Perspectives on Development

Strategies of developing and developed countries are examined and analyzed

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I. INTRODUCTION

"The Japanese people since the war have undergone the greatest reformation recorded in modern history. With a commendable will, eagerness to learn, and marked capacity to understand, they have, from the ashes left in war's wake, erected in Japan an edifice dedicated to the primacy of individual liberty and personal dignity, and in the ensuing process there has been created a truly representative government committed to the advance of political morality, freedom of economic enterprise, and social justice. Politically, economically, and socially, Japan is now abreast of many free nations of the earth and will not again fail the universal trust. That it may be counted upon to yield a profoundly beneficial influence over the course of events in Asia is attested by the magnificent manner in which the Japanese people have met the recent challenge of war, unrest, and confusion surrounding them from the outside..."

R. W. Doyle

"...I know of no nation more serene, orderly, and industrious — nor in which higher hopes can be entertained for future constructive service in the advance of the human race ..."

These are not my words, but rather the words of a man known to all of you: Douglas MacArthur. They were spoken at MacArthur's farewell address to Congress, delivered on April 19, 1951, when MacArthur appeared before a special session of Congress after President Truman removed General MacArthur from the Korean command after 52 years of military service.

II. SOME STATISTICS

Let us take a moment to review some statistics, known generally by all of you. At the time of MacArthur's speech, 1950 per capita GNP of Japan, expressed in U.S. dollars, was $132. In 1960 it was $461. In 1974 it was approximately $4000. In 1974, more than 20 years after MacArthur's address, approximate per capita GNP figures for Indonesia were $100, for the Philippines $200 and for South Korea $400. In 1974, Japan realized per capita GNP nearly ten times that of South Korea, 20 times that of the Philippines, and 40 times that of Indonesia. Admittedly, technology which Japan acquired in the 50's and 60's is in the 70's, spilling over into the developing countries of East and Southeast Asia, causing rapid growth in the economies of certain of these countries.

Disproportionate Difference

However, the difference between developed, developing and underdeveloped countries in Asia is still disproportionate. In the coming years, the neighbors of Japan in East and Southeast Asia, will, in the normal course of trade, obtain and absorb the world's technology, as we know it today, in a considerably shorter time than the developed world consumed in its struggle to develop the technology of today. Yet, is this normal progression fast enough and economically sound?

Query: Has Japan met the 1951 prophecy of MacArthur and truly wielded "a profoundly beneficial influence over the course of events in Asia..."?

III. GLOBAL STRATEGY

In this shrinking world, which is now functioning on an economic base, business activity of necessity is international or global in nature. Markets are no longer defined as internal within the country which possesses the technology for developing products for manufacturing or for further development of the product being manufactured. In fact, the developed country's internal market is shrinking as the developed country and its technology matures; therefore export markets become increasingly important. Business must determine a strategy designed to foster the growth of the business. The strategy emphasizes survival of the business, stability and growth within the market designated for the business, and the planning factors include determination of market share, assessment of competition, technological change within the business environment, and forecasted demand.

Rather than dwell on the many variables in establishing a global strategy, let us select, arbitrarily, an environment within which some perspectives on development may be more readily organized and explained. Rather than considering the world market, let us define the environment as comprising three separate countries with the understanding that they are located generally in the vicinity of each other. The first country will be called "developed," the second country we will call "developing," and the third country we will designate as "underdeveloped."

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The developed country possesses mature technology which is a critical and tangible resource. The developed country manufactures sophisticated products and exports these products from its country. The developing country possesses an amount of raw material and has developed an ability to purchase products of the developed country. There is a level of trade between the developed country and the developing country. The developed country purchases raw materials from the developing country and provides manufactured products. The underdeveloped country, on the other hand, may be considered to have a level of natural resources and a competent work force, but is without the ability to purchase the sophisticated and mature products of the developed country. Assume that the underdeveloped nation trades with the developing nation with respect to basic needs such as raw material, agricultural products, commodities, and the like.

