513	-0.494	0.63419
5	Ingersoll-Rand (India) Ltd.	10.98	4.5543	0.001***	-	-	-
6	K S B Pumps Ltd.	3.84	6.6462	0.00009***	-	-	-
7	Kennametal India Ltd.	122.453	2.8544	0.021**	-0.9714	-1.882	0.0965*
8	Panasonic Carbon India Ltd.	0.60062	1.0726	0.31473	0.01935	1.9391	0.0884*
9	Siemens Ltd.	197.867	1.6543	0.13666	-1.4469	-0.796	0.44872
10	Sterlite Technologies Ltd.	-94.349	-3.1891	0.012**	3.22122	5.3719	0.0006***
11	Stovec Industries Ltd.	-10.304	-1.1421	0.28646	0.20196	1.5107	0.1693
12	Walchandnagar Industries	1.72786	3.4957	0.008***	0.01152	0.2792	0.78716
13	Wendt (India) Ltd.	233.998	0.8762	0.40644	-5.3431	-0.8	0.44654
IT Sector							
1	Aurionpro Solutions Ltd.	-94.349	-3.1891	0.012	3.22122	5.3719	0.0006
2	H C L Technologies Ltd.	6.77435	3.7722	0.005***	-0.1135	-3.26	0.011**

(Source: Author Compilation)

ANNEXURE-VI

Comparative Analysis of FDI & Non FDI based Companies in selected sectors

Food and Agriculture Sector		
	FDI Based Companies	Non FDI Based Companies
Variables	F test = 0.0065(0.01)	F test = 68.88(3.94)
	Breusch-Pagan = 12.21(0.0004)	Breusch-Pagan = 546.83(6.15)
	Hausman test = 0.05(1.00)	Hausman test = 13.54(0.19)
	Fixed Effect Model	Fixed Effect Model
const	0.24 (0.44)	3.47 (3.49)***
Age	-0.24 (-1.57)	0.29 (1.49)
Size	0.62 (2.39)**	0.32 (2.64)**
Current Ratio	-0.006 (-0.10)	-0.01 (-0.29)
Quick Ratio	-0.06 (-0.72)	0.04 (2.01)*
Debt to Equity ratio	0.008 (0.40)	0.07 (4.79)***
Growth in sales	-0.13 (-0.95)	-0.01 (-0.45)
Growth in PAT	0.35 (6.38)***	0.14 (4.56)***
Growth in assets	-0.98 (-6.00)***	-1.16 (-12.32)***
	R^2= 0.90, Adj R^2 =89	R^2= 0.99, Adj R^2 =99
Chow Test	0.21 (0.63)	
No of Observation	220	200
Textile Sector		
	F test = 14.21(1.09)	F test = 2.92(0.0003)
	Breusch-Pagan test = 259.37(2.34)	Breusch-Pagan test = 3.78(0.05)
	Hausman test = 1.61(0.99)	Hausman test = Nil
	Fixed Effect Model	Pooled Model
const	-7.11 (-2.92)***	0.018 (0.44)
Age	2.97 (4.63)***	-0.01 (-1.50)
Size	1.44 (2.51)**	-0.008 (-0.50)
Current Ratio	-0.72 (-2.21)**	0.028 (2.35)**
Quick Ratio	0.37 (1.85)*	-0.013 (-1.60)
Debt to Equity ratio	0.17 (1.40)	-0.002 (-0.98)
Growth in sales	0.07 (0.18)	0.98 (127.50)***
Growth in PAT	-0.05 (-0.73)	-0.001 (-0.56)
Growth in assets	-2.02 (-4.58)***	-0.97 (-72.25)***
	R^2= 0.99, Adj R^2 =97	R^2= 0.99, Adj R^2 =99
Chow Test	0.036 (0.84)	
No of Observation	180	150

