

REVIEW OF LITERATURE

CHAPTER – II

REVIEW OF LITERATURE

The literature relating to the current study entitled “Impact of Vertical FDI Spillovers on the Productivity and Export Performance of Indian Manufacturing Firms” are discussed under the following headings:

- A. Theories of FDI
- B. Trends in FDI Inflows
- C. Determinants of FDI Inflows
- D. FDI and Economic Growth
- E. Spillovers from FDI
 - i. Horizontal and Vertical FDI Spillovers and Firms’ Productivity
 - ii. Export Spillovers
- F. Other Related Studies

A. Theories of FDI

At the theoretical level, the major explanations of FDI encompassing motives and determinants can be divided into macroeconomic and microeconomic approaches. In addition, there are radical approaches based on Marxist principles and exploitation modes.

Macroeconomic approaches

These approaches include comparative advantages and levels of development approach. The comparative advantage approach has been developed by Kojima (1978) which established correspondence between comparative costs (affecting international trade) and comparative profitability (affecting international investment) stressing that both trade and investment should be guided by a common theory. A firm will choose to invest abroad by extending its operations rather than investing in a domestic company operating in the country in which it is interested as long as the income it expects to earn is greater. This will occur whenever the investing company possesses some advantages over its foreign competitor which are not readily available to it and are sufficient to compensate for the disadvantages of operating a subsidiary at a distance.

These advantages as described by Kindleberger (1969) may take various forms and include superior technology, patents, access to markets, and entrepreneurial expertise and experience and economies of integration and so on. A

firm will wish to fully exploit these benefits rather than share them with potential competitors and this encourages the firm to undertake direct rather than portfolio investment. The more significant the advantages, the greater the likelihood of monopoly profits being earned, and the more a firm is encouraged to engage in direct investment. The traditional theory suggests that where the cost of producing a certain quantity of output for export to a particular country, plus distribution and marketing costs is greater than the cost of producing the same product in the country concerned, it will pay the exporting company to set up local production facilities. FDI follows this principle because such type of investment raises income both in home and host countries. Thus this theory is an important determinant of FDI.

The 'level of development' is another important determinant of FDI. This approach was developed by Dunning (1981). It explains how net outward investment position of a country is related to the various stages of development. Dunning has shown that after a 'threshold' per capita income has been reached, further increases are associated with rising gross outward and gross inward investment.

There are five stages of development outlined below.

Stage 1: There is no gross outward investment either because the country's own enterprises have no specific advantages, or are exploited by minority direct investment. Smallness of gross inward investment may be due to small market size, poor infrastructural facilities and lack of trained and educated work force.

Stage 2: Inward investment is more due to expansion of domestic market and due to infrastructural facilities. Outward investment is small as the domestic enterprises are yet to develop fully the ownership specific advantages. Often inbound foreign investment is stimulated by imposition of tariff and non-tariff barriers by the host government. A country must possess some desirable locational characteristics to attract inward direct investment. The extent to which outward direct investment is undertaken will be influenced by home country induced push factors such as subsidies for exports and technology development or acquisition.

Stage 3: In this stage, a country begins to get specialisation in direct investment. The country seeks to attract inward direct investment in those sectors in which the comparative location advantages are strongest and comparative ownership advantages of its enterprises are weakest. Countries in stage 3 are marked by a gradual decrease in the rate of growth of inward direct investment, and an increase in the rate of growth of outward direct investment that results in increasing net

outward investment (NOI). Comparative advantages in labour intensive activities will deteriorate, domestic wages will rise, and outward direct investment will be directed more to countries at lower stage in their investment development path. The ownership advantages of foreign firms also begin to be eroded, as domestic firms acquire their own competitive advantages and compete with them in the same sectors. The role of government induced advantages is likely to be less significant in Stage 3, as those of FDI induced ownership advantages take on more importance.

Stage 4: It is a situation in which local firms develop strong ownership advantages to be reaped best through internationalisation of foreign investment abroad. Firms are induced to invest abroad due to rising domestic labour costs and lower rates of productivity (Dunning and Narula, 1996).

Stage 5: During Stage 5, the NOI position of a country first falls and later fluctuates around the zero level. At the same time, both inward and outward FDI continue to increase. This is the scenario which advanced industrial nations are now approaching. Stage 5 of investment development path (IDP) represents a situation in which no single country has an absolute hegemony of created assets. Moreover, the ownership advantages of MNEs will be less dependent on their country's natural resources but more on their ability to acquire assets and on the ability of firms to organize their advantages efficiently.

Micro economic explanations

Micro economic theories are mainly theories of market structure imperfections and market failure imperfections. In market structure imperfections, there are theories in which the behaviour of the firm deviates from that assumed under conditions of perfect competition, through their ability to influence market prices. Under market failure imperfections theories which depart from the technical assumption behind the model of perfect markets that is the assumptions about production technique and commodity properties will be considered (Bator, 1958). There are a number of theories explaining FDI. Except for the MacDougall-Kemp hypothesis, FDI theories are primarily based on imperfect market conditions. A few among them are based on imperfect capital market. The others take non-economic factors into account. Still others explain the emergence of MNCs exclusively among developing countries (Sharan, 2011).

The proponents of this theory of foreign investment suggest that in case the host country levies tariffs on the goods it was importing from the investing country,

the latter was bound to set up manufacturing facilities in the country. That is to say, FDI is bound to take place behind a tariff wall. In order to cross the tariff wall, the investing country replaces its exports to the host country by undertaking FDI.

(i) MacDougall-Kemp Hypothesis

One of the earliest theories was developed by G.D.A. MacDougall (1958) and subsequently elaborated by M.C. Kemp (1964). Assuming a two-country model i.e., one being the investing country and the other being the host country, and the price of capital being equal to its marginal productivity, they explain that capital moves freely from the capital abundant country to a capital scarce country and in this way the marginal productivity of capital tends to equalise between the two countries. This leads to improvement in efficiency in the use of resources and increase in welfare. Despite the fact that the output in the investing country decreases in the wake of foreign investment outflow, national income does not fall as long as the country receives returns on capital invested abroad, which is equivalent to marginal productivity of capital times the amount of foreign investment. So long as the income from foreign investment is greater than the loss of output, the investing country continues to invest abroad because it enjoys greater national income than prior to foreign investment. The host country too witnesses increase in national income as a sequel to greater magnitude of investment, which would not have been possible in the absence of foreign investment inflow.

(ii) Industrial Organisation Theory

The industrial organisation theory is based on oligopolistic or imperfect market conditions in which the investing firm operates. Market imperfections arise in many cases, such as product differentiation, marketing skills, proprietary technology, managerial skills, better access to capital, economies of scale, government-imposed market distortions, and so on. Such advantages confer on MNCs an edge over their competitors in foreign locations and, thus, help compensate the additional cost of operating in an unfamiliar environment.

One of the earliest theories based on the assumptions of an imperfect market was propounded by Stephen Hymer (1976). To Hymer, a multinational firm is a typical oligopolistic firm that possesses some sort of superiority and that looks for control in an imperfect market with a view to maximising profits. Despite the fact that the international firm is posted disadvantageously in a foreign host country, where it has no intimate knowledge of language, culture, legal system, and consumers'

preference, it possesses certain specific advantages that outweigh the disadvantages. The firm-specific advantages in Hymer's view are mainly the technological advantages that help the firm to produce a new product different from the existing one. It is in fact related to the possession of knowledge, which helps in developing special marketing skills, superior organisational and management set-up, and improved processing. What is significant in this theory is that these advantages are transmitted more effectively from one unit to the other irrespective of their geographical distance. Since the market is imperfect, rival firms do not avail of the technological advantage. International firm harvests huge profits. Graham and Krugman (1989) found empirically that it was the technological advantage possessed by European firms that had led them to invest in the U.S.A. Caves (1971) felt that firm-specific advantages are transmitted more effectively if the firm participates effectively in the production in the host country than through other ways such as export or licensing agreements.

(iii) Location-Specific Theory

Hood and Young (1979) stress upon the location – specific advantages. They argue that since real wage cost varies among countries, firms with low cost technology move to low wage countries. Again, in some countries, trade barriers are created to restrict import. MNCs invest in such countries in order to start manufacturing there and evade trade barriers. Sometimes it is the availability of cheap and abundant raw material that encourages the MNCs to invest in the country with abundant raw material.

(iv) Product Cycle Theory

Raymond Vernon (1966) felt that most products follow a life cycle that is divided into three stages. The first is known as the “innovation” stage. In order to compete with other firms and to have a lead in the market, the firm innovates a product with the help of research and development. The product is manufactured in the home country primarily to meet the domestic demand, but a portion of the output is also exported to other developed countries. The quality of the product, and not the price, forms the basis of demand because the demand is price-inelastic at this stage.

The second stage is known as “maturing product” stage. At this stage, the demand for the new product in other developed countries grows substantially and it turns price-elastic. Rival firms in the host country itself begin to appear at this stage to supply similar products at a lower price owing to lower distribution cost, whereas

the product of the innovator is often costlier as it involves the transportation cost and tariff that is imposed by the importing government. Thus in order to compete with rival firms, the innovator decides to set up a production unit in the host country itself, which would eliminate transportation cost and tariff. This leads to internationalisation of production. The imposition of tariff in the host country encourages foreign direct investment but the entry of foreign capital in protected industry reduces the welfare in the host country (Kojima, 1978).

In the final or “standardised product” stage, a standardised product and its production techniques are no longer the exclusive possession of the innovating firm, rival firms from the home country itself, or from some other developed countries, put stiff competition. This is not unusual because the follow-the-leader theory developed by Knickerbocker (1973) suggests that there is a tendency among followers to snatch the benefits of international production from the innovator. At this stage, price competitiveness becomes even more important; and in the view of this fact, the innovator shifts the production to a low cost location, preferably a developing country where labour is cheap. The product manufactured in a low cost location is exported back to home country or to other developed countries.

(v) Catching up Product Cycle Approach

In Japan, Dr. Akamatsu, Professor Emeritus of Hitotsubashi University, propounded a ‘catching up product cycle’ thesis. He originally called it ‘the wild geese flying pattern’ of industrial development in developing countries.

The concern of Vernon and others was to explain how a new product is invented and manufactured on a large scale in leading industrial countries. In a developing or catching up country, the product cycle starts with imports of the new product with superior quality. ‘Imports reconnoitre and map out the country’s demand’ and once increased demand approaches the domestic production threshold, domestic production is economical (Hirschman, 1958). A learning process follows and is assisted by importing technological know-how and by direct foreign investment. The expansion of production then leads to the exploitation of economies of scale, increases in productivity, improvements in quality and reduction in costs. This involves an import substitution process. But as domestic costs reach the international competitive cost threshold, foreign markets are developed, the scale of production is extended further and costs are reduced again. Thus the expansion of exports that is originally made possible by the growth of domestic demand, in turn

provides a stimulus to industrial development. It appears appropriate to call such successive development of imports, domestic production and exports the catching product cycle. It should be noted that such a product cycle takes place only for standardised, rather than new products, and in developing, rather than in industrialised countries.

(vi) Business Administration Approach

This theory concentrates on the growth of the firms. It views the activities of direct foreign investment as a natural consequence of the growth of a firm. This theory is based on the logic that when a company expands, it tries to capture as much of the domestic market as possible. When the corporate firm can no longer expand within the confines of the domestic market, it undertakes exportation. And thus, an export division is established. When export business expands, export division is converted into an international business division and is granted some autonomy. When international business with relation to a particular country or region becomes very large, subsidiaries are established in the concerned country or region. In the course of time, for the same reason, subsidiaries are established all over the world. And, although some autonomy is granted to its subsidiaries, in respect of a number of matters, there is central control from the corporate head quarters based in the parent country. Consequently the firm faces new problems such as negotiation with foreign governments, the handling of foreign currencies and other assets, dealing with foreign labourers, arbitrations of international conflicts, and so forth. There are many proponents of the business administration approach. Mention may be made of Penrose (1959), Fayerweather (1969), Stopford and Wells (1972), Dymsha (1972), Robbins and Stobaugh (1972) and Robinson (1973).

(vii) Tariff Wall Jumping Approach

The proponents of this theory of foreign investment suggest that in case the host country levies tariffs on the goods it was importing from the investing country, the latter is bound to set up manufacturing facilities in the host country. That is to say, FDI is bound to take place behind a tariff wall. In order to cross the tariff wall, the investing country replaces its exports to the host country by undertaking FDI.

(viii) Internalisation Approach

Buckley and Casson (1976) too assume market imperfection, but imperfection, in their view, is related to the transaction cost that is involved in the intra-firm transfer of intermediate products such as knowledge or expertise. In an

international firm, technology developed at one unit is normally passed on to other units free of charge. This means that the transaction cost in respect of intra-firm transfer of technology is almost zero, whereas such cost in respect of technology transfer to other firms are usually exorbitantly high putting those firms at a disadvantage. Coase (1937) too believes that MNCs bypass the regular market and use internal prices to overcome the excessive transaction cost of an outside market. Thus, it is the internalisation benefit manifesting in the cost-free intra-firm flow of technology or any other knowledge that motivates a firm to go international. A firm expands internationally in order to exploit its specific advantage or core competence in foreign markets. When the know-how, technology, skills, or trade secrets available with the firm are crucial to a firm's competitive advantage, it needs to protect such knowledge base within the organisation. Since arm's-length collaborative strategies, such as management contract and licensing do not provide complete protection to the specific know-how possessed by the firm, internalisation is often preferred so that trade secrets remain within the organisation. Therefore, a firm expands into international markets by way of investing in a foreign country in order to have control over its overseas operations.

According to Dunning (1981) the extent to which MNEs will engage in foreign production will depend upon their comparative ownership advantages vis-à-vis host country firms and the comparative location endowments of home and foreign countries. Unlike location specific endowments, which are external to the enterprises that use them, ownership specific endowments are internal to particular enterprises. They consist of tangible and intangible resources including technology which itself dictates the efficiency of resource usage. Unlike location endowments many ownership advantages take on the quality of public goods that is their marginal usage cost is zero or nominal (hence whenever a marginal revenue can be earned, but it is not earned, they are underutilised) and although their origin may be partly determined by the industry or country characteristics of enterprises, they can be used anywhere.

Three types of advantages are taken. First comprises those which any firm may have over another producing in the same location; Bain's (1956) classic work on the barriers to new competition provides the basic answer. Such benefits may lie in the access to markets or raw materials not available to competitors; or in size (which may both generate scale economies and inhibit effective competition); or in an

exclusive possession of intangible assets for example patents, trademarks, management skills etc., which enable it to such a higher level of technical or price efficiency and/or achieve more market power. These advantages then stem from size, monopoly power and better resource capability and usage.

The second type of advantage is that which a branch plant of a national enterprise may have over a de novo enterprise (or over an existing enterprise breaking into a new product area), again producing in the same location. This arises because, while the branch plant may benefit from many of the endowments of the parent company, for example access to cheaper inputs, knowledge of markets, centralised accounting procedures, administrative experience R&D etc. at a zero or low marginal cost the de novo firm will normally have to bear their full cost. The greater the non-production overheads of the enterprise, the more pronounced this advantage is likely to be.

The third type of advantage is that which arises from the multinationality of a company and is an extension of the other two. The larger the number and the greater the difference between economic environments in which an enterprise operates, the better placed it is to take advantage of different factor endowments and market situations.

The crux is that the international competitiveness of a country's products is attributable not only to the possession of superior resources but also to the desire and ability of those enterprises to internalise the advantages from the possession; and that servicing a foreign market through foreign production confers unique benefits of this kind. Internalisation is thus a powerful motive for takeover or mergers.

(ix) Eclectic Paradigm

Dunning's (1980) eclectic paradigm (OLI Paradigm) is a blend of macroeconomic theory of international trade (L) and micro-economic theories of the firm (O and I). The extent and pattern of FDI are determined by a combination of three factors i.e., ownership (O) factor, the location (L) factor and the internalisation (I) factor.

(a) The Ownership (O) Factor

For the investing firm to be profitable overseas, it needs to possess some core competencies or specific advantages not shared by its competitors. Such advantages, internal to a specific firm, are termed as ownership (O) factor. Such advantages should enable the firm either to have a lower marginal cost or higher

marginal returns vis-à-vis its competitors so as to enable it to reap more profits from overseas investment. An MNE possesses firm-specific advantages, such as

- Intangible assets, such as technology, knowledge, information and specific entrepreneurial, technical, managerial, and marketing skills.
- Tangible assets, such as natural resources, capital, and manpower.
- Size economy due to large size of MNEs they often enjoy economies of scale and scope, access to finance within the MNEs, benefits emanating from diversification of assets and risks spread.
- Monopolistic advantage where an MNE may benefit from its monopolistic ownership of scarce natural endowments, privileged access to raw materials, ownership of patent rights, and other inputs.

Since an MNE is required to have its operations in foreign countries, it has to incur additional costs due to

- Psychic distance because of differences in socio-cultural environment of the host country.
- Unfamiliarity with the host country's market conditions.
- Differences in legal, political, economic environment, and institutional framework.
- Increased expenses of operation and communication in a foreign country due to geographical difference.

As the indigenous firm in the host country is not required to incur the above costs, the 'costs of foreignness' are specific to foreign firms. Therefore, in order to operate profitably and to remain in a foreign market, an MNE has to possess firm-specific advantages that either lower its operational costs or earn higher revenue.

(b) The Location (L) Factor

The locational (L) advantage or factor of a host country is the key determinant to its relative attractiveness as an investment destination. The major country-specific advantages can be as follows:

Economic - Availability of factor endowments, availability of raw materials and other inputs, productivity and costs of inputs, market size and its growth, cost of logistics, efficacy, and cost of communication channels.

