

Prospects for Developing Nations

Successful Technology transfers offer lasting solutions to many problems plaguing world today

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In order to have a chance of communicating with the entire world and of finding a common language in view of achieving a somewhat common development, it would seem that the transfer of techniques and/or technologies, largely applied with its particular limits, is the course that should be taken by the Western World.

If we refer to an historic precedent, not so long ago, this is the way the United States reasoned with the Marshall Plan after World War II.

Engaging in technological transfers is also a means of facing the "threats" of demography, food shortages, health, war (arms race). It is a fact that if technical and economic channels of communication are not found, one or many of these threats will finally direct our relationships, and if this happens, it would happen in a less civil manner than today.

Technology transfer is first a common technical language pertaining to state problems in a common way and to then solve them. Nowadays, we note that problems are not stated in a common, identical, or at least similar way which necessarily implies that no valid solution can be found.

This is what happened in the recent past between France and Germany, where in spite of a background of war, there nowadays exists a "common technological language."

This is what is now happening between the U.S.A. and the USSR where finally what had been for a long time a relationship of "ideologies", is today expressed in terms of "technologies". This is what will probably happen in other parts of the world (a common approach to common problems).

If, on the contrary, we do not take this course, we will find, to cite the most famous and recent examples, more Biafras, Cambodias, Pakistans, that is to say the absolute impossibility of approaching problems (even the formulations of problems will not correspond).

This clash between developed and developing countries is getting more conflictive every day, and as we have already seen, apart from any spiritual factor, the only chance of facing the various threats lies in the economic solution of technology transfers.

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PROBLEMS OF TECHNOLOGY TRANSFER

The more we export our methods (agricultural, industrial and services) and even our banking networks, and especially our system of education to various African and Middle Eastern countries, we "disrupt the cultural identity of these countries", without restoring it.

We can say, for example, that as soon as the business man arrives at the "local Hilton", he immediately makes people value, in the deepest sense of the word, a certain American way of life, which we know, on the one hand, will not make humanity happy, and on the other hand, is quite inaccessible to four billion people. This especially applies to all these black African countries which are not yet nations. They were created on a Western political and administrative model (from the embassies to the State Audit Office) and survive within a quite artificial structure which has virtually no relationship with the profoundness of the country.

A problem similar to the first problem can be illustrated by the example of a black African country. Before the installation of a sugar refinery, the population density was three to four inhabitants per square kilometer, and after the construction of the factory, the population amounted to 20,000 per square kilometer — an extraordinary trauma is thus generated in the structure of social organization, the consequences of which will only be measured 20, 30 or 50 years later. The whole tribal organization is thus "done away with" through the creation of a social hierarchy on the Western model (hence, social conflicts and social disorder).

On the contrary, as regards China, there is no such risk of a "rupture of the cultural identity" being effected. The "Chinese identity" is so strong; nevertheless, for centuries this country has been invaded, but its size is such that there are no problems. There is a permanent assimilation, and it is possible to perform transfers of technology. The Chinese will only retain what they want to retain (even if we continue to visit with our delegations, offering our concessions as in the beginning of the 20th century . . . we shall continue to "roll off like water on a duck's back"—no deep mark shall be left). In this country, it is somewhat possible to transfer technology without serious drama.

Problem

The problem is whether we will be able to act quickly enough in view of the population explosion on the one hand, and the solution to this population explosion which is being prepared in the form of an "arms race", especially if we do not enter a "certain technological race" which is faster than the arms race. Otherwise, matters will be settled differently. The only way of

going faster is to multiply the centers of technology transfers (our nations alone, the 18 OECD countries cannot suffice). This means that a system of "sisters" or partners must be created in Southeast Asia or in South America, capable of taking over and in their turn of serving as centers of technology transfers.

Will we find the men?

This is a critical problem. Whenever a work site is to be opened, a lengthy study or contact is to be initiated abroad, it is difficult at least in France, to find a man who will accept to go. On the one hand, there is a lack of adventurous spirit. People do not like traveling. On the other hand, we have become the most expensive engineers or experts in the world.

