

# Outlook for LDCs in the 80s

*Problems in the world will impact mostly on the LDCs; politicization of technology to continue*

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A substantial amount of discussion on technology transfer in recent years has been devoted to transfers to the Third World. In fact, most technology transfer takes place between developed nations, and that process is as yet far from being satisfactorily arranged; there are substantial problems with respect to the appropriate legal protection of rights in technology, the do's and don'ts of licensors and licensees, the justifiable degree of government intervention and the role of international agencies. All of these are as yet unresolved despite the significant effect they have on the international economic system and consequently also on the international political scene. But despite the fact that the bulk of technology transfer is between developed countries (East-West included) and despite the fact that there are various significant problems pertaining to this activity as yet unresolved—the international debate on technology transfer has been focused primarily on problems connected with transfers to technology from North to South. It has become the major issue in the development process and the debate connected with it.

## THE 1980s

Forecasts for the 1980s project a rather interesting decade with a variety of serious problems and constraints which will affect our globe. Once again the problems of population growth at a faster pace than the growth of available foods is looming; general deterioration of health situation in the poorer parts of the world and a severe shortage of energy sources complicate things. A rather meager growth rate (2% of GNPs annually at best), changes in the capital structure and in the international monetary system and disruptions in the supply of energy are expected. They will probably result in a disturbed international trade system, increasing protectionism and government interference in international trade. The hopes raised by the recent Tokyo round talks will probably not be fulfilled.

The major projected difficulty seems to be that of energy and particularly petroleum. Petroleum serves both as an energy source and as a raw material for many world industries. Disruptions of its availability will make life, business, international trade and development extremely difficult.

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The International Monetary Fund projects stagnation in the developed countries further impoverishment and higher inflation in the less developed countries. LDCs paid \$7 billion for oil in 1973. They are paying \$67 billion in 1980. Not surprisingly, the LDCs owe approximately \$200 billion to private institutions in developed countries (mostly banks) and a lot more to governments and international organizations (e.g. The World Bank). Debt service is becoming a serious financial burden on LDCs. One result of the changing capital structure of the world is certain to be the scarcity of further funding to LDCs.

The 1980's will be a decade of transition. We shall all have to adjust to the new constraints imposed on us. Such adjustment will be easier for the richer and more difficult for the poorer. It will require industrial adjustment to conform to the new realities—availability and cost of raw materials and energy sources. There will be social, economic and political consequences to this transition. The less-developed countries in particular will suffer from the scarcity of energy resources. And while recent electoral results in the western industrialized countries project a rather smooth and stable political adjustment to new economic realities, the prospects in the Third World are for a rougher and rather unstable political process.

## Growing Gap

The growing gap between developed and developing countries poses a political as well as a moral problem. The ever-growing trade deficits and the now common double digit rates of inflation in developed countries are certain to affect foreign aid, national and international, to developing countries—always the first victim in economic crises. Indeed, the United States has already reduced its foreign aid in real terms and as percentage of GNP; the Soviet Union despite a political commitment to the present government of India, refused to make an emergency sale of oil on convenient terms to that country.

Clearly, LDCs are entering a very difficult decade. They will become less and less attractive to foreign business. But, then, technology may become the major if not only source of relief for their difficulties and one of the few, perhaps the only, assets which will be transacted upon in increasing quantities with them. The dire straits in which developing countries are bound to find themselves in the 1980s will probably require a substantial international effort to provide them with appropriate technology; a promising opportunity for licensors.

Licensors should look to exploit these opportunities. Management in most technologically rich western corporations has traditionally ignored those opportunities. Technology is all too often viewed by management as an in-house asset to be used in and for the manufacture of the company's products. That attitude should change.

## DEVELOPING COUNTRIES

Developing countries are frequently mistaken for the differences among them. There are rich and poor developing countries, big and small in terms of geography and population; backward, undeveloped and somewhat developed developing countries; they have varying cultural, political and social characteristics; all influence their attitude to their foreign relations and to foreign trade. Most are interested in developing their economic infrastructure. But their attitudes and positions reflect these different characteristics. Totalitarian regimes, for example, in all countries, including developing countries, tend to invest in "white elephants" which drain resources for political rather than social or economic advantages. In attempting to project the realities in LDCs in the 1980s one must assume that many of these countries will suffer from varying degrees of totalitarianism, corruption, and inequitable distribution of resources, all of which make the transferors' role more difficult and more demanding. More challenging, too.

