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Foreign Direct Investment in India

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Foreign Direct Investment in India

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I Introduction

WHEN A GROUP of businessmen in New York asked Prime Minister Nehru about the Indian Government's policy towards foreign investment, he is reported to have looked out of the window and commented on the weather. Nehru's lofty disdain for foreign direct investment (FDI) was not born out of a lack of faith in its potential to transfer technology and know-how, but of his resolve to shield the economy from the grip of foreign interests; indeed, science and technology formed the centrepiece of the prime minister's development strategy for India.. The sizeable presence of British capital in pre-independence India had done little to promote development, its large presence in extractive industries, plantations, shipping, banking and insurance were geared to promoting colonial interests. Nehru's ideals of democratic socialism and economic self-sufficiency were shaped by his aversion to India's colonial past and dependence on Britain.

The highly regulated foreign trade and investment regimes in place until recently formed an integral part of this design of self-sufficiency. Even so, foreign enterprise participation in the economy was not shunned, its spheres of activity and the form it took were highly regulated. Foreign capital was barred from specified industries and technical collaboration agreements or technology licensing agreements between Indian owned and foreign firms were preferred to FDI. And the policy framework was opaque with implementation of policy based on bureaucratic consideration of each case on its merits.

The 1991 economic reforms were to change all this. Along with the virtual abolition of the industrial licensing system, controls over foreign trade and foreign investment were considerably relaxed, including the removal of ceilings on equity ownership by foreign firms. The reforms did result in increased inflows of FDI during the decade of the nineties. Even so, the volume of FDI in India is relatively low compared with that in the East Asian countries and China. This relatively low volume of FDI, especially so in comparison with China, has attracted widespread comment and sweeping policy recommendations for increasing the volume of FDI in the country. Most recently, a veritable David in the form of Jeffrey Sachs (and his associates from Harvard University) has appeared on the scene, with policy

recommendations on how to slay the Goliath of Indian bureaucracy and other impediments to FDI. If China, with its newfound faith in capitalism, can embrace and attract substantial volumes of FDI why can't India which is blessed with western institutions and capitalist organisations? This impassioned advocacy of increased flows of FDI into India is based on the well worn arguments that FDI is a rich source of technology and know how and capital to boot, it can invigorate the labour intensive export oriented industries of India, promote technological change in the science based industries and put India on a growth path on par with China. This exuberance for FDI is an article of faith, India is asked to accept it as such, it is not based on an analytical review of India's needs and requirements and her potential for attracting large lows of FDI. The case for attracting large volumes of FDI into India requires an analysis of the determinants and impact of FDI in the Indian context. This is the purpose of this paper which is based on the vast literature on FDI in general and FDI in India in particular. Section II reviews the determinants of FDI, section III analyses the efficacy of FDI in promoting development, Section IV examines policies, and section V concludes.

II Determinants

Is India capable of attracting much larger volumes of FDI than she does at present? Should India throw all doors wide open to FDI as advocated by the Harvard economists? Is China's experience a role model for India? The literature on FDI sheds some light on these issues.

Why do firms go abroad? Why do they choose to invest in specific locations? The origins of the theoretical literature on determinants of FDI are to be found in Stephen Hymer's doctoral dissertation (1978). His thesis briefly put is that firms go abroad to exploit the rents inherent in the monopoly over advantages they possess and FDI is their preferred mode of operations. The advantages firms possess include patented technology, team specific managerial skills, marketing skills and brand names. All other methods of exploiting these advantages in external markets such as licensing agreements and exports are inferior to FDI because the market for knowledge or advantages possessed by firms tends to be imperfect. In other words, they do not permit firms to exercise control over operations essential for retaining and

fully exploiting the advantages they own. Hymer's insights form the basis for other explanations such as the transactions costs and internalisation theories (Buckley and Casson, 1991), most of which in essence argue that firms internalise operations, forge backward and forward linkages in order to by-pass the market with all its imperfections. Dunning (1973) neatly synthesises these and other explanations in the well-known eclectic paradigm or the OLI explanation of FDI. For a firm to successfully invest abroad it must possess advantages which no other firm possess (O), the country it wishes to invest in should offer location advantages (L), and it must be capable of internalising operations (I). Internalisation is synonymous with the ability of firms to exercise control over operations. And such control is essential for the exploitation of the advantages which firms possess and the location advantages which host countries offer.

It is the location advantages emphasised by Dunning, which forms the core of much of the discussion on the determinants of FDI in developing countries. The two other attributes necessary for FDI are taken as given from the perspective of developing countries. Dunning (1973) set the ball rolling on econometric studies with a statistical analysis of survey evidence on the determinants of FDI. His study identified three main determinants of FDI in a particular location; market forces (including market size and growth, as determined by the national income of the recipient country), cost factors (such as labour cost and availability and the domestic inflation situation) and the investment climate (as determined by such considerations as the extent of foreign indebtedness and the state of the balance of payments).

Dunning's (1973, 1981) analysis proved influential and were pursued further by others (Agarwal 1980, Root and Ahmed (1979), Levis, 1979, Balasubramanyam and Salisu, 1991) Although the empirical literature continues to grow unabated both in size and econometric sophistication, its overall message can be briefly summarised in the form of the following propositions.

1 Host countries with sizeable domestic markets, measured by GDP per capita and sustained growth of these markets, measured by growth rates of GDP, attract relatively large volumes of FDI

2 Resource endowments of host countries including natural resources and human resources are a factor of importance in the investment decision process of foreign firms.

3 Infrastructure facilities including transportation and communication net works are an important determinant of FDI.

4 Macro economic stability, signified by stable exchange rates and low rates of inflation is a significant factor in attracting foreign investors.

5 Political stability in the host countries is an important factor in the investment decision process of foreign firms.

6 A stable and transparent policy framework towards FDI is attractive to potential investors.

7 Foreign firms place a premium on a distortion free economic and business environment. An allied proposition here is that a distortion free foreign trade regime, which is neutral in terms of the incentives it provides for import substituting (IS) and export industries (EP), attracts relatively large volumes of FDI than either an IS or an EP regime.

8 Fiscal and monetary incentives in the form of tax concessions do play a role in attracting FDI, but these are of little significance in the absence of a stable economic environment.