Socio-Cultural - Familiarity of operational environment, socio-cultural similarity, language, low psychic distance between the firm's home country and the host country.

Political - The host country government's attitudes and policies towards foreign firms and investment, incentives to promote FDI, continuity of economic policies, and the stability of the government.

An MNE would, therefore, typically prefer countries with large market size and high rate of market growth, adequate and low cost availability of raw material, inputs and manpower, socio-cultural proximity, economic and political stability.

(c)The Internalisation (I) Factor

The internalisation (I) factor explains the entry mode used by an MNE to access international markets. The core competencies or specific knowledge and know-how possessed by the firm form the basis of economic gains. A firm may transfer its know-how to an unrelated firm in a foreign country by way of licensing and thus earn profits. A firm attempts to internalise its operations

- To protect its proprietary knowledge from competitors.
- To create and maintain monopolistic or oligopolistic power in the market by subsidising among its international operations, etc.
- To protect itself against market uncertainties.

Thus, the internalisation advantages explain why an MNE opts for wholly owned subsidiaries rather than licensing or minority ownership for accessing foreign markets. The eclectic theory provides the most comprehensive explanation of FDI, integrating firm-specific (O), location-specific (L), and internalisation (I) advantages. It logically examines the reasons for investing overseas, the selection of country location for investment, and the cost-benefit analysis for selecting the mode of international expansion in a holistic manner (Joshi, 2010).

(x) Currency Based Approaches

The currency based theories are normally based on imperfect foreign exchange and capital market. One such theory has been developed by Aliber (1970). He postulated that internationalisation of firms can best be explained in terms of the relative strength of different currencies. Firms from a strong-currency country move out to a weak-currency country. In a weak-currency country, the income stream is fraught with greater exchange risk. As a result, the income of a strong-currency

country firm is capitalised at a higher rate. In other words, such a firm is able to acquire a large segment of income generation in the weak-currency country corporate sector. The merits of Aliber's hypothesis lie in the fact that it has stood up to empirical testing. FDI in the United States of America, Canada, and the United Kingdom has been found to be consistent with the hypothesis. However, the theory fails to explain why there is FDI in the same currency area.

Radical Approaches

The radical approaches running close to the Marxist lines of argument view transnational investment in the frame of spreading international capitalism and imperialism. The explanations of radicals regarding the behaviour and investment of transnational corporations often contain a mix of microeconomic and macroeconomic elements. The radicals broadly regard oligopolistic nature of international business as a necessary cause (and effect) of a worldwide hierarchy of economic dependence, exploitation and political power.

(i) The Core Periphery Model

Gilpin (1975) provides a scientific macroeconomic description of the process of internationalisation of capitalism through transnational investment within the framework of the division of world economy into core and periphery economies. According to Gilpin, foreign investment is a strategy employed by both rising and declining dominant capitalist economies and examines it from the perspective of the 'tendency for the locus of economic and industrial activity to diffuse within the international economy'.

In the first phase of an interdependent international economy foreign investment is a sign of the strength of the dominant, called 'core'. Initially, due to its technological advantages and industrial efficiency, the core's income rises rapidly. There is a high level of savings, which is not absorbed domestically in consumption or investment. The surplus capital resources are exported in the form of investment which takes place predominantly in extractive, infrastructural or manufacturing industries in foreign countries which then become peripheral economies. Subsequently, owing to structural changes in both core and periphery, foreign investment begins to reflect more and more the gradual shift in the locus of economic and industrial activity from core to periphery. There is an acceleration of foreign investment, reflecting one of the two kinds of structural changes in the core. The first is a general decline in domestic investment opportunities in the core relative

to the periphery. The second is the existence of an imperfect capital market and corporate structure, which fosters foreign, at the expense of home, investment. Whatever be the case, foreign investment takes place as a measure against declining profitability in the core. Thus, foreign investment is undertaken by firms in response to both rising and relatively declining dominant industrial core economies.

During the process of structural change, certain forces come up to influence the distribution of wealth, power, and economic activity in the core and periphery regions. One set of forces exert 'agglomeration' or 'polarisation' effects tending to concentrate wealth, industry and economic activity in the core. The other opposite set of forces produce 'spread' or 'diffusion' effects which, over time tend to diffuse or redistribute wealth and resources from the core to the periphery and are concomitant to the declining or maturing phase in the periphery. The spread effects are the resultant of interaction of a number of component forces in the core like scale diseconomies, rising production costs (particularly wages) and falling rate of profit due to capital accumulation which encourage industry and economic activity to migrate.

(ii) The Neo-Marxist Approach

The neo-Marxist theory of which the most prominent founder are Baran (1957), Sweezy (1972), and Magdoff (1966), rests upon two foundations, the theory of monopoly capitalism and the theory of imperialism and purports to show some general characteristics (rather than the exact nature of imperialism) of the centre-periphery relationship.

The fundamental thesis of the most radical neo-Marxists is that the centre is actually against the development of the peripheral economies and that a capitalist development of the less developed countries is impossibility. In the neo-Marxists thinking, centre-periphery relationship is essentially that of exploitation which is manifested in the transfer of surplus (profits) through various channels from periphery to the centre. This increases the absorption difficulties of the centre and induces further outward expansion. The peripheral (less developed) economies are thus entrapped in a vicious spiral of the center's surplus-absorption problem and the perpetual drain on their resources making their development a distinct impossibility.

According to the neo-Marxists, the international capitalist forces dominate the Third World countries through the transnational corporations. The corporations are regarded as the power units of modern imperialism which are used by the states of

the imperialist countries. The international firms act as the conduits for the 'siphoning off' the surplus of the poor peripheral economies (through trade, profit remittance, saving repatriation and capital flight) into the developed core economies. With the under development further caused and inappropriate production (and consumption) pattern imposed, the need for transnational investment is perpetuated.

To sum up, these theories yield a large variety of determinants of foreign direct investment, all the firm, industry, economy and international levels. At a microeconomic level, the factors are largely economic dictated by business interests, at a wider plane, political and ideological factors make a conspicuous presence. The different theories or approaches are in fact, not mutually exclusive and in many cases, emphasise common determinants. For instance, while the radical approach is a class apart, it emphasises, among others, the elements of resource concentration and market exploitation as do the oligopolistic theories. Nevertheless, the explanatory power of each theory taken separately is, at best, limited; collectively, they do enable a comprehensive view of the explanation of transnational investment. The trade related theories which are broadly within the framework of a neo-classical, are at a comparatively higher level of theoretical abstraction and tend to ignore the down-to-earth economic reality of international business.

Microeconomic approaches, particularly the oligopolistic theories, are far most widely accepted as they focus on the firm-specific factors in the context of real-life market structures. The radical approaches are cast predominantly in the core-periphery hierarchal structure of the world economy and explain international investment only in the broader context of imperialism, exploitation and dependence under development nexus. The approaches which often emanate from strong ideological positions contain robust reasoning based on hard interpretation of economic reality and historical forces. Nevertheless, the radical approaches do not explain transnational investment exclusively or explicitly as it is considered only as one of the instruments of international capitalism or imperialist forces. Thus, the approach particularly the Marxist one, would explain international trade, foreign aid and portfolio capital and other forms of international economic relations in the same broad way as it does for direct investment.

B. Trends in FDI Inflows

Rao et.al., (1999) opined that for a long time India's approach towards FDI was governed by multiple objectives of self-reliance, protection of national industry

and entrepreneurs, import of select technologies and export promotion. Rao sought to provide empirical content to the developments during the first seven years of liberalisation. In the new era when the emphasis was on attracting large amount of foreign investment, approvals for FDI marked a significant rise compared to the immediately preceding phase. The approval data revealed that while infrastructure sectors attracted maximum investment, consumer goods sectors also had an important place in the approvals. The broad category of services accounted for almost one-third of the total. The main factors behind the large approved amount appeared to be the de-reservation of public sector reserved areas, de-licensing, allowing larger share for foreign investors, and the general boom in global investment flows. The steep increase in the approved amount since 1995, especially during 1997, was a reflection of further relaxation in the official policy towards foreign investment. The fact was that FDI approvals in the post liberalisation period were increasingly for setting up of subsidiaries. Hence it may not be surprising that very few companies with substantial foreign equity entered the stock market during the post-liberalisation period.

Nagaraj (2003) emphasised that a more liberal policy regime, industrial labour market reforms, and infrastructure investment were needed to increase foreign investment. While infrastructure improvement surely merits a close attention, one cannot be sure if the extent of the reforms and the quantum of foreign investment inflow were positively related. The author stressed that, what is needed is a strategic view of foreign investment as a means of enhancing domestic production and technological capability, and also to access the external market for labour intensive manufacturers as China has precisely done. The investigator reiterated what K. N. Raj, a perceptive observer of comparative economic development, noted early on in China's liberalization drive, "It is certainly not without good reason that China has chosen to be hospitable even to multinationals with world-wide ramifications like IBM, evidently in the expectation of securing the know-how for building up semi-conductor industry of its own. Those who do not realise the implications of all this for India are living in a dream world of their own". Such interventions need selectivity, and strategic intent.

Banga (2003) put forth that the last two decades witnessed an extensive growth in FDI flows to developing countries. This has been accompanied by an increase in competition amongst the developing countries to attract FDI, resulting in

higher investment incentives offered by the host governments and removal of restrictions on operations of foreign firms in their countries. In this scenario, the study examined the impact of fiscal incentives offered, removal of restrictions and signing of bilateral and regional investment agreements with developed and developing countries on FDI inflows to developing countries. The analysis was first undertaken for aggregate FDI inflows to fifteen developing countries of South, East and South East Asia for the period 1980-81 to 1999-2000. Separate analyses were then undertaken for FDI from developed and developing countries. The results based on random effects model showed that fiscal incentives do not have any significant impact on aggregate FDI, but removal of restrictions attracts aggregate FDI. While lowering of restrictions attract FDI from developed countries, fiscal incentives and lower tariffs attract FDI from developing countries.

According to Srivastava (2005), FDI inflows into India vitally depends on adequate infrastructure facilities, better FDI policy framework, labour law reforms and better management of fiscal deficit. The four major constraints which appeared to play a prominent role in deterring FDI inflows into India were (a) lack of policy initiatives (b) inadequate infrastructure facilities (c) rigidities in labour law and (d) high fiscal deficit. The investment climate composed of three elements viz., costs, risk and barriers to competition. India performed badly in all these areas. FDI inflows to India would be bright if these impediments were removed.

Kumar (2005) highlighted that after following a restrictive policy towards FDI, India liberalised her policy regime considerably since 1991. This liberalisation has been accompanied by increasing inflows and also by changes in the sectoral composition, sources and entry modes of FDI. The increasing recognition of India's locational advantages in knowledge-based industries among MNEs led to increasing investments in software development and global R&D centres set up in India to exploit these advantages.

Dutta and Sarma (2008) opined that with the initiation of new economic policy in 1991 and subsequent reforms process, India witnessed a change in the flow and direction of FDI into the country. This was mainly due to the removal of restrictive and regulated practices. FDI in India increased from US \$ 129 million in 1991-92 to US \$ 40,885 million in March 2005, an increase of about 316.9 times. However, negative growth rate was noticed during the period 1998-2000 primarily due to falling share of major investor countries, steep fall of approval by 55.7 per cent in 1998

compared to 1997 and slackening of fresh equity. However, traditional industrial sectors like food processing industries, textiles, etc., which were once important sectors attracting larger FDI, gave way to modern industrial sectors like electronics and electrical equipments, etc.

Rizwanullah and Mangalani (2009) stated that the government of India policy towards foreign capital, after independence was characterised by the cautious promotions strategy, and restrictive nature and was geared towards import substitution measures and in 100 per cent export promotion measures, where the major emphasis was placed on technology transfer and not on investment. A real thrust began with the announcement of the economic reforms undertaken in 1991 which was directed towards increased liberalisation, privatisation and deregulation of the industrial sector, and to re-orient the economy towards global competition by reducing trade barriers, and gradually opening up its capital account, which led India to increasingly become a favourable destination for foreign investors. The New Economic Policy (NEP) measures of 1991 brought about several measures to attract FDI and to make the foreign investors confident in getting healthy and safe return. FDI flows partly depended upon the policy factors and partly on the soundness of the macroeconomic variables. The continuity of the foreign investment policies, infrastructure improvements, growing market size, favourable growth patterns and the setting up of bilateral, interregional and multilateral level agreements among these countries contributed much to FDI flows. Efforts have to be taken to attract FDI in manufacturing sectors with export orientation, development of Export Processing Zones (EPZs) and the reduction of the gap between the approvals and the actual, red tapism, price stability and the improvements in the socio-economic fundamentals.

According to Barthwal and Yadav (2009) India has a vast pool of skilled manpower, cheap labour and large reservoir of natural resources. It is well connected internally and internationally and has several international airports and ports. Production bases can also be set up in India for exports to third world countries. Production can take place for mass communication items like consumer goods, electronic products, for products with short shelf life like food products etc. There was scope for high technology products like semi-conductors, electrical cars, etc., the basic requirements for intensive research and development work. With a middle class, which is now nearing 300 million, offers a huge market. In the

atmosphere of economic stability and economic liberalisation, there is tremendous scope for absorption of FDI directly by the Indian market.

Shobhana and Vaishnavi (2009) stated that the economic reforms launched in July 1991 have progressively liberalised and deregulated the Indian economy. Since then, the Government of India has been laying down the road map for FDI reforms to encompass relaxation of procedural as well as investment norms. The paper focused on the country-wise and sector-wise inflows of FDIs in India. Sector-wise, maximum FDI flows went to financial and non-financial services followed by computer software, telecommunications and constructions activities. FDI inflows had favourably impacted the economy of the leading states that have attracted maximum FDI such as Delhi, Maharashtra, Karnataka and Tamil Nadu and fostered economic growth by creating strong base for the latest technology, developing major sectors, giving rise to employment opportunities and enhancing exports.

According to Sumanjeet (2009) existing studies revealed that the huge surge in international capital flows since early 1990s created unprecedented opportunities for the developing countries like India to achieve accelerated economic growth. International financial institutions routinely advise developing countries to adopt policy regimes that encourage capital inflows. Since the introduction of the reform process in the early 1990s, India witnessed a significant increase in capital inflows. The size of net capital inflows to India increased from US \$ 7.1 billion in 1990-91 to US \$ 108.0 billion in 2007-08. Today, India has one of the highest net capital inflows among the Emerging Market Economies (EMEs) of Asia. The main danger posed by large and volatile capital inflows was that they may destabilise macroeconomic management.

Kuriakose and Jyothi (2009) highlighted that in the pre-recession scenario India was ranked, as the world's third best FDI destination after China and the USA. India has been one of the most favoured investment destinations in the world. In 2003, India was ranked sixth on the list. The Goldman Sachs Global Economic Paper of October 2003 'Dreaming with BRICS: The Path to 2050' predicted that over the next 50 years, Brazil, Russia, India and China could become a much larger force in the world economy. There were several initiatives from the policy makers to facilitate increased FDI inflows. The Indian performance has been worth noticing since 1990s till the global slowdown in 2008. In good old days, India with all its strengths viz., huge domestic market, low-cost skilled and unskilled labour, good

legal system, strong regulatory mechanism etc. did not attract FDI at least like emerging nations like China, Brazil, Mexico, etc. However, today a positive change in the investment scenario could be seen far more favourable than that of the past. The only drawback faced by India was the spread of destinations and type of sectors, which might affect the overall economic growth of the nation. The investment destinations are limited to a few states and a few types of investment sectors.

Pradhan (2010) stated that India's share in the world wide FDI inflows was rather low. This was because India's factor market was less efficient as compared to many East and South-East Asian countries with whom India competes in the international market. The probable reason was the lack of structural reforms and a host of other macroeconomic indicators. In other words, it could be argued that the openness policy of the government was not sufficient to boost adequate FDI inflows into the Indian economy.

Baskaran and Charlas (2010) put forth that the Indian economy today is performing better than it has ever performed since independence, because of the political will that took bold steps to open the closed doors of the Indian economy in 1991. FDI flows are usually preferred to other forms of external finance because these are non-debt creating, non-volatile and their return depends on the performance of the project financed by the investor. Since economies that enjoy relatively higher rate of growth succeed in attracting foreign investment, which, in turn, accelerates their growth, it was fair to expect that India would have a larger share of FDI in the coming decades. The challenge before India was to disentangle the effects by taking measures to maximise positive spillovers and minimise the negative effects.

Pawha (2010) opined that FDI into India has been steadily increasing with increased liberalisation. According to data released by the Department of Industrial Policy and Promotion (DIPP), the cumulative amount of FDI from August 1991 to April 2010 stood at \$134,642 million. The 2009 survey of the Japan Bank for International Cooperation (formerly The Export-Import Bank of Japan) released in November 2009, conducted among Japanese investors, continued to rank India as the second most promising country for overseas business operations, after China. A report released in February 2010 by Leeds University Business School, commissioned by UK Trade and Investment, ranked India among the top three

countries where British companies can do better business during 2012-14. Thus despite the common perception that various hurdles existed to prevent the smooth flow of foreign investment into India, the reality was that it has never been easier or more attractive to invest in India.

Some credit rating agencies have even suggested that FDI is a reflection of that country's creditworthiness. The propaganda of the World Bank and the IMF, among others, on the importance of FDI has been such that it is now believed that a country cannot develop without FDI. India gets less than 5 per cent of the FDI flows to developing countries. The biggest stumbling block for FDI inflows was India's bloated bureaucracy. Approximately only 20 per cent of FDI approvals translate into actual investment. Another hindrance for FDI inflows in India was the streamlining procedures for FDI approval, such as environmental clearances and legal work, are still time-consuming. Added to this, was the political uncertainty at the central and state levels, and of the centre-state relations. Infrastructure reforms are moving very slowly. The challenge before India was not to attract more FDI but to get quality FDI that fosters development (Subbarao, 2011).

