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THE USE OF THE TOKTEN PROGRAM TO IMPROVE
MARKETING INFORMATION SYSTEMS IN DEVELOPING
COUNTRIES: EXPERIENCE IN EGYPT

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**The Use of the TOKTEN Program to Improve Marketing
Information Systems in Developing Countries: Experience in Egypt**

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ABSTRACT

This paper examines the improvement of Marketing Information Systems in developing countries. The enhancement of Marketing Information Systems can lead to market development and can benefit economic growth. Focus is placed on the brain-drain issue and the United Nations' TOKTEN program's efforts to use expatriate nationals to transfer knowledge. The case of Egypt is emphasized but ideas are also suggested for implementing Marketing Information Systems in other developing countries.

INTRODUCTION

Developing countries face the problem of the "brain-drain" in which the migration of professionally trained personnel across national boundaries takes place. The "brain-drain" issue started after the World War era. There was a demand for qualified manpower in Western countries which encouraged many of the people of the Third World countries to stay on after completion of their studies. It has been estimated that over 500,000 professionals born in developing countries are living and working outside their homelands (UN Development News 1985).

This paper focuses on the United Nations TOKTEN (Transfer of Knowledge Through Expatriate Nationals) program as a tool for solving "brain-drain" problems. The emphasis here is on how the TOKTEN program can be used to improve Marketing Information Systems in developing countries, thus contributing to market development and economic growth. First, discussion focuses on the "brain-drain" issue. This is followed by a description of TOKTEN. Next, a brief report of one of the author's experiences with TOKTEN in Egypt is given. Using this, we explain how the development of a program to improve Marketing Information Systems in Egypt can contribute to market development and growth. The paper concludes by discussing the implementation of a shared marketing information system for developing countries.

THE BRAIN-DRAIN ISSUE

The problem of migration is not limited to professionals but also affects skilled workers. For example, in Egypt the number of people who have left temporarily (seeking work opportunities in other countries of the Middle East)

is estimated at 2.5 million. In 1975, of the total of 1.7 million migrant workers in the Middle East in 1975, almost 73% were Arabs. Thus nearly 1.25 million Arab workers were employed in Middle East nations other than their own (Birks and Sinclair 1980). Furthermore, Saudi Arabia attracts the majority of Arab migrant workers; the 700,000 economically active expatriate Arabs in Saudi Arabia in 1975 amounted to well over half of all Arabs.

An Economic Trends Report on Egypt (October 1984) estimates the number of Egyptians working outside Egypt to be 2 to 3 million, approximately five percent of Egypt's population. Egypt's role as a supplier of labor in the Arab world has become a tradition, an accepted part of Middle Eastern economy and society. Table 1 shows both the contribution of Egyptian workers to Middle Eastern and other foreign countries. It is obvious that North America absorbs 74% of the total emigrants to other foreign countries. Egypt's permanent emigrants—whose number may well exceed 400,000—include considerable numbers of professionals, many of whom are qualified with the Masters and Doctorate degrees (Fayez 1985, p. 1). The majority are permanent residents of the United States, Canada, United Kingdom, and Australia (with numbers of residents in decreasing order). Similarly, Great Britain, Canada, and United States have been the countries to attract most of the Indians.

Insert Table 1 here

Many of the Third World countries need to build up modern and efficient administrations and to provide the necessary managerial staff for their developing industries. In addition, they wish to gradually replace foreign expatriate manpower by nationals (Bertrand, Timar and Achio 1981). Developing countries often remain in a situation of industrial dependency and do not yet

possess the research and methods of analysis services which are the greatest users of engineers and highly skilled manpower. Cavusgil (1984) indicated that a common factor limiting the usefulness of both foreign investment and licensing alternatives for transferring technology to developing countries is the shortage of qualified local managers who understand modern management concepts and knowledge. On the other hand, developing countries striving towards industrialization are often constrained in their efforts by a lack of technology and technical infrastructure (Morse 1975 and Oh 1977). Cavusgil (1984), in his study of sixty seven Turkish managers, also indicates that the barriers to transfer of management knowledge include political instability, economic instability, and government regulations. In addition, another problem is resistance to new ideas in the organization and lack of top management support for change.

