Indian Industrialisation, Multinational Enterprises and Gains from Trade

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Introduction

In recent years there has existed a heated debate as to the allocative and distributive effects of multinational enterprises. Usually the hostile voices raised in industrialized nations have argued that the export displacement effect combined with the effect of imports by developed country multinational enterprises from their foreign subsidiaries outweighs additional exports triggered by foreign direct investment.¹

It is interesting to note in this context, however, that foreign direct investments from developing market economies such as India, although still amounting to only a small share of those from developed countries, have been growing faster than those of developed countries.² Indian firms now possess significant direct investments abroad (compare Table 1).

The growth of Indian foreign direct investment has grown rapidly since the 1950s in which India followed a policy of attracting foreign capital. Discrimination between Indian and foreign undertakings did not occur and reasonable quotas for repatriating profits and capital existed. The United Kingdom accounted for about 50 per cent of the supplied foreign capital till 1964, thereafter being replaced by United States investors as leading suppliers. After this period, Indian state-owned enterprises collaborated intensively with the Soviet Union and East European countries.³

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¹ See e.g. Donges and Juhl (1978), Agarwal (1985a).
² See Agarwal (1985a).
³ For a good discussion of these developments see Bhagavan (1985).
RANKINGS OF FIFTEEN DEVELOPING COUNTRIES, BY EXPORT OF MANUFACTURED GOODS AND FOREIGN DIRECT INVESTMENT

<table>
<thead>
<tr>
<th>Country</th>
<th>Rank by 1963 export of manufactured goods to other LDCs</th>
<th>Rank by direct foreign investment (1979)</th>
<th>Foreign direct investment (1979) ($ million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Singapore</td>
<td>1</td>
<td>2</td>
<td>370</td>
</tr>
<tr>
<td>India</td>
<td>2</td>
<td>4</td>
<td>88</td>
</tr>
<tr>
<td>Hong Kong</td>
<td>3</td>
<td>1</td>
<td>976</td>
</tr>
<tr>
<td>Mexico</td>
<td>4</td>
<td>10</td>
<td>23</td>
</tr>
<tr>
<td>Argentina</td>
<td>5</td>
<td>8</td>
<td>38</td>
</tr>
<tr>
<td>Philippines</td>
<td>6</td>
<td>3</td>
<td>276</td>
</tr>
<tr>
<td>Brazil</td>
<td>7</td>
<td>7</td>
<td>41</td>
</tr>
<tr>
<td>Korea</td>
<td>8</td>
<td>5</td>
<td>71</td>
</tr>
<tr>
<td>Chile</td>
<td>9</td>
<td>12</td>
<td>14</td>
</tr>
<tr>
<td>Venezuela</td>
<td>10</td>
<td>6</td>
<td>64</td>
</tr>
<tr>
<td>Colombia</td>
<td>11</td>
<td>9</td>
<td>35</td>
</tr>
<tr>
<td>Peru</td>
<td>12</td>
<td>13</td>
<td>4</td>
</tr>
<tr>
<td>Ecuador</td>
<td>13</td>
<td>11</td>
<td>19</td>
</tr>
<tr>
<td>Bolivia</td>
<td>14</td>
<td>14</td>
<td>3</td>
</tr>
<tr>
<td>Paraguay</td>
<td>15</td>
<td>15</td>
<td>0</td>
</tr>
</tbody>
</table>


From the late 1960s onwards, higher collaboration levels with western multinational enterprises where obtained again climaxing in the years 1976-1977. Thereafter, the stock of direct investment in India declined, reflecting partially host government regulation and a hostile economic climate. The Indian State became the dominant investor in capital goods in the hope of obtaining technological self-reliance.

As Bhagavan (1985) has pointed out the government of Mr. Rajiv Gandhi in its budget of March 1985 and import policy statement of April 1985 have proposed to give a boost to those policies which

4 Compare Hood and Young (1979), p. 26. For example, Indian Law requires foreign companies to divest 60 per cent of their equity to local shareholders unless they manufacture solely for export. See further Lall (1984), Wells (1983), and Kumar and McLeod (1981).

