CHAPTER - III

THE PROCESS OF REPRODUCTION OF MONOPOLY CONDITIONS IN LESS DEVELOPED COUNTRIES

3.1 Transfer of Technology

That TNCs dominate the economies of the developed capitalist countries, which characterises it as a system of monopoly capitalism, is familiar (Baran and Sweezy, 1966). What is not so familiar is the relation obtaining in the extension of this system to the less developed countries (LDCs), i.e., the position of TNCs in the LDCs. A marked characteristic of this relation is the greater degree of control which the TNCs come to exercise in the markets of the LDCs (Lall, 1980a, p. 65) has shown how in the case of a majority of the industries in Malaysia, the market share of the TNCs was much greater in Malaysian industry, than what it was in the home country of these TNCs, namely Britain. The expression degree of monopoly has been used to indicate the extent of control a firm may be able to exercise in determining its own prices and consequently profits. One of the most important determinants of the degree of monopoly for a firm, is its market share. This being the case, it could also be said, that the degree of monopoly for the TNCs is much greater in the LDCs than what obtains for them in their own home countries, since the

1 See for instance, in particular, Kalecki (1971).
share of the markets controlled by them in the LDCs is much greater than the share of the markets controlled by them in their own home countries.

The present chapter examines the forces at work which reproduce the monopoly conditions and in particular, in stronger forms for the TNCs in LDCs. Technology and its monopoly appear as the crucial element in this process, where particular forms of TNC participation prevent its diffusion. Competition is thereby limited and conditions are created for a greater share of the market for the TNCs (UN 1979, pp. 5 and 8, and Bagchi, 1980, p. 307). Even where the possibilities exist for diffusion, the technological backwardness of LDCs may prevent complete and effective assimilation of such technology.

The large scale of resources at the disposal of the TNCs, the case with which they can obtain large credit, the large capital requirements of certain investments and the economies of scale realized in large investments, together prevent local companies in LDCs from effectively competing with the TNCs (Bagchi, 1982, pp. 121 and 129). Even where government make available the requisite finance to local companies, they may not be able to compete for want of experience in production, management and marketing (Bagchi, 1982, p. 189). Well established international marketing networks of TNCs prevent local companies from breaking into these markets. Established brand names and the capacity for sustaining large expenditures on advertising, as well as
product differentiating research and development, aid the monopoly process (Baran and Sweezy, 1966, p. 77).

The economic backwardness of LDCs compels the governments in LDCs, in their efforts towards securing transfer of capital and technology, to yield to the TNCs in providing special concessions and this together with the larger share of the markets in LDCs which the TNCs come to control, imply a higher profitability for the TNCs. Sheltered markets, created as a consequence of the import substitution programmes that the LDCs have pursued in the post colonial phase, have only added to this higher profitability.

One of the principal determinants of monopoly in production, is the monopoly in technology. Technology has two components – a tangible component and an intangible component. The tangible component consist of capital goods and intermediates. The intangible component is the knowhow and this is made available through technical assistance.

The conditions of entry into LDCs by the TNCs are such, that not only is the technological monopoly sustained but conditions for the control of a large share of the market are created by either eliminating altogether or restricting

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2 TNCs in India as well devote a substantial part of their R and D expenditure to product differentiation (See Sidharthan, N.S. 1984, p. 11).
the possibility of technological diffusion and hence of competition (Balasubramanyam, V.N. 1973). This is compounded by the backwardness of the technological infrastructure, obtaining in LDCs, which prevents the effective assimilation of technologies. This is not to suggest that there is no technological diffusion whatsoever in the LDCs or that the capacity for effectively assimilating the technology is non-existent, but that the technological diffusion is limited and only those LDCs, which possess strong technological infrastructures are capable of effectively assimilating the technology.