How does India fare on these attributes? She does possess a large domestic market, she has achieved growth rates of around 5 to 6 percent per annum in recent years, her overall record on macroeconomic stability, save for the crisis years of the late eighties, is superior to that of most other developing countries. And judged by he criterion of the stability of policies she has displayed a relatively high degree of political stability. It is, however, India's trade and FDI regimes which are seen as major impediments to increased inflows of FDI. The product and factor market distortions generated by the inward looking import substitution industrial policies India pursued until recently have been widely discussed. So too her complex and cumbersome FDI regime in place until the nineties.

Two distinct phases can be identified in India's foreign trade and investment regimes- the pre 1991 reforms phase and the post 1991 phase. The pre 1991 phase, which stretches over four decades, was marked by extensive regulation of trade and

investment. The cumbersome and complex nature of the regulatory framework during these years has been extensively analysed. (Kidron, 1965 Kumar, 1994). The specification of sectors in which both foreign financial and technical participation were allowed, those in which only technical collaboration was permitted, and those in which neither technical or financial participation was allowed reflect the desire to restrict foreign ownership and control to sectors of the economy in which its contribution was deemed to be essential. Restrictions on ownership of equity by foreign firms in cases where projects involved substantial inputs of foreign exchange or were export oriented, also reflect the desire to limit foreign control, but at the same time take advantage of FDIs foreign exchange earning potential where necessary and possible. A preference for technical collaboration agreements as opposed to foreign equity ownership also reflects the desire to promote the twin objectives of freedom from foreign control and utilisation of foreign technology and know-how. There were though bouts of liberalisation, as in the mid fifties and the eighties, mostly though not entirely dictated by foreign exchange shortages. The growth in the number of foreign collaboration agreements approved over the years (Table 1) and the proportion of foreign equity participation in Indian industry reflect these swings in policy.

India's reputation for hostility towards foreign economic participation though is mostly due to the restrictions on equity participation and export obligations imposed during the 1970s. The Foreign Exchange Regulation Act (FERA) of 1973 was Prime Minister Indira Gandhi's response to the economic crisis that bedevilled most years of her premiership. Her economic policies initiatives were mostly driven by political exigencies rather than an objective strategy with specific goals. Hostility to private enterprise, especially foreign private enterprise, headline grabbing initiatives such as the nationalisation of banks along with increased state control of economic activity were all part of an orchestrated strategy to please the electorate. In response to the regulation which required foreign firms to dilute their equity holdings to less than 40 percent many major multinationals such as IBM and Cocoa Cola chose to close down their operations in India, some fell in step with the requirement that foreign firms should shed equity in favour of Indian nationals, others such as Unilever diversified their production base in order to fulfil export obligations stipulated by the FERA in return for retaining majority equity ownership. During the period 1967-79 the total number of collaboration agreements reached an all time low of 242, and the

proportion of agreements with foreign equity participation fell from 36 per cent during the years 1959-66 to 16 percent over the years 1967-79 (Kumar 1994). During the eleven-year period 1966-79 the total amount of foreign capital approved by the government amounted to only $70 million and the net inflow (net of dividends and repatriation of capital) was negative (Lall and Mohammad, 1984).

The mid 1980s saw a considerable though not a radical relaxation of the dirigiste trade and investment regime, part of which was a relatively benign attitude towards foreign enterprise participation. Prime Minister Rajeev Gandhi with his penchant for science and technology, mirroring that of his grand father Nehru, appears to have been much more sanguine about foreign enterprise participation in the economy than his predecessor. The total number of collaboration agreements approved per year increased from 242 during the period 1967-79 to 744 during the period 1980-88.

One of the major consequences of the policy regime during the pre 1991 phase was a significant change in the pattern of foreign investment in India, away from plantations, minerals and petroleum towards the manufacturing sector. By the end of the decade of the eighties manufacturing accounted for nearly 85 per cent out of a total stock of FDI around Rs 28 billion. Within the manufacturing sector the high technology intensive industries such as machinery and machine tools, transport equipment, electrical equipment and chemicals including pharmaceuticals accounted for the bulk of foreign capital (Table 2).

The precise measure of the extent of foreign presence in a specific locale is a matter of debate. The proportion of total sales of a sector accounted for by foreign firms, their share in total assets, and their share in value added generated by a sector are some of the indicators used to measure foreign presence. Although there are a number of estimates of foreign presence in Indian industry they differ from each other depending on data and concepts they employ. Kumar (1994) estimates that at the end of the decade of the eighties foreign share in assets or sales of the organised private corporate sector in India was around 23 per cent. The share of foreign firms in individual industries within the manufacturing sector though varies widely from a high of 98 percent in leather products to a low of 7 per cent in textile machinery. In the case of 11 industries, including processed foods, cigarettes, leather goods,

pharmaceuticals and automotive components, foreign shares exceeded 66 percent of total sales in the individual industries; in 15 others including electrical lamps, electric machinery, paints and varnishes and automobile components foreign share in total sales ranged between 34 to 66 percent. More recent estimates suggest that over the period 1970-94 foreign controlled firms accounted for between a third and a quarter of gross sales of India's manufacturing sector (Athreye and Kapur 2001).

As both Kumar and Athreye and Kapur comment, the 1973 FERA, referred to above, appears to have failed in its objective of limiting foreign control. The required dilution of equity in favour of Indian nationals was achieved through fresh equity issues and control over operations was retained through wide dispersal of shares amongst local shareholders. In any case, these estimates, especially those relating to individual industries, suggests that foreign control over Indian industry during the pre 1991 phase was not low; in fact, it was significant in a number of consumer goods and technologically intensive industries. Whist the regulatory phase may have limited the absolute volume of foreign capital in India relative to that in some of the Latin American and East Asian countries, it may not have limited the extent of control exercised by foreign firms in individual industries and the manufacturing sector in general. This discussion of FDI in India during the pre 1991 phase suggests that the size of markets in India, especially for consumer goods with well known brand names, India's industrialisation policies with emphasis on science and technology oriented industries, the generally stable macro economic environment, though punctured with episodes of inflation and balance of payments crisis, and her endowments of human capital have all been factors in the volume and pattern of FDI and technology licensing agreements in the economy during the period 1950-1990. And foreign presence in a wide variety of industries appears to have been sizeable despite the complex regulations.

The Post 1991 Phase

Relaxation of controls over FDI constituted a significant plank of the wide ranging economic reforms introduced in 1991 (Table 3) The three main elements of the reform were the abolition of the licensing requirements governing domestic investment, reduction in tariffs on imports and relaxation of controls over FDI. The

principal changes in the foreign investment regime included automatic approval of FDI up to 51 percent of equity ownership by foreign firms in a group of 34 technology intensive industries, a case by case by consideration of applications for foreign equity ownership up to 75 percent in nine sectors, mostly relating to infrastructure, and the streamlining of procedures relating to approval of investment applications in general.

