Business legislation

Legislation designed to reform 300 public enterprises under government control was enacted on June 13, 1991. The Business Sector Law allows new holding companies to own more than half of the shares of companies they control. It also spells out workers' rights and provides that workers have the right to take 10% or more of net profit. The law is applicable to enterprises in sectors other than iron and steel, aluminum, petroleum, military production, and finance.

Labor unions

The Labor Law, Law No. 91 of 1959, allows the formation of labor unions in Egypt. The main labor unions are industrial unions organized in specific sectors such as agriculture, textiles, foods, and the metal industry. A federation of 22 of these industrial unions called the Egyptian Labor Union was organized with 4.5 million union members in 1967[19]. The leaders of this federation and of the industrial unions are members of the National Democratic Party, the governing party. Though they do not engage in any conspicuous opposition to the government's policies, they do strongly urge consideration of the low-income population's and pensioners' interests.

1.2 Development scenarios and strategies

In the preceding sections we have dealt with two long-term challenges for Egyptian industry: how to structure Egypt's manufacturing industry to enable it to manufacture goods that will be competitive on export markets and how to enhance the ability of the industrial sector to absorb manpower. As preparation for addressing these two issues, we attempted first to assess how much progress Egypt has made toward industrialization and how its manufacturing industry is presently organized.

In this section, on the basis of the above-mentioned analysis, we will analyze specific scenarios for addressing the long-term issues. The analysis will be divided in two: a scenario aimed at long-term improvement

of productive forces and a scenario aimed at reforming the manufacturing system.

1.2.1 Scenario for long-term upgrading of production capabilities

In order to make Egypt self-supporting in the long term, it is important to enhance its economy's latent capabilities, while making long-term improvements in the productive forces of the industrial sector and making the Egyptian economy more efficient.

In this section, we shall review the industrial sector development scenario that the Egyptian government itself is implementing in its Second Five-Year Plan.

Tables 1-12 and 1-13 present the rates of growth in different sectors and the sums scheduled for investment in different industries under the Second Five-Year Plan. It is evident from these tables that the scenario envisioned by the Egyptian government regards expansion of industry and the private sector as the locomotive for economic growth. The Second Five-Year Plan stresses expansion of export capacity; it takes for granted that increasing production of manufactured goods for export is the key to development.

The question arises in regard to the Second Five-Year Plan whether the expected economic growth rate of 5.8% and, in particular, the projection of 8.4% growth in the industrial sector are realistic. It is possible that Egypt's economic growth rate might drop considerably in the short term due to the structural adjustment program which is currently being carried forward. Inevitably, therefore, one must adopt a somewhat pessimistic view about whether there are any prospects at all for achieving the government's projections. In the Five-Year Plan, huge investments are earmarked for industry and its major sectors, compared with other sectors of the economy. However, it will be necessary to examine carefully whether or not investments in these sectors are likely to be effective. For example, the World Bank concludes in 1983 that, according to calculations based on domestic resource costs, the industries with comparative advantage are certain sections of the food processing and textile industries, while investments in the basic

Table 1-12 Investments scheduled in each sector

Sector	Amount to be invested (in million Egyptian pounds, with percentage of total in parentheses)		Percentage of total	
			Public sector	Private sector
Production-related	24,185	(52.8)	52.4	53.3
Agriculture	4,937	(10.8)	8.2	14.7
Mining and manufacturing	12,191	(26.7)	20.8	35.6
Petroleum	1,115	(2.4)	4.0	–
Electric power	4,761	(10.4)	(17.1)	–
Construction	1,181	(2.6)	2.3	3.0
Production services	7,228	(15.8)	19.9	9.5
Transport, communication, warehousing	6,103	(13.3)	16.9	7.8
Suez Canal	240	(0.5)	0.9	–
Commerce	313	(0.7)	0.8	0.4
Banking and insurance	143	(0.3)	0.5	–
Tourism	428	(1.0)	0.8	1.2
Social services	14,405	(31.4)	27.7	37.2
Housing	6,767	(14.8)	0.6	36.6
Utilities	4,017	(8.7)	14.4	–
Education	1,664	(3.6)	5.9	0.2
Health	848	(1.9)	2.9	0.3
Others	1,109	(2.4)	3.9	0.1
Total	46,500		100.0	100.0

Note: Of the 46.5 billion Egyptian pounds, 38.7% are to be invested in the private sector, and the remaining 61.3% are to be invested in the public sector.

Source Ejiputono Keizaishakaino Genjou (Current State of Egypt's Economy and Society)(4th edition), Association for Promotion of International Cooperation.

Table 1-13 Anticipated industrial sector growth rates

(%)

Industrial sector	Average annual real GDP growth rate
Agriculture	4.1
Manufacturing	8.4
Petroleum	2.3
Electric power	7.1
Construction	5.9
Transport, communication, Suez Canal	5.1
Commerce, banking, insurance	5.5
Tourism	10.9
Housing, utilities	11.4
Personal and social services	5.2
Government services	5.5
Total (for the economy as a whole)	5.8

Source: Ejiputono Keizaishakaino Genjou (Current State of Egypt's Economy and Society) (4th edition), Association for Promotion of International Cooperation.

metal industries and the manufacturing of transport equipment (automobiles, etc.) would be inefficient[20].

Examination of the development scenario for the four key industries (foods, textiles, chemicals, machinery and metals), which are assigned principal roles in the industrial sector, indicates an attempt to formulate a plan in which these four major industries retain their importance — by continuing to produce the same percentage of total production — and remain the nucleus for growth. This scenario formulated by the Egyptian government preserves Nasser's planned-economy strategy, putting priority on heavy industrial development in a closed economic system and on the processing and exporting of primary products (as, for example, by the textile industry).

The problematic aspects of this strategy have been addressed in the general remarks in Part I. For a developing country seeking to improve its industrial productivity and increase manufactured goods exports, existing strategies utilizing differentials relative to production factor costs will gradually lose their attractiveness.

It is preferable to replace such strategies with knowledge-intensive industrial development strategies that emphasize the development of new products and technologies and marketing. The World Bank has issued a report which suggests that such a strategy can be extremely advantageous to developing countries. It may be instructive in considering how to make long-term improvements of Egypt's productive forces. (There are some drawbacks, however, such as the fact that, in order to achieve knowledge-intensive development, appropriate facilities and technologies must be selected and manufacturing must be reorganized.)

Table 1-14 summarizes the development objectives of the four key industries in the Five-Year Plan. A number of problems become apparent after review of these development objectives on the basis of the problematic aspects discussed above.

Table 1-14 Key industries' priority development objectives in the Second Five-Year Plan

a. Food industry
- Expand capacity for milling wheat and rice and for baking bread to meet domestic demand
- Increase (cane) sugar production by about 1.5 million tons and expand fructose production
- Greatly expand production of livestock feed
- Expand exports of canned and frozen vegetables and fruits to Africa and the Arab world
- Expand oil, fat, and soap production capacity

b. Textiles
- Expand production of cotton and synthetic ready-made clothes
- Promote domestic processing of raw cotton
- Upgrade dyeing and sewing technology

c. Chemicals
- Increase production of phosphate and nitrate fertilizers for domestic use and for export
- Expand production of compressed boards, resin composite boards, and paper
- Expand production of pharmaceuticals for Africa and the Arab world

d. Metals and machinery
- Increase cement production (to 30 million tons)
- Increase production of plate glass, porcelain, tiles, pipes, etc.
- Increase steel production (to 2 million tons)
- Increase production of steel reinforcing bars for domestic use and to replace imports
- Increase production of boilers, valves, water-treatment machinery, cables, etc.
- Increase production of tractors and trailers for domestic use and for export to Africa and the Arab world
- *Raise percentage of domestic content in production of automobiles and buses to 80%, and* promote their export to Africa and the Arab world
- Expand production of washing machines, refrigerators, and other electrical household appliances

For example, the Second Five-Year Plan calls for raising the percentage of domestic content in automobiles to 80% and to attempt to export cars. The present state of Egypt's peripheral industries, however, would make it extremely difficult for Egypt's automobile industry to raise the percentage of domestic content to this figure. Originally, Egypt's automobile production began from a classical import-substitution program. But production in developing countries of high-value-added products such as automobiles is costly relative to world prices, and exporting them is almost certain to be impractical. And, in another area, if further expansion of textile

product exports is desired, the most important requirement is to improve design and quality; for this, Egyptian manufacturers will have to consider active collaboration with foreign capital and carry out such organizational reforms as the upgrading of their own quality-control capabilities.

If the aim is the long-term upgrading of Egypt's production capabilities, it will be necessary to establish the direction in which industrialization ought to proceed, selecting strategies such as knowledge-intensive industrialization from among a variety of different approaches, and then selecting the key industry or industries that are best suited to enacting these goals. It will be necessary to study carefully not only the investment efficiency but also the market environment (e.g., the infrastructure), as well as present Egyptian levels of science and technology and worker's skills, and the feasibility of industrial reorganization.

1.2.2 Scenario for reorganization of production systems

The most appropriate approach to this scenario is to analyze it on the basis of the Economic Reform and Structural Adjustment Program (ERSAP) that the Egyptian government is currently carrying out with the IMF and the World Bank. The structural problems facing Egyptian industry are both extremely serious and rooted in Egypt's historical and social background, requiring comprehensive and detailed analyses. It would therefore be most appropriate to base analysis of these problems on the reports of the World Bank, which has years of experience in analysis of this area.

The following three elements are the main pillars of the structural adjustment program, whose aim is to restructure Egypt's productive capacities: (i) price decontrol to correct extreme distortions of the incentive system; (ii) stronger emphasis on competition, on reducing the role of the public sector, and on improving the private sector's regulatory environment; and (iii) strengthening market-based economic structures[21].

Price decontrol policy is designed to abolish price controls, especially in the public sector. This is essential in order to effect the public sector's transition to market mechanisms. Price deregulation will eliminate serious

economic distortions and inefficiencies in the public sector and lead to an improvement of the incentive system for manufacturing. And government revenues will grow as a result of the reduction of government subsidies to public enterprises.

Price controls in the industrial sector are due to be phased out gradually, taking into consideration the domestic market competitiveness of goods and services and the liberalization of imports. The aim is to free prices completely in cases in which domestic products are already sufficiently competitive with imports, and to phase them out gradually in cases where prices have been determined for various administrative purposes. Decontrol of prices for products and services that are highly subsidized during their production, such as electric power, will take place after subsidies have been discontinued(22).

It is extremely important for industrial reorganization that public sector reforms be accompanied by basic changes in the regulatory environment, which affects the private sector. Although the Second Five-Year Plan aims at rapid development of the private sector, many government policies have undeniably diminished its vigor. For example, the government has had the authority to stop any further investment or expansion in manufacturing capacity by the private sector, and this authority effectively shielded the public sector from competition. Public enterprises' access to production input was privileged; private enterprises' access was discriminatorily restricted. The regulatory environment has undoubtedly interfered with attempts to improve private sector manufacturing systems.

The structural adjustment policies aim to reform the regulatory environment, advocating that policies that discriminate against the private sector be abolished. For instance, private-sector investments requiring government authorization are to be limited to a small number indicated on a "negative list" of activities; government permits for expansion of manufacturing capacity are to be abolished; and the public sector's monopoly of foreign trade is to be phased out(23).

The structural adjustment program seeks to secure fair competition by abolishing non-tariff barriers and high import duties and by narrowing the range between the highest and the lowest tariffs. It calls for imports

to be deregulated and for import prohibitions to be limited to cases endangering public health, environmental protection, national security, and national assets. The structural adjustment program also seeks to gradually ease restrictions on exports, for instance by reducing the number of items subject to export quotas. Specifically, it reduces the number of items whose export is forbidden from 20 to 6, the items subject to an export quota from 17 to 4, and the items requiring government export permits from 37 to 1[24].

These scenarios for production system reorganization are expected to bring about a rapid response, increasing exports by more than 9% annually in industries other than textiles. After recovering from its reorganization, the textile industry will also be expected to increase exports by more than 7% annually[25].

We believe that the structural adjustment program's orientation toward production system reorganization is generally sound. It will nevertheless be necessary, as mentioned in Part I on general approaches, to evaluate carefully the chances of structural adjustment's success in reforming Egypt's public enterprises, given the current situation in Egypt's public enterprises, where over-staffing has increased under pressure from the country's social institutions and customs. The private sector is expected to respond to this scenario more rapidly than the public sector, but there is concern about the private sector's extremely low level of capital accumulation and the development-arresting and devastating effects on financial and distribution markets of the public sector's decades of control and monopoly.

Deregulation of imports is believed to be the most important facet of structural adjustment's implementation, which is being carried out with great haste and urgency by the government. Egypt's import liberalization policy was originally intended as a means for securing free competition. It has been pointed out, however, that this policy has changed into a means of burying the public sector, and it is feared that the policy will be diverted from its original purpose. Inasmuch as Egypt's long-term industrialization strategy and key industries have yet to be clearly determined and identified, it is feared that pressing forward with the lowering of tariff duties and liberalization of foreign trade will nip in the bud yet infant with latent potential to become tomorrow's key industries. These concerns increase

the urgency of rapidly formulating an industrialization strategy and structural policy for Egypt's industry.

Notes:

(1)~(3) World Bank data.

(4) World Bank, Alleviating Poverty During Structural Adjustment. 1991.

(5) Export-Import Bank of Japan, Overseas Investment Research Institute, Kaigai Toushi Kenkyujo Hou (Report of Overseas Investment Research Institute), Vol. 17, No. 5, "Tenki o Mukaeta Ejiputokeizai - Saimumondaino Shitenkara" (Egypt's Economy at a Turning Point: From the viewpoint of the debt problem).