Pharmaceutical Sector		
	F test (= 0.62(0.93)	F test = 0.01(1.00)
	Breusch-Pagan test = 2.73(0.09)	Breusch-Pagan test = 27.63(1.46)
	Hausman test = 8.69(0.46)	Hausman test = 0.19(1.00)
	Fixed Effect Model	Fixed Effect Model
const	0.043(0.53)	0.005 (0.29)
Age	-0.014 (-0.61)	-0.008 (-1.35)
Size	0.056 (2.45)**	0.002 (0.53)
Current Ratio	-0.04 (-1.56)	0.01 (0.89)
Quick Ratio	0.02 (0.98)	-0.005 (-0.56)
Debt to Equity ratio	-0.005 (-0.43)	0.004 (2.04)**
Growth in sales	0.94 (82.63)***	0.98 (201)***
Growth in PAT	-0.0007 (-0.17)	-0.007 (-0.34)
Growth in assets	-0.99 (-57.43)***	-0.98 (-200)***
	R^2= 0.99, Adj R^2 =99	R^2= 0.99, Adj R^2 =99
Chow Test	0.45 (0.49)	
No of Observation	290	510
Construction Sector		
	F test = 9.53(1.35)	F test = 0.67(0.80)
	Breusch-Pagan test = 92.63(6.28)	Breusch-Pagan test = 3.09(0.07)
	Hausman test = 21.56(0.01)	Hausman test = 10.05(0.43)
	Random Effect Model	Fixed Effect Model
const	0.19 (1.10)	-0.02 (-1.38)
Age	0.06 (1.35)	0.0009 (0.29)
Size	-0.04 (-1.95)*	0.007 (2.09)**
Current Ratio	0.013 (0.73)	-0.02 (-1.18)
Quick Ratio	-0.002 (-0.33)	0.027 (1.25)
Debt to Equity ratio	0.015 (1.25)	-0.001 (-0.49)
Growth in sales	0.092 (5.39)***	0.98(173.85)***
Growth in PAT	-0.91 (-29.03)***	0.0005 (0.29)
Growth in assets	(-0.019, -0.72)	-0.97 (-202)***
	R^2= 0.99, Adj R^2 =99	R^2= 0.99, Adj R^2 =99
Chow Test	0.25(0.61)	
No of Observation	160	630
Metal Sector		
	F test = 9.33(2.41)	F test = 0.44(0.98)
	Breusch-Pagan test = 69.69(6.93)	Breusch-Pagan test = 5.07(0.02)
	Hausman test = 223.07(2.43)	Hausman test = 10.02(0.43)

	Fixed Effect Model	Fixed Effect Model
const	-0.03 (0.82)	0.06 (1.48)
Age	0.16 (-2.44)**	0.0062 (0.45)
Size	-0.05 (4.51)***	0.02 (1.06)
Current Ratio	0.03 (-2.60)**	-0.03 (-2.22)**
Quick Ratio	0.008 (2.09)**	0.024 (2.10)**
Debt to Equity ratio	0.005 (0.99)	-0.001 (-0.25)
Growth in sales	-0.003 (21.4)***	0.96 (74.11)***
Growth in PAT	-0.87 (-0.71)	0.01 (2.61)**
Growth in assets	0.0061 (-26.)***	-0.99 (-60.71)***
	R^2= 0.90, Adj R^2 =89	R^2= 0.90, Adj R^2 =89
Chow Test	0.07 (0.78)	
No of Observation	220	300
Machinery Sector		
	F test = 0.14(0.01)	F test = 61.28(4.34)
	Breusch-Pagan test = 12.52(0.004)	Breusch-Pagan test = 842.97(2.44)
	Hausman test = 2.11(0.98)	Hausman test = 23.57(0.008)
	Pooled Model	Fixed Effect Model
const	0.08 (4.03)***	-0.16 (-1.00)
Age	-0.001 (-0.32)	0.075 (1.94)*
Size	-0.005 (-0.84)	0.35 (4.40)***
Current Ratio	0.014 (0.91)	-0.05 (-0.79)
Quick Ratio	-0.03 (-2.46)**	0.12 (2.32)**
Debt to Equity ratio	-0.001 (-0.41)	0.01 (1.54)
Growth in sales	0.96 (117.98)***	0.68 (17.15)***
Growth in PAT	0.0057 (2.23)**	0.04 (3.38)***
Growth in assets	-0.97 (-146.56)***	-1.06 (-14.78)***
	R^2= 0.99, Adj R^2 =99	R^2= 0.99, Adj R^2 =99
Chow Test	0.17 (0.67)	
No of Observation	300	300
Transport Sector		
	F test = 48.93(6.46)	F test = 0.25(0.99)
	Breusch-Pagan test = 228.96(1.00)	Breusch-Pagan test = 9.28(0.002)
	Hausman test = 29.45 (0.01)	Hausman test = 3.59(0.93)
	Fixed Effect Model	Fixed Effect Model
const	1.30 (0.80)	3.34 (0.64)
Age	-0.041 (-0.53)	-0.14 (-0.25)
Size	4.25 (0.01)	1.03 (1.01)