Relaxation of controls over the extent of foreign ownership of equity signals a major departure from the earlier regime, although foreign ownership of equity over and above 50 per cent was subject to the requirement that the investors should balance all outgoings of foreign exchange on account of their operations with export earnings over a seven year period. The reform package as a whole heralded a departure from the earlier dirigiste regime. And FDI flows appear to have responded to the new initiatives; annual average inflows increased from around $384 million during the late eighties to around $ 3 billion during the late nineties. (Table 4).

Although there are stray voices of dissent echoing the familiar concerns with increased foreign enterprise participation in the economy, the new initiatives have had a favourable reception. Indeed, the often heard lament is that inflows of FDI are low relative to the size of the economy, they account for only 5 per cent of gross domestic capital formation, actual inflows are much less than approvals (around 21 percent of approvals amounting to $54 million between the years 1991-98), and the volume of FDI India has attracted shades into insignificance compared with the sizeable volume of FDI China has attracted in recent years (Table 5). The official target is set at $10 billion of FDI inflows per annum, a more than four fold increase from the present levels.

Admittedly inflows of FDI are much lower than that received by not only China but also several other East Asian and Latin American countries. It is often said that reported inflows of FDI into China are inflated because a substantial chunk of it consists of the so-called round-tripping variety of capital inflows. These are monies taken out of China and brought back into the country to take advantage of tax and tariff concessions accorded to foreign investors. Round tripping capital flows though

are reported to account for only around 6 per cent of total flows, not a huge sum given the size of total inflows of FDI into the country.

It is also argued that China is a large recipient of FDI mostly because of the investments from her Diaspora, chiefly from those resident in East Asian countries including Hong Kong. This may be so, but there is no reason to dismiss Diaspora investments as inferior to those from other sources, a sort of quasi-FDI, as one commentator puts it (Wei, S 1999) To the extent that the Diaspora do bring in know how and technology, they do make a contribution to the growth process. In fact, because of their cultural affinity with those in the Mainland China, the Diaspora may be better placed to take advantage of the location advantages the Mainland offers. And a substantial proportion of investments from Hong Kong may originate from western countries and routed through Hong Kong, a leading financial centre in the region. There is also the suggestion that India's Diaspora, which is sizeable, have mostly preferred to invest in bank deposits as opposed to FDI preferred by the Chinese Diaspora and hence the low levels of FDI in India.

The differing composition of the Chinese and Indian Diaspora, in fact, provides one reason for the differences in the volume of FDI the two countries have attracted. Although there are no precise data on the size and composition of the Chinese and Indian Diaspora, available evidence suggests that whilst Indian Diaspora are located mostly in the US, the UK and other western countries, Chinese Diaspora are mostly located in East Asia. And while the Indian Diaspora, especially so in the US, mostly belong to the professions including education, health services and science and engineering oriented professions. The Chinese Diaspora are business oriented. The opening up of China to trade and investment appears to have provided the Chinese Diaspora the opportunity to extend and or shift their business interests to the mother country to take advantage of relatively low cost labour and land. The Indian Diaspora with their lack of business interests have for long opted for the portfolio variety of investments principally bank deposits, the sudden withdrawals of such investments was one of the proximate causes for the economic crisis India experienced in 1991.

The one notable exception here is the participation of India's Diaspora in the Silicon Valley in the spectacular growth of India's export oriented software industry. The Indian software engineers and entrepreneurs in the Silicon Valley appear to have successfully exploited the location advantages provided by the Indian industry, mostly relatively inexpensive human capital (V. N. Balasubramanyam and A. Balasubramanyam, 2001) In contrast China's exports largely consists of labour-intensive exports, around 50 to 60 percent of total exports, mostly though not wholly on account of Diaspora investments. Both the Indian experience with Software and China's experience with low skilled and semi skilled labour intensive exports endorse the proposition that FDI is most effective in the presence of co-operant factors in the locale of investment and when it complements local capabilities.

It is, however, argued that Indian Diaspora or the non-resident Indians (NRIs) lack the marketing and labour management skills and hence the relatively low levels of NRI investments in India (Guha and Ray, 2000). But then it is also shown that what little NRI investments India has attracted are export oriented, mostly labour-intensive exports such as garments. The inescapable conclusion must be that Indian Diaspora are vastly different in their background and orientation and perhaps in size from the Chinese Diaspora. This is one of the reasons for the relatively low volumes of FDI in India.

One other fact which is noteworthy, which follows from the discussion above, is that the composition of FDI in India in general is substantially different from that in China. A substantial proportion of FDI in India is located in the high technology end of the spectrum of industries and in services, whereas investments in China are mostly located in the low technology end of the spectrum including Electronics which mostly relates to assembly operations (Table 6). This fact too reflects the differences in the stage of industrialisation and local market conditions in the two countries. The relatively high volume of FDI in the technologically oriented industries in India reflects the attraction of a sheltered domestic market for the products of these industries, a consequence of the import-substituting industrialisation strategy the country followed for more than four decades. So too is the sizeable foreign enterprise participation in branded consumer goods including food products. Most of the consumer goods sector, even after the 1991 reforms, enjoys not only protection from

import competition, but also access to imports of equipment and protection at relatively low rates of tariffs resulting in high rates of effective protection. Foreign firms facing a liberalised FDI regime have taken advantage of these high rates of protection and a sizeable domestic market for these goods. The volume of such tariff jumping domestic market oriented FDI would be relatively low for a variety of reasons. These include the product and factor market distortions typical of an import substituting industrialisation strategy, the artificial nature of incentives provided by the strategy and the capital and technology intensive nature of such investments. (Balasubramanyam, Sapsford and Salisu, 1996) In contrast, export oriented investments designed to exploit cheap labour, as in the case of China, tend to be sizeable.

Even so, it can be argued that India too possess large reservoirs of cheap labour, and if only she were to put her house in order, she too can attract large volumes of export oriented FDI. It is a fact that the economy, even after the wide-ranging 1991 reforms, continues to be riddled with various sorts of distortions. Principal amongst these is the stringent labour regulations in the organised manufacturing sector which limit the ability of firms to hire and shed labour in response to market conditions. Average levels of tariff continue to be high and the administration of the FDI regime continues to be riddled with delays and red tape. And, as is often noted, corruption and rent seeking on the part of those in power continues to be widespread.