(6) Ibid.

(7) World Bank, World Debt Tables 1990-91.

(8) World Bank, World Development Report, 1990.

(9) Sekine, Eiichi, "Kougyouka to Gaikokuboueki" (Industrialization and Foreign Trade) in Suzuki, Hiroaki, ed., Monkokaihouka no Ejiputokeizai (Egypt's Economy Under the Open-Door Policy), Institute of Developing Economies, 1991.

(10) Federation of Egyptian Industries, Yearbook 1984/85 - 1986/87.

(11) Ibid.

(12) Ibid.

(13) Ibid.

(14) Sekine, Eiichi, "Kougyouka to Gaikokuboueki" (Industrialization and Foreign Trade) in Suzuki, Hiroaki, ed., Monkokaihouka no Ejiputokeizai (Egypt's Economy Under the Open-Door Policy), Institute of Developing Economies, 1991.

(15) World Bank data.

(16) Based on materials supplied by Japan External Trade Organization (JETRO).

(17) Based on materials supplied by the Japanese Institute of Middle Eastern Economies.

(18) Based on materials supplied by Japan External Trade Organization (JETRO).

(19) Japan External Trade Organization, ed., External Trade Market Series, No.232, Egypt.

(20)~(25) World Bank data.

2. Agriculture

2.1 Status and issues of development

Agriculture accounts for around 20% of gross domestic product (GDP)[1] and about 20% of the total value of exports[2]. In addition, agricultural employment accounts for slightly less than 40% of total employment[3]. Agriculture still continues to be the most important sector of the Egyptian economy.

2.1.1 Basic constraints on Egyptian agriculture

Egyptian agriculture has huge potential due to its rich soils and an ample water supply from the Nile, as well as ample sunlight and almost non-existent climatic disasters such as cyclones and frosts. Egypt also enjoys near year-round irrigation following the completion of the Aswan High Dam.

However, the total area of arable land is only 6.5 million feddan (1 feddan = about 0.42 ha)[4], which is less than 3% of the total land area of Egypt. The population of Egypt has reached 54 million[5], which places Egypt amongst the countries with the highest population density to arable land in the world. Moreover, the proportion of the population living in urban areas has reached 45%[6], which puts increasing demands on Egyptian agriculture to feed the non-agricultural population. New agricultural land must be developed to provide for the increased food demand, but irrigation water, which is a prerequisite to opening up new land, is already close to fully committed, and there is only limited potential for the development of new water resources.

A further complication lies in the failure of industrialization which has been given high priority since 1952. This has led to the persistence in rural villages of poverty that is one of the factors holding back the modernization and development of agriculture. (The World Bank[7] estimates that 25% of the inhabitants of rural villages live in poverty.)

2.1.2 Stagnation in agricultural production, and the growth in the agricultural supply and demand gap

Egyptian agricultural production had grown steadily since the 1952 revolution up to the mid-1960s. During that period, an average annual growth rate recorded about 3.5%[8], although this dropped to about 2% in the 1970s[9]. The growth rate for the period 1982 to 1987 was 2.5%, which was very much lower than the growth rates of 5.8% for industry and 5.6% for services[10].

Despite the fact that 1.53 million feddan of new arable land was opened up in the period between 1952 and 1986[11], much existing arable land was converted to such uses as housing and industry. The net result was that 5.70 million feddan[12] of arable land in 1950, rose only to 6.50 million feddan. The total cultivated area did certainly rise, but the cultivated area of traditional crops such as cotton and wheat either fell or remained the same[13]. Instead, the cultivated areas of rice and sugar cane increased, although they have also shown no increase since the 1970s. On the other hand, the cultivated areas of vegetables and fruit have shown a sustained increase. In terms of land productivity, the period of the 1950s and 1960s showed an overall increase, while there has been no very significant growth since the 1970s in some commodities.

There are two reasons why land productivity did not show a significant increase in those crops. On the one hand are technological factors, involving the failure to put sufficient effort into technological improvements, despite the considerable latitude for improvements in agricultural production that new technology offered. On the other hand, the low producer prices of some crops reduced farmers' incentives. Some further problems which led to the decline in productivity include salinization and soil deterioration, which are caused by rising ground water tables, and are due partly to deficiencies in drainage and inappropriate management of irrigation. These problems were compounded by the inefficiencies imposed by complex governmental structures and mechanisms.

As for animal products, subsidies have kept their consumer prices low with the resultant increase in their demand, while import restrictions

have been applied keeping the producer prices relatively high. This has led to an increase in fodder crop production such as berseem in preference to the cereal crops, and to the encouragement of costly domestic animal production.

Thus, while agricultural production has remained stagnant, food demand has increased further due to population growth exceeding the increase in agricultural output and to the rise in individual incomes in the 1970s. This reversed the food supply and demand balance[14], and caused the net agricultural imports of US$4.3 billion in 1987, which accounted for an excess of one-third of the total trade deficit for that year[15]. As the following table shows, the self-sufficiency rate of the main cereal products - wheat and maize (for feed) is very low.

Table 2-1 Balance sheet for main cereal products (1985)

	Production (thousand tonnes)	Exports (thousand tonnes)	Imports (thousand tonnes)	Supply (thousand tonnes)	Self-sufficiency rate (%)	For feed (thousand tonnes)	For consumption as food (net) (thousand tonnes)	Per capita consumption (kg/year)
Wheat	1,844	–	4,458	6,477	28	–	5,025	103.6
(Wheat flour)	–	–	1,215	1,187	–	–	1,187	24.5
Maize	3,698	–	1,700	5,412	68	1,700	3,226	66.5
Rice	2,311	22	–	2,289	101	–	1,506	31.0 (Polished)

Source: Moustafa, M.S., Outline of Egyptian Agriculture (mimeo), 1991, Annex Table 1. The self-sufficiency rate was calculated from the data presented in the source.

2.1.3 Labor surplus and poverty

The rural population of Egypt, which occupied 70% of the total population in 1937, declined steadily to fall to around 56% by 1976 with the rapid urban population growth[16]. Thereafter, however, higher birth rate in the rural areas than in the urban areas and the weakened capacity of the urban areas to absorb new immigrants have led to a high rural population growth rate with its proportion in the total almost unchanged.

Similarly, the agricultural labor force has shown a steady tendency to increase since 1977. The proportion of the agricultural labor force in

the total labor force fell from 42% in 1977 to 34% in 1983, but then stabilized at the 36% level[17], leaving surplus labor in the rural villages. The income of rural households is about one-third of the average income. The real wage index (1982 = 100) in 1987 was 60.0 for agricultural workers, 62.7 for manufacturing industry workers, 86.2 for oil workers, 60.8 for government employees, and 67.8 for service sector workers. Thus, agricultural workers along with government employees had suffered the greatest falls in real income[18]. The proportion of the population living in poverty in the rural villages has been estimated at 25%[19], and impoverished agricultural workers are estimated to account for 40% of the total impoverished workers in rural villages[20].

This problem is not simply caused by domestic recession alone. The numbers of emigrant workers from Egypt to the oil-producing countries, which rose sharply to 2.8 million by 1985[21], from the beginning of the open-door policy in 1973 with a peak in 1983, has fallen back as the oil-producing countries have experienced recession[22]. Since the Gulf Crisis broke out in 1990, some 450,000 Egyptian emigrant workers returned home according to a Government estimate; most of these are believed to come from rural areas[23]. These people account for as much as 10% of the agricultural labor force of 4.5 million.

2.1.4 Effects of land reform

Over the period 1952 to 1969, the following land reforms were carried out over the three stages:

a. Restrictions on land ownership (requision of land held in excess of the maximum limit with compensation and its redistribution to tenant farmers at a cost with a charge).

b. Controls through the agricultural cooperative structure

c. Improvements in the position of tenant farmers (encouragement of documentation and extension of leases, and of rent payment in money; exclusion of middlemen, etc.)

d. Protection of agricultural laborers (introduction of minimum wages; granting of the right to organize labor unions)

Of the above, the measures with the most notable impact on Egyptian agriculture were the restrictions on land ownership, the redistribution of land, and the formation of cooperatives.

2.1.4.1 Restrictions on land ownership and redistribution of requisitioned land

In the first stage of land reform in 1952, ownership of agricultural (arable) land was restricted to 200 feddan (84 ha) per individual, and 300 feddan (126 ha) (by the 1958 reform act) per family. In the second stage of the land reform in 1961, the limit on individual land ownership was reduced by a half, to 100 feddan (42 ha), and to 200 feddan (84 ha) per family. Finally, in the third stage of land reform in 1969, the limit on individual land holdings was again reduced by a half, to 50 feddan (21 ha), and the total holding per family to 150 feddan (63 ha) per family, which still apply today.

These restrictions on the land ownership were the first in the history of Egypt, although the reduction in the limit on the size of family land ownership to 150 feddan (63 ha) is still quite lenient. Moreover, during the period from the first through to the third stages of the land reform, the large land holders were left free to adopt a number of measures, such as splitting land ownership among different names, reducing the effects of the land reforms. By 1985, 865,000 feddan (around 15% of all agricultural land) had been requisitioned; of this, 714,000 feddan (around 12% of all agricultural land) had been redistributed to some 346,000 farmers (about 10% of the 3,430,000 agricultural land owners in 1985). However, as can be seen from Table 2-2, 70% of redistribution occurred during the first and second stages of the land reforms. Most of the requisitioned land belonged mainly to the big absentee landowners, and the area of agricultural land affected was marginal and restricted a limited regions.

Table 2-3 shows the results of the land reforms. Some leveling out of both the land ownership and land holdings patterns occurred, but the greater change occurred in land holdings. In land holdings, the top 20% fell significantly, from 73% to 53%, while the 20%-80% group increased significantly from 25% to 41%. However, land ownership patterns did not change as strikingly. The fall in the top 20% was limited, and the rise in the 20% - 80% group was not great. This divergence between land ownership and land holdings suggests that there was an increase in tenant farming, and it has been reported that land farmed by tenant farmers accounts for 43% of total agricultural land[24].

Table 2-2 Redistribution of agricultural land under the land reforms

Land reform law	Area (feddan)	Beneficiaries (families)
1952/No. 178	388,831 (54.4%)	186,009 (53.7%)
1961/No. 127	110,581 (15.5%)	56,262 (16.2%)
1963/No. 15	21,850 (3.1%)	10,658 (3.1%)
Awkaf's Lands	105,322 (14.7%)	51,484 (14.9%)
Herasa's Land	22,574 (3.2%)	11,550 (3.3%)
1969/No. 50	32,525 (4.6%)	17,399 (5.0%)
Others	32,525 (4.6%)	13,107 (3.8%)
Total	714,208 (100%)	346,469 (100%)

Source: Central Agency for Public Mobilization and Statistics (CAPMAS), Statistical Yearbook, 1989, p63.

Table 2-3 Trends in distributions of land ownership and land holdings following the land reforms

	1950/52	1977/78
Land ownership		
Lowest 20%	4%	5%
20% – 80%	18%	25%
Highest 20%	78%	70%
Gini Coefficient	0.74	0.66
Mean size	5.2 Feddan	1.67 Feddan
Land holdings		
Lowest 20%	2%	6%
20% – 80%	25%	41%
Highest 20%	73%	53%
Gini Coefficient	0.68	0.48
Mean size	3.8 Feddan	2.0 Feddan

Source: World Bank, Egypt-Alleviating Poverty during Structural Adjustment,1990, p.40.

On the other hand, the average redistributed land area amounted to only 2.1 feddan (about 0.8 ha) per agricultural household. In addition, the Islamic Law requires that land be distributed equally amongst heirs, which causes the continuous subdivision of land holdings. These factors have led to a rise in the number of small land owners.

Table 2-4 shows the proportion of land owners with up to 5 feddan has increased from 78.5% in 1950 to 93.5% in 1977. In particular, the proportion of land owners with 1 feddan or less rose considerably from 21.4% to 48.8% during this period.

Such farmers of small and fragmented areas select tenant farming as a means of expanding the amount of arable land available to them. There are a few factors which hinder the transfer of land ownership; while most small farmers obtain their land through inheritance, there is a high incidence of their not being able to register their land due to high registration fees. As land prices are very high, and finance is very difficult to obtain, these small farmers rarely have the opportunity to buy land; if available arable land is scattered in remote areas, it can not be used efficiently in addition to associated problems with water rights(25).

Table 2-4 Status of agricultural land holdings after the land reforms

Land holdings (feddan)	1950				1977/78			
	Number of land holders (thousand)	Proportion (%)	Land holdings (thousand feddan)	Proportion (%)	Number of land holders (thousand)	Proportion (%)	Land holdings (thousand feddan)	Proportion (%)
<1	214.3	21.4	118.8	1.8	1,458.8	48.8	919.9	15.0
1-2	248.3	24.8	335.7	5.5	984.3	32.9	2,017.4	33.0
2-4	161.7	16.1	373.9	6.1				
3-4	99.1	9.9	328.7	5.4	348.7	11.7	1,165.6	19.1
3-5	63.3	6.3	272.7	4.4				
5-10	122.4	12.2	818.4	13.3	127.6	4.2	785.9	12.9
10-20	52.5	5.2	705.3	11.5				
20-50	26.5	2.6	792.1	12.9	69.9	2.3	1,226.9	20.0
50-100	8.4	0.8	579.1	9.4				
100-	6.5	0.7	1,826.3	29.7				
Total	1,003.0	100.0	6,144.0	100.0	2,989.3	100.0	6,118.7	100.0

Source: Egypt Nogyo Kenkyukai (Study Group for Egyptian Agriculture), Egypt no Nogyo (Egyptian Agriculture), 1990, pI-26.