In the trade between the developed country and the developing country, and, to a lesser extent, in the trade between the developing country and the underdeveloped country, the mature technology of the developed country is being transferred to the developing country simply through the process of export from the developed country. The time frame is lengthy, yet the transfer is occurring. As the developing country matures, it desires a more rapid technology transfer in its dealings with the developed country, for example through licensing. In a sense, the relations between the developing country and the underdeveloped country are similar but this relation will not be explored herein.

Transfer of mature technology from the developed country to the developing country may stimulate demand for output from the existing production facilities within the developed country, but in the long run, technology transfer will preempt the demand, since the product will be manufactured within the developing country under the technology provided by the developed country. On the other hand, refusal to transfer the technology of the developed country to the developing country will also result in the eventual loss of the market of the developed country in that the developing country will eventually acquire the technology which it desires through the trading process.

Trading Process

Transfer of technology may take place through the trading process although the time span is quite long. Technology may be transferred through a license which is a relatively rapid manner of transfer from the licensor, developed country to the licensee, the developing country. Joint venture arrangements and investment decisions are methods within which the licensing arrangement may take form, and need not be explored herein. Suffice it to say that technology may be transferred through the techniques of marketing, joint venture arrangements and investment decisions. The developed country undertakes to transfer technology through licensing (joint venturing or investment decisions) to protect the market in the developing country which the developed country has nurtured and fostered for a period of time. It should be carefully remembered that the developed country's internal market shrinks as the technology and internal market matures; consequently, strategy relative to the developing country is important because, as the developing country matures, it becomes more capable of absorbing the technology and preempting the market established by the developed country.

IV. THE DEVELOPED COUNTRY — APPLICATION

Japan is now in a position of having mature technology and a mature internal market relative to its neighbors in East and Southeast Asia. The transfer of technology to customers of Japan in East and Southeast Asia may have the effect of temporarily increasing the demand for the products of production facilities in Japan, but such transfer can also diminish such demand. Therefore, the transfer of technology is irrevocably linked to sales in the economies affected by the transfer. Over time, mature technology is transferred by product sales as well as by license, joint venture, or investments. Admittedly, transfer of technology takes substantial time if it is done through product sales, but the time is relatively short in license arrangements whether or not a joint venture or investment decision is included.

As global strategy is developed by Japan, global market segments should be identified, and a strategy developed to maximize the demand on existing production facilities in Japan and minimize the overall corporate cost to Japan of extending markets across national boundaries. Manufacturing investments are made to serve a designated market from a facility within that market. Most designated markets are synonymous with the borders of a single country. The total demand of the designated market is the primary justification for the investment and is the point of departure for planning the product business. The basic planning objective for that business is to achieve performance relative to the opportunities in the designated market.

Total Impact

Consideration of the total impact of global economics provides an opportunity to prolong the economic life of existing investments and to leverage the utilization of existing capacity through export sales, joint product ventures, and related investment and licensing decisions. These are changing considerations and Japan must constantly consider global demand and the effect of increasing industrialization of its customers outside of Japan who are developing rapidly.

Licensing, joint venture and direct investment transactions should be considered by Japan as alternatives to export marketing where specific impediments to trade arise and are regarded in the consensus of the transferor company in Japan as permanent. Consideration should simultaneously be given to the long term market foreclosure aspects of licensing, joint venture and direct investment matters, and this consideration should be balanced by an understanding of the export "pull" effect on the transferor, Japan. When making development decisions and considering strategy, export market areas may be defined in a flexible manner as (a) base markets served with local investment, (b) global markets as areas of unexploited export potential, and (c) transitional markets where licensing, joint venture or investment decisions are appropriate. Decisions to use the techniques of marketing, licensing, joint venture or direct investment must consider each technique in the implication of initiating the selected technique when considering an overall strategy.