When TNCs operate in LDCs under conditions of direct investment, that is, with a branch or subsidiary, in which the parent has a large enough share in the equity, to be able to control it, the transfer of technology takes place within the TNC system, with very little possibility of spill over. Under these conditions, i.e., where a branch or a subsidiary is involved, since technology is not likely to be sold to a third party, the only way that the technology can go out of the TNC system, is if some local personnel who are employed in the branch or subsidiary, and who have assimilated the technology, decide to leave the concern and launch on their own (Balasubramanyam, V.N. 1973). Where

3 By the technological infrastructure is meant the levels attained in technical education and operative skills, as well as in basic science and research facilities. The LDCs are of course not all at the same level of technological backwardness. Some among them like India, have fairly well developed technological infrastructures.
however, the TNCs operate through contractual arrangements, the existence of restrictive conditions in the contracts, either altogether or to a large extent prevents the spill over.

For technology to be able to induce a monopoly in production, requires that TNCs have control over this technology. The degree of control that a TNC can exercise over technology, depends upon the form of participation. In the case of a TNC subsidiary, which is wholly owned by the parent or in which the parent has a sizeable share in equity, control over technology can be exercised without difficulty.

Further, while intrafirm trade and transfer pricing are integral to the direct investment process, that is, in the case of a TNC subsidiary, they could however occur, even in the case of unpackaged forms of TNC participation, such as technical collaboration agreements with unrelated enterprises, through tie-in clauses in the agreements.

TNC investment and transfer of technology could take several forms. It could take the form of direct investment with either no local participation in equity or no effective local participation in equity. A majority participation in equity by the TNC is not necessary for control and even a minority participation in equity can ensure control provided the shares in local hands are widely dispersed. Second, TNC participation could take the form of a joint venture, which means sharing of ownership with a local enterprise. Third, it could take the form of a technical collaboration
agreement, which usually means a license. Fourth, it could take the form of a management contract, which ensures control over the management of enterprise. This form of participation is common in LDCs such as Ethiopia, though not in India (UNCTAD, 1974b, pp. 3 and 44, and UNCTAD, 1975a, p. 33). Finally, there is the turnkey cum product guarantee arrangements (UNCTAD, 1978, pp. 13 and 31).

The important point to note is that in the case of direct investment that is where a subsidiary is involved, the TNC has no difficulty in ensuring control over technology and preventing competition, that may occur through the diffusion of technology, on the one hand, and in securing control over the supply of inputs which makes transfer pricing possible and provides another conduit to the TNCs for the outflow of funds, on the other hand. Since a TNC is interested both in preventing competition as well as in having an additional channel for the transfer of surpluses, it would normally aim for securing control over technology and the supply of inputs. In the case of direct investment this is ensured through ownership. In the forms of participation other than direct investment, since control over technology and the supply of inputs cannot be realized exclusively through the means of ownership, the TNC ensures this through other means. This is ensured through the restrictive clauses stipulated in the collaboration agreements.
The restrictive clauses in the collaboration agreements are a means therefore of ensuring control over technology and the supply of inputs. Technical collaboration agreements may or may not involve foreign participation in equity; and in the case where it does not involve foreign participation in equity, the restrictive clauses appear in stronger forms (UNCTAD, 1974a, p.13 and UNCTAD, 1975b, p.64).

The restrictive clauses appearing in collaboration agreements are of the following kind. One, tie-in arrangement specifying the supplier of capital goods, intermediates, raw materials and services. Either the licensee is obliged to buy all or some of the inputs from the supplier of technology or from some source specified by him. Two, restrictions on acquisition of either competitive or complementary technology. Three, restrictions on research and development, including innovation in and adaptation of technology. Four, restrictions on exports.

Even if the imports are not tied on account of specific clauses appearing in the contract, the financial needs of the licensee may compel him to buy from sources specified by the financier. The contract for transfer of technology may occur with an affiliate or an unrelated enterprise.

Further, the financial needs may not only result in the tying of imports but in the transfer of management control to the TNC (UNCTAD, 1975a, p. 16 and UNCTAD, 1974a, pp. 21 and 42).
In the case of a technology contract with an unrelated local enterprise, the existence of export restrictive clauses, would only prevent the full realization of its growth potential. The export restrictive clauses are a means of protecting the global market of the TNCs. While the licence agreements may cover both the patented and unpatented knowhow, the restrictive conditions prevent the diffusion of unpatented knowhow. The degree to which the restrictive conditions obtain depends partly on the stage of development of the technology receiving country.