2.1.4.2 Reorganization of agricultural cooperatives

The movement to establish cooperatives was brought to Egypt by motivated private citizens, with assistance from Italian and French advisers, following the economic crisis of 1907. The first cooperative was established in 1910. The early cooperatives engaged in purchasing activities (cotton seeds, fertilizer, agricultural implements, and so on) and the provision of loans. These cooperatives were essentially unions of small farmers based around local notables.

A law on cooperatives (Law No. 27) was promulgated in 1923. This law provided that Egyptian agriculturists were members of cooperatives, and included in the definition of agriculturists, land owners, tenant farmers and workers in rural industries. The activities permitted to cooperatives included marketing, purchasing, agricultural production, rural industry, insurance, loaning, savings. The government attempted to manage the cooperatives by establishing a registry within the Ministry of Agriculture and through the requirement to report on the activities and accounts of the cooperatives.

A new law (Law No. 23) was promulgated in 1927, which also took in non-agricultural cooperatives, and gave impetus to the movement to popularize cooperatives. Between 1937 and 1939, the cooperatives fell under the Ministry of Finance, but from 1939 until 1960, they came under a new ministry, the Ministry of Social Affairs.

Law No. 53 of 1944 strengthened the management of cooperatives and promoted the establishment of a cooperative financing system. Behind the scenes, there were increasing needs to stabilize agricultural output in the process of wiping out the elements of colonialism. To achieve this the unification of small farmers through cooperatives and central control were required, that necessitated fiscal policy through the cooperatives. In the meantime, the spread of the cooperative movement received a further boost from the food shortages and rationing systems that developed during the Second World War.

This was the background to the Egyptian agricultural cooperative movement against which the land reform cooperatives were introduced. The land reform cooperatives compulsorily organized the beneficiaries of land redistribution under the first round of agricultural land reforms in 1952. The small number of independent cooperatives which had been in existence before 1952 were reorganized to provide them with a government-influenced structure, and were then brought into a nation-wide network of cooperatives. In this way, cooperatives were set up with the village as the basic unit; their membership was drawn from the beneficiaries of land redistribution and other land owners. (Tenant farmers were excluded.) These cooperatives engaged in the provision of credit, production, and marketing, and, being managed by officials, were under direct government influence. These cooperatives were characterized as production cooperatives.

As Tables 2-5 and 2-6 show, the number of agricultural cooperatives and their membership increased rapidly from the mid-1950s. In 1970, the land reform cooperatives accounted for about 13% of the overall number and members of cooperatives. This is roughly proportionate to the share of redistributed land area to total agricultural land area. The number of cooperatives based on the existing village units was overwhelmingly greater, at 83% of the total.

Table 2-5 Trends in numbers and membership of agricultural cooperatives (1910-1950)

Year	Number of cooperatives	Membership of cooperative
1910-11	9 (Number of new cooperatives established)	–
1912-14	14 (Number of new cooperatives established)	–
1930	511	47,929
1935	670	64,667
1940	757	70,517
1945	1,635	516,412
1950	1,685	528,770

Source: Yoshiki Kimura, Ejiputo Keizai no Hatten to Nogyo Kyodo Kumiai, (Egypt's Economic Development and Agricultural Cooperatives)1977, Table II-4, Table II-10, and Table II-26.

Table 2-6 Trends in numbers and membership of agricultural cooperatives (1956-1970)

Year	Agricultural cooperatives		Land reform cooperatives		Desert/land development cooperatives		Total number of cooperatives
	Number of cooperatives	Membership of cooperatives	Number of cooperatives	Membership of cooperatives	Number of cooperatives	Membership of cooperatives	
1956	1,481	460,990	217	–	1	482	1,699
1960	3,221	926,569	360	–	15	5,689	3,596
1970	4,121	2,671,180	686	390,327	171	49,863	4,978

Source: As for Table 2-5, table II-44. Excludes fisheries cooperatives.

2.1.4.3 Control through the agricultural cooperative structure, and its impact

Egyptian policies on the control of agriculture were developed through the Agricultural cooperative structure, established to organize the whole agricultural community, after the 1952 revolution. In the early stages, control was exercised through the management of inputs such as fertilizer and seeds, and later control over crop area and government procurement of certain crops at fixed prices were introduced in Law Number 53 of 1966. Securing of target crop areas for cotton was regarded as the most important element in these controls; crop areas of wheat and rice are also regarded as important. The agricultural cooperatives allocated crop areas to their

members, channeled inputs, and marketed the produce; the cooperatives also had the right to impose fines on members who breached the regulations.

Egyptian government policy on agriculture between 1960 and 1985 can be broadly divided into three periods, as shown in Table 2-7.

Table 2-7 Periodic changes in Egyptian government agricultural policy objectives (1960-1985)

Policy Objectives	Period I (1960-1973)	Period II (1973-1980)	Period III (1981-1985)	Expected effect on producer price
Consumer welfare	0.20	0.20	0.20	–
Farm income	0.10	0.15	0.25	+
Government revenue	0.25	0.20	0.15	–
Foreign exchange	0.20	0.15	0.10	–
Price stability	0.10	0.20	0.20	–
Support of processing industry	0.10	0.05	0.05	–
Regional equity	0.05	0.05	0.05	?
Sum	(1.00)	(1.00)	(1.00)	

Note: The comparison of policy objectives listed here is based on officially published materials and the results of related research.

Source: Dethier,J., Trade, Exchange Rate, and Agricultural Pricing Policy in Egypt, 1989, p39.

The Egyptian government agricultural control measures include control on inputs, crop area and procurement, as described above, and also technological and financial support, management of irrigation and drainage, a variety of public sector investments and income tax exemption for agricultural land and farm income. Table 2-8 provides a summary of the controls by agricultural product in early 1980.

Table 2-8 Summary of controls by agricultural product (early 1980)

Agricultural product	Summary of controls
Wheat/Wheat flour	Price subsidies for urban consumers (no quantitative controls) Procured at below market prices (4 - 20%) The state to make up shortfalls by imports Rural markets to be treated separately from urban markets
Beans/Lentils/ Sesame/Rice	Rationing system at low prices Beyond rationing can be bought at high regulated prices Procured at fixed prices (about 50% of unhulled rice) Supply-demand balance to be maintained through the public sector Rural markets left as free markets
Sugar cane/edible oil	All traded through the public sector Beyond rationing can be bought at high regulated prices All sugar cane (produced under contract with sugar mills), sugar beet, cotton seed, and soya beans bought at fixed prices The state to make up shortfalls by imports
Onions/Garlic/ Peanuts	High value-added export products All exports through the public sector Procured at fixed prices
Meta/Poultry/Eggs/ Milk and milk products	Moderate price control for Egyptian domestic produce The state to make up shortfalls by imports Imports to be sold at subsidized prices
Potatoes/Tomatoes/ Other vegetables/ Citrus fruits	Virtually unregulated
Maize/Sorghum	Foodstuffs and fodder for domestic livestock Limited rationing system for maize Extensive free market Maize for feed for domestic livestock supplied at subsidized prices No obligation to deliver; all Government supplies are imported
Cotton	Crop area control All procured at fixed prices Supply to Egyptian domestic demand at subsidized prices

Sources: World Bank, Arab Republic of Egypt-Issues of Trade Strategy and Investment Planning, 1983, p199
Dethier, J. Trade, Exchange Rate, and Agricultural Pricing Policy in Egypt, 1989, p48.

a. Effects of controls on producer prices

Table 2-9 shows the estimated effects of government controls on producer prices for cotton, rice, wheat, maize, and sugar cane.

Table 2-9 Rates of protection on producer prices from government controls

	1964 – 72				1973 – 79				1980 – 85			
Crop	NRPd	ERPd	NRPt	ERPt	NRPd	ERPd	NRPt	ERPt	NRPd	ERPd	NRPt	ERPt
Cotton	-31	-59	-51	-57	-48	-120	-62	-65	-30	-50	-54	-56
Rice	-47	-54	-64	-69	-64	-58	-74	-78	-39	-46	-65	-70
Wheat	-2	-6	-27	-35	-27	-22	-42	-44	-33	-38	-55	-63
Maize	-7	-12	-30	-35	-12	-3	-28	-24	-10	-3	-36	-36
Sugar cane	–	–	–	–	245	–	-26	-12	–	–	2	66

Notes: a. NRPd is the direct nominal rate of protection; ERPd is the direct effective rate of protection; NRPt is the total nominal rate of protection, and ERPt is the total effective rate of protection. The direct nominal rate of protection shows the direct effects of procurement at fixed price. (Official exchange rates are used; the rate is calculated by dividing the difference between the producer price and the border price equivalent by the latter; this gives the ratio of the regulated producer price to the unregulated producer price.) The total nominal rate of protection includes indirect effects. (This value applies to all trade agricultural commodities since it shows the effects of the over-valuation of the currency at the official exchange rates and the effects of trade policies on non-agricultural traded goods.) The effective rate of protection adds to the nominal rate of protection the effects of government intervention on agricultural inputs; the difference between the added value based on local prices and that based on border prices is divided by the latter. For example, an NRPd of -31% means that direct government intervention makes the nominal producer price 31% lower than the border price equivalent.

b. There is no data for sugar cane because the border prices are negative between 1964 and 1972.

c. There is no procurement system for maize, but the import has been subsided.

Source: As for Table 2-7, p95.

This table shows that, with the exception of sugar cane, government controls generally tend to lower the producer price. The difference was quite striking throughout the period in the case of cotton and

rice; wheat has also been moving gradually in the same direction over recent years. Among the direct effects evident is the difference between nominal and effective prices, with the effective prices lower than the nominal prices (effects of subsidies for inputs are not evident). This is most noticeable with cotton, although the difference is not great as much for the total effects. There is also a clear difference between the direct and total effects (showing up the indirect effects).

While the rates of total and effective protections are positive for animal products and feed commodities, which makes their production profitable especially for small farmers[26]. There are no direct controls over vegetables and fruit, and the subsidies on inputs provide even some profit for the producers of these commodities.

b. Effects of pricing policies on crop production

In Egypt, the price elasticity of crop production is relatively low. The reasons for this include the effects of government intervention on crop area and inputs, technical problems such as crop rotations and production technologies, marketing problems (particularly for vegetables), and problems in obtaining needed materials[27]. However, over the long term, producer prices do have a clear impact on production levels, as can be seen from Table 2-10. For instance, the recent growth in fodder, fruit and vegetable production has been due to the comparative advantages of producer prices for these products.

However, there are differences in the speed with which individual crop production adjusts to price changes. Maize production reacts very quickly to fluctuations in the producer price, so that there is very little cumulative effect over time. Cotton and rice production also react relatively quickly, so that, again, there is limited cumulative effect over time. Wheat production, on the other hand, reacts relatively slowly, and thus there is quite a considerable cumulative effect. Sugar cane production levels possibly react more slowly.

Table 2-10 Long-term price elasticity and coefficients of adjustment for crop production

	Long-term price elasticity	Coefficients of adjustment
Cotton	0.377	0.83
Rice	0.271	0.84
Wheat	0.481	0.75
Maize	0.238	1.00
Sugar cane	0.11	0.14

Note: A coefficient of adjustment of 1.00 indicates no delay. A coefficient of 0.83 indicates that 83% react immediately, accumulating over time until near to 100% is reached.

Source: As for Table 2-7, p.118.

c. Effects of pricing policies on the incomes of rural households

The effects of pricing policies on the incomes of rural households are severely negative overall for landholding households. The effects are positive for land less households.

Table 2-11 Effects of agricultural pricing policies on real incomes of farm households

Farm size (feddan) / Period	0 – 1	1 – 3	3 – 5	>5	Average	Landless households
1964 – 72	-36.3	-45.6	-51.3	-52.6	-47.5	6.1
1973 – 79	-35.2	-51.4	-60.5	-61.9	-54.5	27.9
1980 – 85	-31.6	-43.8	-52.2	-54.9	-46.7	31.0

Source: As for Table 2-7, pp.137, 141.

2.1.4.4 Effects of land reforms on agricultural production systems, and on rural communities

The land reforms were aimed at virtually eliminating the large land owners (composed mainly of the members of the royal family, high ranking government officials, absentee landlords and others who were not indig-

enous to Egypt) inherited from the British colonial period. The land reforms also aimed to reorganize agricultural production systems based on the traditional rural community. The traditional ruling group in the villages, such as umda and shaikh was incorporated into the bottom end of the government machinery through the establishment of the agricultural cooperatives managed by the government.

The land aquisitioned and redistributed under the land reforms was divided into groups of three blocks, and each block was divided into lots. Each beneficiary received three lots from each block, according to a three-year crop rotation system. Priority was placed on maintaining the existing large-scale production systems and productivity, while the reorganization of the traditional community was neglected.

For the 85% of agricultural land that fell outside the provisions of the land reforms, the aim of the first five-year agricultural development plan (1960/1 to 1964/5) was the consolidation of fragmented agricultural land holdings. This consolidation of holdings was carried out without any changes to the existing land ownership, and did not produce any significant change in the rural communities.

2.1.4.5 Effects on agricultural laborers

The position of agricultural laborers (land less farmers) varies across Egypt, and it is even difficult to establish definitions of what constitutes an agricultural laborer or precisely how many there are of them. However, for convenience, taking the difference between the number of agricultural workers and landholders as its approximation, that fell from 3 million in 1950 to 1 million in 1977[28]. In 1981, the proportion of impoverished families in the rural areas was put at from 24.2% to 29.7% (1.023 million to 1.24 million), while the proportion of agricultural laborers (heads of households) was put at 19.7% of the rural poor in 1977. From this, the number of impoverished agricultural laborer households can be put at between 200,000 and 250,000. The proportion of agricultural laborers who are not in the impoverished category (7.1%) suggests that half of all households headed by agricultural laborers are living in poverty.