Admittedly reform of labour laws, elimination of cumbersome bureaucratic procedures for the approval of FDI projects and measures to curtail corruption are all likely to enhance the attraction of India as a host to foreign firms. These measures though would be no less attractive to domestically owned firms. Large firms in the clothing-manufacturing sector, for instance, have responded with alacrity to the recent relaxation of the long-standing regulation that the sector should be the preserve of the small-scale industries. India is not deficient in the sort of skills required for successful exploitation of labour-intensive exports, it is just that she is constrained by the crippling regulations and restrictions imposed by the government. Elimination of these distortions in the factor and product markets would be in the interests of both domestic and foreign firms. It is though arguable if the sort of FDI China has attracted

in labour intensive export oriented industries are essential to promote productivity and exports in the labour intensive segments of Indian industry. In any case, the rational policy would be to provide level playing fields and encourage competition in these industries rather than provide various sorts of fiscal incentives and subsidies for foreign firms. It is also noteworthy that Indian firms have a notable presence in both the domestic and export markets in technologically intensive industries such as chemicals and pharmaceuticals. In this context it is well worth pondering the thesis that the relatively large volumes of FDI in China are a consequence of China's policy framework, which has failed to provide incentives for domestically owned firms if not actively discouraged their growth (Huang, 2002). Foreign firms, with all the incentives offered to them, may have taken advantage of the opportunities denied to the locally owned Chinese firms. The visible presence of large firms in India in most segments of the manufacturing sector, albeit sheltered from competition because of the inward looking industrialisation strategy of India, may be a factor in the low volumes of FDI India has attracted in the post reform phase.

None of this is to say that India should rest content with the volume of FDI she attracts at present. Admittedly technical know-how relating to design of products and marketing skills are required even in the labour intensive export industries such as clothing. These sorts of know-how though can be obtained through licensing and technical collaboration agreements, both of which have grown in number since the 1991 reforms. In the past such arrangements, which were preferred to FDI, failed to yield the hoped for benefits mostly because of the inability of Indian industry to adapt and restructure imported know how. But now India may be better placed to do so, with all the experience she has gained over the years and the human capital she has accumulated including that in the information technology sector. It is ironic that India should have opted for contractual arrangements rather than foreign equity participation in the past, when she was ill-equipped to utilise such agreements effectively, and now when conditions are ripe for utilising contractual agreements she should encourage foreign equity participation.

In sum, the argument that India should attract large volumes of FDI if only because China has done so may be misconceived. The structure, stage of development, sources of FDI and historical factors set India apart from China. The

optimum level of FDI a country should harbour is a function of the structure, stage of development, sources of FDI it has access to and the volume of co-operant factors it possess. And so too would be the contractual forms of foreign enterprise participation the country should opt for. None of these factors underlie the recent exhortations such as "in terms of foreign investment, it is the direct investment that should be actively sought for and *doors should be thrown wide open for foreign direct investment. FDI brings huge advantages (new capital, technology, managerial expertise, and access to foreign markets) with little or no downside "(*Bajpai and Sachs, 2000). The open door policies advocated include relaxation of limits on foreign equity participation, reduction of corporate tax rates, relaxation of labour laws which at present do not allow retrenchment of workers or closure of loss making enterprises, and promotion of export processing zones (EPZs).

As said earlier, some of the reforms such those relating to labour laws, elimination of red tape and cumbersome bureaucracy, and financial sector reforms should be implemented in the interests of growth and efficiency in general. A distortion free economic environment is essential for the growth of both foreign and domestic investments. Some of the proposed incentives for FDI, however, may generate rather than eliminate distortions. EPZs, advocated by the proponents of FDI, is a case in point. They are classic examples of the second best. EPZs are more often than not established to offset distortions elsewhere in the economy. Such a partial move towards free trade may or may not promote welfare. To the extent they attract labour from elsewhere in the economy they may not increase total employment. Moreover, the social costs of generating employment on the zones could be considerable, and as most of the operations on the zones are confined to the assembly of imported components the technology and skills they transmit to the local economy would be limited. For these reasons the social costs of establishing EPZs may outweigh their benefits (Warr, 1984). Here again China may be a special case. An economy with abundant supplies of cheap labour but with little experience of export marketing and labour management may be compelled to adopt second best policies. Also, Shenzhen the most successful EPZ in China is no more than an outpost of Hong Kong with all the marketing expertise and managerial Know-how Hong Kong is able to provide. Here again China may not be the role model for India.

Increased autonomy over decision-making and implementation of reforms to the state governments in India is yet another suggestion for attracting increased volumes of FDI. There is some merit in the proposal as it would not only engender competition between the states for FDI, but also considerably reduce delays and red tape in the approval procedures controlled by the central government. The states of Maharashtra, Tamil Nadu, Andhra Pradesh and Karnataka appear to be much more reform oriented than others such as Harayana, Bihar, Kerala and Orissa. They are also the states which have attracted relatively large volumes of FDI (Table 7). Here again the reforms that are crucial relate to investments in infrastructure, and education. States which are able to attract relatively high volumes of FDI and for that matter domestic investment are also the ones that score high on these determinants of investment. There may though be a downside to granting increased autonomy over decision making to the states in a federal set up. It may be used to promote political objectives with undesirable consequences for political stability in the country as a whole and regional interests may thwart national objectives. The Enron episode in the state of Maharashtra may be an apt example in this context.

There are also repeated references to India's low ranking in the international league tables on competitiveness and her high ranking on corruption, both of which are cited as deterrents to FDI. India though ranks high amongst the developing countries on the so-called FDI outlook index which is based on the current market size and its potential for growth. Judged on the basis of these indices India is at once seen to be a poor bet for FDI (low rank on competitiveness index) and a good prospect (on the basis of the FDI outlook index). The suggestion here is that if only India could move up the league tables on competitiveness index she would be able to attract large volumes of FDI. These sort of exercises lack analytical content not only because they are broad generalisations but also because the so-called competitiveness indices are fraught with methodological and statistical problems (See Lall 2001, for a comprehensive critique of these indices).

Even more vacuous are econometric exercises which regress current FDI flows into specific countries on variables such as growth rates, per capita incomes and corruption indices, and suggest that let alone India not even China has fully exploited her potential for inward FDI (Wei, S, 1999). These sorts of exercises are vacuous

because they fail to recognise the interdependence between FDI and growth, they ignore the composition and quality of FDI countries are able to attract, their stage of development, the co-operant factors they are endowed with, and above all they rely on dubious estimates of levels of corruption.