Reasons for Emigration

Besides the barriers which prevent transfer of management knowledge (i.e., political instability, economic instability, and government regulations), there are some other factors which have an impact on emigration (brain-drain).

These factors are:

1. Lack of employment opportunities particularly in urban areas.
2. Salary differentials.
3. Low priority for research.
4. Corrupt administrative structure.
5. Difficult working conditions.
6. The prevailing educational system.
7. Use of simple, unsophisticated methodology
8. Personal reasons, for example, foreign spouse and better educational opportunities for children.

THE TOKTEN PROGRAM

Since 1976 the United Nations Development Program (UNDP) has been working with a number of developing countries to help them solve their "brain-drain" problem. Through TOKTEN, skilled expatriates are brought back to their countries of origin for short consultancies.

TOKTEN began in Turkey where the scheme was designed to tap the potential knowledge to be found in the large number of successful scientists, technologists, and managers of Turkish origin who had settled abroad. The success of the initial operations caught the attention of a number of UNDP country offices and government officials. The first activity of TOKTEN started in June 1978 in Istanbul. Twenty countries attended the First International Workshop, where the participants generated useful guidelines and operational procedures for wider use. The Second International Workshop was held in Islamabad, Pakistan, January 1982. There were representatives of nineteen countries including Turkey and Egypt. The program mainly concentrated on an exchange of views. Finally, the Third International Workshop in Cairo, Egypt, 1985 was held to assess, encourage, develop, and recommend progress.

By late 1984, the TOKTEN program was operating in seventeen countries in Asia, Arab States, African and Latin America and Europe (see Table 2). Other countries have expressed interest in starting up projects: Belize, Bolivia, Iraq, Jamaica, Lebanon, Morocco, Syria, Thailand, Tunisia and Zimbabwe. In 1985, developing countries have deployed over \$5.6 million to run TOKTEN programs. (UNDP News 1985).

Insert Table 2 here

Expatriate nationals from the seventeen developing countries have carried out some 1,000 short-term consultancies in their homelands under the TOKTEN program, which saves time, cuts costs and facilitates skills transfer. In Turkey, the total number of consultancies has reached 306, including over eighty return visits for follow-up. Assignments completed in 1984 amounted to 225. Similarly in Egypt the total number of consultants who completed their assignments was 112 by the end of 1984 (see Table 3) (Fayez 1985).

To date, these national TOKTEN programs involve allocations of over \$6 million of UNDP/IPF resources (IPF—Indicative Planning Figure—is the amount of assistance UNDP allocates to a country over a five-year programming cycle) (Lalkaka and Shallon 1985). A number of United Nation agencies also support TOKTEN, including UNESCO, ILO, FAO, NN/DTCD, UNIDO, UNCTAD, WILPO and the World Bank.

Insert Table 3 here

The TOKTEN Program in Egypt

The origin of Egypt's interest in TOKTEN is to be found in the 1978 Istanbul International Seminar that was held for the evaluation of Turkey's two-year experiment. The project started in February 1980 in Egypt. The number of consultants who visited Egypt in 1980 was thirty nine. The majority was from the U.S. (61.5 percent of the total consultants) followed by Germany, Canada, Netherlands, Sweden, United Kingdom, Austria, and Brazil. In 1981, the total visits dropped from thirty nine to seventeen consultants, which represented a

fifty-six percent decrease (see Table 3). Then the number of consultants increased from seventeen in 1982 to twenty-two in 1983 and thirty-four in 1984.

The project has been governed by a steering committee which has in its membership high-level representatives of several government departments and the Resident Representative of the UNDP, Cairo. The project is managed by Dr. Mohamed Fayez, the Vice President of the Academy of Scientific Research and Technology. Priority is given to industrial, agricultural and health-related activities.