According to Shukla (2011) the 1991 reforms were a response to the grave economic crisis which the country faced in 1991; most liberalisation attempts in recent history have been driven by crisis of one sort or the other. The author argued that FDI is a superb catalyst of growth and not an initiator and it was most effective in countries which possess a threshold level of human capital. There was no reason to believe that inflows of large volumes of FDI alone necessarily promote the growth of the social product. The optimum level of FDI a country should aspire for was conditioned by the history and the stage of its industrialisation. Policies should be designed to remove various sorts of distortions in product and factor markets, reform of labour laws and promotion of infrastructure and the growth of human capital. These policies should be adopted in the interests of both domestic and foreign investment.

Satyanarayan et.al., (2011) underscored that it is a national priority to remove gaps between approvals and actual flows vis-à-vis FDI. Since FDI is mostly in the form of physical investment, investor would prefer the markets with better infrastructure. The attractiveness of the host market also affects the FDI positively and significantly. FDI makes contribution towards technological progress in real terms in the industrial sector. Current investment policy trends can be generally

characterised by further liberalisation and facilitation of foreign investment. At the same time, efforts to regulate foreign investment to advance public policy objectives (eg. protection of the environment, alleviation of poverty) have intensified. This dichotomy in policies and the political will to rebalance the respective rights and obligations of the State and investors are becoming apparent at both the domestic and international policy levels, with emphasis swinging towards the role of the State.

Rajput et.al.,(2012) emphasised that there was a clear indication that foreign investors showed keen interest in Indian economy because of liberalised regime pursued and followed by Indian economy. There was a constant upsurge in FDI equity flows reaching the peak in 2008-09, showing a decline in 2010 and 2011 and showing slight signs of recovery in January 2012 taking the cumulative equity inflows of FDI to a record level of 243,055 US Dollars. There are a number of factors contributing to this contemporary trend, with a huge consumer base, the growing middle class, increased urbanisation and rising disposable incomes.

Madem et.al., (2012) highlighted that with the onset of reforms to liberalise the Indian economy in July of 1991, a new chapter has dawned for India and her billion plus population. This period of economic transition has had a tremendous impact on the overall economic development of almost all major sectors of the economy especially the services sector. Besides, it also marks the advent of the real integration of the Indian economy into the global economy. India has been attracting foreign direct investment especially during post reforms period. The sectors like telecommunication, construction activities and computer software and hardware have been the major sectors for FDI inflows in India. The services sector accounted for a steeply rising share of FDI stocks in India since the mid-1990s. An analysis of the recent trends in FDI flows at the global level as well as across regions or countries suggested that India attracted higher FDI flows in line with its robust domestic economic performance and gradual liberalization of the FDI policy as part of the cautious capital account liberalisation process.

Shah and Parikh (2012) studied the evolution of FDI from being a small component of total industrial investment in India to becoming a major economy booster. Regression analysis was the primary statistical tool employed to determine growth rates and relations between economic variables. Depending on the characteristics of the host country, investors settle down in the domestic market or in industries that enhance export growth of the host country. In India, where FDIs are

often looked down with suspicion, it was often questioned whether the FDIs are simply exploiting India as a market or are helping in its export growth also. According to the study, the sectors that received highest amount of FDI consistently over the years were service, finance, construction, electronics and telecom. Barring electronics, these sectors were more domestically active rather than being export oriented. Sectors like metallurgy, electronics, gems and jewellery and chemicals were export oriented sectors that were attracting foreign investors. Hence, it is observed that when FDI flows increased, it has also gone into some export sectors and has benefited the nation in earning more foreign exchange. The overall effects of inflow of total FDI on exports have also been positive.

Pillania (2012) put forth that though India has a long history of FDI inflows, the actual FDI post-independence was quite low. Post-1991 liberalisation policies supported inflow of FDI. Overall there was increase in foreign trade from 1991 to 2012; however the annual growth has not been consistent over the years. Services, construction development, telecommunications, computer software and hardware, and drugs and pharmaceutical have received the maximum amount of FDI inflows. These five sectors have received almost half of the overall FDI inflows. Mauritius, Singapore, United Kingdom, Japan and South Africa have contributed the maximum amount of FDI inflows. These five countries have contributed almost three-fourth of the overall FDI inflows. Mumbai, New Delhi, Bangalore, Chennai, Ahmadabad and Hyderabad offices of RBI have contributed the maximum amount of FDI inflows. These six offices have contributed more than two-third of the overall FDI inflows. Maharashtra has received the maximum amount of FDI. However the FDI inflows are quite small in comparison to China. Research showed positive impact of FDI on Indian economy and while the foreign investment inflow represents a substantial jump over the 1980s, it was quite small in comparison to China.

Akhtar (2013) highlighted that FDI has played a significant role in the growth and development of Indian economy. Indian GDP grew four-fold since the year 1991. FDI generates significant benefits by bringing non-debt creating foreign capital resources, technology up gradation, skill enhancement, new employment, spillovers and allocative efficiency effects. Thus FDI acts as a catalyst for domestic industrial development and considered to be an important vehicle for economic development. During pre-liberalisation period FDI increased at the compound annual growth rate of 19.05 per cent while during post-liberalisation period it has grown to 24.28 per cent.

This indicated that liberalisation has had a positive impact on FDI inflows in India. Since 1991 FDI inflows in India has increased approximately by more than 165 times.

According to Wellington and Jammu (2014) before the economic reforms the flow of foreign direct investment to India has been comparatively limited because of the type of industrial development strategy and the various foreign investment policy followed by the nation. Government policy towards foreign capital was very selective. Foreign investment was normally permitted only in high technology industries in priority areas and in export oriented areas. So the inflow of FDI before 1990's was very low. To fully utilize the country's immense economic potential, the government launched economic reforms in 1991. The new government policies were simple, transparent and promoted domestic and foreign investment. India's abundant and diversified natural resources, its sound economic policy, good market condition and high skilled human resources made it a proper destination for FDI. After long years of journey FDI was also introduced in various sectors and states in India. The investment of FDI in various states and sectors led to rapid growth of Indian economy.

Kaur et.al., (2014) stated that India emerged as the fifth largest recipient of FDI across the world. India was considered the second largest country amongst all developing countries and ranked fourth in the Purchasing Power Parity (PPP) in the world. So India has high potential to attract FDI inflow. The authors found that total FDI inflow in India from April 2000 to November 2013 was 311,398 US\$ million. The study also revealed that Mauritius emerged as the most dominant source of FDI contributing 77,083.47 US\$ million of the total investment in the country. The services sector accounted for a steeply rising share of FDI stocks in India followed by construction development, telecommunications and computer software and hardware.

According to Hameedu (2014) FDI in India to various sectors can attain sustained economic growth and development through creation of jobs, expansion of existing manufacturing industries. The inflow of FDI in service sectors and construction and development sector, from April 2000 to March 2013 attained substantial sustained economic growth and development through creation of jobs in India. Computer, software and hardware and drugs and pharmaceuticals sector were

the other sectors to which attention was shown by foreign direct investors. The Foreign direct investors' interest in other sectors has been quite poor.

Veerabhadrapa (2014) underscored that FDI as a strategic component of investment was needed by India for its sustained economic growth and development through creation of higher level of employment generation in the world, expansion of existing manufacturing industries, short and long term project in the field of healthcare, education, research and development etc. Government should design the FDI policy such a way where FDI inflow can be utilized as means of enhancing domestic production, savings and exports through the equitable distribution among states by providing much freedom to states, so that they can attract FDI inflows at their own level.

From all the studies on the trends in FDI inflows it is apparent that with the initiation of new economic policy in 1991 and subsequent reforms process, India witnessed a change in the flow and direction of FDI into the country. The main factors behind the large approved amount of FDI appeared to be the de-reservation of public sector reserved areas, de-licensing, allowing larger share for foreign investors, and the general boom in global investment flows. The cumulative amount of FDI inflows from August 1991 to April 2010 stood at \$134,642 million. The total FDI inflow in India from April 2000 to November 2013 was 311,398 US\$ million. Mauritius emerged as the most dominant source of FDI. The services sector accounted for a steeply rising share of FDI stocks in India followed by construction development, telecommunications and computer software and hardware. India emerged as the fifth largest recipient of foreign direct investment across the world and ranked fourth in the purchasing power parity (PPP) in the world.

C. Determinants of FDI Inflows - Foreign Studies

Noorbakhsh et.al., (2001) observed that developing countries might enhance their attractiveness as locations for FDI by pursuing policies that raise the level of local skills and build up human resource capabilities. Nevertheless, the empirical evidence in the literature in support of this recommendation for a large sample of developing countries was scant. The paper evaluated this argument and empirically tested the hypothesis that the level of human capital in host countries may affect the geographical distribution of FDI. The empirical findings of the study suggested that human capital was a statistically significant determinant of FDI inflows.

Naude and Krugell (2007) used a cross-country econometric approach to identify the determinants for foreign direct investment in Africa. The authors used a dynamic one-step generalized method of moments (GMM) estimator. The GMM-estimates identified a number of robust determinants of FDI, namely government consumption, inflation rate, investment, governance (political stability, accountability, regulatory burden, rule of law) and initial literacy. The study concluded that geography does not seem to have a direct influence on FDI flows to Africa. Neither market-seeking nor re-exporting motives of FDI seem to dominate. Political stability showed up as a significant determinant of FDI. This clearly emphasised the crucial importance of initiatives to ensure political stability and good governance.

Sekkat and Varoudakis (2007) assessed the importance of openness, infrastructure availability, and sound economic and political conditions in increasing developing countries' attractiveness with respect to FDI. The findings highlighted the importance of the investment climate in increasing a country's attractiveness with respect to FDI with regard to infrastructure endowment, as well as with the economic and political environment. Improvement in these aspects of the business climate can increase the FDI inflows. The role of openness in attracting FDI was confirmed. The results showed that these factors are particularly important for South Asia, Africa, and the Middle East. The paper also showed a higher impact of these factors on FDI in the manufacturing sector than on total FDI. The message to developing countries' policymakers was two-folds. First, efforts towards openness should be initiated or further increased in order to make their economies attractive to foreign investors. Second, improvements in other aspects of the investment climate are important complements to openness and result in additional and sensitive increases in FDI inflows.

Bitzenis et.al., (2007) aimed to provide clear insight into the key FDI motives in the manufacturing sector in FYR Macedonia and suggested recommendations that might be applied in attracting FDI. Based on questionnaire data on 79 manufacturing companies, the manufacturing sector was found to perceive the low cost of unskilled labour as the strongest FDI driving force, followed by ownership advantages and geographical proximity. Contrary to the prevailing consensus in the literature, market factors seem to exert very limited influence in attracting investment, except for investment targeting the local market. One major lesson that could be drawn was

that generalised investment promotion policies and strategies might not work equally well for all manufacturing industries and might have no impact in attracting FDI in particular cases. Instead, policies should employ a tailor-made approach, taking account of specific features of the targeted industries, companies and countries of origin.

Hakkala et.al., (2008) examined the effect of corruption on FDI. The authors showed that corruption can have different effects on horizontal investments, which are primarily aimed at sales to the local market, compared with vertical investments, which are made to access lower factor costs for export sales. Using Swedish firm-level data, the authors found that corruption reduces the probability that a firm will invest in a country. Moreover, when studying the different types of investments, they found that horizontal investments, measured by affiliate local sales, are deterred by corruption to a larger extent than are vertical investments.

Jajri (2009) examined the influence of FDI on the growth of Malaysia for the period 1970-2003. It was found that FDI has significant influence on the growth rate of the Malaysian economy. In addition, multiple regression analysis was performed to determine the relationship between the specific determinants and FDI inflow to the country. The results of the FDI determinants model, firstly, revealed the existence of a long-run relationship between FDI and the variables involved; and secondly, that GDP, exchange rate, public development expenditure, openness of the economy and labour cost had a direct impact on FDI.

Mottaleb and Kalirajan (2010) opined that by bridging the gap between domestic savings and investment and bringing the latest technology and management know-how from developed countries, FDI can play an important role in achieving rapid economic growth in developing countries. Using panel data from 68 low-income and lower-middle income developing countries, this article strived to identify the factors that determine FDI inflow to developing countries. Based on a comparative discussion focusing on why some countries are successful in attracting FDI, this article demonstrated that countries with larger GDPs, higher GDP growth rates, higher proportion of international trade and a more business-friendly environment are more successful in attracting FDI. The findings showed that most lower-middle income countries and Asian countries, besides their large domestic markets, are highly linked with the global market through international trade and offer a more business-friendly environment to investors. Finally, in the estimated empirical

model it was also found that besides GDP size and its growth rate, linkages with the global market through international trade, relationships with major donor countries in the form of foreign aid and a business-friendly environment measured by the days required to start a business are the most important and significant factors in determining FDI inflows to developing countries. The study concluded that small, developing countries across the globe can attract substantial amounts of FDI just by adopting more outward-oriented trade policies and providing a more business friendly environment to foreign investors.

According to Shahmoradi and Thimmaiah (2010) the marked rise of FDI flows to selected countries since the early 1990s has prompted substantial empirical research into the important determinants of FDI. The paper attempted to identify important determinants of FDI inflow for the selected high-income countries (23 countries) since 1990. Based on the related review of literature six variables (Outflow, GDP, BOP, Export, Import and Labour) were selected. Employing adding-up/multiple regression models significant determinants were identified. The study found out that balance of payment (BOP) and outflow turn out to be the two significant explanatory variables in all the years. But the parameter of BOP was negative, indicating inverse relationship between FDI inflows and BOP. It could be said that outflow was emerging to be a major component in determining FDI inflows especially in High Income countries. Furthermore, export was significant only in the year 2000. Another important finding was insignificance of GDP in explaining FDI inflows, while many empirical studies had shown significant relationship between FDI inflows and GDP of an economy. The present study had a paradoxical finding that GDP has insignificant relationship with FDI inflows.

Vijayakumar et.al., (2010) examined the factors determining FDI inflows of BRICS countries using annual dataset for the period 1975 to 2007 (for Russia required data set was available from 1990 onwards). The study employed panel data analysis and found that the selected variables market size, labour cost, infrastructure, currency value and gross capital formation as the potential determinants of FDI inflows of BRICS countries. The economic stability and growth prospects (measured by inflation rate and industrial production respectively), trade openness (measured by the ratio of total trade to GDP) seemed to be the insignificant determinant of FDI inflows of the BRICS countries.

Quader (2010) attempted to evaluate the FDI performance based on certain indicators and to examine the catalyst variables of FDI inflows in Bangladesh by applying extreme bounds analysis to the time series data from 1990-91 to 2005-06. The paper evaluated the robustness between inward FDI inflow and various economic indicators and also long term impact of foreign investment in case of Bangladesh. The results revealed that wage, trade openness, net export, GDP growth and tax rate have robust result and all these relationships were statistically significant. Also two years lagged values of FDI and change in the level of domestic investment were found to have a positive effect on economic growth. It was concluded that Bangladesh needs to reinforce its infrastructure facilities, improve the quality of service, liberalize its local and global investment policy further and last but not the least to maintain macroeconomic and political stability to improve its inward FDI performance and potential index to become attractive destination for foreign investors.

Jimenez (2011), analyzed foreign direct investment flows from southern European countries to one of two nearby developing regions: north African countries and new European Union member states in central and eastern Europe. As expected, good economic perspectives, human capital, and development of infrastructures attract greater investment flows. However, greater levels of political risk, measured through scales of political discretion, corruption, and economic freedom also attract higher inflows.

Awan et.al., (2011) examined the major economic determinants of FDI inflows in commodity-producing sector of Pakistan, by using time series data (quarterly) covering the period of 1996:Q1-2008:Q4. Augmented Dickey Fuller (ADF) test has been used to check the stationarity of the data. Cointegration and error correction model were used for estimation. Results revealed that gross domestic product, real growth rate of GDP in commodity-producing sector, gross fixed capital formation, foreign exchange reserves, degree of trade openness and percapita income were the key determinants of FDI inflows in commodity-producing sector of Pakistan.

Nurudeen et.al., (2011) examined the major determinants of FDI in Nigeria, analyzing the annual data over the period 1970-2008, using the ordinary least squares and error correction techniques. The regression results indicated that openness of the economy to trade, privatisation, the level of infrastructural development, and exchange rate depreciation have significant positive effect on FDI

inflows into Nigeria. In addition, the results revealed that the host country's market size has a significant negative effect on FDI, while inflation has an insignificant (but positive) influence on FDI inflows. Thus, the paper recommended the following, Firstly; government should employ policies to further open up the economy in a manner that the economy will be able to attract more FDI. Secondly, the government should increase its investment in the development of the nation's infrastructure (power supply, roads, telecommunication, etc.) in order to reduce the cost of doing business thereby wooing more FDI. Thirdly, the government should encourage production activity via production incentives and/or subsidies in order to increase the economy's GDP. Fourthly, the economy should be ready to accommodate further depreciation of the domestic currency (Naira) so as to encourage the inflows of FDI in the form of merger and/or acquisition. Furthermore, privatization should be done in a manner that is transparent, and all necessary and relevant information regarding the process should be made available to both existing and prospective investors. In addition, there was a need for an efficient and effective judicial system and crime fighting mechanism so as to assure foreign investors the safety of their investment.

