

SPECIAL SESSION

INFORMATION TECHNOLOGY, MARKETING AND ECONOMIC DEVELOPMENT

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ABSTRACT

Marketing has an important role to play in economic development. A major part of that role, given increasingly global business imperatives, is to improve the relative competitive position of the developing nation in the world economy. Porter (1990) has identified "demand conditions" as one of four crucial factors affecting the competitive advantage of nations. Thus, an important contribution of the marketing function is to enhance national competitive advantage by upgrading domestic demand conditions. In this sense, modernizing the marketing function has micro (improving firm competitive position) as well as macro (improving overall demand conditions and thus adding to national competitive advantage) connotations.

Many factors contribute to enhancing the efficiency and effectiveness of the marketing function. Among these is the element of information technology. This factor is increasingly being emphasized by marketing firms in developed countries. A global view of the marketing function would mandate that developing countries as well must rapidly adopt more advanced levels of information technology in order to achieve or sustain viable competitive positions.

INTRODUCTION

Rapid improvements in mass production technologies, robotics, flexible automation, mass customization etc. have altered the terms of discussions of global competition. As developed countries have sought for ways to rejuvenate their manufacturing sectors, they have invested heavily in advanced technologies as a means of achieving cost efficiencies as well as improving their effectiveness and thus competitive position. As a result, leading edge companies in these countries have changed the terms of competition. No longer may a developing country base its global competitiveness on its low cost of labor. It is also not sufficient anymore for that labor force to be exceptionally well educated or motivated. Lacking the appropriate factor conditions, no number of factory workers can duplicate the impact of dramatically superior technologies. Labor simply cannot substitute for productive technology.

Improving demand conditions requires several public policy initiatives. Governments must realize that industrial development is not merely a function of resources; the availability of infrastructural elements and the presence of well-informed buyers are both critical. The former issue has been dealt with extensively in the literature and will not be belabored here, except to stress that infrastructure

should be broadly construed to include information channels (or "utilities," as termed by Lenk 1982).

Governments can do much to facilitate buyer education. Actions that may be taken include: the strict enforcement of quality standards, dispersal of consumer information, creation and publicity of consumer affairs offices, encouraging factual, competitive advertising, etc.

Governments can also help upgrade demand conditions by applying stricter standards their capacity as buyers and enlightened regulation of products and processes (Porter 1990). The focus must remain on improving the *quality* of domestic demand.

There are numerous indirect benefits to the process of upgrading demand conditions via the mechanism of information technology. The same technologies are ideally suited to the dispersal of other types of knowledge. In particular, expert systems have been successfully used in healthcare and agricultural applications in several developing countries.

In order for developing countries to obtain some competitive advantages, they must act in two ways. First, they must make judicious investments in technology which allows them to multiply their

existing advantages. Second, they must pay direct attention to the services sector, and invest in some of the enabling technologies that define the information revolution. Developing economies must realize that national economic health is a function of both sectors. Information technology is the common thread.

INFORMATION AND MARKETING

The development of information and information technology helps explore the economic enterprise, production work and market seeking. Therefore, information is looked upon as a sort of resource, and an invisible and a special category of resource at that. The information obtained in every instant, the knowledge sublimated thereby, and the wisdom smelted thereby occupy a prominent position. As information exists only in a man's mind, deduction, induction and analysis are need to obtain information. On this account, information is the input-output of man's ideas. From here we can see that information is an evolutionary resource, which is proliferative, tensible, contractive, alternative and sharing alike. Hence, the infinity of its transmission. It is not to be occupied as private assets, or to be claimed as one's possession, or to be subjected to one's control. Otherwise, development of marketing will seem to be castles in the air.

While we enjoy the benefits of the advancement of information society, let us stop for a moment to recall the originality of the concept of information society. The credit must go to the Japanese government, which organized around 1966 a science, technology and economics study group to provide guidelines to economic planners and the term "johoka shakai", or "informationalized society", was then coined. The appearance of the nomenclature of information society, indicates that we are just standing on the threshold of social informatization. We must clarify the mutual relationship among information, knowledge and wisdom. Information can be said to be the array and sumtotal of facts and concepts obtained, knowledge the products produced through smelting the facts and concepts, and wisdom the syntheses of knowledge. Therefore, man's wisdom is full of vitality. By means of computers, we generate and access the data of marketing. But the array of data needs to be organically linked up, and further condensed. Only then, can it become marketing knowledge. But it needs wisdom to run as a golden thread through the marketing knowledge.

Information and Marketing

The new information era ushers in a brilliant prospect for industrialized countries and the developing countries as well. In the past twenty years, application of information has been snow-balling, and on the strength of the characteristics of information, we are breaking ground for many lines of business, such as scientific research, technology transfer, computer software, advertisements, and public relations. They, in turn, bring abundant benefit to marketing.