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favour the private sector and prevent some industrial sectors previously the imports of capital goods and disembodied technologies are being prohibited to foreign capital on the assumption that they are now being opened for foreign participation.

The rate of industrialization to a large extent will be dependent upon policies as well as the level of investment by firms will be able to achieve.

The origin of an increasing level of foreign investment among developing countries has been found in the similar levels of development as in India and their standards of living as well as economic similarity.

As Tandon (1982) has already argued, the phenomena of multinational enterprise is one which require intensified examinations of intra-national direct investment. Intra-national direct investment of the cost of disperse parts of the world economies of scale through international specialization and the two-country model in the following in which the effects of gains-from-trade theorem may be more clearly seen.

5 Agarwal (1985b), for example, companies of Indian Joint venture their domestic expansion were an important factor in going multinational.

6 See Jain and Barthwal (1983)
favour the private sector and property-owning classes. Privatisation of some industrial sectors previously in the public hand are occurring and the imports of capital goods and project packages (i.e. embodied and disembodied technologies) are being liberalised. Industrial branches prohibited to foreign capital on a majority foreign equity share basis are now been opened up for foreign investment.

The rate of industrialization facing India in the near future will to a large extent be dependent upon the effective magnitude of these policies as well as the level of intra-foreign direct investment Indian firms will be able to achieve.

The origin of an increasing international intra-industry foreign direct investment among developing countries on the one hand, and among industrial countries on the other, evolves largely out of their similar levels of development as inherent in their production technology and their standards of living as expressed in their ethnic and cultural similarity.

As Tandon (1982) has already pointed out in this journal, the phenomenon of multinational enterprises, internationalisation and integration of economic life are component aspects of national incomes which require intensified examination. The political economic implications of intra-foreign direct investment flows are far-reaching for all concerned. Intra-foreign direct investment flows indicate an intensive specialization effect within the various domestic branches of the international economy combined with an increasing expansion of the differentiated product sortiments of the world's multinational firms. Rationalisation of operations on a world basis allows firms to achieve increased economics of scale through international division of production. Applying a revealed preference argumentation a simple two-good, two-factor, two-country model including the empirically observed price-cost margin distortions in Indian manufacturing industries is formulated in the following in which the effects of multinational enterprises upon the gains-from-trade theorem may be examined theoretically.

5 Agarwal (1985b), for example, has found that 11 per cent of parent companies of Indian Joint Ventures stated that restrictions on their domestic expansion were an important factor behind their decisions to go multinational.

6 See Jain and Barthwal (1983) in this Journal.
The Revealed Preference of Multinational Enterprises

Assuming that the sector $X_i$ in which multinational firms are active is characterised by a convex production set even though internal increasing returns to scale exist, it is well known that marginal-cost pricing will usually not occur, rather commodity prices will exceed marginal costs for goods produced under increasing returns to scale international to the firm. The price-cost margin varies naturally with the market structure.

Following Markusen and Melvin (1984), one may interpret the international price-cost margin as a 'mark-up wedge' $w_i = 1/e_i$ between the free trade price $p_i$ and the free trade marginal cost $MC_i$ of commodity $X_i$, with $e_i$ representing the respective elasticity of demand.

Formulated in an ad valorem fashion the price-cost margin for output levels $x_i$ are thus,

$$ p_i \left(1-w_i\right) = MC_i \quad \forall x_i > 0 \\
\frac{p_i}{1-w_i} \leq MC_i \quad \forall x_i = 0. $$

Commodity $x_o$ on the other hand, is assumed to be produced in a competitive industry as embodied in the usual marginal cost pricing rule for profit maximisation (with $w_o = 0$):

$$ p_o = MC_o. $$

Marginal costs form a tangent to the production surface acting as a separating hyperplane at the free trade production point. Thus, due to the assumed convexity of the production set it follows that (autarky situation is characterised with 'a')

$$ \sum_i MC_i \cdot x_i^a \geq \sum_i MC_i \cdot x_i. $$

Accordingly, the necessary tangency condition to analyse the gains-from-trade in an environment characterised by multinational enterprises is,

$$ \sum_i p_i \left(1-w_i\right) x_i \geq \sum_i p_i \left(1-w_i\right) x_i^a. $$

