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Multinational Enterprise in Pharmaceutical
Industry and Less Developed Countries

P.G.K. Panikar

Centre for Development Studies
Ulloor, Trivandrum 695 011

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I. Introduction

The operations of Multinational Corporations (MNCs) especially in the less developed countries (LDCs), have attracted wide attention from national Governments and international bodies like the UNCTAD and the ILO. A good deal of scholarly research has also gone into the pluses and minuses, the benefit and cost, of MNC activities including pharmaceutical firms, in the LDCs. In this paper, the main focus will be on the multinational enterprise in pharmaceutical industry, because, (a) pharmaceutical industry is perhaps the most multinational of all manufacturing industries, and (b) the products of this industry have certain distinct characteristics which differentiate it from others.

It seems the multinational pharmaceutical industry which has entrenched itself in the LDCs inhibits the growth of indigeneus enterprise, and drains national resources. Such a stranglehold of the industry on the LDCs, facilitated by the permissive nature of the ~~institutional~~ ^{institutional} multinational framework prevailing in such countries, has got far-reaching implications because of the uique characteristics of the products of the industry.

II. Multinational Pharmaceutical Enterprises

II.a. Basic characteristics

(i) One aspect which has the greatest bearing on their operations in the LDCs is the size of MNCs. According to one study, the total foreign sales of MNCs exceeded the G.N.F. of any country, except that of the U.S.A. and U.S.S.R. ^{1/} The value added of all MNCs in 1971

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was estimated at \$500 billion, about a fifth of the world G.N.P., excluding centrally planned economies. The value added by each of the top ten MNCs would be in excess of \$3 billion or the GNP of over 80 countries; the amount of annual sales of each of the four largest MNCs exceeded \$10 billion.^{2/}

The annual turnover of each of the top 28 multinational pharmaceutical firms exceeded \$400 million as of 1970. The annual turnover of each of the largest nine firms exceeded \$400 million, while that of the Swiss firm Roche, alone came to \$850 million.^{3/}

(ii) The MNCs are based in a few developed countries of Europe and North America. Thus, four-fifths of the total stock of foreign investment estimated at \$165 billion, is owned by four countries, viz., U.S.A. U.K. France and Federal Republic of Germany. Among these, the U.S. firms dominate as they account for more than one-half of total foreign investment and one-third of the total number of foreign affiliates. In fact, the largest ten MNCs are based in the U.S.A.^{4/}

The above proposition is brought out sharply by the global profile of transnational pharmaceutical industry. Thus, the largest 28 multinational pharmaceutical companies, which together account for about 60 per cent of total world sales and more than 90 per cent of total research and development (R&D) expenditure, are distributed between USA (14), East Germany (4), U.K. (3), Switzerland (3), France (2), Japan and Holland (1 each).^{5/}

(iii) The bulk of the activities of the MNCs -- roughly two-third of the total foreign direct investment -- is located in the developed market economies, the LDCs accounting for the remaining one-third only. However, the aspect, that the absolute quantum of MNC investment

in the LDCs is comparatively small should be considered against the following:

first, the MNCs have tended to concentrate in a few developing countries; second, the annual turnover of any one MNC would exceed the GDP of a typical underdeveloped host country. In such LDC markets where they dig their toes in, they are apt to dominate. The multinational companies' share of the pharmaceuticals market in these countries would range from 65 per cent to 95 per cent ^{6/}

(iv) Another characteristics of MNC operations in the pharmaceutical field is the high degree of oligopoly. Thus, in each country typically there are a large number of firms engaged in the production of drugs. But the majority of these firms, small and locally owned, supply a small proportion, say 10-15 per cent, of medical preparations. The remainder of the supply comes from a small number of large firms, mainly transnational. Thus, for example, of the total production of pharmaceuticals in India in 1970-71, estimated at Rs.2,500 million, some 100 firms accounted for 80 to 90 per cent, but the bulk of this is contributed by 39 medium and large firms. And 33 foreign-controlled drug companies accounted for 33 per cent of the sales of the medium and large firms. ^{7/} Further, the fact that "the pharmaceutical market is extremely heterogeneous, and comprises a number of sub-markets within which firms have tended to specialise has led to concentration within product classes which is high both in degree and stability. Thus, in each of the 13 major groups, the four largest firms accounted for 60-80% of sales, sometimes even more. ^{8/}