3.11 The Patent System

The patent system not only prevents the diffusion of technology but helps in directly creating a monopoly for the TNCs. A patent is a monopoly privilege extended to the patentee, either with respect to a product or a process, for a specified time duration, for the following reasons. One, to reward inventiveness, and two, to provide an opportunity for compensating the costs of R and D, in terms of a monopoly return, during the specified time duration.

The concentration of technology, in a few developed countries and in particular with the TNCs is revealed by the distribution of patent grants. In 1970, LDCs accounted for only 1% of the total patents granted in the world. Further, of the patents obtained in LDCs in 1970, 86% were held by
mainly TNCs from five developed countries. Further more, of the patents in LDCs, between 90% to 95% were not actually used in production. In contrast to this average utilization rate of patents of between 5% to 10% in LDCs, in U.K. the utilization rate was between 50% to 60%. The reason for non-utilization in the developed countries is the inability to forecast correctly the commercial viability of a patented product or process at the time of obtaining a patent. While on the other hand, most if not all, of the products or processes for which patents are obtained in LDCs are those which have already been found to be commercially viable in the developed countries (See UNCTAD, 1975a, p. 36 and UNCTAD, 1974c, pp. 88 and 106-7).

Quite apart from the direct contribution of the patent system towards the creation of monopoly, the manner in which the TNCs utilize the patent system, may both strengthen the monopoly and extend its duration.

Patents are obtained by the TNCs in LDCs to pre-empt both production in and exports to LDCs by competitors. By not utilizing the patents in production, a monopoly in the import of the product is created.

The patent may be obtained only for a part of the technology while the other part of the technology may appear

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6 The five developed countries being U.S.A., U.K., Federal Republic of Germany, France and Switzerland.
as unpatented knowhow and the licensee may be prohibited from using the technology after the expiry of the contract, precluding thereby the independent use of the technology either by the licensee or by any one else (UNCTAD, 1974a, pp. vii and 11). There is besides the problem of effectively utilizing the information made available in a patent as the disclosures are usually incomplete (Lall, 1980b, p. 311).

The timely diffusion of technology may be prevented by prohibiting the licensee from using the technology after the expiry of the contract or by making the contract for such a long duration that the technology is rendered obsolete.

3.2 Diffusion of Technology

The diffusion of technology requires not only a transfer of technology but also the requisite local capabilities for adequately assimilating this technology. These capabilities are expressed in the level of a country's scientific and technological infrastructure, composed of both the basic science and research facilities as well as the stock of available technical skills. In other words, the development of the technological infrastructure, through TNC transfers of technology, requires a certain prior

7 This has the additional consequence of repeated renewal of the contract for the same technology. See UNCTAD, 1975b, p. vi.

8 As was the case in Ethiopia, See UNCTAD, 1974b, p. 23.
autonomous level of development of the scientific and technological infrastructure. The possibilities of diffusion are the least in the direct investment process, which as has already been noted, also provides for conditions of a higher degree of monopoly, and hence of profits, through the control exercised over technology apart from production and finance. If local personnel are not employed in any technical position, then the possibilities of diffusion are considerably reduced. Similar would be the case with turnkey arrangements since there is no local participation in production (see UNCTAD, 1978, pp. xi and 30). Unpackaging of technology, either in a joint venture or in a technical collaboration agreement with an unrelated enterprise, does not necessarily imply diffusion because of the various restrictive conditions obtaining in the contractual arrangement.

The R and D efforts of TNCs are concentrated in either the parent countries or in other developed countries and very little is located in LDCs (U.N., 1979, p. 5). The technological lag which obtains between the developed countries and the LDCs is also reflected in the R and D carried out by the TNC parents and their affiliates in

9 In Ethiopia for instance there was reluctance to employ local personnel in any technical position (UNCTAD, 1974b).
LDCs. Contractual arrangements for technology transfers, either with affiliates or unrelated enterprises, may inhibit local R and D, through the existence of clauses that give the licensor absolute property rights, over any innovations occurring in technology. Further, TNCs are known to have suppressed local initiatives towards evolving independent technologies (Bagchi, 1980, p. 307).