A country’s balance-of-payments condition may be formulated as $\Sigma p \cdot x = \Sigma p \cdot c$ (c for consumption). In autarky it remains valid that

$$ \sum_i p_i \left(1-w_i\right) x_i^a \geq \sum_i p_i \left(1-w_i\right) x_i. $$

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$x_i^a = c_i^a + i$, production equals consumption. Equation (4) may be restated as

$$ \sum_i p_i \cdot c_i \geq \sum_i p_i \cdot c_i^a - \sum_i \pi_i. $$

Due to the increasing returns on a multinational basis however, levels $x_i$ increase with trade (e.g. gross) and can be restated as;

$$ \sum_i p_i \cdot c_i \geq \sum_i p_i \cdot c_i + \sum_i \pi_i. $$

with $\pi_i$ representing profits in the home country. 

Equation (6) illustrates that the presence of multinational enterprises can improve the balance of payments at the autarky output level.

One of the important changes over the last decade is the capability of repatriating earnings from exports to the host country’s balance of payments, to pay for direct foreign investment opportunities to local financing.

With regard to India’s need for technological innovation, the importance of foreign direct investment is receiving increasing attention.

Denoting $\pi_i$ as multinational earnings.
Firms are active producers of output, and internal returns to scale will exceed marginal-cost prices. Returns to scale will increase naturally with increase in size.

We interpret the Marginal Cost (MC) = Marginal Revenue (MR) at 1/q; between price, cost and demand. MC, of course, varies with scale of demand.

If a market price is set above cost margin for inelastic demand, supernormal profits will be produced in a competitive market.

In summary, the gains from trade may be produced by multinational enterprises and / or the existence of externalities.

The above analysis, however, is formulated as though the assumptions are valid that

\[ x_i^d = c_i^d + i, \]  

production equals consumption. Using this information, equation (4) may be restated as:

\[ (5) \quad \sum p_i c_i = \sum (p_i c_i^d + \sum p_i w_i (x_i - x_i^d)) = \sum p_i c_i^d + \sum (p_i - MC_i) x_i = \sum p_i c_i^d + \sum (w_i - MC_i). \]

Due to the increasing returns to scale present in sectors operating on a multinational basis however, \[ MC_i = AC_i = i. \] Given that output levels \( x_i \) increase with trade (e.g. \( w_i, > 0 \) and \( x_i > x_i^d \)) equation (5) may be restated as:

\[ (6) \quad \sum p_i c_i = \sum p_i c_i^d + \sum (p_i - MC_i) x_i = \sum p_i c_i^d + \sum (p_i - AC_i). \]

with \( p_i \) representing profits in the free trade equilibrium and \( c_i^d \) signifying profits at the autarky output at free trade prices.

Equation (6) illustrates that there will still be gains-from-trade in the presence of multinational enterprises given that the free trade profits at free trade prices \( p \) are larger than the autarky profits at \( p \) under the restriction that \( x_i > x_i^d \).

One of the important characteristics of multinational enterprises is there capability of repatriating earned profits, having a direct impact on the host country’s balance of payments. Furthermore, the financing of foreign direct investment of developing countries is often restricted to local financing.

With regard to India’s need for foreign exchange, her relatively recent start at industrialization, and India’s presently limited international competitiveness, these aspects undoubtedly deserve due attention.

Denoting \( \pi^* \) as multinational enterprise profits repatriated, the

\[ \pi^* \]

Agarwal (1985a) page 246, interestingly points out that Indian cash transfers were not permitted at all until 1978 and foreign direct investment took place by capitalizing the value of exported capital goods and services such as ‘headquarter’ functions and licensing fees. Since then, however, cash investments have been permitted for those projects likely to stimulate exports.

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balance-of-payments condition is now appropriately stated as:

(7) \( \sum p_i x_i = \sum p_i e_i + \sum \pi_i^* \)

Substituting, one obtains:

(8) \( \sum p_i e_i \geq \sum p_i e_i^a + \sum (\pi_i - \pi_i^a - \pi_i^*) \)

Equation (8) simply states that gains-from-trade are guaranteed if the condition \( (\pi_i - \pi_i^a - \pi_i^*) \geq 0 \) is fulfilled. In other words, the host country must be capable of retaining a portion, \( \pi_i - \pi_i^a \), of the multinational enterprise profits which is equivalent to the potential earnings of a domestic monopolist in the absence of multinational enterprises.