(v) The pharmaceutical firms under the MNCs report heavy expenditure on research and development. This industry spends more than any other manufacturing industry on R&D. Expenditure on R&D ranges between 7 and 13 per cent of total sales. ^{9/} Further, R&D expenditure is

concentrated among the large firms, in the U.S.A., for instance, the four largest firms accounted for 40 per cent, the eight largest firms for 63 per cent and the 20 largest firms for 95 per cent of the total R&D expenditure in the industry. In the U.K. the four largest firms spent 70 per cent of the total expenditure on R&D.^{10/} However, the true motivation and social benefit of the R&D effort are open to doubt. A good portion of the outlay is devoted to the production of the so-called new and improved medicines, a pre-condition for the continued domination of the transnational drug companies. But Tom Heller contends that the vast majority of these "new" products "do not represent any significant therapeutic advance, but are the result of molecular juggling to produce a product just sufficiently different to satisfy the requirement of granting a new period of patent protection".^{11/} The fact that R&D is generally treated as a current tax-deductible expense is a convenient device for squeezing out the maximum possible profit from the patent system.^{12/}

(vi) The pharmaceutical industry, like other consumer goods industries dominated by MNCs, is characterised by aggressive sales promotion. According to one estimate, the cost of advertising come to 9.5 per cent of the value of business receipts of the [U.S.] pharmaceutical industry in 1967, one of the very highest among the 27 consumer goods industries studied. Further, the advertisement cost of drugs come to 16.8% of the total of all the 27 industries. The advertising cost of drugs has also been rising at a higher rate than that of almost all other consumer goods industries.^{13/} If the cost of advertising and other forms of sales promotion is taken together, the total would come to one-third of the value of drug sales.^{14/} Thanks to the economies of scale in sales promotion, the large firms, particularly MNCs, are seen to be at a great advantage.

II.b. The Method of Operation and Control

(i) Admittedly, the primary, if not the sole objective of MNCs is maximisation of profits, and in fact, the pharmaceutical industry is also one of the most profitable industries today. "It has since the mid-fifties consistently recorded profits substantially higher than the average for all industry in both the U.S. and the U.K., in 1966, the industry earned 21% on the capital employed in the U.S., as compared to 13% for all manufacturing, and in the U.K., a survey of 110 pharmaceutical companies showed a return of 26% for 1967-69 as compared to 12.6% for all manufacturing " ^{15/} The stated profitability figures must be taken with a pinch of salt, for there exist hidden profits under various guises, to which question we shall soon return. To achieve this goal, they resort to various methods and tactics. Control over their foreign affiliates through complete or majority ownership is one such method. Generally the MNCs prefer their foreign affiliates to be wholly-owned. ^{16/}

(ii) Transfer-pricing is another technique generally employed by an MNC to maximise total profits of the company, including the subsidiary units abroad. The use of transfer-pricing on the intermediate products and other current inputs imported by the affiliates, under the usual clause of tied-purchases, is effectively used by MNCs to take advantage of differential rates of taxation in different countries, including the home country. Investigations of transfer-pricing by multinational drug firms have brought out that the weighted average of over-pricing for a wide range of pharmaceutical imports into Colombia came to 155 per cent. ^{17/} In the case of two ingredients, viz., Diazepam and Chlordiazepoxide, overpricing exceeded 6,000 per cent: ^{18/} In the case of Colombia, the one LDC where the data from any systematic study of this are available, the percentage of

over-pricing is seen to be higher for the imports in the pharmaceutical sector than in other sectors. "The conclusion from the Colombian work was that the effective return on net worth for the sector of the pharmaceutical industry studied was 136.3 per cent which shows a marked discrepancy from 6.7 per cent return on investment declared as profits for tax purposes by the companies concerned." ^{19/} In view of the generally higher rate of corporate taxes, lower tariffs on imports of intermediate and capital goods in the typical underdeveloped country, there is every incentive for the MNCs to show low profits in such host countries by resorting to transfer-pricing. The setting of transfer prices at unreasonable levels cannot only serve to minimize a Corporation's overall tax bill, but can also be used to circumvent exchange restrictions, minimize customs duties, satisfy local partners of foreign subsidiaries and for a variety of other purposes." ^{20/}