In sum, India has the potential for attracting increased volumes of FDI. She can do so with a set of policies which are in the interests of not only foreign investors but also domestic investors. It is though a bit far fetched to argue that FDI is a panacea for the development problem and India should throw all doors wide open to FDI. It would also be a folly to woo FDI if only because China attracts relatively high volumes of FDI.

III Efficacy

Few would dispute that FDI is an effective mechanism for the transfer of technology and know-how to developing countries. The one principal characteristic of FDI which distinguishes it from other sorts of capital flows, however, is its ability to transmit technology and know-how, broadly defined to include managerial and marketing know-how. Indeed, theoretical explanations of the birth and growth of MNEs, the principal purveyors of FDI, are cast in terms of the monopoly over advantages, broadly defined as technology and know-how, they possess and their desire to exploit the rents inherent in these advantages in overseas markets. And they prefer FDI to other methods of market participation such as exports and licensing because of market imperfections which may erode the monopoly over advantages they possess (Hymer 1976, Buckley and Casson, 1976, Dunning, 1988, 1993). MNEs overcome such imperfections by internalising operations from production to sales i.e. by forging backward and forward linkages. They effectively by pass the market as it were and confine their operations to the internal bureaucracy of the firm. If the objective of firms undertaking FDI is to preserve and protect the advantages they possess how can such investments benefit the host economies? They do so because of the externalities or spillovers, as it is now known, from their investments which accrue to the host economies. Apart from the employment FDI creates, and the exports and foreign exchange earnings it generates, it is the technology spillovers which are regarded as the major contribution of FDI to development.

Foreign firms are unlikely to voluntarily surrender the advantages they possess to local firms in the economy, nor can they be compelled to do so, although attempts to force them to do so are often made with the imposition of various regulations such as local content requirements and injunctions to employ nationals of the host countries in managerial positions, known as trade related investment measures (TRIMS).

There are, however, channels through which such spillovers occur. These include imitation, acquisition of skills, competition and enhanced export intensity of locally owned firms (Gorg and Greenaway 2001). Imitation of the products produced by the foreign firms through reverse engineering, an activity which enables local firms to copy the process and design of new products, is a recognised channel for spillovers. That such spillovers do occur is evidenced by the demand for intellectual property protection voiced by foreign firms. Such imitation need not be replication, it rarely is, but it does allow locally owned firms to benefit from the technology and know-how perfected by foreign firms. It is noteworthy that for such imitation to be successful the locally owned firms must possess the human and engineering skills required for reverse engineering.

Acquisition of skills occurs mainly through the movement of skilled labour employed by the foreign firms to locally owned firms. Quite often foreign firms may have invested in training the relatively cheap labour available in the host countries. Such internal migration of labour is a significant channel for spillovers. Labour employed in the foreign firms may wish to set up their own establishments with the experience and skills gained from their sojourn in the foreign firms. Also, foreign firms may, either in response to TRIMS imposed by the host country or because of distinct cost advantages, train or establish local suppliers of components and parts. This too would be a channel for spillovers.

Another potent channel for spillovers is competition. The theory here is that the entry of foreign firms increases competition in the market place and locally owned firms are compelled to increase their productive efficiency. This is the sort of efficiency recognised in the literature as X-efficiency rather than allocative efficiency. Increased competition from locally owed firms also induces foreign firms to invest in R and D either in the host country or in their home countries in order to be ahead of

the locally owned firms. Increased competition may also result in spillovers through the other channels referred to above. Interesting in this context is the observation by Richard Caves (1971) that competition from foreign owned firms is much more invigorating than competition from domestically owned firms. This may be because competition from technologically endowed foreign owned firms is much more intense than that from locally owned firms. Finally, locally owned firms may learn marketing techniques and methods of penetrating export markets from export oriented foreign firms.

These propositions have been extensively tested in the context of FDI in developed and developing countries (For a survey of the empirical literature see Gorg and Greenaway, 2000, Blomstrom and Kokko 2000,). These econometric studies have produced a mixed bag of results, some identify positive spillovers from the presence of foreign owned firms in the manufacturing sectors, others find them to be either negligible or negative (Table 8). Prominent amongst the studies which have identified positive spillovers is that relating to Mexico, (Blomstrom and Wolff, 1994), where the presence of foreign owned firms helped Mexican firms to converge to US productivity levels during 1965-82. Significant amongst those which find little or negative spillovers is the study on Morocco listed in Table-.8. It is suggested that studies which find positive spillovers may be suspect because they rely on cross section data at the industry level, which does not allow for productivity growth over time and the positive effects they pick up may be due to MNEs gravitating towards high productivity sectors. In other words, foreign firms may not be the cause of productivity efficiency; they may choose to invest in relatively productive sectors and industries in the host countries. Yet another survey paper, besides echoing the concern that studies using cross section data as opposed to panel data are more likely to identify positive spillovers, suggests that publication bias may have yielded a relatively large number of studies identifying positive spillovers. (Gorg and Strobl, 2000). The suggestion here is that academic journals lean towards publishing papers which report statistically significant results. In sum, econometric studies do not permit broad generalisations such as FDI brings huge benefits, there is no downside to FDI and that large volumes of FDI are always beneficial.

Ever since the 1991 reforms and the relatively mild bout of reforms in the mid-eighties, a number of studies on the impact of reforms on FDI and its efficacy in India's manufacturing sector have appeared. A study on the mid-eighties liberalisation efforts finds that both domestically owned and foreign owned firms in the chemicals and machinery industries increased their investments, imports of capital goods, in house Rand D expenditures and imports of technology. There was, however, no such growth of investments by foreign firms in the pharmaceuticals industry mostly because of the absence of protection of intellectual property legislation in India at that time (Siddharthan and Pandit 1998). A variant of this finding is that over the period 1980-1994, which includes both the liberalisation episodes, there were technology spillovers in the pharmaceutical industry of India, but only between multinational firms themselves with little impact on domestic firms (Feinberg and Majumdar 2001). Here again weak protection of intellectual property is seen as the reason for the spillovers which were confined to MNEs themselves in the pharmaceuticals sector.