Four qualities which are difficult to combine are demanded of the men in charge of transfers:

—Vocation.

—Experience.

—Competence (flexible, if possible, especially for the less-favored developing countries).

—Tenacity (we do not know of any transfer agreement which did not require two, three and even four years before an outcome). It is therefore a "lengthy" job. Tenacious men are necessary.

We shall have to become "partners" for imparting industrial mastery. It is the profile of the "partner" who will be more and more acceptable to developing countries (for example, a man who accepts to stay as long as necessary after a complex has been set up). More and more, everything which may appear as a development plan imposed by international bodies (IMF, FAO, World Bank) is rejected.

Will the "receivers" of technology accept gradualness?

"What we have done in 200 years, the developing countries want to do in 20 years". They will not succeed, except in a certain number of advanced techniques where they start with our acquired knowledge (for example, the techniques of data processing). On the contrary, as regards the administration of industrial production, of transportation and communication, of research and development, of labor force, they will probably not need 200 years. Save a few decades, but that's all.

Will these countries possess the necessary authority over their population, their elite (educated in Harvard and at other universities) so that all admit that if the individual (the elite) has become remarkably intelligent and can discuss on equal terms with the Frenchman or the American, this does not mean that the population has accepted to advance at the same rate (see what has happened in Iran).

In this respect, the development of African countries should not be confused with those of the Middle East, and with white developing countries (Latin America, for example, has less problems). A distinction also should be made between the development capacities of the "yellow world" whose culture still escapes us to a certain degree. We will perhaps be surprised at their ability of assimilation and inventive capacities which can meet and even surpass ours.

Feedback Problems

For four or five years, the question has been whether

these technology transfers might have an effect on our own industry, due to the flood of imported finished products which are to the detriment of a certain number of domestic industries which are no longer the most productive in the world!

Questions are also posed concerning the effect of protectionist measures which are likely to be taken. For example, Japan and the U.S.A. are very much aware of how to defend themselves in the automotive industry (Japan) and food industry (U.S.A.).

This protectionism already exists and will probably become tougher with the development of new production formerly purchased by these countries for whom we are the suppliers.

If we cannot accept this exchange and if we persist in piling up hard currencies without compensation (such as purchase of manufactured products), we shall probably come to a deadlock.

PROS AND CONS FOR THE SHORT-, MEDIUM- AND LONG-TERMS

The transfer of technology generates foreign currency, or new markets and industrial footholds. There is an obvious financial gain in foreign currency which has developed in an extraordinary manner since 1973 (France quadrupled its exports of plants and processes over the preceding period). This was necessary since it served to pay for part of the invoice bill.

This renders possible the continuation of research and development which would otherwise stagnate because of an insufficient domestic demand in our country and also in the neighboring European countries. We are obliged to improve our techniques, to adapt them, to rewrite our specifications in view of the problems we encounter in creating a factory such as in the Ivory Coast, or a car or truck installation in Egypt. Thus, a kind of permanent adaptability is maintained.

The increasing consumer demand between 1950 and 1970 which has allowed a certain flexibility for meeting the needs, is now replaced by the demand of developing countries. And this a real opportunity for us, and it prevents certain industrial sectors from sinking into apathy and passivity as regards industrial habits which have become conventional.

Middle Term

A working knowledge of the Third World is being obtained, and this knowledge is useful (successes or failures in technology transfer result in our learning their language and respecting their cultural identity), since this will enable us, on the day of a reallocation of wealth, power and knowledge, a day which has already commenced some 10 years ago, not to be completely swept away.

In succeeding in establishing these strongholds, we shall have economic and financial influence and gain zones of influence as business expands in new countries.

We have had to accept imports from these countries planned in some transfer programs such as: the agreement between Citroen and Romania (wherein some 10,000 vehicles are planned to be returned to France), the agreement between Renault and Portugal concerning the birth of a new car industry (a factory of 300,000

motors to be reexported to France). But we should organize them in advance rather than accepting them without preparation.