Pradhan and Saha (2011) examined the determinants of foreign direct investment in seven SAARC countries over the period 1980-2010. Using panel VAR model, the paper found that foreign direct investment are largely influenced by economic growth, exchange rate, inflation, labour population, trade balance, current account balance and long term debt outstanding. The impact of economic growth and exchange rate are bidirectional, while the other factors are unidirectional on FDI inflows.

Onuorah and Nnenna (2013) investigated the long run relationship between macroeconomic variables and foreign direct investments in Nigeria. The study made use of data from the database of World Bank between 1980 and 2010. VAR and Impulse Function were the major econometric techniques used for data analysis having performed unit root test and co integration. The result showed evidence of a negatively strong relationship between FDI and GDP in the country suggesting inverse relationship. It was concluded that FDI survives in an atmosphere of robust GDP, exchange rate and regulated money supply. Furthermore, it was recommended that government should work on the Interest rate and inflation rate policies to enhance foreign direct investment in Nigeria.

Determinants of FDI Inflows - Indian Studies

Venkateswarlu and Rao (2004) aimed at re-exploring the determinants of FDI inflow across countries. Attracting FDI to low income economies was no easy task. A good deal of home work by the host country was a must if the country was serious about relatively large magnitudes of FDI. There was a strong relationship between per capita GDP (positive), inflation rate (negative), per capita reserves (negative) and per capital portfolio investment. Fundamental economic factors, viz., inflation rate, are not of much value for obtaining FDI. They are useful for portfolio investment. What India needs is FDI not portfolio investment, a fact that policy makers do not seem to appreciate, as revealed by the few proactive political/labour/civil-service reforms carried out so far.

Menon and Sanyal (2007) investigated the sensitivity of overseas investment to labour conflict across states in India, using a state-fixed effects approach. The authors found that foreign direct investment tends to veer away from states that have high incidences of labour conflict, particularly as measured by the number of man-days lost due to work stoppages. Furthermore, results of the fixed effects technique confirmed that measures of labour conflicts are endogenous in an analysis of FDI location in India. This research has important implications for policy. Since FDI brings significant positive benefits, from a purely economic perspective, it may be prudent for state governments to try to reduce the incidence of labour disputes. The paper analyzed patterns of foreign direct investment in India. The results indicated that labour unrest was endogenous across the states of India, and has a strong negative impact on foreign investment.

Pradhan (2008) investigated the determinants of FDI in India, with particular reference to infrastructure. Covering the period from 1970 to 2004, the empirical investigation confirmed that infrastructure has a significant negative impact on FDI inflows in India. This was mostly due to stagnant infrastructure investment in the economy. On the contrary, FDI inflows were positively determined by trade openness in the country. The author suggested that to make the economic policy more effective towards increasing inflows of FDI, a successful FDI policy must be well-integrated with the policy of globalization and infrastructural development.

Pradhan (2010) investigated the role of trade openness on foreign direct investment inflows in the economy during the period 1980-2007. From the results of the study it was found that trade openness has a significant positive impact on FDI

inflows. However, its impact was much stronger in the post-globalisation era (from 1991 to 2007) compared to the pre-globalisation era (from 1980 to 1990). Other factors that significantly affected India's FDI inflows during this period are real effective exchange rate and terms of trade. The study, therefore, suggested that the government has to continue the openness policy with greater attention in order to attract more FDI inflows into the Indian economy.

Singhania and Gupta (2011) used macroeconomic variables GDP, inflation rate, interest rate, patents, money growth and foreign trade to find the best fit model ARIMA (p,d,q) to explain variation in FDI inflows into India. The authors tested for various assumptions taken before applying autoregressive integrated moving average (ARIMA) such as heteroscedasticity, autocorrelations, etc. using standard tests and quantified FDI policy changes using dummy variables. The results of the study showed that of all macroeconomic variables taken, only GDP, inflation rate and scientific research are significant and that FDI policy changes during the years 1995-1997 have had significant impact on FDI inflows into India.

According to Shylajan (2011) literature on factors determining FDI inflows into an economy showed that many factors influences inflows such as market size, inflation, trade openness, interest rate, wage rate, business environment, etc. The present study examined the factors determining FDI inflows in India during post reform period. The results of the analysis showed that FDI was related positively with real GDP and previous period FDI inflow but inversely related with inflation. The analysis revealed that the macroeconomic instability in terms of inflation has been an important factor which influenced the inflow of FDI in India in the post reform period.

Anitha (2012) examined the various set of factors which influence the flow of FDI identifying the causes for low inflow and suggestive remedial measures to increase the flow of FDI in India. The huge market size, availability of highly skilled human resources, sound economic policy, abundant and diversified natural resources all these factors enable India to attract FDI. Further, it was found that even though there has been increased flow of FDI into the country during the post liberalization period, the global share of FDI in India was very less when it was compared to other developing countries. Lack of proper infrastructure, unstable government and political environment, high corporate tax rates and limited export processing zones were considered to be the major problems for low FDI into the country. To overcome this situation, the Government should revise the sectoral cap

and bring more sectors under the automatic route. Further, India should sign the agreement of Double Taxation treaties with other countries in order to increase bilateral trade. Therefore, there was an urgent need to adopt innovative policies and good corporate governance practices on par with international standards, by the Government of India, to attract more and more foreign capital in various sectors of the economy to make India a developed economy.

Sahni (2012) attempted to empirically examine the determinants of FDI in India by using time series data for the period 1992-93 to 2008-09. The study applied ordinary least square (OLS) method for this purpose. The empirical results indicated that GDP, inflation and trade openness are important factors in attracting FDI inflows in India during post-reform period whereas foreign exchange reserves was not important factors in explaining FDI inflows in India.

Jadhav (2012) explored the role of economic, institutional and political factors in attracting FDI in BRICS (Brazil, Russia, India, China & South Africa) economy and the comparative weightage of these factors in attracting FDI. The study used panel data for a period of ten years (2000-2009) in order to examine the significant determinants of FDI in BRICS from a holistic approach. Analysis has been done using panel unit-root test, and multiple regressions. This study took into account market size, trade openness, natural resources as economic determinants and macroeconomic stability (inflation rate), political stability/no violence, government effectiveness, regulatory quality, control of corruption, voice and accountability, rule of law as potential institutional and political determinants of FDI. The findings of the study indicated that economic factors are more significant than institutional and political factors in BRICS economies. The results indicated that market size measured by real GDP was a significant determinant of FDI which implies that most of the investment in BRICS was motivated by market-seeking purpose. Analysis of empirical data also indicated that trade openness, natural resource availability, rule of law and voice and accountability are statistically significant. Coefficients of market size, trade openness are positive which implies that these variables have positive effect on total inward FDI. Natural resource availability has negative effect on total inward FDI. This particular result indicated that FDI was not motivated by resource-seeking purpose in BRICS economies.

Kaur and Sharma (2013) stated that foreign direct investment inflows to the developing countries have increased with a greater pace in the 1990s accounting for

about 46.1 per cent of global FDI inflows in the year 2010. Similar trends have also been visualized in India where FDI has expanded rapidly following the economic reforms initiated in the early 1990s. These were directed towards increased liberalization, privatization and deregulation of the industrial sector, integrating the economy with that of world economy by reducing trade barriers and adapting favourable policy framework towards expansion of foreign investment in the country. This made Indian economy a favourable destination for foreign investors. The present study explored the determinants of FDI that influence the inflows of FDI into India. Explanatory variables used in the study are gross domestic product, foreign exchange reserves, long-term debt, inflation, exchange rate and openness. Empirical analysis concluded that the variables openness, foreign exchange reserves, GDP and long term debt have positive impact on FDI, while negative impacts of inflation and exchange rate on FDI was noticed.

Saluja et.al., (2013) investigated the relationship between foreign direct investments and the current account and FDI and capital account in context of Indian economy. Using the Augmented Dickey Fuller Test, it was found that all the series were non-stationary at level. The Johanson cointegration test was used for finding relationships between variables for the period of 1991:Q1-2012:Q4. The result indicated that FDI-CU and FDI-CA are cointegrated in the long run. Results suggested that the current account balance has a negative relationship to FDI but capital account had a positive impact on FDI after the liberalisation of the economy.

According to Vagadia and Solanki (2014) attempted to empirically examine the determinants of FDI in India by taking time series data for the period 1991-2010. The study used OLS method and the results indicated that GDP, inflation and trade openness were significant in explaining FDI inflows in India whereas foreign exchange reserves was not significant in explaining FDI inflows in India.

Dua and Garg (2015) examined the macroeconomic factors underlying FDI flows to India using co-integrating VAR with I(1) exogenous variables. The results indicated that conventional determinants such as a depreciating exchange rate, higher domestic returns, higher domestic output and better infrastructure are conducive to FDI flows to India. The results also indicated that macroeconomic instability has adverse effects while credit worthiness was conducive to FDI flows. A negative relation between trade openness and FDI was observed suggesting that FDI flows to India may be tariff jumping in nature. Empirical estimates also indicated

that an increase in global FDI flows to other emerging economies reduces FDI flows to India indicating that India competes with other emerging economies in receiving FDI.

To sum up, the marked rise of FDI flows to selected countries since the early 1990s has prompted substantial empirical research into the important determinants of FDI. Developing countries have not been considered as favourable destinations for FDI as developed countries. It was demonstrated that countries with larger GDPs, higher GDP growth rates, higher proportion of international trade and a more business-friendly environment were more successful in attracting FDI. The studies concluded that small, developing countries across the globe can attract substantial amounts of FDI just by adopting more outward-oriented trade policies and providing a more business-friendly environment to foreign investors. On the whole the above studies both from the other countries and from India found human capital, trade openness, inflation rate, infrastructure, GDP, exchange rate, public development expenditure, labour cost, gross capital formation, foreign exchange reserves, tax rate, net exports, per capita income, privatisation, labour population, current account balance, long term debt outstanding, privatisation, governance, initial literacy, ownership advantages and geographical proximity have a positive influence on FDI inflows. Some studies had a paradoxical finding that the host country's market size or GDP has a negative impact on the FDI inflows. Lacks of proper infrastructure, unstable political environment, high corporate taxes, macro economic instability, labour unrest and corruption have negative impact on the FDI inflows.

D. FDI and Economic Growth - Foreign Studies

Choe (2003) attempted to show causal relationships between economic growth and FDI and gross domestic investment (GDI) in 80 countries over the period 1971-95, by using a panel VAR model. The results showed that FDI Granger-causes economic growth, and vice versa; however, the effects are rather more apparent from growth to FDI than from FDI to growth. Also, GDI does not Granger-cause economic growth, but economic growth robustly Granger-causes GDI. These findings suggested that strong positive associations between economic growth and FDI inflows or GDI rates do not necessarily mean that high FDI inflows or GDI rates lead to rapid economic growth.

Katerina et.al., (2004) stated that empirical research on the effects of Foreign Direct Investment on economic growth mainly focused on the US and the western

European countries. The objective of this paper was to investigate the existence and the nature of the effect of FDI on the rate of growth of a panel of transition economies. The authors applied Bayesian analysis. The results indicated that FDI does not exhibit any significant relationship with economic growth for the transition countries.

Balamurali and Bogahawatte (2004) examined the relationship between foreign direct investment and economic growth of Sri Lanka for the period 1977-2003 using Johansen's full information maximum likelihood method by considering relationship between real gross domestic product, foreign direct investment domestic investment and openness of the trade policy regime. The results indicated that foreign direct investments exert an independent influence on economic growth and there was bidirectional causality between foreign direct investment and economic growth. The findings suggested that better trade policy reforms, implementation aimed at promoting foreign direct investment and domestic investment, and restoring international competitiveness to expand and diversify the country's exports have the potential for accelerating economic growth in the future.

Li and Liu (2005) investigated whether FDI affects economic growth based on panel data for 84 countries over the period 1970-99. Both single equation and simultaneous equation system techniques were applied to examine the relationship. A significant endogenous relationship between FDI and economic growth was identified from the mid-1980s onwards. FDI not only directly promotes economic growth by itself but also indirectly does so via its interaction terms. The interaction of FDI with human capital exerted a strong positive effect on economic growth in developing countries, while that of FDI with the technology gap had a significant negative impact.

Yasin et.al., (2009) examined the relationship between FDI and economic growth using a panel data set for 10 African countries over the period 1980-2004. The authors used Fully Modified Least Squares (FMOLS) to test and estimate the long run co integration coefficients. The investigators found a long term, cointegrating relationship between FDI and economic growth.

Wang (2009) suggested that the ambiguous results might be caused by the use of total FDI. He studied the heterogeneous effects of different sector-level FDI inflows on host country's economic growth. Data from 12 Asian economies over the period of 1987 to 1997 were employed. Evidence from the study showed that FDI in

manufacturing sector had a significant and positive effect on economic growth in the host economies. FDI inflows in nonmanufacturing sectors do not play a significant role in enhancing economic growth. Furthermore, without the decomposition of total FDI inflows, the effect of manufacturing FDI on host country's economic growth was understated by at least 48 per cent.

According to Moura and Forte (2010) foreign direct investment influenced the host country's economic growth through the transfer of new technologies and know-how, formation of human resources, integration in global markets, increased competition, and firms' development and reorganisation. Empirically, a variety of studies considered that FDI generated economic growth in the host country. However, there was also evidence that FDI was a source of negative effects. Given this ambiguity of results, the present paper made a review of the existing theoretical and empirical literature on the subject, intending to shed light on the main explanations for the divergence of results in different studies. The main idea that stands out in this review was that the effects of FDI on economic growth was dependent on the existing or subsequently developed internal conditions of the host country (economic, political, social, cultural or other). Thus, the host countries authorities have a key role in creating the conditions that allow for the leverage of the positive effects or for the reduction of the negative effects of FDI on the host country's economic growth.

Srinivasan et.al., (2010) employed Johansen cointegration technique followed by the vector error correction model (VECM) and standard Granger Causality test to investigate the causal nexus between Foreign Direct Investment and economic growth in ASEAN economies. The Johansen Cointegration result established a long run relationship between FDI and GDP for the five ASEAN economies viz., Indonesia, Malaysia, Philippines, Singapore and Vietnam. The empirical results of VECM exhibited a long run causality running from GDP to FDI for Indonesia, Philippines and Singapore. For Malaysia and Vietnam, the results revealed long run bidirectional causal link between GDP and FDI. Besides, the evidence from standard Granger Causality test for rest of the ASEAN economies showed that there was no causality between FDI and GDP for Brunei, Darussalam and Lao People's Democratic Republic. For Myanmar and Thailand, the test results showed that there was a one-way short run Granger causal link from FDI to GDP and GDP to FDI, respectively.

Abbas et.al., (2011) investigated the impact of foreign direct investment on Growth (GDP) of SAARC countries. This relationship was tested by applying multiple regression models. The change in GDP was taken as dependent variable while FDI and inflation were considered as independent variables. The data used for this ranged from year 2001 to 2010. The result showed that the overall model was significant. There was a positive and significant relationship between GDP and FDI while an insignificant relationship between GDP and inflation was observed.

FDI and Economic Growth - Indian Studies

Chakraborty and Basu (2002) explored the two-way link between foreign direct investment and growth for India using a structural cointegration model with vector error correction mechanism. The existence of two cointegrating vectors between GDP, FDI, the unit labour cost and the share of import duty in tax revenue was found, which captures the long run relationship between FDI and GDP. A parsimonious vector error correction model was then estimated to find the short run dynamics of FDI and growth. The VECM model revealed three important features: (a) GDP in India was not Granger caused by FDI; the causality runs more from GDP to FDI; (b) trade liberalization policy of the Indian government had some positive short run impact on the FDI flow; and (c) FDI tends to lower the unit labour cost suggesting that FDI in India was labour displacing.

Dash and Sharma (2007) re-examined the relationship among FDI, trade, and economic growth in the case of India. The study was based on a Vector Autoregression (VAR) model applying Granger non-causality test of Toda and Yamamoto Amatory (1995) for the period 1996:Q4 to 2007:Q4. Evidence showed that there was bi-directional causality between FDI and economic growth. At the same time, there was a unidirectional causality, which runs from FDI to export as well as from FDI to import. Furthermore, decomposition of causality suggested that 46 per cent causality runs from FDI flows to export, 21 per cent from export to FDI, and the remaining 33 per cent were due to two-way causality. As far as import was concerned, of the total dependence, 55 per cent was due to causation from FDI to import, 27 per cent due to causation from import to FDI and 18 per cent was due to contemporaneous or two-way causality.

Pradhan (2008) explored the promotion of FDI towards economic growth (and vice versa) in the economy. The empirical investigation was undertaken in two Asian countries namely India and Malaysia during 1970 and 2004. The empirical analysis

confirmed that it was economic growth that promoted FDI in both the countries. On the contrary, FDI does not promote economic growth in the Indian and Malaysian economies. The paper justified the possible reasons for the same and strongly argued that FDI promotes economic growth indirectly via productivity spillovers and export spillover effects.

Verma and Arora (2009) evaluated the FDI and economic growth nexus, using Johansen's cointegration analysis. The overall conclusions that emerged from the empirical analysis suggested that FDI was an important variable to augment economic growth. Domestic investment in the infrastructure, skill formation and private corporate sector especially in the manufacturing sector can play a lead role in attracting FDI inflows in the economy. The negative impact of employment on economic growth confirmed the functioning of the Parkinson's Law in Indian organised sector and thus portrayed the problem of overstaffing and presence of decreasing returns in the economy.

Sridharan et.al., (2009) examined the causal relationship between FDI and growth of the BRICS countries. The investigators employed Industrial Production Index (IPI) as a measure of economic growth. The stationarity of the data series was checked using Augmented Dickey Fuller (ADF) test and tested for the existence of co-integration. Johansen cointegration model found that Brazil alone cointegrated among the selected countries at levels. The vector error correction model was employed to trace the existence of long run relationship. The results of VECM found that growth led FDI bi-directionally for Brazil, Russia and South Africa and FDI led growth uni-directionally for India and China respectively.

