Indian Industrialisation, Multinational Enterprises and Gains from Trade

Broll, Udo and Gilroy, Bernard Michael

1986

Online at https://mpra.ub.uni-muenchen.de/18057/
MPRA Paper No. 18057, posted 22 Oct 2009 11:10 UTC
INDIAN INDUSTRIALISATION, MULTINATIONAL ENTERPRISES AND GAINS FROM TRADE

UDO BROLL
B. MICHAEL GILROY

INDIAN INDUSTRIALISATION, MULTINATIONAL ENTERPRISES AND GAINS FROM TRADE

UDO BROCK; B. MICHAEL GILROY

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 displace-ment effect combined with the effect of imports by developed country multinational enterprises from their foreign subsidiaries out-weighs 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 1966, 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

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).
### Table 1

**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 Bhagavat (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).

---

5 Agarwal (1985b), for example companies of Indian Joint, their domestic expansion were an influence to go 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 be opened up for foreign investment.

The rate of industrialisation 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.\(^6\)

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 margins distortions in Indian manufacturing industries\(^5\) 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 Bartha (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,

$$(1) \quad p_i (1-w_i) = MC_i \quad \forall x_i > 0$$
$$p_i (1-w_i) \leq MC_i \quad \forall x_i = 0.$$  

Commodity $x_6$, 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 $w_6 = 0$):

$$(2) \quad p_6 = MC_6.$$  

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') .

$$(3) \quad \sum MC_i x_i \geq \sum MC_i x_i^a$$

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

$$(4) \quad \sum p_i (1-w_i) x_i \geq \sum p_i (1-w_i) x_i^a.$$  

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

$$(5) \quad \sum p_i c_i \geq \sum.$$  

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

$$(6) \quad \sum p_i c_i \geq \sum$$  

with $\pi_i$ representing profits in the trading profits at the autarky output.

Equation (6) illustrates that the presence of multinational enterprises at free trade prices $p$ are possible under the restriction that $x_i > x_i^a$.

One of the important advantages is there capability of repatriating earnings on the host country's balance of payments as foreign direct investment of local financing.

With regard to India's needs recent start at industrialization, multinational competitiveness, these are the attention.

Denoting $\pi_i^*$ as multinationals

9 Agarwal (1985a) page 26. Cash transfers were not permitted, investment took place by capitalizing and services such as 'headquarters' then, however, cash investments were likely to stimulate exports.

11—265
x_i^d = x_i^c + i, production equals consumption. Using this information equation (4) may be restated as:

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

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

\[ (6) \quad \sum p_i, c_i \geq \sum p_i, c_i^d - \sum (p_i - AC_i)(x_i - x_i^0) = \sum p_i, c_i^d + \sum (\pi_i - \pi_i^0). \]

with \( \pi_i \) representing profits in the free trade equilibrium and \( \pi_i^d \) 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 \( x_i > x_i^a + i \).

One of the important characteristics of multinational enterprises is their 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.\(^8\)

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 \( \pi_i^{out} \) as multinational enterprise profits repatriated, the

\(^8\) 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.
balance-of-payments condition is now appropriately stated as:

\[ (7) \sum p_i x_i = \sum p_i i + \sum \pi_i. \]

Substituting, one obtains:

\[ (8) \sum p_i c_i = \sum p_i a_i + \sum (\pi_i - \pi_i^a) \cdot \pi_i. \]

Equation (8) simply states that gains-from-trade are guaranteed if the condition \((\pi_i - \pi_i^a - \pi_i^a) \geq 0\) 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. 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 internationalizing 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.

\(^{11}\) See Subrahmanyam (1984).
fication of preferences. Multinational enterprises of industrialising nations are likely to react (with relatively low costs of adjustment) to the increasing diversification of preferences as a growing number of developing countries move up on the income escalator and their patterns of comparative advantages evolve along this path.\(^{12}\)

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.\(^{13}\) 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 externalized 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

---

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

\(^{13}\) 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 gains-from-trade effect to occur, repatriated profits of foreign multinational enterprises involved in India must not exceed certain critical limits.


References


Broll, U. and B.M. Gilroy (1986); International Division of Labour and Intra-Trade. Economia Internazionale (forthcoming).

Donges, J.B. and P. Juhl (1978); Deutsche Privatinvestitionen im Ausland: Export von Arbeitsplätzen?. Kieler Arbeitspapier (discussion paper) No. 81; Institut für Weltwirtschaft, Kiel (December).


Hood, N. and Young, S. (1979); The Economics of Multinational Enterprise, London.

Furthermore, the benefits of foreign investment may be limited in order for the host country to benefit from it. The benefits of foreign investment may only accrue to the host country when certain conditions are met. These conditions may include factors such as the level of technology transferred, the degree of local content requirement, and the extent of training provided to local workers. In some cases, the benefits of foreign investment may be shared among different stakeholders, including local governments, local enterprises, and local communities. However, in other cases, the benefits may be unevenly distributed, leading to concerns about the sustainability and equity of foreign investment. Therefore, it is important to ensure that foreign investment is managed in a manner that maximizes the benefits for the host country and its citizens.