The basic procedure that Egypt follows in implementing the project depends on the following two complementary approaches:

1. Stimulation of demand.
2. Stimulation of supply.

Demand of the services of the Egyptian expatriate nationals is stimulated through the involvement of local institutions of both the public and private sectors. Stimulation of supply of the services of the consultants (Egyptian Expatriate Nationals) is carried out by promoting the concept of the project and by contacting the cultural offices in the Egyptian embassies. Dr. Fayez, the head of the Egyptian TOKTEN program, and one assistant match organizations' demands to the supply of expatriates and thus select the appropriate expatriate to help the appropriate organization.

The emphasis of the Egyptian program is placed on applied scientists and technologists to serve government organizations and research establishments. On the other hand, the Turkish program tends to attract natural scientists and

technologists and generally associates them with universities and research centers. Other countries also place emphasis on different aspects according to their individual needs.

EXPERIENCES IN EGYPT

One of the authors attended the Third International Workshop in Cairo, Egypt, January 1985. He also was assigned to provide a consultancy assignment with two organizations: the Central Agency for Public Mobilization and Statistics, and the Academy of Scientific Research and Technology. His work involved initiating programs for managerial planning and control and the establishment of data bases. The emphasis was on the use of forecasting techniques for planning and control. In addition, he visited some other organizations which were establishing systems to collect economic and general information on a national basis. The task was to develop a system which would obtain the information without duplicating efforts and resources, thus minimizing the costs in collecting and storing data. Such efforts in Egypt are intended to be centralized.

He was also involved in providing different training programs in the area of utilizing forecasting for planning and control. More specifically, he provided guidance in establishing data bases, checking the reliability of data bases in planning and control, the importance of utilizing computer technology and the selection of hardware and software.

NATIONAL INFORMATION FOR EGYPTIAN DEVELOPMENT (NIED):**MARKETING INFORMATION SYSTEMS IN EGYPT**

Egypt has realized that it can no longer afford to have the country's most vital resources and professional and managerial manpower function below their potential due to lack of awareness and poor use of information. The Egyptian Academy of Scientific Research and Technology (ASRT) therefore has embarked on an ambitious program to establish a nationwide system for Scientific and Technical Information services, intended to support Egypt's socioeconomic development.

The program is a bilateral agreement between ASRT and the U.S. Agency for International Development USAID (The Academy of Scientific Research and Technology undated) and has been called National Information for Egyptian Development (NIED). It is intended to provide a major contribution in bridging the gap between the information needs and the supply of information. Development of the program has taken five years. Implementation was scheduled to start by 1986 in five sectors (agriculture, energy, industry and natural resources, medicine and health care, and science and engineering) that constitute priority areas for Egypt's socioeconomic development. Figure 1 describes the National Information for Egyptian Development network. Through this network, users will have access to information through specialized nodes in the national information system. The services nodes will use mini-computers or super-micros to handle their basic informational functions. Through suitable telecommunications, the nodes will be interconnected to form an open-ended, undirected network, allowing eligible users to communicate directly with any information service and document repository.

Insert Figure 1 here

Through the system distributed ring network, the authorized user can access any of its service nodes and repositories to get an answer for his query or copies of the original documents. Through public packet-switching network such as TELENET or TYMNET the users will have access searching of data bases in Egypt or abroad. Furthermore, the users will have access to document repositories. The system provides the users with a variety of data bases (numeric and textual). These data bases represent a diversified range of information sources which include: books and monographs, trade magazines, product catalogs, patents, bibliographic data bases, and others. The system also provides the users with bilingual Arabic/English capability through the use of bilingual computer terminals and modification of Data Base Management Software to store and retrieve bilingual information.

The system tends to serve users such as scientists, engineers, managers, professional practitioners, and applied researchers. Among many other trained professionals, the system includes full-time marketing specialists.