As was noted earlier, it is estimated that some 450,000 emigrant workers returned to Egypt due to the Gulf Crisis. As most of these came from the rural areas, this has only exacerbated the problems of the agricultural laborers.

Table 2-12 Incidence of Poverty in Egypt

	Proportion of poor households (%)	Number of poor households (thousand households)
1958/59		
Rural	35.0	1,161
Urban	30.0	597
1974/75		
Rural	44.00	1,833
Urban	34.5	1,076
1981/82		
Rural	24.2–29.7	1,023–1,240
Urban	22.5–30.4	756–1,196

Source: World Bank, Egypt-Alleviating Poverty during Structural Adjustment, 1991, p6.

Table 2-13 Distribution of Rural Labor Force by Occupation of Household Head (1977)

Farmer	39.5%
Agricultural laborer	19.7%
Craftsman	7.4%
Army and National Service	5.9%
Government	5.2%
Service	4.5%
Seeking employment	2.1%
Construction	1.6%
Other	5.1% (Total 91%)

Source: As for Table 2-12, p17.

2.1.5 Systems of research and extension

Since the 1960s, Egypt has had one of the most extensive systems for research and development in the developing world. As can be seen from Table 2-14, Egypt has a particularly large number of research personnel.

Table 2-14 Numbers of agricultural research personnel, in Egypt and elsewhere

Country or region	1961–65	1966–70	1971–75	1976–80	1971–85	(1961/65–1981/85)
	Number of researchers (full time equivalents)					Growth rates (%)
Egypt	569	1,431	2,070	2,748	4,246	10.6
North Africa [a](4)[b]	301	371	444	616	770	4.8
West Asia (15)	1,287	1,683	2,232	2,655	3,980	5.8
West Asia and North Africa (20)	2,157	3,485	4,746	6,019	8,995	7.4
Developing countries (130)	19,753	28,829	37,004	55,143	77,737	7.1

Notes: a Excluding Egypt
b Figures in parentheses indicate the number of countries
Source: Pardy et al., Agricultural Research Policy, 1991, p252.

There is a wide variety of research institutes: some under the Ministry of Agriculture, some under universities, and others independent. There are 14 research bodies, including those for cotton, soil and water, under the Agricultural Research Center (ARC) of the Ministry of Agriculture; these have 19,000 staff, of which over 680 have doctoral degrees. The General Authority for Agricultural Production has 31 research stations (animal husbandry 12, horticulture 6, agriculture 13) funded through the ARC. The Academy of Scientific Research and Technology is essentially concerned with the promotion of basic scientific research, but also supports research in applied areas; 40% of funding from the Academy goes to government agencies, 40% to universities, and 20% to specialized research institutes. In addition, there are 11 specialized councils. These councils are responsible for identifying issues in their own areas, receiving research proposals, and disbursing and managing research funds. One such council is the Food and Agricultural Council. The National Research Center is an independent

body, which has conducted research on a contract basis since 1975. The Center has links with a number of international research bodies, and conducts research in six areas (industry, food and agriculture, health, energy, resources, and regional development). The National Research Center has 500 research personnel in the area of agriculture, 200 of whom have doctoral degrees[29]. Fourteen universities in Egypt have agriculture faculties; in 1987, there were 35,747 students in the agriculture and veterinary science faculties which accounted for about one quarter of all students - a very high proportion[30].

2.1.5.1 Issues of research

Although Egypt is clearly well ahead of other developing countries in terms of the number of agricultural research personnel, expenditure on research (less than 0.5% of GDP attributable to agriculture) is much lower than in the oil rich countries, where it is over 2%[31]. In addition, personnel expenses account for a much larger proportion of expenditure on research. As Table 2-15 shows, per capita expenditure on research is highly inadequate, while many of the testing and research facilities have also aged. The applied research effort has suffered particularly, and the dissemination to farmers of research results in collaboration with agricultural extension work has been inadequate. A further problem is that each body carries out its own research without sufficient coordination of efforts with each other.

Table 2-15 Real annual expenditures per researcher

(Units: dollars, based on 1980 purchasing power parity)

Country of origin	1961–65	1966–70	1971–75	1976–80	1981–85
Egypt	29,600	19,200	11,300	11,600	10,500
North Africa [a](4)[b]	99,800	105,600	130,600	100,200	105,600
West Asia (15)	62,200	108,800	98,300	93,300	82,800
West Asia and North Afroca (20)	58,800	71,700	63,400	56,700	50,600
Developing countries (130)	55,400	55,600	59,500	54,400	46,700

Notes: a Excluding Egypt
b Figures in parentheses indicate the number of countries
Source: As for Table 2-14, p254.

2.1.5.2 Extension system

The National Extension Service of the Ministry of Agriculture has six departments concerned with respectively cereals, animal husbandry, regional development, extension technology, mechanization and joint projects, and programming. The structure at the governorate level consists of heads of extension services for the governorate, governorate extension inspectors (one for every two governorates), heads of district extension services (one per district), regional supervisors, and village extension workers. Village extension workers account for 70% of the total extension services work force (which was 2,300 in 1982).

This is the equivalent of only half the number of agricultural research workers and as there is, on an average, less than one village extension worker per village, the extension effort is inevitably fairly broad brush in nature. There are agricultural extension service offices and display farms in nearly all of the 123 districts; they provide such information on new varieties, pesticides, fertilizers, and cultivation techniques. However, their links with the research bodies are weak, and the extension services are unable to fully introduce the new techniques to their clients.

There is a need to increase the number of agricultural extension workers, supplement the equipment and communications facilities required for extension work, raise the technical level of extension workers, and strengthen cooperation between the extension services and the research bodies.

2.2 Development scenarios and strategies

Agriculture in Egypt faces the challenges to increase its production and reduce the agricultural trade deficit, and secure agricultural employment. However, while the rate of population increase in Egypt has fallen from 2.8% at the beginning of the 1980s to 2.3% recently[32], there is unlikely to be any rapid fall in future. The population of Egypt is expected to reach 64 million in the year 2000[33], while food imports are expected to rise by 2% per year[34]. Against this, even under the most optimistic

scenario, growth in agricultural production will only reach 3.5% per year[35], which suggests that it is most unlikely that there will be any significant reduction in Egypt's agricultural trade deficit.

Nevertheless, the structural adjustment policies currently being pursued by the Egyptian government are aimed at correcting the distortions in the existing structures of production and achieving a more efficient allocation of resources. If these aims have been achieved, effects of improvements in the technology of agricultural production, improved marketing infrastructure and others could reflect efficiency in the agricultural production, resulting in greater productivity and increased production, a reduction in the agricultural trade deficit, and more employment in the agricultural sector, accompanied also by increased incentives to farmers. Thus, the success or failure of the structural adjustment policies will be an important key to the development of Egyptian agriculture.

2.2.1 Outline of the structural adjustment policies

The Egyptian government's policies on structural adjustment for the agricultural sector began in 1986. These policies involved the abolition of the compulsory procurement system for agricultural commodities other than cotton and sugar cane, the liberalization of prices for wheat, lentils, and others, and the abolition of subsidy on the price of wheat flour, the abolition of the public monopolies on the import of feed and agricultural materials, the removal of the restrictions on private sector imports of agricultural products, increases in the prices of agricultural inputs and the freezing of subsidies on agricultural inputs, and the introduction of private capital to land reclamation.

The Egyptian government plans to reduce restrictions on cotton, including control on crop area, wherever possible. The government plans to raise cotton prices to near international levels over a three to five year period, lifting cotton prices to 60% of international levels in 1991/2, and 66% in 1992/3. All subsidies on feed, fertilizers, and pesticides are to be abolished by 1992/3[36]. In addition to this, the government is selling off public sector agricultural land, facilities and machineries to the private

sector. The government is also considering the sale to the private sector of the agricultural processing industries and distribution and sales operations for agricultural products which come under the jurisdiction of the Principal Bank for the Development of Agricultural Credit (PBDAC)[37].

2.2.2 Effects of the structural adjustment policies on agricultural production

As has been pointed out above, while the regulatory policies of the Egyptian government have, on the one hand, protected the land less farmers, they have, on the other hand, greatly reduced the income of landholding households and restricted the production of the controlled crops. Accordingly, the abolition or reduction of controls will deliver a considerable blow to the land less farmers, who were the biggest beneficiaries of the controls. In addition to this, the small farmers who benefited from such policies as protection on animal husbandry and benefited just as landless farmers from relying in part on wage labor (about 50% of all farmers own one feddan or less; 80% of all farmers own three feddan or less) may also suffer.

Turning to production for individual crops, while animal and fodder production is expected to fall, the growth in the production of controlled crops and the improvement in the income of their producers are also expected. However, it is not easy to forecast the results of these changes[38]. When crop area are left to the discretion of individuals, the problem of the fragmentation of land holdings must be faced again.

Differences in access to information on technology and markets, capital, and in land size will magnify the gaps among households and the small farmers may be disadvantaged. Water management will also be a problem. If farmers pursue short term profits, there is then a risk that the crop rotation system would break down, and that land degradation may ensue.

As the rural communities of Egypt were not destroyed by land reform, and remain intact over large areas, it may still be possible to hope that the communities will be able to adapt to these changes. The structural adjustment policies will also place the focus on the role of the agricultural

cooperatives. The cooperatives have long been based mainly on the rural communities, forming one of the main producer support mechanisms, and they may therefore be able to play a part in resolving these problems. The rural communities are expected to play an important role in providing mutual support for their weaker members.

2.2.3 Need for improved production support systems

When production and distribution are left largely to free market forces, knowledge of markets and technology, and the ability to raise finance, will become far more important than has been the case hitherto. There will be a need for a reexamination of the roles of the national and regional administrations, the agricultural cooperatives and so on, and for the provision of integrated structures to provide the necessary support as the government pursues privatization.

On the one hand, over the medium to longer term, there will be a need for trade promotion activities, taking in such areas as market research and quality control, in response to the liberalization of agricultural production. On the other hand, there will also be a need for the establishment of optimum crop rotation and irrigation systems, which will in turn require the upgrading of the research work and the extension services which can disseminate to the farmers the results of the research work. In addition, the existing irrigation systems need rehabilitation, drainage systems need to be improved, marketing infrastructure needs to be provided, and the systems to maintain and manage all of these systems must be established.

Because most of the new land development is to be on infertile soils, this new land would make a relatively small contribution to the growth of agricultural production. Opening up new land imposes a heavy financial burden in such quarters as the provision of infrastructure for the new settlers, while the gestation period for the investment tends to be quite long. The development of new agricultural land also requires the provision of irrigation, but water resources are already in short supply. Nevertheless, the need to absorb surplus labor from the rural areas and to alleviate poverty make consideration of a certain level of development of new agricultural

land inevitable. The possibility of agricultural exports to reduce the agricultural trade deficit should also be examined more thoroughly.

Hereafter, efforts should be directed towards carefully selecting land for new development to ensure that the soils and other conditions are favorable, carrying out research on water economic irrigation technologies and promoting the implementation of the findings, and conducting market research, for both in and out of Egypt.

It is also felt that the rationalization and reorganization of the cooperative system will be of major importance in expanding agricultural production. When the selection of crops is left to individual farmers, the upkeep of the irrigation system and prevention of soil degradation will become important issues. The agricultural extension facilities which act as a pipeline between the central and research institutes and the producers will need to be reorganized. It is hoped that the agricultural cooperatives will play a role in this conjunction.

Finally, overemployment and poverty in the rural areas not only reduce productivity but also cause degradation of the environment. These problem cast a gloom on the sustained agricultural development in Egypt. However, these problems can hardly be solved by the agricultural sector for itself: the development of other sectors particularly of manufacturing industry, must play a role as well. Thus, regional development linked to the rural industry will be of vital importance.

Notes:

(1) World Bank, World Tables
(2) United Nations, International Trade Statistical Yearbook
(3) Central Agency for Public Mobilization and Statistics (CAPMAS), Arab Republic of Egypt, Statistical Year Book, June 1989.
(4) Ejiputo Nogyo Kenkyukai, Ejiputo no Nogyo, 1990, PI-7.
(5) World Bank, World Development Report, 1991, p177.
(6) CAPMAS, op. cit.
(7) World Bank, Egypt - Alleviating Poverty during Structura Adjustment, 1991, p15.

(8) Ikram, K., Egypt - Economic Management in a Period of Transition, p32.
(11) Ejipto Nogyo Kenkyukai, op. cit., p.II-20.
(12) ibid., P.I-11.
(15) United Nations, International Trade Statistical Yearbook
(16) CAPMAS, op. cit.
(17) ibid.
(19) World Bank, Egypt - Alleviating Poverty during Structural Adjustment, 1991, p156.
(20) ibid., p164.
(21) Sato, K., "Jinko Hendo to Rodoryoku," in Suzuki, H. (ed.) Monko Kaiho-ka no Ejiputo Keizai, Institute of Developing Economies, 1991, p22.
(22) International Labor Organization (ILO), The Challenge of Job Creation in Egypt, 1991, p13, Figure 3.
(23) ibid., p12.
(24) Suzuki, H., "Nogyo ni okeru Kozo Henka", in Suzuki, H. (ed.) Monko Kaiho-ka no Ejiputo Keizai, Institute of Developing Economies, 1991, p38.
(25) Glavanis, K. " Commoditization and the Small Peasant Households in Egypt," in Glavanis, K. & P. (eds.) The Rural Middle East, 1989, pp145-148.
(26) World Bank, Egypt - Alleviating Poverty during Structural Adjustment, 1991, p103.
(27) World Bank, Agricultural Price Management in Egypt, 1980.
(28) Hansen, B., The Political Economy, Equity and Growth - Egypt and Turkey Twin Study, 1987 (mimeo).
(29) See, for example, Ministry of Agriculture and Land Reclamation of the Arab Republic of Egypt and United States Agency for International Development (USAID) Egypt - Strategy for Accelerating Agricultural Development, 1982, pp8-18
(30) CAPMAS, op. cit.
(31) Pardy et al, Agricultural Research Policy, 1991, p276
(32) ILO, The Challenge of Job Creation in Egypt, 1991, p6
(33) ibid.