(iii) Establishment and retention of monopoly or oligopoly position through control of technology and know-how is another strategy. Protection of patent rights and other restrictive clauses in licensing contracts like restriction on exports, requirement of guarantees, etc. are the tactics employed. ^{21/} As Hall rightly observed in the context of drug industry "the granting of a long period of virtual monopoly in a product which faces very inelastic demand and which is heavily promoted violates the main economic justification of patenting." ^{22/}

(iv) We referred to the high cost of sales promotion in the case of multinational pharmaceutical enterprises. Part of this cost is by way of advertisement and the rest, probably a larger proportion is towards other means of promotion. We have already noted that the cost of advertisement per se for drugs was higher than that for almost all consumer goods, that the cost of advertisement is out of all proportion

to the social benefits is fairly obvious. It is also a well-known trick of the trade that the advertisement campaign is mainly aimed at product differentiation. But there is an important aspect of advertisement in the pharmaceutical field, viz., that it conceals a lot more than it reveals. One dimension of it, implicit in the product differentiation effort, is the attempt to claim greater therapeutic efficacy for any product than warranted either on the pharmacological or other grounds. Another, perhaps more serious dimension, is the practice of suppressing certain information about toxicity or adverse side effects of drugs which came out in the course of testing or clinical experience. Again, drug advertisements go more by brand names, than generic names, and the physicians tend to prescribe by brand names. This results in spurious product differentiation between drugs of identical pharmacological properties. An equally important omission is that the advertisements hardly ever mention prices; therefore, the doctors who prescribe are not able to compare the price differential and cost to the patient.^{23/}

A larger proportion of the cost of sales promotion is towards influencing the physicians through moral and immoral persuasion, if one might say so, by the drug companies' representatives. Unlike other goods, in the case of drugs the buyer (whether it be the patient or the State) is not the chooser; on the contrary, the physician who prescribes is the decision-maker. Naturally the medical profession is the target of the promotion campaign. About the U.S. medical profession it is observed that "... perhaps no other group in the country is so insistently sought after, chased, wooed, pressured and downright importuned."^{24/} According to one authority quoted by Ivan Illich, the U.S. drug industry spent in 1972 \$4,500 on each of the 350,000 practising physicians.^{25/} "In Britain the pressure is less intense, but the drug firms spend £250 on each doctor for their

'representatives' and this amount is only 45 per cent of their total expenditure on sales promotion. Each general practitioner in addition receives an average of seven pieces of mail a day, as well as being subject to other forms of pressure - advertising in the medical and paramedical press, free samples, minor presents (desk pads and calendars), and the financing of clinical trials." ^{26/} The American drug industry is known to be more lavish in their presents to cooperating doctors. Obviously, such an expensive campaign of persuasion would not be mounted without some quid pro quo.

Aside from advertisement and sales promotion through representatives, most of which might be legally permissible in the LDCs, the multinational drug firms are also alleged to indulge in a variety of dubious sales promotion tactics, exploiting the permissive legal framework, ignorance of consumer and the incompetence, laxity and corruption of the bureaucracy prevailing in such countries. The promotion of ineffective or even harmful medicines among the LDCs is an allegation against the international drug firms. The most telling example in recent times is the dumping of chloramphenicol by Parke-Davis into the clinics of South Vietnam through the U.S. Defence Department soon after its sale was banned in the U.S.A. ^{27/} Omission of certain vital information regarding the use of medicines is another charge levelled against the industry. Illich refers to the disappearance of the descriptive leaflet accompanying every drug sold in Mexico during the last ten years, and being replaced by a cryptic line "to be used only under medical supervision" ^{28/} Then there is the practice of variation in 'indications and warnings' regarding the use of particular drugs. A survey covering "Indications and Warnings about Chloramphenicol", cited by Heller, brings out the significant variations in this regard among the four countries covered, viz, U.K., Ceylon, Egypt, and Jamaica. ^{29/} The most outrageous of the practices of the multinational drug firms is using the vulnerable populations in the Third World countries as guinea pigs for