LDCs have joined together in political blocks which argue for a variety of new international arrangements which, according to them, ought to be instituted and imposed on developed countries. These attempts frequently result in disturbing the atmosphere of international trade and investment.

### Appropriate Technology

Transferors of technology should consider the long-term benefit of a technology transfer transaction to the recipient. There may be a conflict between the desire to make a short-term one-shot profit and the long-term interest which would also benefit the transferee society. That essentially is the meaning of the often used term "appropriate technology". There are myths about "appropriate technology". It is often suggested that appropriate technology for LDCs must necessarily be labor intensive. Labor-intensive technology normally results in a more equitable distribution of resources in the recipient society. But it also causes the squander of raw materials and professional or semiprofessional manpower. Frequently, capital-intensive technology is more desirable even if at a short-term difficulty. Transferors should investigate and should consider themselves under a particular obligation to help the recipient establish what technology is indeed "appropriate".

In determining what is "appropriate technology", the following criteria should be considered:

1. Existing economic and social conditions in the recipient society. (e.g. Oxfam discovered that the introduction of aluminum to India resulted in the almost immediate disappearance of clay pot makers, who played a significant social role in Indian rural

society.)

2. Basic needs of the recipient society. This might on occasion be interpreted to mean survival (as in the drought-stricken countries of Central Africa), efficient use of available resources, particularly raw materials, minerals and agricultural potential, a rational allocation of resources and equitable distribution.

3. The transformation process. Introducing a new technology to a developing country often means basic changes on various social and economic levels on the recipient society. Transferors should assess the existing conditions in these countries and adjust both the technology needs and the introduction process to these constraints. Particular emphasis should be placed on the involvement of the local scientific community in the introduction of foreign new technologies. The local scientific communities in developing countries are often frustrated by the situation at home and seek recognition abroad. Getting them to participate in the technology transfer process would not only benefit their society but would also help to improve and facilitate the introduction of the new technology, its adaptation to local needs and the prospects for future improvements. It will also serve to create continuity for the process.

The introduction of new technologies to LDCs also requires a substantial amount of patience. In business terminology that means time which must also be translated into cost. One should not forget, however, that the introduction of new technologies is a very lengthy process even in advanced societies. It is often bewildering to see a company which had worked on introducing new technology in a developed country for a long period of time, acting impatiently with the introduction of such new technology to a developing one.

## TECHNOLOGY TRANSFER AND THE PATENT SYSTEM

LDCs have organized themselves in an attempt to cope jointly with the challenges of technology transfer. They have joined politically and economically in a variety of international groupings and organizations. They have attempted to bring about national and international legislation to regulate the flow of technology. Such legislation involves antitrust or competition rules, taxation and foreign currency regulations, and a variety of mechanisms intended to encourage foreign investment in developing countries. This process has hardly begun. It will require further efforts on the part of all parties to formulate a universally acceptable arrangement. A major effort has been undertaken under the auspices of UNCTAD. The parties to those negotiations are too far apart at this point to warrant prospects for near consumation of this exercise.

Another effort is being undertaken with respect to the revision of the Paris Convention for the International Protection of Patents. The international patent system, designed primarily by the Paris Convention, has functioned successfully for almost 100 years. It withstood two world wars, numerous

other conflicts, and the emergence of a score of new nations.

It must now address itself to the relationship between technology and the process of development. The international patent system, including its very recent developments (PCT, the European and Community patent systems, etc.) have functioned efficiently partly because they were designed and operated by professional patent experts rather than

by professional diplomats.

The increasing significance of technology and concomitantly the legal mechanisms for the protection of technology, have resulted in the politicization of technology including patents and the entry of diplomats and international diplomacy in its crude sense into that arena. One should hope that the international patent system, so successful in the past and so important for the future will survive that recent development.