(38) World Bank, Egypt - Alleviating Poverty during Structural Adjustment, 1991, p10

References (9), (10), (13), (14), (18), (34), (35), (36), and (37) are from World Bank data.

3. Employment and human resources development

3.1 Status and issues of development

3.1.1 Problems of unemployment at the present stage

The problem of unemployment in Egypt began to intensify again in the second half of the 1980s. The reasons for this included structural stagnation of oil prices dating from the beginning of the 1980s, which had both direct and indirect negative effects on Egypt's economy. Also, in the mid 1980s, the balance of payments worsened, debt accumulation appeared again, and these problems seriously affected unemployment conditions. In the 1986 census, the total number of unemployed reached an unprecedented high level of 2 million out of a total labor force of 13.7 million; the open unemployment rate was estimated at 14.7%. A later and more detailed study put the open unemployment rate at 12%, but even this was a large increase on the unemployment rate of 7.7% recorded ten years before, in 1977. The export of large numbers of workers from Egypt (the highest estimate is 3 million) to the other Arab countries had a moderating effect on the unemployment problem in Egypt. However, in 1985, the number of workers returning to Egypt exceeded the number of workers leaving, so that the beneficial effect of labor exports then began to decline. Especially from August 1990, the continuous return to Egypt of migrant workers following the Gulf Crisis had a serious impact on the demand and supply balance in the labor market.

The International Labour Organisation (ILO) estimates that, with assumptions of a growth rate of 5.2% per year in GDP by the year 2000, and a growth rate of 2.75% per year in the labor force, the amount of open unemployment will reach 3.2 million, or 17% of the 19.1 million projected labor force. A growth rate in the GDP of 8% per year would be required to reduce the unemployment rate to 7% by the year 2000, but it is considered difficult to achieve[1]. Egypt is facing a difficult task of formulating policies for creating new employment opportunities while at the same time implementing the structural adjustment policies.

3.1.2 Changes in the structure of the labor market since the 1960s

In the 1960s, Egypt was a typical surplus-labor economy. However, the unemployment rate was kept artificially low, from 2% to 3%, by the state playing the role of major employer under the socialistic policies of the Nasser administration. From 1964, the state guaranteed graduates of universities and armed forces veterans employment, either in the public service or in public enterprises. The contradictions inherent in this policy manifested themselves in underemployment and low productivity. On the other hand the state set standard wage levels de facto.

Although the intervention by Egypt in the Yemeni civil war in the 1960s, and Egypt's crushing defeat in the third Middle East war in 1967 seriously worsened the conditions of Egypt's economy and employment, they began to improve again by the mid-1970s, and the problem of unemployment was regarded as "solved". The rapid rise in oil revenue in the Arab oil-producing countries of the Persian Gulf and North Africa attracted an ever-increasing number of migrant workers from Egypt, and the ripple effect of this led to an expansion in construction and investment in Egypt itself. There were even shortages of labor.

With the return of the Sinai Peninsula in the late 1970s, Egypt became an oil-exporter, albeit in small scale, and oil soon became Egypt's largest export commodity. On the other hand, with the implementation of the "infitaf" (Open Door Policy) in 1974 foreign affiliates, albeit on a marginal scale, appeared as employers in the Egyptian market; the wages paid in these enterprises were very much higher than those in the public service and public enterprises, and this introduced a new element to the structure of wages in Egypt.

The guarantee of employment for university graduates in the public service and public enterprises caused over-employment in these areas. Over-staffing became particularly evident in the public enterprises, and the guarantee of employment in public enterprises gradually become nominal. During the second half of the 1980s, the waiting period for employment in the public service, through the employment guarantee, was also extended, and was only able to cover graduates up to 1984. As a consequence, it

had virtually ceased its function. This caused a further rapid deterioration in the employment situation[2]. It was then decided that the employment guarantee be abolished. The employment guarantee to university graduates, with no charges made for tuition up to university level, encouraged interest in further studies. However this caused problems in the effective mobilization of graduates from the point of view of productivity. Nevertheless, the employment guarantee did have a positive effect in providing a path for women to enter the public service labor force, and certainly contributed to the social advancement of women.

The Wafd Party regime prior to the 1952 revolution established new education policies in 1950 which took account of accusations that formal education was elitist. Under the new Wafd Party education policies, the successful completion of primary schooling conferred an automatic right of entry to secondary level schools. No school fees were charged at the secondary school level. The Nasser administration followed this approach. In 1957, the National Assembly decided to grant secondary school graduates automatic entry to university, and to abolish university tuition fees. The result of these policies was a system that allowed all primary school graduates to continue to secondary school, and all secondary school graduates to continue to university, with a guarantee of employment in the public service and public enterprises for all university graduates. This system produced a schooling structure with a much more top heaviness than other developing countries with comparable levels of income. In other developing countries with comparable levels of income, the ratio of primary school students to secondary level school students to university students is 10:4:1, whereas in Egypt it is 10:6:2[3].

Following the revolution is 1952, the number of universities and university students increased rapidly. Before the revolution, there were only two universities in Egypt: Al Azhar University and Cairo University, but after the revolution, eight new universities were established, and student numbers rose ten times, from 51,000 to over 500,000[4]. In the early stages, demand and supply for graduates was in close balance, and graduates were able to find better work, and there was a high level of upward mobility of those with technical qualifications. However, in the 1970s, a surplus had begun to emerge to the extent that there were on

average seven applicants for each top position in technical areas[5]. Conditions were even more difficult for Arts and Commerce graduates.

3.1.3 Employment structure by industry

About 90% of the employed labor force in Egypt is male: there has been only limited social advancement for women[6]. Social advancement for women has been particularly restricted in rural areas. However, female participation in the labor market has been rising rapidly over recent years: while the total labor force in Egypt rose 20% over the period 1976 to 1986, the female labor force rose by nearly 60%[7]. However nearly 70% of employed women are in the agricultural sector, many being unpaid workers in rural areas[8].

Two-thirds of the employed are on wages and salaries; the public and private sectors share about the same proportions of the employed. 27% are self-employed. The ILO classified the labor market in Egypt at the beginning of the 1980s as unadjusted or mismatched[9]. The ILO found both labor shortages and labor surpluses occurring at the same time.

Turning to the structure of employment by industry[10], agriculture is still the largest employer, accounting for around 38% of all employment in 1986; while industry accounted for 12.5% of employment, and social services 21.5%. However, given that agriculture accounted for over 50% of employment up to 1973[11], the fall in the share of agricultural employment has been dramatic. The social services and construction sectors showed the biggest increase in shares in the period from 1976 to 1986. Because the ability of the industrial sector to absorb the labor force is limited, most of the movement away from work in the (private) agricultural sector seems to have been to social services in the public sector, and the informal sector. As an oil producing country, Egypt has also suffered from the effects of the so-called Dutch Disease, in which the exchange rate becomes over-valued, putting the trading commodity sector at a relative disadvantage, and causing the labor force to flow to services, construction, and other areas of the non-trading commodity sector.

The changes in employment share by sector between 1976 and 1986[12] show increases of 4% each in the government and private non-agricultural sectors, and a significant decline from 47.9% to 39% for the private agricultural sector. However, employment growth in each sector does not necessarily reflect its growth in production, thus, the labor absorption capacity varied according to the sectors. Agricultural production was stagnant and employment showed no growth. Industry showed no growth in employment, and continued to absorb a relatively small amount of labor. The areas that showed the highest rates of growth were transport, communications, and warehousing, but these showed only a 3.8% growth in employment during the 1970s. On the other hand, social services, utilities (electricity, gas, and water) all increased employment at a higher rate than that of their growth, indicating a high labor absorption rate. These findings demonstrate that the growth in employment for individual sectors did not reflect their growth rate.

Private non-agricultural sector employment exists in urban areas, and the employment in urban areas can be divided into three sectors: the public, private, and informal sectors. It is difficult to estimate the share of the informal sector; depending on calculations, the figure varies from 16% to as high as 43%. In Egypt, the informal sector involves small-scale enterprises (with less than 10 employees), migrant workers, craftsmen (such as carpenters), the personal services (such as janitors), retail traders, sidewalk vendors, and others. The largest employer in urban areas would be the public sector (public service, and public enterprises), followed by the informal sector, then the private sector. In 1986, the public sector accounted for 32.1% of employment in Egypt, and the private sector 67.6%, but the public sector share of employment in the non-agricultural sector was over 50%[13]. Government, as the largest employer in the non-agricultural sector, occupies an important position and it provides an even larger share of employment in urban areas.

Government control on the main part of the labor market results in a failure to appropriately distribute labor according to demand and supply; establishing barriers within the labor market and restricting free movement between different sectors. The large pool of unskilled labor

shows up in over-staffing, unemployment, and under-employment, while the large number of young people with higher education unable to take part fully in productive economic activity are one good example of the mismatches in the labor market in Egypt.

3.1.4 Wage structure

The wage structure in Egypt shows peculiar distortions that reflect the employment structure. Wage levels are highest in the formal private sector and are then followed by the public sector and the informal sector, in that order. Put simply, wage levels in the public sector - for public service employees - effectively establish minimum wage levels, which also apply to the formal private sector. This is different from the position in many developing countries, where government wage levels are higher than those in the private sector. The characteristic wage structure in Egypt is due to the guarantee of employment to university graduates. While government service wage levels are very low, the government acts as a last resort employer of university graduates.

This employment guarantee inevitably gave rise to over-staffing and led to constant increases in government expenditure. The government expenditure on wages, as part of the total government budget, rose by more than five times over the period from 1973 to 1988[14]. However, it is undeniable that real wages actually fell: with the 1973 level at 100, wages of public service employees had nearly halved to 55 by 1988, and wages of public enterprise employees had dropped to 90[15]. The average monthly income of public service workers in 1989 was reported to be LE150[16]. While this expenditure on wages put financial pressure on the government budget the living standards of public sector workers continued to decline. Some public service workers are forced to live in slum areas and side businesses, even if illegal, are almost necessary for survival for many public service workers in urban areas. The increasing need for subsidies on the staples (such as bread, sugar, and edible oil), and on public transport to allow these low paid public sector workers to survive, means that ever-increasing amounts of recurrent expenditure go to such subsidies, locking the government budget into a vicious circle.

On the other hand, wage levels in the formal private sector are generally high; some of the foreign banks are very high wage employers. Since the introduction of the open-door policies, starting salaries for university graduates of LE600 per month are not uncommon in foreign capital firms, and there appears a difference, from five to ten times, between the wage levels in foreign companies and those in the public service. Employment in foreign companies is still small, and these restricted employment opportunities and the disparity in wages with the public sector only serve to reinforce frustration amongst public sector workers, and act as a source of social instability.

Wages and other conditions in the informal sector are generally poorer than those in the formal private and public sector. However, some artisans/craftsmen in the informal sector occasionally manage to capitalize on labor shortages to achieve wage levels better than those ruling in the formal private sector. This reflects a growth in demand for non-trading commodities, and the movement of artisans/craftsmen to the Persian Gulf and other areas in search of higher wages.

There have been increases in wage levels in the agricultural sector, which continues to lose laborers, although the disparity between urban and rural wages remains. The real wage index in 1988 stood at 240, which was the highest growth rate for any sector(17).

3.1.5 Government intervention in the labor market, and mobility of the labor force

The employment and wages structures in Egypt reflect the mismatches in the labor market. According to a survey carried out by the Central Agency for Public Mobilization and Statistics (CAPMAS), the rate of labor mobility between employment status (proportion of laborers moving between one status to another) was about 4% per year between 1973 and 1981, and 8.5% between 1986 and 1988. However, the rate of mobility between sectors was only 0.9% and 1.8% respectively. This indicates that the mobility for labor allocation between industries, dependent on changes in demand and supply, exhibited greater rigidity than the absorption of

new labor into the market.

In Egypt, many factors hinder labor mobility and militate against the private sector establishing a labor-intensive economy. These factors include the government employment guarantee and monopoly on job placements, the great legal and practical difficulties in dismissing an employee, which provide a legislative environment very favorable to the employee, and the restrictions on the authority of public enterprises in personnel matters.

3.1.6 Characteristics of the unemployment problem

The special feature of the problem of unemployment in Egypt is that it affects mainly the new participants in the labor market. According to the findings of the 1986 census, 76.6% of the unemployed belonged to this category. The proportion of workers who had been employed, but lost their positions, was low. Of unemployed women, 96.8% were new participants in the labor force.

Thus, the majority of the unemployed are young people who are still looking for their first job. Most of these were younger then 35, and of which 54% were in the 20 to 24 years age group. The proportion of educated young people looking for work was extremely high: secondary school graduates accounted for 63.9% of the unemployed, and university graduates 19.2%. Thus, 89% of the unemployed had secondary level or higher qualifications[18]. There are no reliable figures on unemployed women, but most of them would be looking for work to supplement their family income.