V. THE DEVELOPING COUNTRY — APPLICATION

The strategy of the developing country is about 180 degrees out of phase with the strategy of the developed country. The developed country wishes to enjoy the market of the developing country for as long as possible, whereas the developing country wishes to become self-sufficient and a supplier rather than a customer as quickly as possible. Therefore, the developing country prefers licensing to importing and will accept joint venture or direct investment as a necessary consequence of its desire to develop rapidly so that it may in turn export to its lesser developed neighbors. A compromise between the developed transferor and the developing transferee countries is not necessarily the answer to orderly development within a developing country.

Oftentimes, the developing country, since it is not sufficiently sophisticated in industrial techniques, cannot distinguish between that technology which it is equipped to handle and that technology which is too sophisticated; it wishes to go from labor - intensive to capital - intensive to technology - intensive technology as quickly as possible without realizing the steps necessary to make such transitions. It does not realize the problems in the transition because it has not been through the steps and cannot anticipate problems along the way. The developing country must rely heavily upon the transferor of technology to guide the developing country through these steps. The developing country must urge the developed country to assist in this maturation process and the developing country must "pay the price" in terms of allowing joint-venture participation or direct investment in the developing country by the developed country or by paying a high price for licensing.

The developing country finds it difficult to evaluate the technology which it is seeking to the extent that developing country executives are unable to judge, simply from lack of basis, the value of that which is being transferred. They may look at the product, which is made from the technology to be transferred, and consider it to be relatively simple, mainly because it "looks easy to make." Consideration is often not given to the basic technology necessary within the developing country to arrive at the ability to manufacture a specific product, and consideration of the step by step manner in which this technology is required may not be rationalized by the executives within the developing country. This problem is compounded by the fact that often the developing country agencies responsible for development are staffed by prominent and influential individuals who are dedicated to the development of their country, but who may lack the engineering, business and legal training necessary to correspond with counterparts from the developed country.

Developing countries face a problem in training people. Some developing countries in Asia have a very high level of education available which was instituted during "colonial" times. Other countries may have very fine basic training centers developed through "boot-strap" operations or with the assistance of various worldwide organizations, such as the United Nations. Some Asian countries have a combination of training centers and a high level of education but often this is not coupled with practical experience that comes from experience within a developed country. In the technology transfer process, the transferor and transferee must be objectively realistic about the ability of the transferee to absorb the technology, and the state of training is a prime consideration in the ability to absorb. Of course this must be coupled with the practical considerations of the work and general competency of that which has already been accomplished in the transferee or developing country.

In developing a country the "leap-frog theory" may apply. For example, the developing nation is normally capable of basic operations such as cutting, forming, bending, welding, stamping, forging and casting, and capable in the final operations of assembly, test, quality control, etc. However, the in-between steps to arrive at total integrated production often require technology not available in the developing country, or capital investment which requires an economy of scale not available within the developing country market. Accordingly, the developing country may initiate a policy of importing, from a developed country, components necessary to "leap-frog" from initial to final steps and accomplish product manufacture otherwise impossible within the developing country.

Application Technology

In making component purchases, the developing country may "force" a transfer of application technology; in other words, receive help in the incorporation of the component into the finished product.

The developing country may also search for idle technology within the developed country. Idle technology is that body of know-how no longer used within the developed country, simply because an advanced stage of development has been reached. This body of knowledge must not be overlooked since it can provide an important source of income to the developed country and a new level of development capability to the developing country.

In relations between the developed and developing countries cultural shock exists both ways. Each country sees and experiences different problems in dealing with the other. Different living patterns, different family patterns, different work habits, and different recreational habits may present problems in the initial stages of a relation. These cultural differences must be explored very carefully at the time a strategy is developed which may lead to technology transfer.

VI. DIVISION OF LABOR

In order to balance the consideration of providing technology and thereby ultimately losing the market, the division of labor concept allows a "phasing" of the technology transfer/market loss phenomenon and provides economies of manufacture to both the transferor and transferee. Economy of scale is very important in manufacture and

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The Importance of Finding New Ways

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to say how to do it. Good systems for developing profitable new ventures do exist and can be described. And experience has certainly taught a number of fundamental ground rules without which innovation has not much chance of success.