A permanent "nibbling" of the initial contractual conditions is imposed upon us. The people with whom we are working will not cease until these various conventions, conditions and advantages that we had initially obtained, and which at that time seemed to be quite fair, are further limited, until the whole agreement has turned to their favor. It should be better to know it at the outset rather than discovering it later, since this can be a hard blow for overdrawn trading accounts. However, we can consider that it is almost unavoidable.

Long Term

We can hope, through technology transfer, for equal opportunities and obligations, not for all of the 152 U.N.-member countries, but for at least 60 of them. Once the "power" and the "knowledge" have been distributed in a less disproportional manner than in the beginning of the 20th Century, we could find ourselves in a less tense international situation. Once we are 60 to rule the world, things will probably be harder, but in any case less dangerous.

At that time, a certain cultural complementarity will play a part; we shall be influenced by cultures which are not ours and thus change to a certain extent our own culture. We shall thus arrive at a wider culture and a better understanding, served by numerous exchanges between individual and collectivities.

We must be aware of the fact that, on the other hand, the reduction of the part of the West is an unavoidable result, but such a reduction can take place in easy stages, while maintaining a certain cultural influence, instead of suddenly through an accelerated decline.

CONCLUSIONS

Finding the Men

- To find the men at the emitter's (i.e. here at home) and at the receiver's (in countries who often have shortages in industrially-minded men). We have difficulties in finding the right interlocutor.

- Difficulty in finding the right transmitter who knows the mentalities of both the emitter and the receiver, and who can succeed in getting "the current" to flow between both parties.

- Difficulty of finding men within the environment of "public agencies" (whether those public agencies of the emitter or of the receiver) and particularly within the public agencies of the receiver which are often excessively modeled on ours, thus ahead of an industrial revolution; there exists a "formal office language" which absolutely does not correspond to the economic agricultural, industrial reality of the country concerned.

Which technique should be transferred?

- What is requested is always the most recent, the most sophisticated technique; but what can be adapted

to the country in question is not always that technique. But a great deal of diplomacy is necessary for making this understood.

- It is preferable to choose a less-advanced technique: if what is in question is the mobilization of human energies, it would be better to have a factory which in the end employs 10,000 to 15,000 persons and which would impart within 30 years' time an industrial mentality to a whole group instead of a high performing, automated factory employing 300 persons. It would become a nucleus completely isolated from the remaining population. However, considering the trading account of the first factory, we can see that it is a loser in strictly monetary terms; hence the difficulty in being able to give up this strict monetary language and to develop a more global and complex, but also in the end, a more comprehensive language.

Finding the Right Partner

- We must find the industrialist who is ready to export. This is the case, for example, with agribusiness techniques, where we have the land and the techniques, but where our balance shows a deficit in the field of patents, licenses and imports of equipment. We have not been able to mobilize ourselves to set up a certain number of systems adapted to exportation.

To Not Generalize the Techniques of Invitation for Tenders

- This method is too widespread, it is a particularly ponderous and partly inoperative advisory system.

- We would have much more success in entering mutual negotiations with the local partner. Any direct contact is preferable between one who has something to supply and one who receives.

- Therefore, and if possible, let us try to avoid these national and international invitations for tenders which unfortunately have often prevailed under the aegis of big international bodies for about 20 years.

- Except for huge complexes where they are used, in most cases they are inoperative and too expensive.

Demanding and Supplying Industrial Maintenance

A lot of plants, complexes and equipment have been exported and often after a few years, factories run at 30% only of their capacity or have stopped. Why?

- The emitter is not really responsible. He has been fair, has done his job. The receiver has paid (or the international fund which subscribed for him). The first recruiting and training effort has been made.

- However, we have not reached the point where the partner who controls his industrial apparatus is capable of maintaining it.

- Maintenance is not only upkeep, it also means technological improvement in view of obsolescence (maintaining the equipment at its purchase level) and also means the maintenance and the training of men capable of managing the production apparatus (and in Europe it is often not in our vocation to stay put), when it does not mean the immediate departure after start-up. Hence, in the absence of the training of men necessary for the maintenance of equipment, technology transfers remain incomplete and do not attain the original goals.