testing new medicines and contraceptives.^{30/}

III. Distinct characteristics of pharmaceutical products.

The pharmaceutical products differ from all other consumer goods in some important respects and the difference is not one of degree but of kind. The difference may be observed in the nature of demand for pharmaceutical products as well as in the inherent properties of these products. These differences have far-reaching implications.

(a) The demand for medicine differs from that for other goods. In the first place, consider the facts underlying the demand. To start with, the genesis of the need is extraneous. Unlike the demand for say, food or clothing, the demand for medicine does not originate from a need felt by the consumer. It is a need perceived by his physician, for reasons best known and only known to him. Secondly, the need for medicine is episodic and originates under abnormal and adverse circumstances which demoralise the consumer. Once he is made to feel the need, he feels it most intensely and desperately. It should be so for this is literally a question of life and death for him. Negation of the right medicine at the right time can be fatal, or at least the affected person thinks so. Therefore, his demand assumes a degree of urgency far greater than that for any other good. Thirdly, an average consumer in the rural parts of the underdeveloped countries is totally ignorant about the properties of the product he buys and consumes. He does not know for sure what relief the medicine will bring, or what harmful effects its use will leave behind. He is simply guided by his belief that his doctor knows best. He just takes a chance, with trust in God and in his doctor, hoping for the best. Fourthly, the consumer has no choice, or at least he is not aware of it. Even if he is aware of the alternatives, his doctor has the decisive voice in this matter. In the case of other wants, there are alternative

means of satisfying them and an average consumer is aware of the alternatives, and he exercises his option taking into account the price and other properties of the options. In their case, the consumer can compare the prices for the same product quoted by different sellers or the prices of close or near substitutes, he can judge for himself the relative merits of various substitutes, he can and often does bargain with the dealers. But in the case of medicine, the consumer does not know much about either the relative merits of the alternatives or about their prices. In this case, he simply buys the brand and the quantity as prescribed by his doctor and pays such price as the druggist bills him.

(b) Now to look at the other side of the coin, pharmaceutical products are inherently different from most other consumer goods. The medicines which are currently in use, and the new ones which enter the market with unparalleled rapidity, carry a lot of uncertainty and risk, to the consumer, that is. Let us first take the uncertainty part of it. True, every medicine before it is granted licence is supposed to have been tested adequately. However, no medicines can be tested to a perfect degree of safety before they are put on sale, for they have to be tested on man. And the testing of new products on human population is governed by the Helsinki Declaration which requires voluntary and informed consent from the human subject. Fairly rigorous standards are observed in the testing of new medicines in the U.S.A. and U.K. In the U.S.A., the Food and Drug Administration will not grant a licence to a new drug if the condition of the Helsinki Declaration were not met during its testing. But, as Heller points out, when medicines are tested in the Third World, "it is obviously more difficult to be absolutely sure of the level of informed consent given by the subjects of experimentation." ^{31/} And these days, quite a few testings have been carried out in this group of countries: steroid contraceptives in Puerto Rico, Haiti and Mexico; oral progesto- nes in Chile; ^{intranuterine} devices in Chile, Colombia, Iran, Korea, Taiwan