THE ROLE OF THE TOKTEN PROGRAM TO IMPROVE THE MARKETING INFORMATION SYSTEM IN EGYPT

Egypt has realized the importance of the information systems age and the impact on its economy, by establishing the NIED project. Especially, the Egyptian governmental structure relies on central planning and control and coordination among many different sectors (public and private). The Egyptian public sector accounts for 75% of the total economic activities.

The NIED project will have a great impact on a variety of sectors and their users through the access of specific and general data bases. This opportunity will enable decision makers in general and in particular those who are involved in marketing research to achieve better decisions.

Egypt has a fairly well-developed statistical system that generates a considerable body of data through the Central Agency for Public Mobilization and Statistics. The problems, however, are that these are not always conceptually useful for marketing problems; they often are not available at the appropriate time and they may be unrealistic indicators (Ikram 1980; Brasch 1978; Mahmoud and Rice 1984).

It is obvious that the TOKTEN program could provide Egypt with the opportunity of establishing a good marketing research environment with the aid of the NIED project to provide marketing researchers with good data bases. Inviting the Egyptian expatriates, especially those who have expertise in the area of marketing research and data bases, through the TOKTEN program would enhance the marketing research infrastructure in Egypt.

Among many of the opportunities that both programs could offer to the Egyptian economy are the following:

1. Inviting more expatriate nationals with expertise in the areas of marketing research, data bases for marketing use, and the use of computer technology in marketing issues would enhance the familiarity of the market researchers in Egypt with the state of the art of marketing research. Furthermore, this would enable the nationals to easily discuss marketing issues and seek guidance and help to address some of the

marketing problems that they have been facing.

2. Establishing a marketing research association or group, where the national would have access to research and marketing information could be useful for national expertise in the area of marketing research. Having such a group would enable both expatriates and nationals to exchange information and discuss marketing issues.
3. Conducting regular meetings between researchers residing in Egypt and Egyptian expatriates would establish a good marketing research environment.
4. Through the NIKD project, well structured data bases can be developed with the help of both internal marketing researchers and expatriates through the TOKTEN program. For example, conducting proper marketing surveys and establishing specific data bases would enable many of the organizations to better market their products. This would have a great impact on the Egyptian economy. The government would have ready access to market information concerning the pricing and distribution of essential food products. Having better knowledge of the sources having the least cost may enable the reduction of food subsidies in Egypt.
5. Conducting marketing research to identify marketing opportunities in different demographic areas beside Cairo, Alexandria, Port Said and other cities around the Suez Canal would enable Egypt to reduce market concentration and expand distribution, especially of durable goods.
6. Having the public sector foreign trade organization access the international network through the NIKD project (see Figure 1), along with the help of both expatriate and national marketing researchers would enable the import/export organization to study the international market and determine the best possible sources with the best prices and the best markets. This would enable Egypt to reduce the burden on its expenses

especially in the case of importing necessary goods such as wheat. Egypt imports over 70% of its wheat (Business International 1980). This also would help Egypt to minimize the trade deficit and to diversify its exports.

7. Providing guidance through the coordination of expatriate experts and national marketing researchers would enable the NIED project to establish conceptual data for marketing which could be used for solving marketing decisions. This would facilitate many marketing problems which have been addressed by Ikram (1980), Keegan (1980), and Mahmoud and Rice (1984).
8. Applying a comparative analysis of government buying procedures in Egypt and similar procedures in other countries would enable the government to address many of the difficulties that sellers face especially in the area of joint ventures and foreign investment. Thus providing such information and utilizing the consultation of the expatriate would help the government to overcome such problems.

It should be noted, however, that the success of the TOKTEN program and the NIED program rely on addressing many of the marketing infrastructure problems that Egypt faces such as the telecommunications and transportation networks in Egypt (for more details see Mahmoud and Rice 1984).

**CONCLUSION: BENEFITS OF MARKETING INFORMATION SYSTEMS
FOR DEVELOPING COUNTRIES**

In conclusion, this paper has emphasized the problem of the brain-drain in developing countries and how TOKTEN and other programs can contribute to

easing this problem. The focus has been on the use of TOKTEN to help develop and implement marketing information systems to promote market development and economic growth using Egypt as an example.