Looking from the angle of information source, customers are perhaps the best origins of messages for establishing a long term marketing project. If we can obtain information direct from the general customer, solicit their opinions concerning designs, prices, complete set packing, and make them participate in the policy-making process, the success of our marketing will be greatly helped.

While hunting for the information on international marketing, the contradiction is apparent. The high-level requirements of the interaction among manpower, equipment, technique and control within the framework of multinational marketing information system on the one hand, and the troublesomeness of international marketing beyond the boundaries on the other, make it necessary for us to set aside the political barriers and contraband of policy. Where information is flooding, it is inevitable for us to confront the interference of falsified information or of information in disguise, as a willful stratagem. Therefore, discrimination and extraction of the valuable information present themselves as procedures of paramount importance.

Important as the above-mentioned problems are, the more imminent one is, at bottom, to recognize the great significance of the free flow of information in doing marketing work. Now the normal working basis for modern marketing is "understanding and coordinating", and not solely "ordering and commanding". Let as many people as possible participate in policy-making, and allow great amounts of information as feedback. For this reason, the prerequisite of an information society is for all to cooperate and for quality, reliable, speedy, and inexpensive communication facilities. Stipulations should be made for international standard so that information-treating equipment and the service items are incorporated into the general communication network.

Wisdom and Marketing

We cannot rely on information's functional value and limit our field of vision to pure technicality. From the history of scientific development, we know that the principle of lever and screw permitted man to obtain an unimaginable extension of the limb. Similarly, the electronic computer of today becomes a great extension of human mind, but the key factor for exploring scientific realm is firstly man and man's wisdom, the development of which lies in the development of society. We must ride on the wave of progress to develop wisdom. We have the ability to store information so as to raise productive force. This is not enough, and the subjective mobility of a man is also the prerequisite. Just as a gunner, aiming at an enemy ship that is sailing with waves, must take its up-and-down movements (i.e. pieces of information), into account and depend on his subjective mobility to train the weapon on the target at sea. Certainly, to rely on our mobility in adjusting aim is more important. This tells us that the fundamental thing is subjective mobility. Only with this recognition can we better utilize information and serve marketing better!

The present day economies are in close tie with the economics of almost all countries. If we went to adapt ourselves to the changeable world market in our marketing career, we ought to be well-informed and grasp actively the information, so that in the international economic relations we can learn from others' merits to offset our shortcomings and to push forward each others' economic development. If, on the contrary, we isolate ourselves by standing aside from such relations, lock the gates and close the door behind us, we will get stuck in the mud.

In marketing, we must make a correct assessment of the market, which in turn demands a well-informed information market (infomarket). We must appraise the conditions and special features of the market, adopt flexible marketing strategy and tactics, and carry on effective marketing.

DIRECT EXPORT OF TELECOMMUNICATIONS-BASED MARKETING SERVICES: AN OPPORTUNITY FOR DEVELOPING COUNTRIES

In recent years, the importation of services from developing countries by developed countries has grown rapidly. The advantage is in the existence of highly-skilled labor in developing countries who can perform certain skills with a much lower cost than can people in developed countries where

nearly full employment may exist in specialized fields. Decreased communications costs make it far less expensive to leave labor resources in place and move data rather than people.

Examples of exportable services include computer programming, insurance underwriting and processing and even journal abstracting for compact disks. Until this point, however, exportable services have involved batch processing rather than real-time delivery. Demand for real-time information and marketing services tends to be market-specific demanding a high level of knowledge of local conditions which tends to preclude direct real-time export of such services.

Now, however, given recent advances in computer technology and expert systems, it is possible to divide customer service between high-level intelligence such as the ability to speak to the customer and recognize what is being said, and lower-level intelligence which involves deciding what to say. Ironically, high level intelligence (from a technological standpoint) involves attributes that nearly any human being possesses, but which is currently impossible to simulate by computer. Low-level intelligence from a cognitive standpoint is what society generally regards as high level. An example is the ability to sell.

Current pilot projects are being run by large financial institutions to divide these functions and hire telemarketing sales and customer service personnel based upon their projected warmth rather than their reasoning or sales ability. The latter is being handled by microcomputers or workstations tied into customer information files, in real time. The results are transparent to the customer.

This division allows institutions to service its customers from a great distance away from the physical facilities. For many years, Citicorp has been handling credit card information from South Dakota where a capable and low-cost labor force was available. If South Dakota is possible, why not a foreign country including a developing country.

Clearly, there are obstacles to the delivery of such services in that manner. Obstacles include language problems and time differences. However, the demand for such services is huge and growing and the obstacles can be overcome.

This paper describes the opportunities for the export of telecommunications based marketing services, particularly from developing to developed

countries. It discusses procedures, costs and obstacles and suggests ways of overcoming such obstacles. If time allows, a demonstration of prototype programs will be made.