Dhakal et.al, (2010) examined the dynamic relationships between FDI, trade and economic growth in India, Pakistan and Sri Lanka with the help of a VAR model and data covering 1971-2006. Before estimating the model, the time series properties of the data were analysed and the estimated results indicated that in India, FDI tends to cause economic growth by improving trade but there was a weak direct relationship between FDI and GDP. In Pakistan, FDI appeared to cause trade but trade was not a significant factor in economic growth. In Sri Lanka, very little effect of FDI and trade on GDP was detected.

Srinivasan (2010) examined the causal nexus between foreign direct investment and economic growth in India during the post-liberalisation period. Johansen's cointegration technique followed by the vector error correction model

was employed to examine the objective. The database on foreign direct investment inflows and index of industrial production were taken on a quarterly basis and covers the period from 1994-95:Q2 to 2008-09:Q1. The empirical results revealed that unidirectional causation was running from economic growth to foreign direct investment both in the short-run and long-run in India.

Sethi (2011) attempted to explain the effects of private foreign capital inflows on some macroeconomic variables in India using the time series data between April 1995 and December 2007. The study also examined the impact of international capital flows on economic growth. Cointegration test confirmed the presence of long-run equilibrium relationships between a few pair of variables like private capital flows and economic growth and private capital inflows and exchange rate. The Granger causality test showed unidirectional causation from private capital inflows and growth. The study found that FDI positively affect the economic growth, while foreign institutional investment negatively affected the growth. The study concluded that capital inflows have not contributed much towards industrial production or economic growth. The study identified two reasons for this, one the amount of capital inflows to the country has not been enough and the amount of capital that does flow in, was not utilised to its full potential.

Chakraborty and Mukherjee (2012) attempted to understand the nexus between the investment and economic growth in India. A time series analysis was undertaken to analyse whether there exist any long-run relationship between FDI, domestic investment and economic growth, and if so, what was the direction of the relationship. While the long-run cointegrating relationship between FDI, gross fixed capital formation and gross domestic product in India was confirmed by the empirical analysis, the findings that there was a unidirectional causality from India's economic growth to FDI and from FDI to domestic investment raised important policy implications. Higher FDI inflow in India in recent period could be argued to be facilitated by the relatively stable GDP growth rate, which in turn acted as a major boost towards a sustainable high domestic investment. The growth effects of the FDI on GDP in the short run were, however, less pronounced.

Ray (2012) attempted to analyze the causal relationship between FDI and economic growth in India and tried to analyze and empirically estimate the effect of FDI on economic growth in India, using the cointegration approach for the period, 1990-91 to 2010-11. The empirical analysis based on ordinary least square method

suggested that there was a positive relationship between FDI and GDP and vice versa. The unit root test clarified that both economic growth and foreign direct investment were found to be integrated of order one using the Kwiatkowski, Phillips, Schmidt and Shinn (KPSS) test for unit root only. The cointegration test confirmed the existence of long run equilibrium relationship between the two as confirmed by the Johansen cointegration test results. The Granger causality test finally confirmed the presence of uni-directional causality which runs from economic growth to foreign direct investment. The error correction estimates gave evidence that the error correction term was statistically significant and had a negative sign, which confirmed that there was no problem in the long-run equilibrium relation between the independent and dependent variables. For FDI to be a noteworthy provider to economic growth, India would do better by focusing on improving infrastructure, human resources, developing local entrepreneurship, creating a stable macroeconomic framework and conditions favourable for productive investments to augment the process of development.

Saiyed (2012) examined the effect of FDI on economic growth in India by using annual data for Indian economy over the post reforms period 1990-91 to 2011-12. The regression result indicated that FDI was positively correlated with economic growth of Indian economy. FDI was established as a significant determining factor for economic growth. The causality tests also showed unidirectional causation that FDI stock causes output to rise and also indicated unidirectional causality from FDI to output. It was concluded that there was a significant effect of FDI on India's economic growth which was an evidence of FDI-output causal relationship. Regressions analysis revealed that FDI expansion influenced output variables; changes in FDI cause annual output to increase. The results indicated that whatever may be the cause of rise in stock of FDI in India, but it definitely led to rise in the output growth.

Dash and Parida (2013) examined the linkages between inward FDI, services trade (export and import) and economic output using co-integration and VECM causality test. These linkages have been explored both at the aggregate and at the sectoral levels (manufacturing and services). The empirical findings confirmed the long-run relationship among these variables. Causality results indicated the presence of bi-directional causal relationship between FDI and economic output as well as between services exports and economic output. The results also brought out

feedback relationship between services export and FDI, reconfirming the presence of complementary relationship between the two. At the sectoral level, the investigators found at least a unidirectional causality from FDI and services exports to both manufacturing and services output and also cross-sectoral spillover effects from manufacturing output to services' output and vice versa.

Malhotra (2014), aimed to examine the impact of FDI on the Indian economy, particularly after two decades of economic reforms, and analysed the challenges to position itself favourably in the global competition for FDI. The paper provided the major policy implications from the analysis, besides drawing attention on the complexities in interpreting FDI data in India. India's FDI policy has been gradually liberalised to make the market more investor friendly. FDI inflow supplements domestic capital, as well as technology and skills of existing companies. It also helps to establish new companies. All of these contribute to economic growth of the Indian economy.

It could be concluded that FDI influences the host country's economic growth through the transfer of new technologies and know-how, formation of human resources, integration in global markets, increase of competition, and firms' development and reorganization. Empirically, a variety of studies considered that FDI generated economic growth in the host country. However, there was also evidence that FDI was a source of negative effects. Many studies attempted to show causal relationships between economic growth and FDI using Granger causality test, Johansen's full information maximum likelihood method, Johansen's cointegration analysis, fully modified least squares (FMOLS), vector autoregression (VAR) and vector error correction method (VECM) and found strong positive associations between economic growth and FDI inflows. Some investigators found a long term, cointegrating relationship between FDI and economic growth. Wang (2009) showed that FDI in manufacturing sector had a significant and positive effect on economic growth in the host economies. FDI inflows in non-manufacturing sectors do not play a significant role in enhancing economic growth. Among the Indian studies the main finding was that economic growth promoted FDI in India but FDI does not promote economic growth. However, FDI promotes economic growth indirectly via productivity spillovers and export spillover effects. Sethi (2011) asserted that FDI positively affect economic growth, while foreign institutional investment negatively affected the growth.

E. Spillovers from FDI

(i) Horizontal and Vertical FDI Spillovers and Firms' Productivity – Foreign Studies

Globerman (1979) investigated the existence of indirect economic benefits of foreign direct investment in Canada using a sample of Canadian manufacturing industries. Estimates of labour productivity in domestically owned plants were constructed and employed as the dependent variable, and various measures of foreign ownership were included among the independent variables in the estimating equations. Labour productivity differences across Canadian-owned plants were found to be positively related to an industry's capital intensity, plant-scale economies, labour quality, average hours worked per employee, and the amount of foreign ownership in an industry.

Haddad and Harrison (1993) opined that many developing countries now actively solicit foreign investment, offering income tax holidays, import duty exemptions and subsidies to foreign firms. One reason for subsidizing these firms was the positive spillover from transferring technology to domestic firms. This paper employed a unique firm-level dataset to test for such spillovers in the Moroccan manufacturing sector. The authors found evidence that the dispersion of productivity was smaller in sectors with more foreign firms. However, the authors rejected the hypothesis that foreign presence accelerated productivity growth in domestic firms during the second half of the 1980s. Using detailed information on quotas and tariffs, the investigators rejected the possibility of a downward bias in estimating technology spillovers because foreign investors may be attracted to protected markets.

Rodriguez-Clare (1996) argued that inter-industry linkages can result in vertical spillovers, which can facilitate technology transfer to domestic firms in host countries. The vertical linkages can be backward or forward. Backward linkages include interaction between foreign firms and local suppliers, which can promote technological advancement among domestic firms through direct knowledge transfer from foreign customers to local suppliers.

Kokko et.al., (1996) examined intra-industry spillovers from FDI in Uruguayan manufacturing plants in 1988, to determine whether differences in the technology gap between locally-owned plants and foreign affiliates have any impact on the relation between local productivity and foreign presence. The authors found a positive and statistically significant spillover effect only in a sub-sample of

locally-owned plants with moderate technology gaps vis-à-vis foreign firms but not in the group of local plants facing large technology gaps. Measures to actively promote direct investment from abroad may not be sufficient to generate spillovers if the majority of local firms employ technologies that are very different from those used by foreigners.

Aitken and Harrison (1999) opined that governments often promote inward foreign investment to encourage technology “spillovers” from foreign to domestic firms. Using panel data on Venezuelan plants, the authors found that foreign equity participation was positively correlated with plant productivity (the “own-plant” effect), but this relationship was robust only for small enterprises. The authors tested for spillovers from joint ventures to plants with no foreign investment and found that foreign investment negatively affects the productivity of domestically owned plants. The net impact of foreign investment, taking into account these two offsetting effects, was quite small.

Blomstrom and Sjöholm (1999) examined the effects on technology transfer and spillovers derived from ownership sharing of foreign multinational affiliates. More specifically, the authors tried to answer two questions, using unpublished Indonesian micro data. Firstly, do establishments with minority and majority ownership differ in terms of productivity levels? Secondly, does the degree of spillover differ with the degree of ownership in the FDI? The results showed that foreign establishments have comparable high levels of labour productivity and that domestic establishments benefit from spillovers. However, the degree of foreign ownership does neither affect the level of labour productivity in foreign establishments, nor the degree of spillovers.

Liu et.al, (2000) examined intra-industry productivity spillovers from foreign direct investment (FDI) in the UK manufacturing sector. The empirical analysis used a panel data for 48 UK industries over the period 1991-1995. A major contribution is empirical evidence on spillover effects in situations where the host country was developed. The results indicated that the very presence of FDI had a positive spillover impact on the productivity of UK-owned firms. The analysis also showed that the extent to which local firms benefit from the introduction of advanced technology depended largely on their own technological capabilities.

Djankov and Hoekman (2000) used firm-level data for the Czech Republic to show that during 1992-96 foreign investment had the predicted positive impact on total factor productivity growth of recipient firms. This result was robust to corrections

for the sample biases that arise because foreign companies tend to invest in firms whose initial productivity was above average. Together, joint ventures and foreign direct investment appear to have a negative spillover effect on firms that do not have foreign partnerships. However, with foreign direct investment alone, the magnitude of the spillover becomes much smaller and loses significance. This result, in conjunction with the fact that joint ventures and foreign direct investment accounted for a significant share of total output in many industries, suggested that further research is required to determine the extent of knowledge diffusion from firms that have foreign links to those that do not.

Braconier et.al., (2001) underscored that multinational enterprises are important in transmitting technology across national borders. Not only do they allow for transfer of technology within the firm, but it is also believed that they are important channels for international R&D spillovers as well. The paper analyzed empirically whether inward and outward FDI work as channels for international R&D spillovers. The study utilized firm-level as well as industry-level data for Swedish manufacturing. The study found absence of FDI-related R&D spillovers neither at the firm-level nor at the industry-level in Swedish manufacturing. The only variable that consistently affects total factor productivity was own investment in research and development.

Konings (2001) used firm level panel data to investigate empirically the effects of direct foreign investment on the productivity performance of domestic firms in three emerging economies of Central and Eastern Europe, Bulgaria, Romania and Poland. Two main questions addressed in the paper were: (1) Do foreign firms perform better than their domestic counterparts? (2) Do foreign firms generate spillovers to domestic firms? Only in Poland, it was found that foreign firms perform better than firms without foreign participation. Moreover, for the countries studied, the author found no evidence of positive spillovers to domestic firms on an average. In contrast, on an average there were negative spillovers to domestic firms in Bulgaria and Romania, while there were no spillovers to domestic firms in Poland. This suggested a negative competition effect that dominates a positive technology effect.

Fosfuri et.al, (2001) analyzed a model where a multinational firm can use a superior technology in a foreign subsidiary only after training a local worker. Technological spillovers from foreign direct investment arise when this worker was

later hired by a local firm. Pecuniary spillovers arise when the foreign affiliate pays the trained worker a higher wage to prevent him/her from moving to a local competitor. Hence the multinational firm might find it optimal to export instead of investing abroad to avoid dissipation of its intangible assets or the payment of a higher wage to the trained worker.

Girma et.al., (2001) presumed higher productivity of foreign firms and resulting spillovers to domestic firms has led governments to offer financial incentives to foreign firms. The authors investigated if there was any productivity or wage gap between foreign and domestic firms in the U.K. and if the presence of foreign firms in a sector raises the productivity of domestic firms. The results indicated that foreign firms do have higher productivity than domestic firms and they pay higher wages. They found no aggregate evidence of intra-industry spillovers. However, firms with low productivity relative to the sector average, in low-skill low foreign competition sectors gain less from foreign firms.

Barrios and Strobl (2002) aimed to analyse the impact of foreign direct investment (FDI) on firms' productivity using a panel of Spanish manufacturing firms for the period 1990-1998. The authors confirmed previous findings that one needs to take into account the "absorptive capacity" of firms when considering whether they are able to avail of externalities associated with FDI presence. For the Spanish case the investigators found that only firms with sufficient levels of absorptive capacity experience positive spillovers.

Demelis and Louri (2002) analyzed the production efficiency gains in terms of technology transfer and labour productivity changes caused by diverse degrees of foreign ownership using a sample of 4,056 manufacturing firms operating in Greece in 1997. Interesting results included a positive effect on labour productivity of foreign ownership, which stems exclusively from full and majority owned affiliates and becomes significant only in the middle quartiles. Productivity spillovers benefiting local firms were also differentiated, with minority holdings exercising a stronger effect in most quartiles.

Girma and Gorg (2002) focused on the role of absorptive capacity in determining whether or not domestic firms benefit from productivity spillovers from FDI using establishment level data for the UK. The investigators allowed for different effects of FDI on establishments located at different quartiles of the productivity distribution by using conditional quartile regression. Overall, while there was some

heterogeneity in results across sectors and quartiles, the findings clearly suggested that absorptive capacity matters for productivity spillover benefits. They found evidence for a u-shaped relationship between productivity growth and FDI interacted with absorptive capacity. They also analysed in some detail the impact of changes in absorptive capacity on establishments' ability to benefit from spillovers.

Javorcik (2004) emphasized that many countries strive to attract foreign direct investment (FDI) hoping that knowledge brought by multinationals will spillover to domestic industries and increase their productivity. The analysis based on firm-level data from Lithuania, produced evidence consistent with positive productivity spillovers from FDI taking place through contacts between foreign affiliates and their local suppliers in upstream sectors.

Barrios et.al., (2004) stressed that despite a growing number of empirical studies on efficiency spillovers arising from the presence of multinational firms for a number of countries, general conclusions on this issue have been inhibited by differences in the data sets and estimation techniques used across studies. The authors conducted a comparative empirical study for Greece, Ireland and Spain by creating comparable data sets and estimating identical models. The results showed evidence of spillovers in Ireland and Spain only, although these positive spillovers seem to depend on whether firms have the absorptive capacity to capture technological spillovers.

Takii (2005) examined productivity spillovers derived from the existence of foreign multinational plants and explored the conditions that influence the magnitude of spillovers. The empirical evidence first suggested the existence of positive spillovers. Second, the results suggested that the greater presence of majority or wholly foreign plants reduced the magnitude of spillovers. Third, partially due to the stronger negative relationship in industries where technological gaps between foreign and locally owned plants were relatively large, the magnitude of spillovers tend to be smaller and was sometimes negative in such industries. On the other hand, the negative relationship between the magnitude of spillovers and the presence of majority or wholly owned foreign plants was not observed in locally owned plants with research and development activity.

Wei and Liu (2006) assessed productivity spillovers from research and development, exports and the very presence of FDI in China's manufacturing sector, based on a panel of more than 10,000 indigenous and foreign-invested firms for

1998-2001. The results showed positive inter-industry productivity spillovers from research and development and exports, and positive intra-industry and inter-industry productivity spillovers from foreign presence to indigenous Chinese firms within regions. OECD invested firms played a much greater role in inter-industry spillovers than overseas Chinese firms from Hong Kong, Macao and Taiwan within regions.

Hale and Long (2007) used a firm-level data set from a World Bank survey and found that the evidence of FDI spillovers on the productivity of Chinese domestic firms was mixed, with many positive results largely due to aggregation bias or failure to control for endogeneity of FDI. Attempting over 2500 specifications which took into account forward and backward linkages, they failed to find evidence of systematic positive productivity spillovers from FDI.

Haskel et.al, (2007) examined two issues first, are there productivity spillovers from FDI to domestic firms? second, if there are such spillovers, what level of subsidies would be justified? To examine these questions, a plant-level panel covering U.K. manufacturing from 1973 through 1992 was used. A robust and significantly positive correlation between a domestic plants' total factor productivity (TFP) and the foreign-affiliate share of activity was found. Typical estimates suggested that a 10 percentage point increase in foreign presence in a U.K. industry raised the TFP of that industry's domestic plants by about 0.5 per cent. A large number of countries pay subsidies to attract FDI because the social returns to FDI exceed the private returns which means, productivity spillovers from FDI to domestic firms.

Mullen and Williams (2007) explored the relationship between inward FDI and the average productivity performance of domestic firms within the manufacturing sectors of U.S. states. The analysis focused solely on the labour productivity of domestic firms. The analysis failed to offer any evidence that benefits accrue to domestic firms from a larger presence of foreign affiliates. The findings suggested that inward FDI may actually reduce domestic firm productivity.