Furthermore, given that the multinational enterprise expands production, gains-from-trade arise. By the nature of their very existence in host countries one may argue that they are revealed preferred as postulated in equation (8). The existence of the multinational enterprise clearly makes some contribution to increasing the level of employment. Direct employment effects, as well as the indirect employment effects, must be taken into consideration.\(^10\) Often it is argued that developing countries like India, in the process of their economic industrialization, need large amounts of foreign direct investment. Corporate profit taxes have become an important source of financing economic development policies.\(^11\)

**Future Trends and Prospects**

The existence of multinational enterprises has raised the international mobility of financial (in the form of repatriated profits) as well as real capital (through foreign direct investments). The possibility of internalizing world-wide production-and-marketing relations permits internationally active firms to achieve higher profit levels. These profit levels are the stimulators of the observed internationalisation of production.

Entrepreneurial strategies focusing on obtaining and securing through product differentiation strong market segments in international markets have also profited from the observed per-capita income increase among consumers which has been accompanied by a stronger diversi-

\(^10\) Compare Hood and Young (1979); p. 203.


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Internationally active firm factors, so-called firm specific skills and technological know-how countries other than the country in which the transaction, within industrial economic development benefited Agarwal (1985a) has remarked, liberalizing nations such as India and foreign direct investments in host countries for capital gains by developed country multinational.

Secondly, through their increased demand for commodities and national enterprises will increase involvement's between developed and more and more common. With foreign direct investment flows, as legal restrictions and political

The rise in intra-industry is not necessarily confined only more and more apparent as NII that the preferred form of intra-industry foreign direct investment externalized cross-hauling of firm exist increasing levels of intra-industries in that industry.

Placing the above discussion of trend of India's industrialisation, success or non-success of an

\(^{12}\) See further Broll and Gilroy

\(^{13}\) See Helpman (1984).
Internationally active firms are in a position to transfer embodied factors, so-called firm specific assets such as management, marketing skills and technological know-how to service production plants in countries other than the country in which these inputs are employed.\textsuperscript{12} The increase in international commodity transactions, along with investment transactions, within industrial sectors will lead to a more favourable economic development beneficial to all concerned. Furthermore, as Agarwal (1985a) has remarked, foreign direct investments from industrialising nations such as India are complementary to developed country foreign direct investments insofar as they firstly increase the demand in host countries for capital goods and intermediate inputs supplied by developed country multinational enterprises.

Secondly, through their induced national income expansion effect demand for commodities and services from developed country multinational enterprises will increase. Finally, international joint venture involvements between developed and developing countries are becoming more and more common. With regard to India specifically, outward foreign direct investment flows are likely to increase rapidly as long as legal restrictions and political policies inhibit domestic growth.

The rise in intra-industry economic involvement between nations is not necessarily confined only to intra industry trade. It is becoming more and more apparent as Norman and Dunning (1984) point out that the preferred form of international involvement is indeed taking the form of intra-industry production, e.g. production financed by intra-industry foreign direct investments. In place of, or in addition to externalised cross-hauling of final goods in a particular industry, there exist increasing levels of internalized cross flows of intermediate products in that industry.

Placing the above discussion into perspective, it is clear that the trend of India's industrialisation will depend to a large extent upon the success or non-success of an elimination of the market distortions.

\textsuperscript{12} See further Broll and Gilroy (1985), (1986).

\textsuperscript{13} See Helpman (1984).
present in both the goods and factor markets. Furthermore, the balance-of-payments restriction facing India requires that in order for a positive gain-from-trade effect to occur, repatriated profits of foreign multinational enterprises involved in India must not exceed certain critical limits.


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Furthermore, the benefits of foreign investment need to be evaluated in order for the decisions of foreign multinationals to be made. The benefits of foreign investment are discussed in the context of labor relations and wages, which are key factors in the decision-making process of multinationals.

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