and Thailand; injectible steroid, known as DMPA, in Brazil, Thailand, Chile, Philippines, Sri Lanka, etc.^{32/} Even granting that the testings meet with the Helsinki Declaration norms, one wonders whether the results of such tests leave enough margin of safety. Is the period of testing long enough to bring out fool-proof evidence of efficacy or lack of toxicity, given the wide heterogeneity of age, sex, race, climate, environment, etc., of the prospective users? And, where the public awareness and alertness, political will and governmental commitment, administrative apparatus and technical expertise are lacking, as is usually the case with most LDCs, what is the guarantee that the MNCs, motivated and resourceful as they are, will resist the temptation to suppress inconvenient evidence? As a result, the medicines which are purchased and used with such complete confidence, are, by and large, imperfect, uncertain, if not experimental.* It looks as though the MNCs take the entire human race as their guinea pigs, and we the consumers meekly submit ourselves to be experimented upon! These misgivings should not be interpreted to imply that we should not have experimentation. Research, innovation and experimentation are the price of progress without which we would not have today any of the wonder drugs. Yes, but let us also not forget that these gains have to be set against disastrous failures and human suffering, a few cases of which, like for example, thalidomide are by now known. In such matters, a cost-benefit analysis would be a cruel joke.

Now we come to the question of risk. Apparently, every medicine we buy, with or without prescription, carries some risks. Overdose of any

*Dr. Lawrence quotes Sir Anthony Comblisles remark that "medicine was an art founded on conjecture and improved by murder" and proceeds to say: "Although medicine has advanced so rapidly, there is still a ring of truth in that statement to any one who follows the introduction of new drugs and observes how, after the early enthusiasm, the reports of serious toxic effects begin to appear". D.R. Lawrence, Clinical Pharmacology, The English Language Book Society & Churchill Livingstone, 1973, p.14

medicine may have disastrous consequences. True, this is so with everything, even with 'amruth' or elixir, as the saying goes. But there is a significant difference between medicine and other consumer goods. In the case of medicine, the cut-off point, exceeding which is overdose, is very thin; the likelihood of the patient exceeding the tolerance limit and inviting trouble is greater here than in the case of a person overeating food and developing obesity. Second, there are quite a few drugs proven to be ineffective which continue to be prescribed and used as a result of the alleged collusion between drug companies and the medical profession, nick named as 'retail men'. In such cases, unlike most other goods, the consumer gets no utility whatsoever. Third, there is the aspect of side effects of a wide range of medicines. Norton observes: "... as a general proposition, unpleasant and even dangerous side effects are not new, and it is only a minority of effective drugs that lacks them."^{33/} But the tragic fact is that the side-effects are discovered only after a drug has been in use for some years. Norton cites numerous instances of useful and old-fashioned remedies like digitals, quinine, phenacetin, mercury-containing purgative, cliniquintol and the classic case of thalidomide;^{*} it took several decades

* Digitalis, prepared from foxglove extracts, had been in use for a long time even before Dr. William Withering accidentally ran into its use in 1775. After intensive investigation over a number of years, Dr. Withering observed that digitalis was a potent therapeutic agent, but also warned that it could be a potent poison if misused. Physicians ignored his instructions and poisoned their patients. Its use was revived after 150 years when it was under a cloud of disrepute; though it is used today it has a variety of side effects. Quinine was introduced into Europe in 1633. It was used for all fevers, including malaria and has been the principal antimalarial drug. It has several toxic effects like interfering with auditory nerve causing deafness and vertigo, and visual impairment and even complete blindness. In addition, quinine causes rashes, nausea, vomiting and diarrhoea. Phenacetin is an important ingredient of many analgesic mixtures used for somatic pain used in combination with others. Its continuous use can cause severe damage. Cliniquintol has a wide range of antibacterial effects; being an amebicide it is popular as a prophylactic and for treatment of mild infective enteritis. It has been implicated in the incidence of tens of thousands of cases of SMON in Japan a neurological disease. Thalidomide is a hypnotic and used for symptomatic relief of pain, cough and fever. But it has serious adverse effects, especially on pregnant women. West German Health Ministry estimated that thalidomide caused about 10,000 birth deformities in babies. Disaster of more or less similar magnitude occurred in the U.S.A. See Lawrence, op. cit.

before the damaging effects were unearthed.^{34/} This is only the tip of the iceberg. As Norton puts it, "these disasters, dramatic though they may have been, have been responsible for only a small proportion of the deaths which drugs have caused over the years; of course, serious but non-fatal reactions to drugs are far commoner still."^{35/} The consumer is ignorant of these side-effects and reactions, and there is no built-in safety arrangement to forestall the dangers. On the contrary, such medicines continue to be prescribed and used indiscriminately until they are totally and effectively banned.