Halpern and Murakozy (2007) aimed to find whether FDI causes horizontal or vertical productivity spillovers to domestically-owned Hungarian manufacturing firms and to see if distance matters in spillovers. The authors found positive vertical spillovers but there was no evidence of positive horizontal spillovers. By taking distance into consideration positive horizontal spillovers was found for domestic firms close to foreign-owned firms.

Reganati and Sica (2007) opined that foreign direct investment from Multinational Enterprises (MNEs) can be beneficial to host countries, since it may generate positive externalities to domestic firms, contributing to the increase of their productivity. These positive effects can take place both within an industry (“horizontal” spillovers) and across industries (“vertical” spillovers) as in the case of technology transfers to domestic suppliers or customers in the production chain. Using a firm-level panel data the investigators analysed productivity spillovers of FDI in the Italian manufacturing firms both within and across industries. The results suggested the existence of “vertical” spillovers and no evidence of “horizontal” spillovers.

Buckley et.al., (2007) found that significant variation in FDI spillover effects on local industry was obscured through the aggregation, common in most studies. Breaking Chinese industrial data for 2001 down by category of ownership of foreign investor, local firm, and by host industry, the authors found evidence of greater positive spillovers from FDI in technology-intensive industries than in labour-intensive industries. They also found that overseas Chinese affiliates from Hong Kong, Macau and Taiwan (HMT) generate spillovers to locally owned enterprises (LOEs) in labour-intensive industries, in contrast to western affiliates, which positively impact on the performance of LOEs in technology-intensive industries. Chinese state-owned enterprises (SOEs) benefit from the presence of both HMT affiliates in labour-intensive industries and of western affiliates in technology-intensive industries. Other LOEs however, benefit only from HMT affiliates’ presence in labour-intensive industries. These findings offer some support to host government policies offering generous incentive packages to attract foreign investors in high-technology industries.

Blalock and Gertler (2008) hypothesised that multinational firms operating in emerging markets transfer technology to local suppliers to increase their productivity and lower input prices. To avoid hold-up by any single supplier, the foreign firms must make the technology widely available. This technology diffusion induces entry and more competition which lowers prices in the supply market. As a result, not just the foreign-owned firms, but all firms downstream of that supply market obtain lower prices. This hypothesis was tested using a panel dataset of Indonesian manufacturing establishments. The authors found strong evidence of productivity gains, greater competition, and lower prices among local firms in markets that supply

foreign entrants. This provided justification for policy intervention to encourage foreign investment.

Liu (2008) explained how FDI generates externalities in the form of technology transfer. The insight gained from the theory was that the level and rate effects of spillovers can go in opposite directions. The negative level effect underscores the fact that technology transfer was a costly process; scarce resources must be devoted to learning. The positive rate effect indicates that technology spillovers enhance domestic firms' future productive capacity. A large panel of Chinese manufacturing firms provided suggestive evidence that an increase in FDI at the four-digit industry level lowers the short-term productivity level but raises the long-term rate of productivity growth of domestic firms in the same industry. It was found that spillovers through backward and forward linkages between industries at the two-digit level have similar effects on the productivity of domestic firms, and backward linkages seem to be statistically the most important channel through which spillovers occur.

Wang and Zhao (2008) examined FDI spillovers accruing to Chinese local industry both at intra and inter-industry levels and how such effects vary with the nationality of the investor. A panel dataset for Chinese industry over the period 2000-2002 was employed for an augmented production function with external factors being defined as the influences of externalities in production. The paper provided evidence of positive spillovers working both within industries and between industries, and evidence of vertical effects being more important than horizontal effects. The results also showed that Western multinational enterprises generated more vertical spillovers than their overseas Chinese counterparts.

Javorcik and Spatareanu (2008) hypothesised that the ownership structure in foreign investment projects affects the extent of vertical and horizontal spillovers from FDI for two reasons. First, affiliates with joint domestic and foreign ownership may face lower costs of finding local suppliers of intermediates and thus may be more likely to engage in local sourcing than wholly owned foreign subsidiaries. This in turn may lead to higher productivity spillovers to local producers in the supplying sectors (vertical spillovers). Second, the fact that multinationals tend to transfer less sophisticated technologies to their partially owned affiliates than to wholly owned subsidiaries through horizontal spillovers. The analysis based on a Romanian firm-level data suggested that vertical spillovers were associated with projects with

shared domestic and foreign ownership but not with fully owned foreign subsidiaries. They also indicated that the negative competition effect of FDI inflows was lower in the case of partially owned foreign investments as it was mitigated by larger knowledge dissipation within the sector.

Marcin (2008) examined the existence of externalities associated with FDI in a host country by exploiting firm-level panel data covering the Polish corporate sector. The author distinguished between horizontal spillovers (from foreign to domestic firms operating in the same industry) and two types of vertical spillovers: backward (from FDI in downstream industries) and forward spillovers (from FDI in upstream industries). The main findings were as follows. Local firms benefit from foreign presence in the same industry and in downstream industries. The absorptive capacity of domestic firms was highly relevant to the size of spillovers: vertical spillovers were larger for R&D-intensive firms, while firms investing in other (external) types of intangibles benefit more from horizontal spillovers. Competitive pressure facilitates backward spillovers, while market power increases the extent of forward spillovers. Horizontal spillovers were particularly strong in services, while the remaining results, including backward spillovers and the role of absorptive capacity and competition, were mainly driven by manufacturing. Host country equity participation in foreign firms was consistent with higher unconditional productivity spillovers to domestic firms. A number of robustness checks yield results qualitatively similar to those obtained in the baseline specification.

Fu (2008) stated that innovation has widely been regarded as one of the main drivers of economic growth in the knowledge economy. The paper investigated the impact of FDI on the development of regional innovation capabilities using a panel dataset from China. The study found that FDI has a significant positive impact on the overall regional innovation capacity. FDI intensity was also positively associated with innovation efficiency in the host region. The strength of this positive effect depends, however, on the availability of the absorptive capacity and the presence of innovation-complementary assets in the host region. The increased regional innovation and technological capabilities have contributed further to regional economic growth in China's coastal regions but not in the inland regions. The study concluded that the type and quality of FDI inflows and the strength of local absorptive capacity and complementary assets in the host regions are crucial for FDI to serve as a driver of knowledge-based development.

Alvarez and Lopez (2008) investigated whether exporting generates positive productivity spillover effects on other plants in the same industry and on plants in vertically related industries. Using data for Chilean manufacturing plants from 1990 to 1999, the investigators found strong evidence that domestic as well as foreign-owned exporting plants improve productivity of local suppliers. They also found some evidence of horizontal spillovers from exporting but these are mainly generated by plants with foreign ownership. These results suggested that positive productivity spillovers are not only generated by the presence of foreign-owned exporting plants but also by exporting activity of domestic firms. The results are robust to controls for agglomeration of economic activity, the importance of non-exporting foreign-owned plants, and plant unobserved heterogeneity.

Keller and Yeaple (2009) estimated international technology spillovers to U.S. owned manufacturing firms via imports and FDI between 1987 and 1996. The results suggested that FDI led to significant productivity gains for domestic firms. FDI spillovers accounted for between eight per cent and 19 per cent of productivity growth of U.S. firms. FDI spillovers were particularly strong in high-tech sectors, whereas they were largely absent in low-tech sectors. The evidence on imports-related spillovers was much weaker.

Bekes et.al., (2009) underscored that firms cluster their economic activities to exploit technological and informational spillovers from other firms. Spillovers from multinational firms can be particularly beneficial to firms in less developed economies, because technological superiority and management expertise of foreign multinational firms yield various opportunities for learning. Yet, the importance of foreign firms' spillovers might vary with respect to two key features of domestic firms: their productivity level and their export status. In line with theories on the absorptive capacity of firms, the authors argued on the basis of an empirical analysis of Hungarian firms that larger and more productive firms are more able than smaller firms to reap spillovers from multinationals. However, the export status was found to be of minor importance once higher productivity was controlled for.

Javorcik and Spatareanu (2009) employed a unique dataset from the Czech Republic to identify the relationship between suppliers and multinationals. Countries strive to attract FDI hoping that knowledge brought by multinationals will spillover to domestic producers. The study found evidence demonstrating a positive correlation between the presence of multinationals in downstream industries and the

productivity of domestic firms in the supplying (upstream) sectors. The study demonstrated that MNC suppliers differ from other firms in terms of various characteristics namely, productivity, size, capital-intensity, wages. It was also found that better-performing firms were more likely to become MNC suppliers. From the results evidence was found which suggested that the Czech suppliers learned from their relationships with multinationals. In other words high productivity firms have a higher probability of supplying multinationals as well as learning from their relationships with multinationals.

Barbosa and Eiriz (2009) examined whether foreign firms generated productivity spillovers. Using firm-level data over for the period 1994-1999, the authors attempted to contribute to the literature on productivity spillovers from FDI by analysing the Portuguese manufacturing industry. The results indicated that foreign firms in the same industry of the observed firms (horizontal spillovers) and linkages between foreign firms and their local suppliers or customers (vertical spillovers) do not impact significantly on firms' productivity.

Stancik (2009) analysed the effects of FDI on the sales growth rate of domestic companies in the Czech Republic. Using firm-level panel data from 1995 to 2005, the author studied both horizontal and vertical spillovers with respect to two kinds of foreign investment-takeovers and greenfields. The results suggested that the sales growth rates of domestic companies mostly decrease in the presence of foreign companies, especially in upstream sectors. The impact through horizontal spillovers was mixed-positive from foreign takeovers, negative from greenfields. Positive forward spillovers were present mainly in recent years. Time sensitivity was revealed for horizontal as well as vertical spillovers.

Anwar and Nguyen (2010) made use of panel data on 22 manufacturing industries over the period 1995-2005, and examined the impact of FDI-generated spillovers on manufacturing sector growth in Vietnam. This article focused on the impact of FDI-linked spillovers that take place through both horizontal and vertical linkages between domestic and foreign firms. The empirical results suggested that FDI generated spillovers have made a significant contribution to manufacturing sector growth in Vietnam through vertical-backward linkages. The positive impact of vertical-backward linkages on manufacturing sector growth was strengthened by the stock of human capital. Specifically, manufacturing industries with a larger stock of

human capital experienced a higher level of technological advancement and hence stronger economic growth.

Abraham et.al., (2010) used a new longitudinal dataset of more than 15,000 manufacturing firms to analyse the heterogeneous responses of firms to foreign direct investment in China. Domestic firms operating in sectors where foreign firms were active had higher total factor productivity. However, the magnitude of such horizontal spillovers depends on the structure and origin of foreign ownership, the export status of firms and the characteristics of the special economic zones firms are operating in.

Le and Pomfret (2011) used firm-level data to examine how technology spillovers through FDI affect the productivity of domestic firms in Vietnam. The authors found that domestic firms gain technology spillovers through vertical linkages with foreign firms, but the effect of the horizontal presence of foreign firms on the productivity of domestic firms was negative. This suggested that potential technology transfer between foreign firms and their local competitors was more than offset by the competition induced by the entry of foreign firms. The existence and strength of horizontal and vertical spillovers depend on industry and firm characteristics and on the types of FDI.

Javorcik and Spatareanu (2011) used firm-level panel data from Romania to examine whether the origin of foreign investors affects the degree of vertical spillovers from FDI. Investors' origin may matter for spillovers to domestic producers supplying intermediate inputs. The share of intermediates sourced locally by multinationals was likely to increase with the distance between the host and the source economy. The results indicated that Romanian firms in sectors whose products were expensive to transport benefited more from downstream presence of American affiliates than Romanian firms in sectors with low shipping costs.

Gerschewski (2013) provided a review of literature on spillover effects and linkages that arise from FDI in developing countries. The review suggested that there tends to be negative intra-industry productivity spillover effects (i.e., spillovers between MNEs and local firms in the same industry). This was explained by the fact that MNEs crowd out local competitors that were not able to compete against MNEs, and by the concept of "absorptive capacity" which implied that local firms may not be able to assimilate and absorb knowledge of MNEs. However, the author found evidence for positive inter-industry spillovers through linkages between MNE

affiliates and suppliers in different industry sectors which may be attributed to the benefits for MNEs in transferring knowledge and technology to their local suppliers.

Monastiriotis (2014) examined the case of capital flows (foreign ownership) and the related productivity spillovers, using firm-level data from the Business Environment and Enterprise Performance Survey (BEEPS) covering 28 transition countries over the period 2002-2009. The investigator estimated the direct and intra-industry productivity effects of foreign ownership and examined how these differ across regional blocks (CEE, SEE and ENP), according to the origin of the foreign investor (EU versus non-EU), across geographical scales (pure industry versus regional spillovers) and for different types of locations (capital-city regions versus the rest). The results suggested that FDI of EU origin played a distinctive role in the countries concerned helping to raise domestic productivity significantly more than investments from outside the EU. However, this process appeared to operate in a spatially selective manner, thus enhancing regional disparities and spatial imbalances.

Gorodnichenko et.al., (2014) used rich firm-level data and national input-output tables from 17 countries over the 2002-2005 period to test new and existing hypotheses about the impact of FDI on the efficiency of domestic firms in the host country (i.e., spillovers). The investigators documented that backward linkages had a consistently positive effect on productivity of domestic firms while horizontal and forward linkages showed no consistent effect. They also examined how the strength of spillovers varies by sector, FDI source, business environment (corruption, red tape, level of development), firm's distance to the technological frontier, education of workers, and other firm- and country-specific characteristics.

Horizontal and Vertical FDI Spillovers and Firms' Productivity - Indian Studies

Feinberg and Majumdar (2001) examined whether knowledge spillovers from MNCs' local R&D activities benefit domestic firms in the Indian pharmaceutical industry from 1980-1994. In a policy environment that restricted FDI and provided weak intellectual property protection, the authors found that the only significant R&D spillovers in the Indian pharmaceutical sector were between MNCs and each other. They explored the implications of the findings in light of India's economic and industrial policy goals and implementation.

Kathuria (2002) tested two hypotheses, namely (a) whether liberalisation has improved the productivity of local firms; and (b) whether the spillovers from

technology transfer have increased in the liberal regime. To test these, techniques from panel data and stochastic production frontier were employed on 487 firms belonging to 24 three-digit manufacturing industries for the period 1989-90 to 1996-97. The results showed that after liberalisation, the productivity of Indian industry, especially the foreign owned firms, had improved. The econometric results suggested that only 'scientific' non-FDI firms have benefited from the liberalisation. For the 'non-scientific' firms, the impact was found to be productivity depressing. With respect to spillovers, only those domestic firms, which invested in R&D to decode the spilled knowledge, benefitted.

Pradhan (2004) tested the FDI spillover hypothesis in the Indian Pharmaceutical industry using an unbalanced panel data for a sample of firms over the period 1989-90 to 2000-01. The study estimated firm-specific productive efficiency growth for domestic firms from frontier production function and relates the same to a set of firm-specific attributes along with the variables of foreign presence. The study found that the presence of foreign firms per se may not be important for productivity growth of domestic firms unless it is complemented by the latter's R&D activity or size. Therefore, the study concluded that policy efforts to encourage R&D and some concentration of size of the domestic firms in the industry may be more desirable than passively liberalising the FDI policy from the point of view of increasing productive efficiency of local enterprises.

Sasidharan (2006) attempted to examine the spillover effects of FDI in Indian manufacturing industries. A firm level data of 4900 Indian manufacturing firms for the period 1994-2002 were used. Both the horizontal and vertical spillover effects from FDI were investigated. No evidence of significant horizontal spillover was found from the results of the study. Also negative vertical spillovers were found indicating the possibility of lack of local sourcing by the multinationals which can be explained by the fact that the foreign firms investing in India may not be sourcing inputs from domestic suppliers. This may be due to the fact that foreign firms were unable to find local suppliers which satisfy their quality requirements. Another reason for this may be due to the policy of "cherry picking" by the foreign firms which means that multinational firms source inputs only from the productive local firms.

Sasidharan and Ramanathan (2007) attempted to empirically examine the spillover effects from the entry of foreign firms using a firm-level data of Indian

manufacturing industries. Firm-level data of Indian manufacturing industries was used for the period 1994-2002. The authors considered both the horizontal and vertical spillover effects of FDI. Consistent with the results of the previous studies, they found no evidence of horizontal spillover effects. On the contrary, they found negative vertical spillover effects.

Parameswaran (2007) examined the effect of trade facilitated R&D spillovers on the productivity of manufacturing firms in India. A firm level data of 19 industries and 2101 firms for the period 1988-89 to 2000-2001 were used for the study. The paper distinguished R&D spillovers into two types, namely rent spillovers and knowledge spillovers. Rent spillovers takes place through the import of capital goods embodying better technology and knowledge spillovers through trade facilitated interaction of domestic producers with products, markets and producers of technology leader countries. The study also examined inter-sectoral variations in the productivity effect of spillovers and the importance of firms' investment in R&D, imported technology and plant and machinery in absorbing spillovers. The empirical results showed that rent spillovers through imported machinery are higher than that through machinery purchased from domestic sources in technology intensive industries. Another important result was that trade facilitated knowledge spillovers have significant effect on productivity and in this case also technology intensive industries are gaining more than low technology industries. The study provided evidence for the existence of inter-sectoral variation in the productivity effect of trade related R&D spillovers. The study also showed that imported machinery and investment in R&D were enhancing the effect on productivity which suggested that the benefit of imported machinery go beyond its direct contribution and also highlights the importance of developing in-house R&D capability to effectively absorb knowledge from technology leaders through trade interaction.