There are also studies which identify positive spillovers. A study based on stochastic frontier analysis, utilising data for 368 medium and large sized firms in India's manufacturing sector, finds that there were positive spillovers from FDI in science based industries, but only in the case of domestic firms which possessed significant Rand D capabilities. In the sub- group of 'non-science' industries presence of foreign owned firms had compelled domestic firms to increase their productive efficiency (Kathuria , 2001). In addition to these econometric studies, there are also case studies of linkages and technology transfer between foreign owned and locally owned firms relating to specific MNEs in India and specific industries such as India's truck manufacturers (Lall, 1980, 1983). These studies, shorn of the statistical and methodological problems which beset the econometric studies, are able to identify the precise nature and extent of linkages and spillovers. And they do identify spillovers and more specifically linkages which are undertaken by MNEs with a view to promoting productive efficiency and minimising costs.

A number of studies have investigated the export performance of foreign owned firms in India for various periods of time (Lall and Mohammad 1984, Lall and Kumar 1981, Kumar 1994, Aggarwal, 2000). In general the export performance of the foreign owned firms is found to be no better than that of locally owned firms. Both

groups appear to have targeted the sheltered profitable domestic markets rather than the highly competitive export markets during the pre-1991 phase. Aggarwal's study, based on data relating to 1315 firms in the Indian manufacturing sector, for the period 1992-93 to 1994-95 though concludes that the export performance of foreign owned firms was distinctly superior to that of locally owned firms, especially so in the high-tech industries. The 1991 reforms appear to have had an impact on the export performance of both foreign owned and locally owned firms, with the former exhibiting a superior performance.

Another recent study (Mahambare 2001) based on a sample of 2417 firms in the manufacturing sectors for the period 1988-89 to 1997-98 notes that foreign firms in chemicals, drugs and non-electrical machinery sectors increased their exports in the post-reform period. There is also evidence to show that the reforms have had a favourable impact on the productivity of foreign firms. Mahambare also notes an improvement in the efficiency of foreign firms in the post-reform period. The analysis which is based on Data Development technique, reports that 61% of foreign firms showed an improvement in efficiency after the reforms compared to 35% of locally owned firms. Changes in the pattern of financing, namely a decline in the debt-equity ratio in the post reform period also appears to exert a positive impact on efficiency of foreign owned firms in chemicals, inorganic chemicals, drugs, computer hardware, and software industries.

As stated earlier, the statistical studies on spillovers yield a mixed bag of results. But they do identify a number of factors which are likely to promote spillovers of technology and know-how from foreign owned firms to the locally owned firms. First, the magnitude of spillovers tends to be high in industry segments where the gap in technological capabilities between foreign owned and locally owned firms tends to be narrow. Second, spillovers are likely to be high when the competition in the market place between locally owned and foreign firms tends to be intense. Third, the extent and magnitude of spillovers differ between industries and host countries. Fourth, several studies show that spillovers are proportional to the magnitude of foreign presence, measured by shares of foreign firms in total equity or sales of the relevant industry groups. Note though that this finding is challenged by Kokko (1996) who argues that it is competition between foreign and locally owned

firms and not the volume of FDI which influences spillovers. Fifth, local capabilities including R and D and human skills sustain high levels of spillovers. Finally, analogous to the last proposition, is the suggestion that liberalisation of foreign trade, increased competition and development of local infrastructure all promote spillovers.

These propositions are also endorsed by the endogenous growth theory or the new growth theory (Romer 1986, 1987, Lucas 1988). Although there are several variants of the theory, its main message is that technical change is endogenous. In a world of imperfect competition firms would have an incentive to invest in research and development. They compete with each other on the basis of new cost reducing methods of production and innovations designed to produce new products. Those in the lead would capture the market and retain their market share until imitators of their products and processes appear. But such competition would spur further research and development.

Endogenous growth theory explicitly recognises the role of spillovers in promoting technical change and growth, styled as externalities in the growth literature. Technology and know how are in the nature of non-rivalrous inputs, in the sense that the use of it by one entity does not preclude others from using it. Put differently the marginal cost of replicating knowledge may be zero. It is worth noting that whilst increased investments in capital of any kind, including human capital, may result in diminishing returns at the level of an individual firm, it may nonetheless increase productivity of capital at the aggregate level of say the industry. This could be the case if spillovers and externalities are present.

The message of all this is clear. Externalities or spillovers a re significant sources of growth and technical change, and FDI is a major engine of such spillovers. Increased volumes of FDI alone, however, are unlikely to generate widespread spillovers. In the absence of competition and co-operant factors such as local R and D and human skills spillovers from FDI may be limited. To put it another way FDI is a catalyst of technical change and growth, it cannot be expected to be the prime mover. Indeed empirical research suggests that FDI is most effective as an agent of change in economies which possess a threshold level of human capital and skills and in those economies which have attained a threshold level of growth (Balasubramanyam, Salisu

and Sapsford 1999, Blomstrom, Lipsey and Sajan, 1996). In sum, in the absence of the necessary ingredients and co-operant factors large volumes of FDI alone may be ineffective in promoting growth and may even be counter productive. For these reasons the exuberance relating to the role of FDI in the growth process and exhortations that India should adopt a wide open doors policy towards FDI may be ill conceived.

III Policy Framework

The 1991 reforms have considerably relaxed the FDI regime. The issue though is whether India should embark on further liberalisation and adopt a wide open doors policy which would include further relaxation of limits on foreign equity participation, autonomy to state governments over policies towards FDI, promotion of export processing zones and presumably fiscal incentives of various sorts to foreign firms. The foregoing discussion of the determinants and efficacy of FDI suggests that this enthusiasm for FDI should be tempered by recognition of the factors which govern FDI flows and its efficacy. Large volumes of FDI alone are unlikely to promote the objectives of development. It is noteworthy that although most studies on China do find that FDI has contributed to exports and growth, they do not find the relationship between FDI and productive efficiency to be all that robust (Wei, Y and Liu, X, 2001). This conclusion relates to the experience of China's electronics industry and the weak impact of foreign presence on the productive efficiency of the industry in general is attributed to negative spillovers; competition from foreign firms appears to have reduced the ability of locally owned firms to compete effectively in the market place. More often than not specific polices favouring FDI may yield relatively high private rates of returns to foreign firms but may contribute little to the social rates of return expected from the operations of foreign firms. Such policies may result in the establishment of FDI enclaves with very little linkages to the rest of the economy. Export processing zones, discussed earlier, are a case in point.