Most of the developing countries face similar problems. Thus the TOKTEN program could benefit them by adopting a similar approach to that implemented by Egypt. Each of the country members of the TOKTEN program should try to establish similar information networks (NIED). The details could be different based on the structure of each country's government. It is suggested that each establishes a "Marketing Research Center" and an "International Marketing Research Center" could be established through the coordination of TOKTEN and the marketing research nationals in each country. Establishing such an international group or center would enable the expatriates as well as the nationals to exchange information, help, consultancies, guidance, and assistance. Having such a center or group would also enable expatriates to provide help in their area of expertise not only in their own national country but also in other developing countries where certain types of expertise are in short supply.

The suggested International Marketing Center or group would provide the developing countries with the following opportunities:

1. Exchanging marketing information among the country members of TOKTEN programs through the International Packet Switching Network (see Figure 1). Each country through its own data base systems would have access to the marketing data available at the systems of all other country members.
2. Establishing a directory of marketing researchers, (national and expatriate) of each country. This directory should be available to all members of TOKTEN and should be classified by area of expertise,

experience, training programs etc. This would enable full cooperation and assistance among TOKTEN members in developing countries. This also would be useful for arranging consultancy visits by an expatriate who could also visit neighboring countries in which the same language is spoken.

3. By exchanging marketing information and knowledge through newsletters and journals, countries using TOKTEN could learn from each other. Translation of such information to different languages would be preferable so marketing researchers of different nationalities could benefit.
4. Exchanging information through the different channels of communications of an International Marketing Research group particularly in the area of import/export would enable developing countries to better market their products and identify their needs among country members and the international market.

Table 1

Number of Egyptians Working in Other Countries

<u>Middle East</u>		<u>Other Foreign Countries</u>	
Iraq	1,250,000	U.S.A.	200,000
Saudi Arabia	800,000	England	170,000
Libya	300,000	Canada	60,000
Algeria	35,000	Australia	50,000
United Arab Emirates	150,000	France	9,000
Jordan	125,000	Italy	30,000
Qatar	25,000	Greece	27,000
Sudan	20,000	West Germany	9,000
Syria	15,000	Switzerland	25,000
Oman	11,500	Scotland	1,000
North Yemen	12,000	Spain	250
Somalia	500	Norway	25
Mauritania	120		
Others	600		

Source: Adapted from Minister of Emigration, Arab Youth Journal (Arabic),

June 1985, No. 938.

Table 2

Countries Involved with TOKTEN Program

1. Argentina
2. Bangladesh
3. Benin
4. China
5. Dominican Republic
6. Egypt
7. Ethiopia
8. Greece
9. Grenada
10. Guyana
11. India
12. Pakistan
13. Philippines
14. Saint Lucia
15. Sri Lanka
16. Trinidad and Tobago
17. Turkey