Let me now examine some of the implications of the above mentioned aspects. In most of the LDCs which are planned economies, health care is a public utility service and is provided for in the Government budget. It is being recognised that in the health care programmes of these countries, a higher priority is given to curative medicine than for preventive and promotive measures. The pressure of MNCs is apt to result in a further increase in the allocation of the health budget for the purchase of medicines at the expense of other, and perhaps more important, components of the health care programme. Another implication is the ~~depersonalisation~~^{of} curative treatment itself. Even though the nature of demand for medicine is such that it depends on the physicians' prescription, the availability of an increasing number of standardised medicines which can be purchased without prescription leads to the erosion of the physician's role. Further, the diagnostic role of the physician is eroded by the sales promotion drive of the MNCs. The true role of the physician as an expert becomes effective only when prescription follows careful diagnosis based on detailed examination and clinical tests, and founded on a thorough understanding of the pharmacological properties of the medicine. The mass production of curative care leads to skipping many of the diagnostic

procedures, and supplying standard mixtures. Replacement of generic names by brand names, a convenient short-cut for the physician who does not have the time or patience to update his pharmacological equipment, reduces the physician under pressure of MNC sales promotion campaign, to a mechanical agent.

Certainly, there are other consumer goods, the consumption of which entails health hazards. This is true of cigarette smoking, L.S.D. and other opiates, why, even carbohydrates and fat. But in the case of the latter category of goods, there is a growing public awareness of the risks involved, there are concerted attempts at educating the public and of even discouraging their use. On the contrary, in the case of medicines the public are totally unaware of the nature and magnitude of the hazards and the governments through national health service, health insurance or publicly-financed free medical care encourage their consumption. The governments in the under-developed countries seem to be ashamed of the low per capita intake of medicine and committed to rise this level to that prevailing in the developed countries.

IV. Summary and conclusion

The multinational drug firms share the generic characteristics of MNCs size of investment, scale of turnover, structure and organisation, methods of control and operations, etc. But, then, the pharmaceutical industry is the most multinational of all manufacturing industries; it is also the most profitable of all.

The pharmaceutical products, are, however, a class by themselves. A person's need for medicine originates under adverse circumstances, and is perceived by his physician; the patients' demand for it, both its type and quantity, is decided by the physician; the consumer has practically no option (to buy or not to buy, if to buy what) in this matter. The demand

is urgent and the consumer would be willing to pay any price for it, and everything else becomes a second order of priority. The consumer knows very little about the product, including its effect, favourable and unfavourable, about the alternatives available, their prices and relative merits. On the other hand their use involves a certain degree of uncertainty and risk, unwholesome side effects and reactions which can prove serious, long-standing or even fatal. While in the case of other to be/consumer goods with known adverse effects, public awareness and governmental policy lead to discouraging their use in the case of medicine, its use is fully and actively supported by public policy.

Now, what are the implications of the dominance of MNCs in the Pharmaceutical markets of LICs? The inordinate cost of MNC operations in general, borne by these countries by way of loss of control over strategic, non-renewable resources, development of dependency relations, not to speak of the drain of financial resources, are by now well known. Here, we are concerned with an added, entirely different and more serious dimension of MNCs activities arising from the unique characteristics of pharmaceutical products. This is a vital, sensitive sector, the performance of which can affect the life and health of the people, including the coming generations. This is one sector where any lapse in government commitment, of tutory framework, enforcement machinery and public alertness can cause irreparable damage. This is one industry where the objective of profit maximisation has to be curbed. The inevitable conclusion is that the less developed countries cannot afford the luxury of allowing multinational enterprises to thrive in this business of disease and death, whatever be the avowed advantages.

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