Joseph (2007) sought to examine the effects of spillovers from FDI on the productivity performance of Indian manufacturing firms and the role of the absorptive capacity of domestic firms in utilising such spillovers under the liberalised framework. The findings of the study showed evidence of positive spillover effects from foreign firms' market presence that increases the productivity of domestic firms. The results indicated that there was both competition effect from the presence of foreign firms (horizontal effect) and a complementary effect due to backward linkages between domestic firms and foreign firms, where local firms act as suppliers of raw materials

to the foreign firms. The study showed that it was the vertical (complementary) effects that mainly facilitate the positive spillovers from FDI. Further, the analysis showed that greater productivity benefits from both horizontal and backward linkages were associated with high R&D intensity of domestic firms.

Iyer (2009) attempted to seek empirical evidence for upstream and downstream effects of MNCs on local firms in the Indian manufacturing industry during 1989-2004. The study found that the presence of foreign firms resulted in a positive as well as negative inter-industry and intra-industry spillovers. The study observed that the FDI was not uniformly beneficial or consistently adverse for the domestic economy. The impact varied across industry, implying the need for industry-specific policy rather than a blanket embracing.

Pant and Mondal (2010) pointed out that one of the principal objectives of developing countries increasingly opening their economies to FDI has been to achieve technology transfer from foreign firms to host country firms. The study for India showed that technology transfer was more likely to be achieved by the presence of foreign firms rather than by simple purchase of foreign technology. From the results it was found that technology transfer is dependent on the absorptive capacity of firms and the competitive nature of the industry.

According to Mishra (2011) the channel through which the inflows of FDI contributed to economic progress of the host economy like India could both be direct as well as indirect. Such pecuniary benefits resulting in improved productivity of local firms which cannot be fully appropriated by foreign investors are known as spillover effects. The study enveloped a rich firm level dataset from 22 sectors of Indian manufacturing industries over a time period from 2006 to 2010. With respect to productivity spillover, positive and significant evidence in support of productivity spillovers from foreign firms to local firms through horizontal channels was found. Results indicated that productivity of local firms' decreases as foreign presence in the upstream or downstream sector increases, which may be an indication of inefficient absorptive capacity and adaptive capacity.

Behera et.al., (2012) attempted to analyze the spillover effect of FDI across Indian manufacturing industries. Foreign presence by way of FDI brings new channels of technology spillover to the domestic industrial firms in the form of enhanced efficiency and diffusion of knowledge in the long-run. By carrying out Pedroni cointegration tests, the analysis tried to provide a long-run relationship

between endogenous variables and explanatory variables, pertaining to technology spillovers across Indian manufacturing industries. From the results of the study it was found that technology spillovers are relatively higher in industries like food products, textiles, chemicals, drugs and pharmaceuticals and non-metallic mineral products.

Thakur and Burange (2014) tried to study spillovers from FDI in the manufacturing sector of India, using firm level data for the period 2000 to 2010. Both horizontal and vertical (backward and forward) spillovers were tested with the help of panel data fixed effects 'within' model. Spillovers across different manufacturing industries were also examined in order to find out whether spillovers varied across industries. It was inferred that spillovers from backward and forward vertical linkages positively affected the TFP of the manufacturing sector. Spillovers through horizontal channels were, however, encountered to be negative. The results at the disaggregated industry level showed mixed evidence. Most of the industries gained from backward vertical spillovers followed by forward vertical spillovers and lastly horizontal spillovers. Industries like paper products and non-electrical machinery were the only ones benefitting significantly through productivity spillovers from FDI. On the other hand, industries such as cosmetics, chemicals and fertilizers and drugs and pharmaceuticals gained solely through backward vertical spillovers. The absorptive capacity (particularly human capital) of the manufacturing sector was, however, found to be low. Moreover, it was observed that industries witnessing considerable amount of FDI inflows did not benefit from the spillovers in the similar manner. These included automobile industry, electrical machinery, electronics and miscellaneous manufacturing.

Malik (2015) examined the productivity effect of technology spillovers via vertical linkages through FDI in India. An analysis of firm-level panel data from the Indian manufacturing sector from 2000-2001 to 2007-2008 employing the semi-parametric method of Levinsohn-Petrin to correct the endogeneity bias in productivity estimation showed productivity improvements in domestic firms due to vertical technology spillovers through backward linkages from FDI. The study confirmed that firms in high-technology industries benefit more from vertical technology spillovers from foreign firms compared to firms in low-technology industries. It also showed that minority-owned foreign firms are more prone to technology spillovers than majority-owned foreign firms. Nonetheless, domestic firms

in high-technology industries were able to access both horizontal as well as vertical technology spillovers from majority-owned foreign firms. The paper concluded that technology spillovers from FDI was not spontaneous, but was constrained by the technological ability of domestic firms and the ownership structure of foreign firms.

Findings from the above studies show that the spillovers from FDI; both intra-industry or inter-industry spillovers positively affects the productivity of the domestic firms. Some studies also found contrary results. The existing literature has confirmed that only those domestic firms which have the absorptive capacity can absorb the spillovers generated by the foreign firms. The above studies explain the importance of the domestic firms' investment in R&D activities to improve their technological capabilities so as to reap the benefits of FDI spillovers.

(ii) Export Spillovers - Foreign Studies

Aitken et.al (1997) examined whether spillovers associated with one firm's export activity reduce the cost of exporting for other firms. They identified two sources of spillovers: export production in general and the specific activities of multinationals. From a simple model of export behaviour they derived a probit specification for the probability that a firm exports. Using panel data on Mexican manufacturing plants, they found evidence of spillovers from multinational enterprises but not from general export activity.

A cross country analysis of 52 countries by the UNCTAD (1999) found a positive relationship between FDI and manufactured exports, and the relationship was stronger for developing countries than for developed countries and in high-tech and low-tech industries than in medium-tech ones.

Sjoholm (1999) examined various types of foreign contacts that influenced as well as enabled the establishments to become exporters in the Indonesian manufacturing sector. Taking three types of foreign contacts viz., foreign ownership, imports, and spillovers from regional presence of FDI, the study found that while the first two types of foreign contacts (ownership and imports) had a positive effect on the propensity to become an exporter, and that there were no export spillovers from large regional presence of FDI.

Kokko et.al., (2001) examined the association between FDI Spillovers and export behaviour of domestic firms in Uruguay using a cross-sectional firm level data. They found that domestic firms were more likely to export if they operated in sectors where the presence of foreign firms was relatively high. Their study also

pointed out that the type of trade regime (controlled or liberalised) may influence the ability of MNEs in generating positive export spillovers.

Greenaway et.al., (2004) stated that an underexplored indirect channel for productivity spillovers were through exports. Exporting firms were more productive than non-exporting firms. Thus, if the presence of MNEs resulted in more indigenous firms exporting, an indirect productivity spillover could occur. In this paper, the authors identified possible transmission mechanisms for export spillovers and tested for their existence on a large panel of firms in the U.K. The results confirmed positive spillover effects from MNEs on the decision to export of UK-owned firms as well as on their export propensity.

Lemi (2004) analyzed the role that foreign direct investment from the U.S. and Japan in affecting developing countries' productivity and export. Trade and production dataset by industrial groups and disaggregated U.S. and Japanese FDI data were used to empirically test presence of spillover effects on labour productivity and export. The results of the study showed that positive productivity effects from U.S. and Japanese FDI firms were not empirically supported for the case of sample developing countries. The presence of FDI firms from all source countries and the number of U.S. total FDI and U.S. manufacturing FDI firms increased exports of host countries to the rest of the world. On the other hand, productivity was enhanced by foreign portfolio investment, availability of skilled manpower, capital intensity of industries and the number of bilateral investment treaties signed by host countries. Official development assistance and official aid had significant negative effect on host country productivity, and export.

Ruane and Sutherland (2005) investigated how export decisions of host-country enterprises were associated with the presence and export intensity of foreign-owned enterprises (FOEs) in an export-platform economy. The investigators used enterprise-level data for the manufacturing sector in Ireland. They postulated that export spillovers from FOEs were dependent upon the sectoral presence and export intensity of FOEs, so that third-country export-platform FDI may not result in positive export spillovers to host-country enterprises. The authors found that the decision by host-country enterprises to enter the export market was positively associated with the presence of FOEs in their sector. However, the export intensity of host-country enterprises was negatively associated with the export sales ratios of

FOEs, a result that contrasts with evidence of positive FOE export intensity spillovers in most previous empirical studies.

Vuksic (2005) put forth that the exports of Croatian manufacturing industry was stagnating over the last decade. Over the same period there was a relatively high inflow of FDI into industry. The aim of this paper was to examine, after controlling for other potentially significant variables, whether these inflows had an impact on export performance. Using the panel data approach for 21 manufacturing industry sectors over the period between 1996 and 2002, it was found that FDI positively and significantly affected exports, but the extent of this impact was relatively low. This implied that there was a potential for improving the export performance of Croatian manufacturing industry by attracting more FDI into this sector.

Zhang (2005) put forth that from the 32nd in 1978 to the 3rd largest exporting country in the world in 2004, China's export boom was accompanied by substantial inflows of FDI in the same period. Exports by foreign-invested enterprises in 2004 were \$339 billion, comprising 57 per cent of China's total exports. While there were considerable theoretical treatments of the FDI-export linkage, relevant empirical analyses were limited. This paper attempted to close the gap by investigating the issue with the Chinese industrial data. The estimates indicated that FDI indeed has had a positive impact on China's export performance, its export-promoting effect was much greater than that of domestic capital, and its effect was larger in labour-intensive industries.

Ma (2006) stated that multinational firms were important conduits of managerial skills, foreign market linkages, and technology. Foreign export spillovers associated with multinational firms have the potential to reduce entry costs for local exporting firms. The paper examined whether exports by multinational firms increased the probability of exporting by domestic Chinese firms. The findings from the probit estimation highlighted the varying relationships between multinational exports and local foreign entry based on the type of ownership. The results from separating foreign-invested enterprises into overseas Chinese companies and OECD-based multinational firms suggested that the export activity of the former does not increase the probability of exporting by local firms, whereas the latter positively influenced the export decision of local firms, particularly under processing trade.

Kneller and Pisu (2007) analysed export spillovers using a data set of British manufacturing firms from 1992 to 1999. The authors investigated not only horizontal (intra-industry) spillovers, but also vertical externalities (inter-industry). The study used a Tobit type II model that allows to model the two decisions of whether to export or not, and, if so, how much to export, separately. They differentiated foreign firms in the same industry by their physical proximity to the domestic firms and to their export orientation. The results indicated that export spillovers are diverse and affect exporters and non-exporters in different fashions. More specifically, non-exporters seemed to benefit only in a limited way from export spillovers. Indeed, the export decision of domestic firms does not seem to be affected by contacts they may have with multinational enterprises. Except for backward spillovers (which were positive and significant) no evidence of forward and horizontal spillovers were found. On the contrary, the decision concerning how much to export appeared to be influenced by the presence of foreign multinationals in the same, upstream and downstream industries. In addition, intra-industry (horizontal) spillovers seemed to depend on the export orientation of foreign firms. Both export-oriented and domestic market-oriented multinationals appeared to generate positive and significant export spillovers, but those from the former were stronger. This suggested that of the likely sources of export spillovers, i.e. competition effect from host market-oriented foreign firms and leakage of specific information about foreign market from established foreign exporters, the latter appeared to be more important. With reference to vertical spillovers, the authors found negative and significant forward export externalities, and positive and significant backward externalities.

Buck et.al., (2007) used a two-step modelling strategy to a panel of 5,861 foreign-invested and 7,697 indigenous Chinese firms for the period 1998-2001 to investigate whether export spillovers may represent a mechanism underpinning Dunning's Trade Development Path hypothesis. Such spillovers were found, and the results emphasized the importance of a wide spectrum of spillover channels involving labour mobility, spatial agglomeration, technological imitation and the diffusion of exporting experience. Multinational enterprises in China positively affected local Chinese firms' exports through various spillover channels, and inward FDI brought significant, indirect spillovers.

Kutan and Vuksic (2007) estimated the effects of FDI inflows on exports in 12 Central and Eastern European (CEE) economies for the period between 1996 and

2004. The authors separated the effects of FDI into supply capacity-increasing effects and FDI-specific effects. The supply capacity-increasing effects arise when FDI inflows increase the host country's production capacity, which, in turn, increase export supply potential. The FDI-specific effects arise because the multinational company may have superior knowledge and technology, better information about export markets, or better contact to the supply chain of the parent firm than do local firms. The empirical results indicated that, for all countries in the sample, FDI increased domestic supply capacity and hence exports. However, FDI-specific effects on exports were observed only in the new member states of the European Union.

Nguyen (2008) used firm level data for the manufacturing industries in Vietnam and examined whether the presence of foreign firms influenced the decision of domestic firms to export or not, and whether foreign firms influenced the intensity of exports by domestic firms. In contrast with most previous studies, the paper focused on the export spillovers from FDI taking place through both horizontal and vertical linkages. The findings showed that horizontal and forward linkages to be the two main channels of export spillovers from FDI while domestic firms had no benefits from backward linkages to enter the export markets as well as to increase their export value.

Gu et.al., (2008) highlighted that there has been a long debate in the theoretical and empirical economic circles on how host country's exports respond to inward FDI. This paper examined whether FDI stimulates export performance of the recipient countries using the case of China. It contributed to the literature by investigating the relationship of FDI and export performance using disaggregated manufacturing sectors from 1995 to 2005. The empirical results suggested that FDI flows into China had statistically significant and positive effects on its exports and it exhibited differences across sectors.

Sun (2009) explored the export spillovers from the FDI in the cultural, educational and sporting product manufacturing industry of the manufacturing sector in China from 2000 to 2003. The empirical evidence suggested that there existed export spillovers from FDI in the industry, for which the magnitude depended on firms' geographical location, sale cost and revenue ratio, and ownership structure. On an average, domestic firms located in Western China suffered from a foreign presence, irrespective of whether they were privately owned or state and collectively

owned. For firms in Central China, both the privately owned and state and collectively owned firms appeared to benefit from foreign presence. Regarding firms located in Coastal China, the privately owned firms suffered from the foreign presence, while in contrast the state and collectively owned firms benefited from the foreign presence. In addition, in this industry there were more firms that benefited from the presence of FDI than those that suffer, which to some extent justified the government's policy to attract the FDI inflow.

Uddin (2010) focused on the causal relationship between export and foreign direct investment for Bangladesh and Pakistan using annual data from 1975 to 2005. The Granger causality test and error correction models were employed to take care of stochastic properties of the variables. The cointegration analysis suggested a long-run equilibrium relationship between exports and FDI. The results of Granger causality test for Bangladesh and Pakistan showed a causal relationship between the examined variables. FDI cause export growth in the long run and does not have any short run influence.

Cheung (2010) stated that since economic reforms began in 1979, China sought to overcome the technology gap by absorbing foreign advanced technology through FDI. The paper investigated the impact of FDI via exports on the innovation performance of domestic firms in China's high-tech product industries for the period 1995-2006. By using the panel data analysis, the author confirmed the hypotheses that: (1) exports of domestic firms have positive spillover effects on innovation performance of local firms either through learning or through competition; (2) R&D activities of foreign-invested enterprises in the host country in an industry are positively associated with innovation performance of domestic firms in that industry; and (3) import of technology, which was important for the establishment of assimilative capability, had positive effects on domestic innovation performance. This provided evidence suggesting that China's domestic firms benefited from spillovers associated with FDI and from export activity of both domestic firms and foreign-invested enterprises.

Sun (2010) explored the magnitude and heterogeneity of foreign direct investment export spillovers in China. Using a Heckman sample selection model estimated over a rich firm-level dataset in China's manufacturing sector from 2000 to 2003, it was found that FDI exerted significant influence on the exporting behaviour of domestic firms, and such impacts were heterogeneous in that some firms received

positive impacts while others received negative impacts. The heterogeneity of FDI spillovers had significant policy implications as it indicated that government policies need to be more specific and targeted in order for the benefits of FDI to be reaped.

Phillips and Ahmadi-Esfahani (2010) stated that generating a more outward looking sector was one of the principal aims of agri-food policy in Australia for the past two decades. Australia's proximity to fast-growing economies of East Asia was seen as a major source for export growth. Over the same time span, there was an increase in foreign ownership in the food sector. Using a firm-level data set for 2005, the authors characterised the probability that a firm participated in exporting by a set of firm characteristics, including foreign ownership and spillovers from foreign-owned firms, and found that foreign ownership neither increases nor decreases the probability that a firm will be involved in exporting.

Anwar and Nguyen (2011) made use of firm level data from Vietnam's manufacturing sector, and examined the impact of horizontal and vertical (backward and forward) linkages between domestic and foreign firms on (i) the decision of domestic firms to export and (ii) the export share of domestic firms. This paper considered only transactional linkages. The empirical analysis was based on Heckman's two-step estimator in selection models. It was shown that the presence of foreign firms in Vietnam, through horizontal and forward linkages, significantly affected the decision of domestic firms to export as well as their export share. This result continues to hold when the following factors were taken into account, i.e., (a) level of technology of domestic firms, (b) ownership structure of domestic firms, (c) orientation of foreign firms and (d) geographical proximity to foreign firms.

The objectives of the paper by Bhatt (2010-11) was to study foreign trade and investment dimensions of New Zealand in comparison with its competitors such as Australia, China, India, Japan and Republic of Korea and to study the role of FDI to the growth of exports. Vector Autoregression model (VAR) was adopted to estimate the long run causal relationship among exports, FDI and GDP. The cointegration test result showed that there existed a long run equilibrium relationship among exports, FDI and GDP. It was found from the estimated error correction model that FDI was a significant variable and the result indicated that one per cent increase in FDI led to 0.62 per cent increase in exports with one year time gap. Granger Causality test indicated a unilateral relationship between exports and FDI and the direction were from FDI to exports which meant that FDI caused exports.