The lack of employment opportunities within Egypt is one of the factors drawing Egyptian labor out of the country, and the flow of workers out of Egypt has now extended from the unskilled laborer category into the skilled technical specialist and knowledge-intensive worker categories. The outflow of workers acts as a safety valve for the growth in unemployment in Egypt, and also functions as an important source of foreign exchange. In the case of public service workers, they can still regain their original positions after some five years abroad, and this is another powerful factor in favor of the outflow of workers. In recent years, over half of the labor force engaged outside Egypt has come from the rural areas, but when

these workers return to Egypt, not all can necessarily return to their old jobs, and many set up self-employed businesses in the private sector. At the peak, there were around 2 million Egyptians working in Iraq and Kuwait. Following the Gulf Crisis in August 1990, many were forced to return to Egypt, worsening the housing and employment situation in Cairo. This problem needs to be addressed as a matter of urgency.

3.1.7 Human resources and education

While many workers are not being utilized effectively, the condition of education and the development of human resources has also been criticized. Egypt has a relatively larger population than its neighbors, and having a much higher level labor force, has exported large numbers of skilled professional workers, specialized technical workers, university teachers, and so on to the rest of the Arab world. This raises the problem of the brain drain. At the same time, Egypt has a very large unskilled worker category and many semiskilled workers, and each of these categories is well represented in the outflow of workers from the country. Egypt's human resources are very important in that the utilization of these resources is a critical issue in order to earn foreign exchange and increase employment.

Despite the importance of this issue, there exist many problems in this area. The growth in personnel costs for the public education system in the government budget, and the shortage and deterioration of teaching materials and facilities has become evident. A further criticism is that over emphasis on higher education and delays in teaching practical skills mean that the education system is not producing the type of laborers industry requires. It is reported that since the 1970s, the universities have been tending to produce more graduates with specializations in humanities and fewer in physical science, engineering, and education. This trend is reported to be continuing.

The vocational training system is now almost entirely in the hands of the public sector. This is a result of the absorption of the staff training functions from the private companies that were nationalized during the period of the Nasser era. The government agency responsible for each

area of industry oversees training for that industry, and generates its own policies on training. The result of this is both a lack of policies on training established or implemented at the national level, and no uniformity in curricula or qualifications. In addition, the teaching itself is becoming more theory-oriented, and as the teaching service is an important consumer of new graduates, the majority of the teaching staff have no practical experience in the field they teach. This has caused a widening gap between what is taught and the technology in use in industry. The continuing difficulties in government finance management lead to delays in the supply of teaching equipment and materials; the equipment and materials then age and become obsolete, and this eventually makes the public vocational training system unable to fulfill its function properly. This area requires a drastic review.

3.2 Development scenarios and strategies

A number of changes have been made on employment policies under the structural adjustment programs. The work guarantee to university graduates has been suspended in practice, the labor laws have been amended to facilitate the dismissal of employees, the number of government employees has been frozen, and rationalization and labor-shedding has been proceeding in public enterprises. As a consequence of these changes, real wages are predicted to continue falling, and it is estimated that around 120,000 out of 1.3 million employees of public companies over two to three years, or 80,000 per year, may need to move to the private sector or to self-employment[19]. According to the IMF and the World Bank, the government's series of economic reforms will make capital and imported materials relatively more expensive than the cost of labor, and the result will be to make labor-intensive industry more attractive, therefore the short-term unemployed shed by the public enterprises will have the chance ultimately to be reallocated to private sector enterprises. Thus, the short-term issue would be how labor mobility should be smoothed over during the transitional period. Some of the specific issues to be faced include the liberalization of the labor market, the improvement of relief measures for the unemployed (employment placement retraining, unemployment benefits) and policies

for the temporary absorption of labor. At the heart of the new policies is the government's Social Fund for Development (SFD). The SFD, anticipates to absorb over 26,000 persons each year in temporary employment in construction activities, and create 15,000 new employment opportunities in the operation and maintenance activities. The SFD is also targeting 5% (about 80,000) workers in the public sector for retraining programs[20]. However, when the reported 1 million university graduates waiting for guaranteed employment and returning workers from overseas are taken into account, it is difficult to be optimistic about the prospects for the employment situation even if the SFD fully functions.

Naturally, the generation of employment opportunities is the most serious issue of all. As the public sector and agriculture will be unable to play useful roles in providing jobs, the private sector and self-employment will have to be the major consumers of the new labor force. The World Bank points out that the small and medium private sector business is well placed to react relatively quickly to changes in economic conditions, and that it is therefore vital to facilitate the environment for these businesses for improvement of the employment situation. Relief measures will be required to cushion the impact of the recession and high interest rates which can be anticipated during the transitional period of economic reform. In practical terms, this will mean establishing a system to provide credit to the small, medium and micro enterprises, and providing technical assistance and market information. Capital and technical assistance for entrepreneurs and the self-employed will also be needed.

In principle, it is desirable that Egyptians working overseas should be able to return to jobs in Egypt. However, at present the emigration serves as a safety valve for the domestic labor market and is also an important contributor of foreign exchange earnings. Systems should be put in place to provide information on work overseas, particularly in the Arab countries. As in the past, the major destinations will be the Arab oil-producing countries of the Persian Gulf, and Libya, for reasons of language and culture. Information should be provided on demand for labor, from the highly skilled technical specialist level down to the unskilled laborer level.

It has been decided that the SFD will implement retraining programs for the short-term allocation of the short-term unemployed, as part of the training activities(21). Nevertheless, when the training is considered from the medium- to long-term perspective, a number of problems then become apparent which need to be resolved in the current general education and vocational training systems. In terms of general education, further resources need to be allocated to primary education, and primary teaching facilities and education material need to be improved; higher education needs a greater focus on education in applied technology, and hence an overhaul of curricula, and so on. In the area of vocational training, the public vocational training system needs to be rationalized; there should be closer links with industry; uniform qualifications, and a revision of the curricula to provide a sharper focus on practical technology are required; a national vocational training policy should be established, and teachers and trainers should be retrained to help meet these changes.

Finally, in order to remedy the mismatch between university graduates and employment opportunities, university education must become more oriented towards meeting the demand from industry, and the capacity should be provided to monitor trends in the labor market. If fees are introduced for university education it will be necessary to ensure that the basic principle of equal access to university education is maintained, and that the quality of education is improved. Special attention should also be given to opportunities for education and employment for women, small farmers in rural areas, and the children of agricultural laborers and workers in the informal sector.

Notes:

(1) ILO, The Challenge of Job Creation in Egypt, 1991, pp3-5.
(2) ibid., p7.
(3) Alan Richards and John Waterbury, A Political Economy of the Middle East: States, Class, and Economic Development, West View Press, USA, 1990, p119.
(4) ibid., p133.
(5) ibid., p134.

(6) World Bank, Egypt - Alleviating Poverty during Structural Adjustment, 1991.
(7) ibid.
(8) CAPMAS data, December 1990.
(9) ILO, op. cit.
(10) World Bank, op. cit.
The data by industry in this paragraph are all based on this reference, not Reference (11).
(11) World Bank, Economic Table.
(12) World Bank, Egypt - Alleviating Poverty during Structural Adjustment, 1991.
The data by sector in this paragraph are all based on this reference.
(13) World Bank, Economic Table.
(14) IMF, Government Finance Statistics Year Book.
(15) World Bank, Egypt - Alleviating Poverty during Structural Adjustment, 1991.
(16) CAPMAS, op. cit.
(17) World Bank, Egypt - Alleviating Poverty during Structural Adjustment, 1991.
(18) ibid., Annex D, Table D7.
References (19) through (21) are World Bank data.

4. Health and medical services

4.1 Status and issues of development

The health situation in Egypt has shown improvement in recent years, however there are still as many problems now as there were before. Infant mortality rate is 43.3 per thousand infants[1]. Diarrheal diseases and respiratory infections are given as the main causes. In recent years, wider use of oral rehydration therapy (ORT) has helped reduce the incidence of diarrheal diseases. How to combat respiratory infections remains a future challenge. Maternal mortality has shown a marked decline over the last ten years, however the figure of 320 deaths (per 100,000 births)[2] is still high when compared to developing countries as a whole. Because the major cause of both maternal death and neonatal death is complications in pregnancy, the quality of midwifery is also under question. There are also many reports of pregnant women, nursing mothers, and children suffering from anemia. In addition, the discrepancies in income and geographical location give rise to such problems as a gap of about 20% in immunization coverage between cities and rural areas. Schistosomiasis, leprosy, tuberculosis, and diseases of the circulatory system remain very widespread. The incidence of schistosomiasis in upper Egypt is showing a decline, however not so in lower Egypt, where the irrigation works allow it to spread.

4.1.1 The medical system

Approximately two-thirds of Egypt's medical facilities come under government or public control. Medical services at these facilities are free in principle. About 60% of medical facilities are health units or health centers run by the Ministry of Health in each governorate. These health units and centers provide primary health care (PHC) services. The whole country is broken up into a myriad of control districts; health units have been set up in each district. Districts that have several health units come under the jurisdiction of health centers. Nearly 100% of the population is within four kilometers of a health center[3]. Health units mainly provide first aid for simple injuries, prescribe medicine for colds, and dispense

contraceptives. Patients that are too serious to be treated at health units are sent on to a health center. In addition to simple treatment for such patients, health centers perform simple checkups and run health education programs. Patients that cannot be treated at health centers are sent on to a national or public hospital. Curative health care (CHC) is provided by hospitals under the Ministry of Health (central and local governments), the Ministry of Education, a number of public institutions, and by private hospitals, but most of these hospitals are in urban areas. University hospitals and so on provide the tertiary level medical care, and are also used as a forum for medical education. Thus, the public sector plays a very significant role in Egypt's health and medical services, but the quality of medical services available is declining because the majority of PHC and CHC public medical facilities are suffering severe financial difficulties. By contrast, treatment at private hospitals is very expensive, but generally very good.

4.1.2 Doctors and nurses

There were 77,300 doctors in fiscal 1986 (one doctor for every 553 people in 1984). Of these, it is reported that about 60% were concentrated in Cairo, causing a noticeable imbalance in the distribution of doctors. The ratio of doctors to nurses was almost 1:1 in 1988[4]. A reasonable ratio is normally from 1:3 to 1:5, so the shortage of nurses constitutes an acute problem. In particular, there is the severe shortage of graduate level nurses who constitute only 1.2% of the current nursing population[5]. In recent years, the government has turned from placing emphasis on the training of doctors to placing emphasis on the training and development of nurses instead.

The government is currently promoting a program to double the number of graduate level nurses, however, the fact of the matter is that current facilities and equipment in graduate level educational institutions are scarcely adequate to cope with any such attempt to increase the number of nurses in Egypt.

4.1.3 Primary health care in Egypt

The Ministry of Health, which functions as the central body within the public health care system, has always stressed the importance of providing health care services to rural areas. The Ministry adopted the PHC approach in 1978. It persevered in utilizing the PHC network (with its health units in each governorate forming direct points of contact with the people in rural villages) as a conduit for providing basic medical care, extending immunization programs, and promoting health improvement activities. The Ministry of Health has made good use of this PHC network, implementing various national disease control projects such as the Contagious Diseases Control Project and the Bilharzia Control Project, as well as a program to promote child vaccination. They have achieved results, by and large.

However, despite its name, the PHC network scarcely provides the mechanism for coordinated links between health units and health centers. Health centers take in patients from health units, but they are basically quite separate in terms of their operation. There is little exchange of information or collaborative activity. The medical functions of health units and health centers actually favor curative care rather than the preventive approach or education. Moreover, people have little faith in the doctors at these facilities, which means that the utilization of urban health units in particular is extremely low. People who are able to pay their way prefer to go directly to a national hospital or a public hospital, which means health units are not providing a proper patient screening function for CHC facilities (governorate hospitals, etc.). Many of the users of health units are the poor - the people who are unable to receive adequate medical care.

One of the reasons health units can not fulfill their primary function lies in the quality of their doctors. Graduate doctors fresh from university are obliged to spend two years in the health units in rural villages, yet their behavior could hardly be deemed positive. Reasons for this included the fact that few of the institutions from which they received their medical instruction handle PHC as a subject, there are no instructing physicians in the field, and in general, doctors tend to attach little importance to PHC anyway. As a result, both diagnosis and treatment are generally

inadequate, leading to the people's lack of faith in their doctors.

4.1.4 Difficulties in the health budget

Another major factor for the problems of PHC in Egypt is the severe shortage of medical equipment and supplies, caused by falling levels of the government budget in this field. In spite of difficulties in the government budget of late, its medical expenditure per head of population has continued to increase, but this is entirely attributable to rising labor costs. The proportion of salaries in the total expenditure for the health sector has been increasing in line with the over employment in the public sector, such that the 64% in 1980/81 has risen to 78% in 1989/90, largely surpassing the international level of 65%[6]. Because of this, expenditure on medical equipment, materials, and supplies has suffered drastic cut backs. At the same time, the PHC field is experiencing a shortage of financing. On top of all this, doctors' real income has declined, and it has become the norm for health personnel to take on side jobs.

Public hospitals are also experiencing severe financial difficulties. For this reason, the system is now promoting the charging of fees, with the aim of cost-recovery and improvement of wages and salaries. Some public hospitals have introduced the payment of fees of around five Egyptian pounds per bed which are different depending on the type of room and meal, and some large university hospitals are even introducing fee-charging for beds and charging by the hour for house calls. It is reported that by introducing fee-charging at public hospitals, the top 10% of the income group end up using overseas hospitals, or domestic private hospitals, the middle 40% pay to receive treatment at public hospitals (economic hospitals), and the remaining 50% receive free medical treatment at public medical facilities.