Current Ratio	0.0064 (1.10)	-0.06 (-0.03)
Quick Ratio	-0.03 ((-3.67)***	0.69 (0.41)
Debt to Equity ratio	-0.0004 (-0.64)	0.37 (1.67)
Growth in sales	-0.0001 (-0.41)	0.06 (0.14)
Growth in PAT	1.676 (1.29)	-0.05 (-0.28)
Growth in assets	5.501 (2.27)**	0.91 (1.24)
	R^2= 0.90, Adj R^2 =89	R^2= 0.90, Adj R^2 =89
Chow Test	0.25 (0.61)	
No of Observation	160	260
Hotel Sector		
	F test = 25.88(0.001)	F test = 90.11(2.08)
	Breusch-Pagan test = 52.06(0.004)	Breusch-Pagan = 408.02(9.84)
	Hausman test = Nil	Hausman test =98.34(1.16)
	Pooled Model	Fixed Effect Model
const	-0.20 (-1.30)	-0.04 (-0.47)
Age	-0.03 (-4.71)***	
Size	-0.01 (-2.19)**	0.0004 (0.80)
Current Ratio	0.06 (2.02)*	-0.047 (-0.18)
Quick Ratio	-0.05 (-1.72)*	-0.015 (-0.05)
Debt to Equity ratio	0.01 (2.47)**	0.063 (0.57)
Growth in sales	1.001 (183.83)***	0.00061 (1.30)
Growth in PAT	-0.004 (-0.27)	1.9084 (0.003)
Growth in assets	-0.95 (-73.59)***	-0.00015 (-0.92)
	R^2= 0.99 Adj R^2 =99	R^2= 0.99 Adj R^2 =99
Chow Test	0.21 (0.64)	
No of Observation	90	60
IT Sector		
	F test = 0.63 (0.87)	F = 1.53 (0.22)
	Breusch-Pagan test = 2.88 (0.09)	Breusch-Pagan test = 0.001 (0.97)
	Hausman test = 6.17(0.80)	Hausman test = 10.08 (0.43)
	Fixed Effect Model	Fixed Effect Model
const	0.58 (2.07)**	0.011 (0.16)
Age	-0.12 (-1.71)*	0.012 (0.60)
Size	0.64 (4.78)***	0.0002 (0.04)
Current Ratio	0.06 (1.30)	-0.014 (-0.38)
Quick Ratio	-0.01 (-0.31)	0.014 (0.39)
Debt to Equity ratio	-0.006 (-0.34)	-0.007 (-1.13)

Growth in sales	0.58(10.09)***	0.93 (37.24)***
Growth in PAT	0.09 (4.05)***	-0.02 (-1.38)
Growth in assets	-1.33 (-11.6)***	-0.92 (-55.9)***
	R^2= 0.97, Adj R^2 =96	R^2= 0.97, Adj R^2 =96
Chow Test	0.37 (0.54)	
No of Observation	260	260
Financial service Sector		
	F test = 0.095 (1.00)	F test = 2.64(1.14)
	Breusch-Pagan test = 12.18 (0.0004)	Breusch-Pagan test = 21.58(3.39)
	Hausman test = 2.47 (0.98)	Hausman test = 8.06(0.62)
	Pooled Model	Fixed Effect Model
const	-4.12 (0.31)	-0.68 (-2.57)**
Age	-	0.66 (2.52)**
Size	0.0003 (0.06)	1.012 (0.85)
Current Ratio	1.03 (0.08)	-0.0005 (-0.22)
Quick Ratio	-1.08 9 (-0.08)	0.0005 (0.21)
Debt to Equity ratio	-0.002 (-0.009)	0.001 (0.15)
Growth in sales	-0.008 (-0.01)	4.28 (1.30)
Growth in PAT	-0.0003 (-0.01)	2.75 (2.50)**
Growth in assets	-0.0001 (-0.05)	-3.86 (-1.22)
	R^2= 0.48, Adj R^2 =0.15	R^2= 0.74, Adj R^2 =70
Chow Test	0.017 (0.89)	
No of Observation	270	330
Note: Numbers in Parentheses are the t- Statistic , ***Coefficient are Significant at 1%, **Coefficient are Significant at 5% and *Coefficient are Significant at 10%		

(Source: Author Compilation)

ANNEXURE-VII

Research Papers Published

1. Pooja, K., & Sriram, P. (2017). "Financial Performance of FDI and Non FDI based Companies in Information Technology Sector and Service Sector in India". *Business Science International Research Journal Dec 2017.*

2. Pooja, K., & Sriram, P. (2017). "Financial Performance of FDI Based Companies is Superior than Non FDI Based Companies in Food, Agriculture, Textile, Pharmaceutical, Construction & Metal Sector in India." *International Journal of Research Culture Society, UGC Approved Monthly, Peer - Reviewed, ISSN: 2456-6683, Volume-1, Issue-09, Nov-2017.*

3. Pooja, K., & Sriram, P. (2017). "A Study on Impact of Foreign Investment on Technical Efficiency of FDI Based Companies in India." *INSPIRA- Journal of Commerce, Economics and Computer Science, ISSN: 2395-7069 (Print) (Impact Factor: 1.7122)* General Impact Factor: 2.0546, Volume 03 NO. 04, October- December, 2017.

4. Pooja, K., & Sriram, P. (2017). "A Study on Foreign Investment & Its Impact on Growth of Food & Agriculture Sector in India". *International Journal of Research in Commerce & Management, Volume No. 8 (2017), Issue No. 07 (July).*

ANNEXURE-VIII

Research Papers Presented

1. Pooja, K., (2017). "Financial Performance of FDI and Non FDI based Companies in Information Technology Sector and Service Sector in India". three days *International Conference on Advances in English Studies, Women Empowerment, Business ,Humanities & Social Sciences, at Carmel College for Women, Nuvem, Goa, India, 28-30th Dec 2017.*

2. Pooja, K., (2016). "A study on Impact of Foreign Direct Investment on Indian Economy- A Macro level analysis". Two days *2nd International Conference on Inclusive Economic Growth and Sustainable Development,* at Shri Dhamasthala Manjunathestwara Institute for Management Development, Mysore, 18th - 19th November 2016.