The evidence from statistical studies and theoretical literature strongly endorse the proposition that policies geared to removing factor and product market distortions in general are conducive to both increased flows of FDI and its efficacy in promoting development objectives. Such policies include liberalisation of the foreign trade

regime, investments in infrastructure facilities, dismantling of arcane labour laws which have done little to promote the growth of employment or the welfare of labour, the promotion of local R and D and investments in the growth of human capital. The essential message here is that level playing fields which do not discriminate between locally owned and foreign owned firms are much more likely to be efficacious than specific policies geared to FDI. Arguably India may be at a stage of development and industrial sophistication which would enable her to effectively utilise licensing and technical collaboration agreements, especially so in the labour-intensive export oriented industries. Again liberalisation of the foreign trade regime may engender increased competition from international sources and promote exports. There are though two caveats in order here. First, liberalisation of the foreign trade regime does not imply an all out export promotion strategy with attendant export subsidies and various other incentives for exports. As suggested by Bhagwati (1978) a distortion free regime is a neutral regime which does not favour either the export oriented industries or the import substitution industries, but allows comparative advantage to determine the allocation of investments between the two groups. There is some statistical evidence in support of the proposition that such a neutral regime is likely to attract both relatively large volumes of FDI and promote its efficacy (Balasubramanyam, Salisu and Sapsford, 1996). Here again the emphasis of policy should be on promoting a distortion free market environment for one and all and not just foreign firms.

It is also received wisdom by now that various sorts of incentives geared to attract FDI may do little in the absence of macro economic stability, possession of co-operant factors such as labour skills and stability of policies. Competition between developing countries for FDI based on such incentive packages may only succeed in yielding rents to the foreign firms and diverting incomes from the host countries to the foreign firms. National policy regimes designed to delimit the monopoly power of foreign firms, specifically those governing acquisitions of locally owned firms by foreign owned firms, may also be futile. Here gain the problem is lack of policy coordination between developing countries which foreign firms may adroitly take advantage to thwart domestic objectives. For these reasons there may be a case for an international compact on FDI, similar to the one on trade in services, under the aegis of the WTO. This suggestion has been often mooted in the Ministerial meetings of the

WTO. India though has steadfastly opposed such a compact. Although a detailed case for an international compact on FDI is the subject for a separate paper, it is worth pondering whether such a compact, which would place development objectives of host countries at the fore, would be a much more sagacious policy move than divergent unilateral policies of individual developing countries.

Other policy suggestions such as the promotion of transparency in the laws and regulations governing FDI, elimination of cumbersome bureaucracy and red tape and associated corruption are incontestable. There is now a sizeable body of literature on the causes and consequences of corruption both in India and other developing countries. One message here again is that increased government interference in the market place is one of the key reasons for the widespread corruption in countries such as India and China.

III Conclusions

FDI is a superb conduit for the transfer of technology and know-how to developing countries. This message has not been lost on India's policy makers. They have though until the decade of the nineties attempted to regulate and control its spheres of activity and the contractual forms of foreign enterprise participation in the economy. The framework of policies they put in place was guided by the desire to limit foreign control of economic activity but at the same time take advantage of the technology and know how provided by foreign capital. This attempt at riding two horses in tandem, a complex feat, inevitably resulted in a complex and cumbersome bureaucratically guided FDI regime and earned India the reputation for hostility towards FDI. Nonetheless, the volume of FDI in segments of the manufacturing sector was significant if not substantial. The 1991 economic reforms, a watershed in India's economic development strategy, signalled a major departure in the FDI policy framework and removed many of the restraints on ownership and composition of FDI. It is a fact that the 1991 reforms were a response to the grave economic crisis which the country was faced with in 1991, most liberalisation attempts in recent history have been driven by crises of one sort or the other. And far from representing a genuine change in heart towards foreign enterprise participation, India may have been compelled to adopt a liberal FDI regime. Nevertheless inflows of FDI increased

appreciably during the nineties and FDI appears to have had an impact on growth, exports and productive efficiency of Indian industry.

Even so, there are those who argue that a lot more needs to be done and India should throw all doors wide open to FDI. The spectacular growth of FDI in China is frequently invoked in support of this passionate advocacy of FDI. This paper has argued that this exuberance for FDI should be tempered by the recognition that FDI is a superb catalyst of growth and not an initiator, its efficacy in promoting development objectives is conditioned by the presence of co-operant factors in the host economies and it is most effective in countries which possess a threshold level of human capital. There is 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 is conditioned by the history and the stage of its industrialisation, the sources of FDI it has ease of access to and its endowments of co-operant factors and the sort of institutions it possesses t facilitate and monitor the operations of foreign firms. For these reasons the thesis that India should regard China as a role model may be misconceived. The paper has no quarrel with the advocacy of policies 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 are policies which should be adopted in the interests of both domestic and foreign investment. Indeed, a level playing field for one and all may be a much better bet than specific policies geared to the promotion of FDI. The paper also suggests that India may now be better placed than in the past to effectively utilise licensing and technical collaboration agreements as opposed to FDI. Finally, there may be a good case for a multilateral compact on FDI under the aegis of the WTO, a suggestion which India has hitherto steadfastly opposed.

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Table 1: Foreign Collaboration Approvals, 1948-1993

Period	Average number of collaborations approved per year	Those with foreign equity		Average foreign investment per year (Rs million)
		Average Number per year	Proportion in total	
1948-58	50	n.a.	n.a.	n.a.
1959-66	297	108*	36.4	n.a.
1967-79	242	39	16.1	53.62
1980-88	744	170	22.8	930.84
1989-90	635	194	30.6	2,224.95
1991-93	1,315	589	44.8	44,280.40

Note: n.a. – not available, * based on the basis of 1961-66
Source: Kumar (1994)

Table 2 Sectoral Distribution of the Stock of FDI in India (Rs billions)

	Mar-64		Mar-74		Mar-80		Mar-90	
	Value	%	Value	%	Value	%	Value	%
I. Plantations	1.1	**18.7**	1.1	**11.7**	0.4	**4.1**	2.6	**9.5**
II. Mining	0.05	**0.9**	0.1	**0.8**	0.1	**0.8**	0.1	**0.3**
III. Petroleum	1.4	**25.3**	1.4	**14.7**	0.4	**3.9**	0.0	**0.1**
IV. Manufacturing	2.3	**40.5**	6.3	**68.4**	8.1	**86.9**	23.0	**84.9**
Food and beverages	0.3	13.2	0.5	8.3	0.4	4.8	1.6	7.0
Textiles	0.2	7.2	0.4	5.7	0.3	3.9	0.9	4.0
Machinery and Machine Tools	0.2	6.8	0.4	6.7	0.7	8.8	3.5	15.4
Transport and transport Equipment	0.2	6.5	0.3	5.1	0.5	6.3	2.8	12.3
Metal and Metal Products	0.3	14.4	0.9	13.9	1.2	14.6	1.4	6.1
Electrical goods	0.2	7..9	0.7	10.9	1.0	12.0	3.0	12.8
Chemicals and Allied Products	0.6	26.2	2.0	32.6	3.0	37.2	7.7	33.4
Miscellaneous	0.4	17.6	1.1	16.7	1.0	12.3	2.0	8.8
V. Services	0.8	**14.6**	0.4	**4.4**	0.4	**4.1**	1.4	**5.2**
Total	5.7	**100**	9	**100**	9	**100**	27	**100**