4.1.5 Public health and family planning

Water-carried contagious diseases and parasites spread easily in areas where people live on canals and waterways. Also, the indiscriminate dumping of rubbish and the dry and dusty atmosphere give rise to an

environment that is favorable to the spread of respiratory infectious diseases. The living environment is thus beset by these and other hygiene problems. One such problem is that national awareness of personal hygiene is close to non-existent. Very few city people, let alone rural people, are accustomed to washing their hands.

The population growth rate is now a high 2.5% per annum[7]. The government is starting to recognize the gravity of the population problem. It is necessary to promote family planning in rural areas where the population growth rate is particularly high.

4.2 Development scenarios and aid strategies

4.2.1 Expansion of primary health care (PHC)

The main short-term issue ensuing from the reconstruction of the health sector lies in the restructuring of financial conditions based on appropriate allocation of resources and controls on increases in labor costs. The key health and medical problems in Egypt are schistosomiasis, contagious diseases, the health problems of pregnant and lactating women, and children. These problems are even more serious in rural areas; many could be largely prevented by improving and extending PHC. Changes should therefore be made in the allocation of budget to medical services, to give greater emphasis to PHC. Such changes are designed to improve health unit facilities in outlying areas.

In terms of medium-term problems, it is necessary to encourage improvements in the salaries and working conditions of doctors who work in health units and other rural medical facilities. It is required that the PHC service improve itself and have doctors participate more positively in PHC activities, in order to enhance the nation's confidence in the PHC service. To be more specific, instituting education programs for newly-appointed doctors posted to PHC facilities; dispatching traveling instructors; applying living-away-from-home allowances, overtime pay, and so on, as incentives for doctors and nurses to work in outlying areas, should be considered. These incentives would then take the place of income from side jobs that are simply not an alternative for doctors and nurses sent to work in rural areas. In addition, it is important for the practical side of PHC activities

to take a more flexible approach towards the nation's provincialism (social, economic, and environmental conditions), and to promote planning district by district. To this end, local administrative bodies (governorate and city levels) need to play a bigger role.

Once PHC activities have started to bear fruit, it is then essential to not only extend and strengthen immunization programs for children, but also to take measures against contagious diseases, institute programs to exterminate parasites, and promote programs to improve nutritional conditions. Without doubt, one of the most important issues is to combat schistosomiasis.

4.2.2 Measures to restructure financial conditions

It is also important to establish the self-reliance of public hospitals for the purpose of restructuring the financial conditions in the health sector. From this point of view, the fee-charging system now under way in public hospitals should be continued. As a way of making considerations for the poor, a certain number of free beds should be set aside.

It is expected that the financial difficulties in this sector will continue, it seems impossible for the public sector to fund the entire health and medical services field. At present, both public and private medical facilities have their own share of responsibilities as shown earlier, and this burden sharing needs to continue. To promote this burden sharing,a favorable environment for private hospitals and clinics must therefore also be provided. Note, though, that depending on how the liberalization of medical services progresses, there are fears that it can only incur an abnormally steep rise in medical fees. To set a procedure for medical liberalization, further studies are needed.

The government needs to expedite the use (especially by low income earners) of chargeable health and medical services at public hospitals, and find effective ways of cost sharing, the government also needs to improve and expand the medicare system, to serve as a cushion against sudden price hikes in doctor's fees.

4.2.3 Personnel development in the medical profession

Over the long term, personnel in both the public and private sectors need extensive training. The training and development of nurses and midwives working in rural areas is particularly urgent in terms of improving the quality of medical service available. To achieve this, facilities and equipment need to be provided to train nurses to graduate level. It is also necessary to give consideration to maintaining salaries for nurses, despite the process of reducing public sector spending on health care personnel. Lastly, it is also important to move ahead with the type of medical education that incorporates practical training for doctors in order to enhance their perception of PHC.

4.2.4 Improvements in public health and emphasis on the role of women

Improvement of public sanitation, things that influence the living environment such as sewerage and water supply systems, and housing are also vital ways of improving health conditions in Egypt. Very importantly, the government also needs to raise people's awareness of their hygiene matters. Achieving this involves improving the literacy rate and providing health education.

The role of women in the field of health and medicine is extremely important. It is necessary to promote the participation of women in health and medical activities through the use of activities such as improvements in maternal and child nutrition, promotion of the health of pregnant and lactating women.

Notes:

(1) Ministry of Health, Birth and Mortality Statistics, August 1991
(2) UNICEF, Sekai Kodomo Hakusho 1992, (The State of the World's Children 1992),1992, Table 7.
(3) World Bank, Egypt: Alleviating Poverty during Structural Adjustment, 1991, p71.
(4) ibid., p75.

(5) Japan International Cooperation Agency (JICA), Ejiputo- koku Kairo Daigaku Kango-gakubu Jizen Chosa-dan Hokokusho (Report by the Japanese Preliminary Survey Team on the Project for the High Institute of Nursing, Cairo University), 1990, p3, Table 6.

(6) World Bank, op. cit., Table J8.

(7) World Bank, World Development Report, 1991, p254, Table 26.

5. Other issues for development

5.1 The environment

Egypt is often described as the Jewel of the Nile. Since the beginning of its history, Egypt has relied heavily for its development on the benevolence of the River Nile, and the development that Egypt has managed to achieve is based on the use of the limited water supply from the Nile and 3% of the country's land area. At the same time, development work has placed a tremendous amount of pressure on the country's natural resources, thus giving rise to many serious environmental problems. Major problems are deterioration of the living environment, such as contamination of drinking water resulting from defective drainage and water supply systems, pollution caused by factories, automobiles, waste disposal plants and so on; environmental problems common to the arid zone like salinization, water logging, erosion, land subsidence due to the excessive pumping of ground water; environmental problems that are common to oil-producing countries, like marine pollution caused by the variable types of petroleum and oil; the loss of bio-diversity; the deterioration in the country's cultural heritage; and so on.

In addition, the pressure of the ever-increasing population will only serve to exacerbate these problems. The Nile will continue to act as Egypt's life line, and there is little hope of any sudden increase in land suited to the type of existence these people lead. Under such severely handicapped environmental conditions it is indispensable for Egypt to work hard, both to overcome the current environmental problems, and to give proper environmental consideration in development activities in order to achieve the sort of growth that will continue to thrive through future generations. It is also essential that the environment be given ample consideration, as part of the development work that takes place.

The main environmental problems in Egypt can be broadly divided into two categories: pollution and environmental degradation. Pollution is caused by the direct discharge of pollutants that have an adverse effect on the environment, such as factory waste water, smoke, the dumping of industrial waste, and oil spills. It affects mainly the cities. Rather

than being the direct result of human activities, environmental degradation implies the devaluation of the country's natural resources (soil, water, marine, etc.) due to the combined effects of various factors occasioned by human activities. This has become a major problem in areas such as agricultural and fishing villages where their industries rely heavily on such natural resources.

In terms of water contamination, this is mainly caused by factory waste water and domestic waste water, and agricultural chemicals are also a main factor of this problem in Egypt. In particular, Lake Maryut in Alexandria is suffering severe pollution problems. As regards air pollution, the main sources of NOx are iron and steel factories and cars, while the main source of dust is cement factories. Air pollution is quite severe over greater Cairo[1], however detailed study of the current status has not progressed very far at all. There exist some studies indicating that air pollution is hastening the destruction of Egypt's historic creatures[2]. Marine and coastal pollution in Egypt is caused mainly by waste water from factories and households and oil spills. The former type of pollution is most serious in Alexandria, and lately, is spreading to the Red Sea especially around the Suez. Because the problem of pollution can be alleviated by specifying individual sources and restricting their emission of pollutants, a legislative system and related government bodies need to be improved or newly set up as soon as possible to handle the work of monitoring in order to grasp the current situation and specify the sources of pollution, and to establish and implement regulations and standards.

The biggest environmental degradation problem in Egypt is land degradation. According to a survey, most of the crop land in Egypt is showing an increase in salinity and about 50% of farmland is affected by increasing accumulation of salt on the topsoil[3]. This of course affects the crops, but it is also known to have an effect on buildings constructed from bricks containing salt. Another problem is waterlogging due to the water table rising to the surface. The indirect cause of all of these problems is the building of the Aswan High Dam. Prior to the construction of the dam, the biggest environmental problems were flood and drought in the dry season, while the Nile river was the natural means by which the soil

was freed of its salinity and supplied with nutrients. The completion of the dam has protected the area from floods, and allowed perennial irrigation and a stable supply of electricity. This, in turn, has formed the driving force behind Egypt's economical development. These benefits were emphasized at the time the dam was built, but not enough consideration was given to what would be lost as a result of the dam's construction[4]. People overlooked the matter of what would happen if the river's function of supplying the soil with nutrients and flushing away the salt was lost. As a result, the more irrigation systems came into use, the more the land became salinized and waterlogged. Moreover, the lack of drainage facilities, over-irrigation, and the poor management of irrigation canals only served to exacerbate the problem. This then caused another problem, that is, the outbreak of schistosomiasis through the irrigation system. Together, it is pointed out that these problems affected the country's agricultural productivity[5]. An inconsiderate attitude towards the environment, coupled with inappropriate conduct vis-a-vis development (poor maintenance management, and so on), are indirectly related to the problems of environmental degradation and low productivity that result from development activities involving the widening use of irrigation schemes. There is also a similar relationship between the construction of the dam and the decline in marine resources, and between the use of ground water in delta areas along the coastline and the increase in salinity in well water. Viewed in terms of sustained development, it is vital that the indirect relationship between the country's development and environmental degradation be duly recognized, that a way be found to resolve the current problems, and that future environmental degradation be prevented.

The Egyptian government first started to take serious note of these problems in the 1980s. Since then, the government's concern over environmental problems has been exemplary: the environment was one of the highest priority issues in the First Five-Year Plan (1983-87), and was also highly regarded in the Second Five-Year Plan (1987-91)[6]. Egypt is also an enthusiastic participant in international environmental conventions and protocols[7]. However, Egypt has not been able to deal successfully with all of its environmental problems. There has been no systematic data collections on its environmental problems; a few action plans for

environmental problems were not implemented. In particular, as regards its pollution problems, Egypt has made a tentative effort in the direction of solid waste management and maintenance of Nile water quality, for example, but it has largely fallen behind in terms of dealing with land degradation and other environmental degradation problems. The central body responsible for the environment is the Environmental Affairs Agency which is supposed to be in charge of developing strategies for coping with all of Egypt's environmental problems, and conducting environmental assessments. It is also responsible for coordinating the relevant ministries and agencies, however it has virtually no authority over these matters at all. Other administrative problems include the fact that Egypt is ill-prepared in terms of environmental law, and that, in addition to the central ministries and agencies, there are also other groups dealing with environmental matters in each governorate and they are therefore involved in deciding environmental matters, on top of which the jurisdiction of each is unclear[8].

5.2 Women in development

The rate of participation in economic activity in Egypt stood for men at a high 83% in 1970 and 80% in 1990, and for women at a low 6% in 1970 and 9% in 1990. (This data is based on the number of women working in cities; it does not take into account women working in rural villages.) Thus, there is a huge discrepancy between the number of males and females participating in the work force. In terms of school enrollments, the proportion of female children is put at only 76% of the number of male children at primary school. This figure drops to 65% in secondary school, then to an even lower 47% when it comes to higher education. At the beginning of the 1950s, the percentage of females receiving a higher education was put at a tiny 7.5% of the total number of males. Although the figure has shown remarkable improvement, rising in recent years to 47%, the male-female gap is still significant. The male-female discrepancy is also born out in the illiteracy rate, where 62% of females in the 15 to 24 age bracket are illiterate, compared to only 37% of males. Over the age of 25, 51% of males are illiterate, compared to a truly high 85% of females. As these figures show, the low educational level of women in Egypt affects

them in various ways: their wage levels, choice of work, participation in domestic and community decision-making, their welfare and nutrition at home, their children's education, and family planning are all affected, as is the preservation of environment. 56% of women live in rural villages in Egypt. As regards the living environment in these areas, one finds for example, that whereas 93% of people in the cities are guaranteed safe drinking water, this is a privilege for only 61% of the rural population. The percentage of households with the power on is 77% in cities, but only 19% in rural villages. Amid this type of inferior living environment in the rural community, women are not only involved in such domestic labor as taking care of the children and performing household duties, but also have to plant, weed, and harvest the crops, which are important farming activities. Thus, women play their extensive roles in socio-economic development. Notwithstanding, it is tradition in rural villages that the role of women is accorded little respect. Women's relationship with society often takes place through the male head of the household, and their role in decision-making both in and outside the home is generally minimal.

The average annual rate of increase in the Egyptian population is an astounding 2.5%. In order that the country's population problem be solved, it is important that women learn to cope with the problem themselves, from the point of view of becoming more aware of the problem, understanding what a reasonable family size means, and seeking to keep themselves and their children healthy. The Egyptian government, through the General Department of Women's Affairs in the Ministry of Social Affairs as a conduit for promoting improvements in the social status of women, is providing training courses in such areas as job creation for women, family planning, literacy education for adult women, and measures to bring about improvement in domestic life (food sanitation, dress making, etc.). These activities receive the cooperation of the United Nations Fund for Population Activities (UNFPA), the International Labor Organization (ILO), the United Nations Food and Agricultural Organization (FAO), the United Nations Children's Fund (UNICEF) and so on, and conduct various projects in villages in 13 of the 26 governorates in Egypt. The types of these projects are many and varied: in outline, around 100 village women receive training each year to become women leaders who will be able to impart to other women

the information on projects targeted at women and various government services; financial resources from petty loans are used as a revolving fund to create jobs for women and thereby raise women's incomes; through such work experience, women learn about production improvement technology leading to their greater social involvement.