3. **Costs of technology transfers**

Regardless of the conditions in which the transfers of technology take place, the cost of such transfers are not confined to explicit returns on technology, like royalties and licence fees. Other accompanying costs, may take the form of technical service fees (and management charges) and profit sharing arrangement. Part of the payment for knowhow may be capitalised, that is, a part of the equity may be offered as payment for the knowhow, in which case, to the TNC supplying the technology, the returns on the

10 The nature of R and D in TNC affiliates located in some of the larger LDCs, is between 15 to 20 years behind what is being carried out in the R and D locations in developed countries (see U.N., 1974, p. 27).

11 Royalties are usually expressed as a percentage of sales, though in some cases, a lumpsum payment may be made in addition to or in lieu of the percentage rate. A royalty rate of 5% of sales is the most typical rate and the average duration of the contract varies between 5 and 10 years (Kopits, 1976, pp. 791-2).
technology are realized through dividends. As has already been noted, unpackaging of transfers of technology do not necessarily imply the elimination of the monopoly control of technology and the monopoly in the supply of inputs, that makes transfer pricing possible in the sale of technology, supplies of equipment, intermediates and raw materials. The additional costs in terms of commodity transfer pricing occur not only in the direct investment process but in exclusive technology sales as well, as the latter, are usually accompanied by tie-in-arrangements. While it is not difficult to arrive at estimates of commodity transfer pricing, since comparable open market transactions of intermediates and raw materials may exist, providing thereby the arm's length prices for comparison, highly differentiated technology sales would altogether lack comparable open market transactions, rendering it difficult to arrive at any estimates of transfer pricing in royalties.

LDCs have pursued import substituting industrialization ostensibly with the objectives of achieving self-reliance and a healthy balance of payments. This policy of import

12 In Ethiopia, payments for knowhow not only took the form of technical services fees and profit sharing arrangements but explicit transfer pricing of intermediate supplies. See UNCTAD, 1974b, p. 47).

14 See Kopits, 1976, p. 792 and UNCTAD, 1974a, p. 18. The capitalisation of knowhow may itself be overpriced.
substitution on the part of LDCs, led many of the TNCs to locate production in LDCs, either as subsidiaries or in collaboration with local companies, to retain their old markets, which had earlier been fed by exports (UNCTAD, 1975b, pp. 38 and 50; Dasgupta 1977, p. 636; Bagchi, 1982, p. 233 and Subramanian and Pillai, 1976, p. 1730). In certain cases, by manufacturing locally in the wake of import restrictions instead of exporting to these markets as they had done earlier, TNCs have strengthened their market position. This was the case with I.C.I. for instance, which was able to improve its market position in the Indian Dye Staff industry, when it moved into local manufacturing (Sudworth, 1971). Manufacturing locally may be more efficient than exporting to that market and the increase in the market share of the TNCs, would naturally be at the expense of local production (Monthly Review, November and December, 1969). Manufacturing in the LDCs, rather than in the home countries of the TNCs, would certainly for instance mean lower wage costs for the TNCs. Having located their production in LDCs, protection through tariffs and import quota restrictions, meant a captive market for the TNCs, in which the costs inclusive of high transfer prices, could be passed on to the consumers, without the fear of competitive imports and consequently this meant huge profits for the TNCs (Bardhan, 1975, p. 8; UNCTAD, 1975b, pp. 46-7 and UNCTAD, 1974a, p.10).
TNCs have often been able to realize various privileges, from the governments in LDCs, such as in the form of generous tax concessions, particularly exemption from profit taxes and customs duties. These privileges have also included franchises for exclusive production and the state providing an assured market at predetermined prices (UNCTAD, 1974a, p. 30; UNCTAD, 1975b, p. 52 and UNCTAD 1974b, pp. 2 and 19). These privileges have naturally aided the TNCs in consolidating their monopoly position in LDCs.

This chapter concerned itself with how TNCs not only preserve their monopoly position upon entry into LDCs but in fact strengthen them. Monopoly over technology is a crucial factor that enables the TNCs to strengthen their monopoly position, in the markets of LDCs. The patent system contributes towards this monopoly over technology. The diffusion of technology is prevented through various restrictive clauses that appear in the technical collaboration agreements. Finally, there was a discussion on the cost of technology transfers to the LDCs. The following chapter deals mainly with theory.