Source: Kumar (1995)

Table 3: Major Economic Reforms in India

Prior to 1991	Reforms
Industrial licensing, reserved several Industries for the public sector	Abolished with a few exceptions.
MRTP act restricting corporate investment	Relaxed.
Imports subject to quotas and tariffs	Removal of quotas and substantial lowering of ta
Restrictions on FDI, foreign equity Discouraged	Many sectors opened up to FDI, automatic approval of foreign equity up to 51% in many sectors.
Control over foreign exchange	Largely liberalised current account, although restrictions on capital account remain.
Ban on foreign portfolio investment	Relaxed rules.
Severe restrictions on the timing and pricing of capital issues	Substantial capital market reforms.
Interest rate ceilings, subsidised lending	Ceilings largely removed, subsidised lending reduced.
Access to foreign technology restricted	Policies relating to technology relaxed.

Table 4: Number of Foreign Collaborations Approvals in India (August 1991 to May 2002)

	Technical	Financial
1991-1995	3954	4183
1996	744	1559
1997	660	1665
1998	595	1191
1999	498	1726
2000	418	1726
2001	288	1982
2002	118	940
Total	**7275**	**14972**

Source: Secretariat of Industrial Assistance, Ministry of Commerce and Industry, India

Table 5: Realised FDI (US $ billion)

	China	India
1979-1990	20.6	1.5
1991	4.4	0.1
1992	11.0	0.1
1993	27.5	0.3
1994	33.8	0.6
1995	73.3	1.3
1996	41.7	2.1
1997	45.3	2.8
1998	45.5	3.6
1999	40.4	2.5
2000	40.8	2.2
2001	46.9	2.3
2002(P)		3.9

Note: Financial year for India is from April-March
Source: China - PRC Ministry of Foreign Trade and Economic Cooperation
India - 1979-90 World Bank database, 1991 onwards Economic Survey 01/02.

Table 6: Composition of FDI in Manufacturing in India and China

	China	India
	1995	Aug.1991-Sep.97
Low Technology Intensive Industries		
Food and beverages	10.5	15.1
Textiles	8.9	4.0
Garments and footwear	6.0	na
Paper and Paper Products, Printing	4.7	3.6
Leather and related products	3.6	na
Total	**33.7**	**22.7**
High Technology Intensive Industries		
Chemical and chemical products *	3.4	18.5
Rubber Products	1.8	0.9
Plastic Products	5.1	na
Non Metal Mineral Products	7.7	na
Metal and Metal Products	5.5	12.7
Machinery Manufacturing	4.0	18.0
Special purpose equipment	1.9	na
Transport Equipment	5.9	15.4
Electrical equipment and Machinery	6.6	8.1
Electronics and Communication	9.6	na
Instruments	1.8	na
Other Manufacturing		3.6
Total	**47.3**	**77.3**

Note: * including pharmaceuticals
Source :Huang (2002), Sharma (2000)

Table 7: State-wise Break-up of Foreign Collaborations
(Period - August1991 to May 2002)

STATE	Number of Approvals			% of Total
	Total	Technical	Financial	
	21926	**7039**	**14887**	**2804.4 (Rs billion)**
MAHARASHTRA	3959	1146	2813	17.4
DELHI	1951	214	1737	12.0
TAMIL NADU	2152	542	1610	8.3
KARNATAKA	1950	448	1502	7.7
GUJARAT	1049	505	544	6.6
ANDHRA PRADESH	1010	239	771	4.7
MADHYA PRADESH	225	70	155	3.3
WEST BENGAL	591	191	400	3.1
ORISSA	136	49	87	2.9
UTTAR PRADESH	737	261	476	1.7
HARYANA	779	288	491	1.3
RAJASTHAN	320	100	220	1.1
PUNJAB	183	56	127	0.7
KERALA	264	62	202	0.5
PONDICHERRY	114	39	75	0.4
HIMACHAL PRADESH	97	57	40	0.4
GOA	176	59	117	0.3
BIHAR	47	22	25	0.3
CHATTISGARH	45	29	16	0.2
CHANDIGARH	51	10	41	0.1
JHARKHAND	73	49	24	0.1
Others state and locations not known)	6017	2603	3414	26.8

Source: Secretariat for Industrial Assistance, Ministry of Commerce and Industry, India (2002)

Table-8 Studies on Spillovers.

	Author(s)	Country	Year	Data	Aggregation	Result
1	Developing Countries Blomstrom & Persson (1983)	Mexico	1970	cs	Industry	+
2	Blomstrom (1986)	Mexico	1970/1975	cs	Industry	+
3	Blomstrom & Wolff (1994)	Mexico	1970/1975	cs	Industry	+
4	Kokko (1994)	Mexico	1970	cs	Industry	+
5	Kokko (1996)	Mexico	1970	cs	Industry	+
6	Haddad & Harrison (1993)	Morocco	1985-1989	panel	Firm & ind.	?
7	Kokko et al. (1996)	Uruguay	1990	Cs	Firm	?
8	Blomstrom & Sjoholm (1999)	Indonesia	1991	Cs	Firm	+
9	Sjoholm (1999a)	Indonesia	1980-1991	Cs	Firm	+
10	Sjoholm (1999b)	Indonesia	1980-1991	Cs	Firm	+
11	Chuang & Lin (1999)	Tiawan	1991	Cs	Firm	+
12	Aitken & Harrison (1999)	Venezuela	1976-1989	Panel	Firm	-
13	Kathuria (2000)	India	1976-1989	Panel	Firm	?
14	Kokko et al (2001)	Uruguay	1988	Cs	Firm	?
15	Kugler (2001)	Colombia	1974-1998	Panel	Industry	?

Source Gorg H and Greenaway D, Foeign Direct Investment and Intra-Industry Spillovers; A review of the Literature, Leverhulme Centre For Research on Globalisation and Economic Policy, Nottttingham University