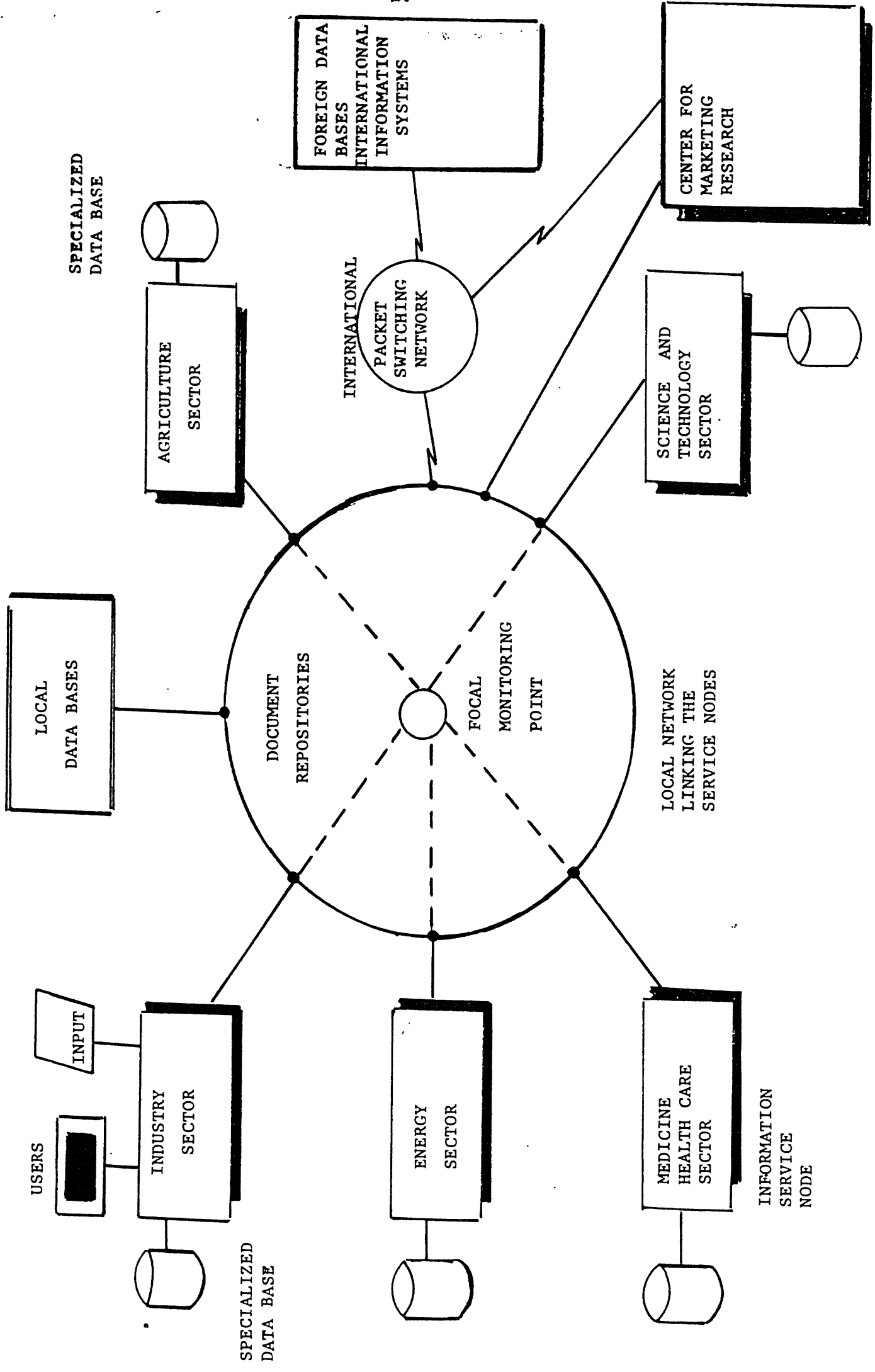
Source: Lalkaka, R. and Shallon, N. "The TOKTEN Concept: Agenda for the Future," Third International TOKTEN Workshop, Egypt, 13-17, January, 1985, p. 3.

Table 3

Distribution of Consultancy Missions 1980-1984 by Egyptian Expatriate's
Country of Residence

	Country	1980	1981	1982	1984	Total
1.	U.S.A.	24	10	14	24	72
2.	Canada	3	2	1	5	11
3.	Germany	5	3	1	1	10
4.	Netherlands	2	-	3	1	6
5.	United Kingdom	1	-	2	2	5
6.	Sweden	2	-	1	-	3
7.	Switzerland	1	1	-	1	3
8.	Austria	1	-	-	-	1
9.	Brazil	-	1	-	-	1
	TOTAL	39	17	22	34	112

Sources: Fayez, M.B. "The Implementation of TOKTEN Program in Egypt," Third International Workshop, Cairo, 13-17, January, 1985, p. 5. More than 60 national institutions in the government and in the public and private sectors have benefited from the expatriate services.



Source: National Information for Egyptian Development Project (undated), Cairo: The Academy of Scientific Research and Technology

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