Anwar and Nguyen (2011) examined the impact of FDI on exports, imports and net export of Vietnam. The empirical analysis used the panel dataset involving Vietnam's 19 major trading partners for the period 1990-2007. The paper also considered the impact of FDI on trade during three sub-periods: the pre-Asian financial crisis, the post-Asian financial crisis and during the Asian financial crisis period. The empirical analysis revealed that a complementary relationship exists between FDI and exports and FDI and imports. While the impact of FDI on net-exports was insignificant during the full sample period, a significant positive relationship exists between net-exports and FDI in the post-Asian financial crisis period.

Duran and Ryan (2012) studied the presence of spillover effects on the exporting decisions of Chilean manufacturing firms over the period 2001-2004, derived from the presence of foreign multinational firms (MNE). Evidence was found that the firm's export likelihood was positively affected by domestic firms' exports, but negatively by MNE exports. However, MNE employment generates positive spillover effects, suggesting externalities in human capital. The authors found some evidence of spillovers from MNE activity on how firms allocate their production in order to serve the domestic and foreign markets, but not on how much they decide to export.

Nguyen and Sun (2012) investigated firms' export behaviour in the manufacturing sector in Vietnam, using a Heckman sample selection model estimated over firm-level data in 2003 and 2004. Empirical results indicated that (i) firm-specific characteristics have significant impacts on firm export behaviour; (ii) there exist significant export spillovers from FDI to domestic firms; and (iii) spillovers are heterogeneous and depend on firm characteristics. Firm age, private ownership, average wage and import intensity were found to have positive and significant impacts on the spillover magnitude, whereas firm size and domestic competition exert negative and significant impacts.

Anwar and Sun (2012) considered the impact of FDI and FDI-related spillovers on the entry and exit rates of domestic firms in mainland China's manufacturing sector. Since the authors suspected that aggregate results obscure differing effects based on the source of the FDI, they disaggregated FDI into that originating from Hong Kong, Macau and Taiwan (HMT) area and the rest of the world. The empirical analysis, based on four-digit industry level panel data over the period 2003-2007, revealed that FDI originating from the rest of the world made a

significant contribution to the entry rate of domestic firms in China and the spillover effect arising from backward linkages was positive and significant. However, FDI originating from HMT area had not encouraged domestic entry, whilst it contributed to an increase in the exit rate of domestic firms.

Sun (2012) investigated the impact of FDI on domestic exporting firms. The investigator showed that domestic firms respond to an increase in the presence of FDI by increasing their exports even though the increase in foreign presence can drive up production costs and make the domestic market more profitable. The test case for this hypothesis was China, where the author confirmed significant positive impact of FDI on domestic firms' exports. This finding shed light on the massive exports and rapid inflow of foreign investment that have been observed in China in the past three decades.

Chen et.al., (2013) examined the horizontal and vertical export spillovers of FDI on China's manufacturing domestic firms by using firm-level census data over the period of 2000-03. Based on a Heckman two-step procedure combining first differencing and instrumental variable regression techniques, it was found that FDI has had a positive impact on the export value of domestic firms mainly through backward technology spillovers and a positive impact on the export-to-sales ratio of domestic firms through horizontal export-related information spillovers. After decomposing FDI by different market orientation and domestic firms by different ownership, the paper found that the positive impact on domestic firms' export values was mainly from the non-exporting and the exporting foreign-invested enterprises while the positive impact on domestic firms' export-to-sales ratios was mainly from the high-exporting foreign-invested enterprises. Both types of export spillovers were mainly diffused to domestic non-state-owned enterprises.

Export Spillovers - Indian Studies

Aggarwal (2002) compared the export performance of MNE affiliates and domestic firms in Indian manufacturing after the 1991 liberalization by analysing the determinants of their export intensities. The study examined the relationship between FDI and export performance using the Tobit model for 916 Indian manufacturing firms for the period 1996-2000. Aggarwal found that the liberalisation measures of the 1990s enhanced the export role of MNE affiliates, especially in the late 1990s. However, the author could not find any evidence of a positive relationship between foreign equity share and export performance of firms.

Kumar and Pradhan (2003) looked at the important factors that influenced the export competitiveness of Indian manufacturing firms with an emphasis on knowledge-based industries. They found that younger firms drive export competitiveness in the high and low technology industries whereas older firms were more competitive in the medium technology industries. The study also found that foreign affiliates are better achievers on the export front compared to their domestic counterparts in Indian manufacturing. The study concluded that the liberalisation policies of the 1990s definitely improved the export competitiveness of Indian manufacturing, especially in the technology-intensive segments.

Banga (2006) highlighted the export-diversifying impact of FDI in a developing country. FDI may lead to export diversification in the host country if it positively affected the export intensity of industries that had a low share in world exports. Indirectly, FDI may encourage export diversification through spillover effects: that is, the presence of FDI in an industry may increase the export intensity of domestic firms. The empirical results for the Indian economy in the post-liberalisation period showed that FDI from the US has led to diversification of India's exports, both directly and indirectly. However, Japanese FDI has had no significant impact on India's exports.

Joseph and Reddy (2009) stated that the spillovers from FDI through multinational enterprises attracted considerable attention in recent times. Existing empirical studies on FDI spillovers largely looked at the productivity enhancing effects and horizontal spillovers of foreign firms in the same industry sector ignoring the possibility of spillovers through buyer-supplier or backward linkages. The present study examined the impact of horizontal as well as backward spillovers from the presence of foreign firms, on the export performance of domestic firms in the Indian manufacturing industry during 1993-2008. Increased competition in the domestic market post-liberalisation through sales of foreign firms was forcing domestic firms to look for export markets. The results indicated that domestic firms were not benefited in improving their export performance through any buyer-supplier linkages with the MNEs.

Prasanna (2010) opined that in a globalising world, export success can serve as a measure for the competitiveness of a country's industries and lead to faster growth. Recently, a much optimistic view on the role of FDI on export performance in the host country has evolved. The Government of India moved in this direction in

mid-1991 which increased the FDI inflow into India. Viewing the increasing trend of FDI inflows into India, this study explored the impact of FDI inflows on the export performance of India. The study found that the impact of FDI inflows on export performance was significantly positive.

Kuntluru et.al., (2012) presented an empirical analysis of how FDI impact on the export performance of pharmaceutical firms in India. The hypothesis was examined using panel data analysis. The results showed that foreign ownership had a negative impact on export performance. Unlike other industries, it was observed that in pharmaceutical industry foreign owned firms export less and focus more on domestic demand and host country specific advantages.

Barua (2013) examined the two most important benefits associated with the inflow of FDI for the host country in the form of: export promotion and GDP growth. To study the dynamics of cointegration between FDI, GDP and exports, evidence was taken from country-specific level like Indian economy where the period of study was from 2000-2012. As FDI inflow can have a two-way impact on the host country, the paper first examined the current economic scenario of India in terms of its FDI inflows, GDP growth rate and its export performance so far. Secondly, the paper showed a positive correlation between FDI, GDP and exports by framing simple regression and multiple regression models built on the hypotheses formulated and validating the results of the models based on ANOVA and Durbin-Watson test. The study clearly revealed that FDI not only acts as a vehicle for accelerating the pace of exports but also an important variable that alters the level of GDP of the host country. FDI can complement local developmental efforts by boosting export competitiveness, generating employment and strengthening the skill base, enhancing technological capabilities (transfer, diffusion and generation of technology), and increasing financial resources for development. It can also help plug a country in the international trading system, as well as promote a more competitive business environment. In view of this, India should continue to take steps to ensure an enabling business environment to improve India's attractiveness as an investment destination.

Kemme et.al., (2014) emphasised that the role of foreign capital inflow, FDI and foreign portfolio investment, on export behaviour of both recipients and non-recipient competing firms in the same sector often guides economic development policy. By using panel data of Indian IT firms over 2000-2006, the

investigators showed that FDI reduces the sunk costs of entering foreign markets and therefore positively effects both the decision to export and the export propensity of recipient firms. Foreign portfolio investment has no effect on the decision to export, but it does marginally increase the volume of exports. Further, these positive FDI and FPI recipient effects do not spill-over to non-recipients.

To sum up, many studies attempted to study the influence of the export activity of foreign firms on the export decision and export intensity of the domestic firms. The studies found that the domestic firms were more likely to export if they operated in sectors where the presence of foreign firms was relatively high. The findings also showed that horizontal and forward linkages to be the two main channels of export spillovers from FDI while domestic firms had no benefits from backward linkages to enter the export markets as well as to increase their export value. Results contrary to the above findings were also found.

F. Other Related Studies

Athukorala and Menon (1995) highlighted that the literature on the role of FDI in the export expansion of manufactured exports from developing countries was sparse. This article attempted to fill this gap through a case study of the role of export-oriented FDI in Malaysia's rapid industrialisation. The overall conclusion of the article was that export-oriented FDI brought significant returns to Malaysia principally because the general economic climate was favourable for the internationalisation of production for a considerable period of time.

Glass and Saggi (1998) provided a contrasting view to the common depiction of imitation as exclusively the foe of FDI. In situations where substantial technology gap persists between source and host countries, imitation can provide the technological foundation needed to make state-of-the-art technology transfer through FDI more attractive.

Gorg and Strobl (2004) investigated whether spillovers occur via worker mobility. The authors used data on whether or not the owner of a domestic firm has previous experience in a multinational, and relate this information to firm level productivity. The results suggested that firms which are run by owners who worked for multinationals in the same industry immediately prior to opening up their own firm are more productive than other domestic firms.

Pradhan et.al., (2004) attempted to evaluate the employment and wage effects of FDI in Indian manufacturing. The findings suggested that foreign firms do

not have any adverse effects on the manufacturing employment in India as compared to their domestic counterparts while they significantly pay relatively higher to their workers. Therefore this study tends to imply that labour in fact had benefitted from foreign investment on India.

Alse and Srinivasan (2008) stated that FDI to India increased from a mere \$97 million in 1990-91 to \$5,526 million in 2004-05 because of institutional restructuring. This investment led to a change in technological, economic and social conditions in India. The analysis using Likhert scale and ordered probit regression indicated that respondents perceived that economic liberalisation policy was beneficial and has resulted in creating a competitive environment, and improvement in the quality of goods and services. Younger respondents were overwhelmingly supportive that FDI has resulted in better job opportunities for the educated, while older respondents perceived that foreign companies have increased the disparity between the rich and poor.

Karim and Ahmad (2009) stated that Malaysia's rapid economic growth has given rise to the realisation of distributional objectives for achieving its ultimate goal of national unity. Reducing poverty and income disparities among races, income groups and regions is continuously emphasised by the Government of Malaysia in the country's series of national development plans. This paper concentrates on the significance of foreign direct investment in poverty reduction across the states of Malaysia. In the econometric analysis, a set of panel data covers eight sub-periods over the period 1984-2005. All the 13 states and three federal territories of Malaysia are taken into account in the analysis. The FDI-poverty model selected is in the log-linear form and the FDI inflows into the manufacturing sector are the only explanatory variable. The empirical result showed that the FDI coefficient has a statistically significant negative sign, suggesting that the poverty incidence could be reduced by increasing FDI inflows into the Malaysian states.

Okada and Samreth (2010) investigated the effect of FDI on economic growth by employing the data of 132 countries for the period from 1995 to 2008, considering the role of corruption in each country as an absorptive factor. The estimation results indicated that, although FDI alone does not promote economic growth, it had a significant effect on economic growth if the interaction term between FDI and corruption was considered. The threshold level of corruption separating the negative and positive effects of FDI on economic growth was approximately in the 10th

percentile from the least corrupt countries. The existence of a corruption threshold implied a counter-intuitive proposition: that FDI inhibits economic growth in countries where corruption was below a corruption threshold, and promotes economic growth in countries where corruption was above the threshold.

Lai and Sarkar (2011) measured the effect of labour cost on FDI in India and found out whether the foreign owned firms pay higher wages than their domestic counterparts. The estimation was done by the OLS technique. Data suggested that after controlling the output, the lower average wage attracts foreign investment in a firm implying that India enjoys comparative advantages of low labour cost which enabled her to lead in product competition globally. Second, Indian firms have efficiency wage to encourage employees to produce higher output. In addition, the foreign owned firms in India pay higher wages than their domestic counterparts. The firms with higher ratio of foreign ownership pay more wages than the firms having lower ratio.

Barrios et.al., (2011) argued that the measures of backward linkages used in recent papers on spillovers from multinational companies were potentially problematic, as they depended on a number of restrictive assumptions, namely that (i) multinationals use domestically produced inputs in the same proportion as imported inputs, (ii) multinationals have the same input sourcing behaviour as domestic firms, irrespective of their country of origin, and (iii) the demand for locally produced inputs by multinationals is proportional to their share of locally produced output. The authors discussed why these assumptions are likely to be violated in practice, and provided alternative measures that overcome these drawbacks. The results, using plant level data for Ireland, clearly showed that the choice of backward linkage measure and thus, the assumptions behind it, mattered greatly in order to draw possible conclusions regarding the existence of FDI-related spillovers. Using the standard measure employed in the literature the investigators failed to find robust evidence for spillovers through backward linkages. However, when alternative measures of backward linkages that relax assumptions were used, they found robust evidence for positive FDI backward spillover effects.

Saluja et.al., (2013) put forth that the subprime crisis of 2007-08 led many countries of the world to fall into a recessionary period. This resulted in many countries facing different macroeconomic problems. In this scenario the Indian economy is also facing many macroeconomic problems one to the likes of current

account deficit. The government in recent times tried hard to boost FDI to finance the deficit. In this paper, the authors tried to investigate the relationship between FDIs and the current account and FDI and capital account in context of Indian economy. Using the Augmented Dickey Fuller Test, it was found that all the series was non stationary at level. The Johanson cointegration test was used for finding relationships between variables for the period of 1991:Q1-2012:Q4. The result indicated that FDI-CU and FDI-CA were co integrated in the long run. Results suggested that the current account balance had a negative relationship to FDI but capital account made a positive impact on FDI after the liberalisation of the economy.

Anwar and Sun (2013) made use of firm-level panel data from 2005 to 2007 and empirically examined the relationship between research and development behaviour and the presence of foreign firms in China's four major manufacturing industries. The manufacturing industries considered were (1) car manufacturing, (2) household electrical appliances, (3) electronics and (4) communication equipment manufacturing. The authors found that the presence of foreign firms resulted in a significant increase in R&D intensity of all four manufacturing industries in China. While the average R&D intensity in communication equipment manufacturing was the highest, the electronics industry, which had the highest level of foreign presence, experienced a relatively large increase in R&D intensity. This suggested that China's electronics manufacturing sector was responding to rising competition from foreign firms located in China. Foreign presence in China's car manufacturing sector was relatively small, and this industry experienced a relatively small increase in R&D intensity because of foreign presence.

Castro and Nunes (2013) opined that globalisation created new opportunities for firms to invest abroad and many economies are making active efforts to attract FDI in order to promote economic growth. Decisions to invest abroad depend on a complex set of factors, but the least corrupt countries may attract more FDI because they provide a more favourable climate for investors. In this paper the authors investigated the impact of corruption on FDI inflows in 73 countries, over the period 1998-2008. The results suggested that countries where corruption was lower, the FDI inflows were greater, and so controlling corruption may be an important strategy for increased FDI inflows.

Eapen (2013) accentuated that scholars' studying FDI spillovers usually examine whether productivity gains in domestic firms can be attributed to the presence of foreign firms in their industry. However, empirical estimation was often based on datasets that omit certain kinds of firms in the economy. Hence the investigator argued that identifying FDI spillover effects in such incomplete datasets was problematic, owing to measurement error and selection problems. Using Monte Carlo simulations, the author showed that spillover effect estimates from incomplete datasets were potentially biased. The investigator discussed the theoretical implications of this, and demonstrated a weighted instrumental variable approach that could yield better spillover effect estimates in incomplete datasets.

To sum up, large number of studies (Liu et.al., 2000; Haskel et.al., 2007; Joseph, 2007; Keller and Yeaple, 2009; Abraham et.al., 2010; Thakur and Burange 2014; Malik, 2015) have identified the favourable impact of FDI spillover on the productivity of the domestic firms both at the international and national level. However contradictory views (Haddad and Harrison, 1993; Konings, 2001; Hale and Long, 2007; Barbosa and Eiriz, 2009) exist on the presence of foreign firms on improving productivity of domestic firms. A number of foreign and Indian studies on export spillovers (Greenaway et.al., 2004; Lemi, 2004; Ruane and Sutherland, 2005; Vuksic, 2005; Zhang, 2005; Kneller and Pisu, 2007; Gu et.al., 2008; Sun, 2010; Prasanna, 2010; Anwar and Nguyen, 2011; Nguyen and Sun, 2012; Sun, 2012; Chen et.al., 2013; Barua, 2013; Kemme et.al., 2014) reported positive influence of FDI spillovers on the export performance of host country firms. On the other hand few other studies (Aggarwal, 2002; Joseph and Reddy, 2009; Kuntluru et.al., 2012) showed that FDI spillovers do not have an influence on the export performance of indigenous firms. Most of these studies took the manufacturing firms as a whole instead of differentiating them on the basis of their technology intensity and structure of foreign ownership as done by Malik (2015). The present study differs in that it focuses on both the influence of foreign firms on the productivity and export performance of the manufacturing firms of India based on their technology intensity and structure of foreign ownership covering a longer time period from 2000-01 to 2012-13.