In implementing assistance programs in a country like Egypt where the status of women is far from satisfactory, it will be especially important to understand the situation surrounding the women among the target group. One useful example of such a project is given by the United States Agency for International Development (USAID), which was successful in their attempts in 1983 to give infants oral rehydration salt to combat dehydration caused by diarrhea, through their social marketing method. This extension method involved the vigorous use of posters, notice boards, newspapers, magazines, radio, television, and other forms of media, coupled with adult education and communication. Lastly, to implement projects that will enhance the status of women in Egypt, it is important to make constructive use of the Islamic leaders, called the imām, and the community leaders in such measures as large-scale social mobilization campaigns.

5.3 Poverty

The structural adjustment programs currently being carried out by the government are aimed at reducing the subsidies that have become one of the main causes of budget deficits and economic inefficiencies. However, the success or failure of the structural adjustment programs will depend to a great extent on their impact on the impoverished class, and how that class is able to survive the impact.

Under the social welfare policies pursued by the government so far, although the problem of poverty in Egypt has shown signs of improvement in recent years, it is estimated that between 20% and 30% of the population still live in absolute poverty[1]. (Absolute poverty is defined as being below the minimum levels of nutrition, housing, drinking water, and health required to sustain life. However, the only method used to define poverty in Egypt is to determine a poverty line, based on the results of surveys

of household income and expenditure.) Regional differences in the poverty situation are evident in Egypt. The results of the 1981/82 survey show that the proportions of poor households were 37% in Lower Egypt, 51% in Middle Egypt, and 43% in Upper Egypt[2]. Moreover, there were further differences in the situation between urban and rural areas in each region: in Lower Egypt, 31% of rural households and 43% of urban households were poor, in Middle Egypt, the figures were 54% and 47%, and in Upper Egypt, 47% and 38%. Thus, in Lower Egypt, the problem of poverty is more serious in Cairo, Alexandria, and the many other urban areas, whereas in Middle and Upper Egypt, where the majority of the rural population is found, the problem of poverty is more serious in the rural areas.

The features of the situation of poverty in Egypt become clearer when considered by occupation. An examination of the occupations of heads of poor households shows that 40% are farmers, 20% are farm laborers, and 2% are unemployed. Thus, in the rural areas, most (about 60%) of those living in poverty are farmers and farm laborers[3]. In addition, it is estimated that the income of farm households that own 1 feddan or less of land is about the same as that of an farm laborer[4]. Therefore, about one half of farmer households that own 1 feddan or less of land, and about one half of agricultural laborer households also, are poor.

On the other hand, the occupations of poor households in urban areas are in the following proportions: unemployed 35%, traders and service industry workers 22%, industrial workers 20%, and agricultural workers 11%[5]. Many of the poor in the services and industrial sectors are believed to work in the public sector. In addition, it is believed that the majority of the unemployed are in the informal sector. The most severely impoverished group of all, the ultra poor, are not restricted to either the urban or rural areas; these are the elderly, the disabled, the widows, and others, who have no proper means of earning an income, but rely almost entirely on assistance from their families and relatives. This group is believed to account for 10% to 13% of the total population[6].

Turning to the living conditions of the poor, nutrition is poor; their calorie intake is at least 20% below the required level; their protein intake is also inadequate[7]. They also lack education, health services, and supplies

of safe drinking water. The situation is even worse for women and children in the group.

The social welfare policies of the Egyptian government include subsidies for food, public facilities, transportation, fuel, electricity, housing, direct transfers such as pensions, and various forms of social security. The subsidies on food have come to receive the greatest weight. These food subsidies serve to replace food supply and income transfers for the poor who spend from 60% to 70% of their income on buying food[8]. The effect is particularly noticeable on the urban poor. A World Bank report[9] has calculated the effects of the Egyptian government's food subsidy policy on five commodities: cotton, wheat, rice, maize, and sugar cane. (The report regards it as an agricultural price policy.) The report showed that the urban poor received the greatest benefit from the subsidies; the policy had the effect of raising the real incomes of the urban low income group by an average of at least 50% between 1980 and 1985. On the other hand, the effects of the policy on the rural poor was estimated to increase the real income of farm laborers by 14% over the same period. When the effects of government intervention in the exchange rate and government trade policies are taken into account, the impact of the subsidy policy on the poor was found to be even greater. The World Bank estimated in the same report that the effects of the subsidy policy were then to increase the real income of the urban poor by 115%, and of the farm laborers by 31%.

Thus, it can be seen that the urban poor and farm laborers will suffer the greatest impact from the reductions in subsidies, under the structural adjustment programs now being pursued by the Egyptian government. Due to the reduction in income of these groups, there is a danger that they will suffer a further deterioration in nutrition, and also even more restricted access to social services such as education and health.

It is considered that the present structural adjustment programs and the socio-economic development of Egypt will be greatly influenced by the following: to what extent the poor will be affected by the structural adjustment policies; how they will react, and also to what extent the SFD project and the social safety net provided by existing channels, will serve to soften

the negative impact of the structural adjustment.

The success of the SFD project will depend absolutely on the co-operation of the various aid donor countries and agencies. If the SFD project proves capable of being a suitable channel for aid, Japan should examine the possibility of assistance for this project. In other directions, the alleviation of poverty should be treated as a long-term aid issue, regardless of how the SFD project progresses. To this end, clear targets should be established, and assistance that genuinely benefits the poor should be given. At the same time, the residents' participation should be encouraged, in order to implement assistance aimed at alleviating poverty more effectively.

5.4 Education

Since the 1952 revolution, the Egyptian government has put an emphasis on education and training and built up the free education system from primary to the higher level. As a percentage of gross domestic product (GDP), education expenditure rose from around 3% in 1952/53[(1)], to around 6% in and after 1980[(2)]. The percentage of primary education enrollments jumped from 46% in 1952/53[(3)], to 82% in 1986/87[(4)]. In addition, the illiteracy rate (ten years and over) showed a marked decline, dropping from 71% in 1960[(5)], to 50% in 1986[(6)]. (Note, though, that the actual number of illiterate people increased in line with the growth in population.) Nevertheless, as mentioned in Section 3, "Employment and human resources development", the government could not increase education expenditure at the same pace as the ever increasing school enrollments under the free education system and the system of guaranteeing employment for graduates of higher education (the average annual growth rate between 1951/52 and 1987/88 was 5.1% for primary education, 9.1% for secondary education, and 7.1% for higher education)[(7)]. This only caused the quality of education to drop quite noticeably. In other directions, faced with economic crisis from 1980 onwards, the Egyptian government strived to improve the quality of technical education over and above its former standard. This has been thwarted in recent years, however, by the problem of a mismatch in supply and demand. Grappling with its structural adjustment

policies and a further squeeze on its education budget, it is likely that the problems of declining educational standards and the supply-demand mismatch will further worsen in Egypt, requiring the thorough overhaul of the education and training system.

Education in Egypt is based on centralized administration. A long-term plan is prepared for school education by the National Education, Scientific Research and Technology Council, which comes under the direct control of the president. The school system is basically 6-3-3-4, where primary and secondary education is compulsory. Responsibility for the administration and management of education is shared by the Ministry of Education (primary and preparatory schools, and general secondary schools), the Ministry of Higher Education (technical secondary schools, technical institutes, higher technical institutes and universities), and the Ministry of El-Azhar Affairs (religious education).

The primary education enrollment rate in 1989 was 75%; the number of students at primary schools was 61,5000 and the number at preparatory schools was 34,1000[8]. The drop-out rate at both of these school levels was about 20%, while the student pass rate for the qualification test in each case was around 70%. The secondary school enrollment rate is increasing rapidly, and currently stands at 43%. The secondary school system consists of three-year general and technical secondary schools, and five-year technical institutes. There were 1,420,000 students attending these schools in 1987/88; the percentage of students was 40%, 58%, and 2% respectively[9]. Technical secondary schools include industrial, commercial and agricultural secondary schools with the percentage of students being 40%, 46% and 14% respectively in 1987[10]. Of late, the number of students at industrial secondary schools has shown a remarkable increase. There are 24 five-year technical institutes: 17 industrial (of which five are teacher training institutes), five commercial and two agricultural institutes.

Next to secondary education enrollments, higher education enrollments have shown a rapid increase standing currently at 17%, which is considerably higher than the average for a developing country (7%)[11]. Higher education institutions include two-year higher technical institutes and universities. There are 36 of the former, which offer courses in commerce,

manufacturing, home economics, education, social welfare, physiotherapy, tourism and so on. The total number of students is about 20,000: two-thirds of whom major in commerce and one-third in manufacturing[12]. There are 12 national universities: the total number of students in 1987/88 was around 600,000[13].

Besides these, the El-Azhar education system offers much the same schooling as the general education system. There are primary schools through to a university, with the latter having a number of faculties like general universities. Curricula at primary and preparatory schools include ordinary educational subjects, as well as Arabic and the Koran. The pupils at these schools are mainly children from rural villages. In 1988, they accounted for 5% and 6% of all pupils at primary and preparatory schools respectively—not an extremely high percentage[14].

Vocational training comes under the jurisdiction of various Ministries such as Industry, Housing and Reconstruction, Agriculture, Health, Social Affairs and Tourism. The Ministries of Health and Tourism also handle higher technical education. Most of the short-term informal education is handled by the Ministries of Industry and Housing and Reconstruction, although further details are yet to be studied.

Primary and technical education seems to be bearing the brunt of the shortage of budget for education in Egypt. In 1989, the Egyptian central government spent 4.6% of its gross national product (GNP) on primary and technical education[15]. This was not much lower than in other developing countries. However, because the total central government expenditure amounts to as much as 40% of GNP[16], the amount spent on education accounts for only 8 to 12%[17]. This is substantially lower than the average for other developing countries (17%), as well as the average (16%) for countries in the lower middle income bracket (to which Egypt belongs) as classified by the World Bank. Moreover, of Egypt's total current educational expenditures, primary education accounts for 31%, secondary education 35%, and higher education 26%[18]. Compared to an average of 46%, 28% and 18% in developing countries[19], the amount allocated to primary education in Egypt is noticeably smaller. Under such circumstances, the shortage of primary school facilities and teaching materials,

in particular, presents problems. Shortage and inappropriate placement of qualified teachers are also problems.

Technical education is beset by such problems as deteriorating facilities, shortages of teaching materials and equipment, and shortages of teachers. As a result, the quality of education is very low. The mismatch caused by lack of contact with the industrial sector is another problem, requiring school curricula to respond to changes in demand. Demand appears to be particularly high for engineering graduates who have the practical knowledge of their field, and graduates of the Ministry of Industry vocational training schools. Given such a situation, the Egyptian government has introduced, since 1988, measures to raise the quality of university technical education and, to adapt it to demand, including strict control of the number of university entrants, additional funding and the system of students paying for laboratory experiments and computer courses. The net result, however, can hardly be described as satisfactory.

Notes:

5.1 Environment

(1) JICA, 1991.

(2) Newsweek Japanese Edition, Vol.5, No.31, 1990.

(3) M.A. Kishk, "Land Degradation in the Nile Valley", AMBIO, Vol. 15, No. 4, 1986, p228. For land degradation, see land map prepared in 1980 by the Food and Agriculture Organization (FAO), United Nations Environment Programme (UNEP), and the United Nations Educational, Scientific, and Cultural Organization (UNESCO), ibid., p227.

(4) Gilbert, F. White, "The Environmental Effect of the High Dam at Aswan", Environment, Vol. 30, No. 7, pp4-41.

(5) Emma Robson, "Stalking an Ancient Disease of the Nile", SOURCE, United Nations Development Programme (UNDP), Dec. 1990, pp22-25.

(6) Egypt's Second Five-Year Plan for Socio-Economic Development, "Future Prospect".

(7) For details on how Egypt is dealing with international agreements on global environmental problems, see World Resource Institute's World Resource 90-91, p358, Table 25.1.
(8) USAID, 1988.

5.3 Poverty

(1) World Bank, Alleviating Poverty during Structural Adjustment, 1991.
(2) Ibid., Annex B, Table B.4.
(3) Ibid., p17.

According to another reference in this same document, the Household Budget Survey performed by CAPMAS in 1981/82 showed these figures to be agricultural households 40% and unemployed 37%. However in this case, unemployed is presumed to include agricultural laborers as well.

(4) Jean-Jacques Dethier, Trade, Exchange Rate, and Agricultural Pricing Policies in Egypt, Vol. II Appendixes: Data and Methodology, World Bank, 1989, p135.
(5) World Bank, op. cit., p17.
(6) Ibid., pxiv.
(7) Ibid., p20.
(8) Ibid., pp56, 233.
(9) Jean-Jacques Dethier, op. cit., pp137-138, 153.

5.4 Education

(1) Ikram, K., Egypt - Economic Management in a Period of Transition, 1980, p24.
(2) UNESCO. UNESCO Bunka Tokei Nenkan, 1990, Table 4.1.
(3) Ikram, K., op. cit., p118, Table 6-6.
(4) World Bank, Egypt - Alleviating Poverty during Structural Adjustment, 1991, p208, Table 1-1-3.
(5) Ikram, K., op. cit., p121, Table 6-8.
(6) World Bank, op. cit., p207, H2.
(7) Ibid., p207, H2.

(8) Egypt, Central Agency for Public Mobilization and Statistics (CAPMAS), Statistical Year Book, 1952-1990, 1991, pp160, 162.
(13) CAPMAS, Statistical Year Book, 1952-1988, 1989, p173.
(14) CAPMAS, Statistical Year Book, 1952-1990, 1991, pp160, 162, 163.
(16) World Bank. World Development Report, 1991.
(17) World Bank. World Development Report, 1991, etc.
References (9), (10), (11), (12), (15), (18), and (19) are World Bank data.

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