Some of these rules emerged from an internal seminar held a fortnight ago in Birmingham by the Delta group of metal and engineering companies. The first is the essential need for serious commitment by top management. Particularly in these days of stringency and cutback and saving every penny, it is hard for any board to commit funds to anything new or risky. But if it is hard for them it is harder still for divisional company and line managers, who are directly responsible for profit now. So the enthusiasm and the means must come from the top.

Source of Innovation

It probably follows that you cannot expect innovation to come from people with an in-tray full of today's problems. New ventures (which in early stages cost money and do not make it) will go to the bottom of the pile and stay there. Line managers should certainly be involved in innovation projects but the drive should come from people one step removed from the hurly-burly.

The next rule is that innovation must be geared to market need. This may not mean, indeed probably does not mean, the immediate market. The closer one is to one's market the less chance there is of being thrown by changes in demand. Equally, the more people's eyes are focused on their technical or manufacturing skills the more they will suffer when demand for those skills declines.

Good innovation work, too, is geared and assessed frequently in the light of the potential profit it will yield; if not misdirection and fruitless effort is almost inevitable. The ability to cut a project quickly is important.

The next rule is that innovation should be based on existing strengths, and these need not be technical ones. I would even say the opposite: too much emphasis on technical excellence has inhibited many companies from profitable innovation.

By this I do not minimize the need for a product to perform well. But I do mean we have to see what performance is required. We have to reassess the whole process of getting products successfully into society.

The other point to bear in mind is that innovation is essentially a creative as well as an analytical process. The important thing is to get the balance right, and, again, there are established ways of doing so. Whether brainstorming and other group activities for developing ideas are encouraged, or whether ideas come back from what Steinberk called "the lonely mind of a man", does not matter. The great thing is to search for new ideas, new ways of relating previous experience — then to check them.

The final rule is that innovation should be the constant, continuous concern of any organization. In good times we may appear to get along without it, but past negligence will surely show when the climate changes. If I may quote Colin McIver, the eminent marketing consultant, "It's like growing asparagus. The right time to have started is five years ago."

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the division of labor concept practiced by the cooperative effort of the developed and developing country provides a basis for low-cost manufacture of a given product which in turn builds volume, which in turn further increases the cost savings generated by the division of labor concept. It should be noted that technology learned by the developed country over a period of, for example 25 years, may be learned by a developing country in a substantially shorter time because the developing country is starting with that which is known today — the device has been made, therefore it may be made. To protect markets and to bring about healthy economies in both transferor and transferee countries, application of the division of labor concept dampens the effect of the technology transfer/market loss phenomenon to the transferor. The transferee, in turn, develops a higher level of industrialization and he, in turn, may become a transferor of technology relative to his neighbor, a lesser developed country. This step by-step-progression is economically sound for each of the countries in the developed, developing and under-developed country environment.

VII. CONCLUSION

The developed country must be sensitive to developing countries which are the market places of the future for the developed country as it reaches its own market saturation point. The developed country must strike a balance between rapid transfer of technology and therefore loss of the developing country as a market place, and the normal growth within the developing country which will preempt the developed country from the ability to maintain the developing country as a market place through a cooperative effort. The developed country must develop a strategy which is economically sound for developing country customers.

The developed country must guide the developing country carefully, helping the developing country avoid mistakes and delays experienced by the developed country. The developed country must carefully plan and use the technique of licensing, joint ventures, merger and acquisition with long range consideration in mind.

The developed country should not be so shortsighted as to exploit the market places of the developing countries since this will lead to loss of the market more surely than in the licensing process.

On the other hand, the developing country must consider the advice of the developed country. The developing country must carefully apply the techniques of division of labor, the leap-frog theory, and the use of idle technology.

In short, a cooperative effort on each side will balance the forces of developed/developing countries and balance the technology transfer/market loss phenomenon, thereby achieving an economically sound environment.