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Egypt: Impact of Accelerated Population Growth

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An Intelligence Assessment

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GS 81-10248
September 1981

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Egypt: Impact of Accelerated Population Growth [redacted] 25X

An Intelligence Assessment

Information available as of 30 September 1981 has been used in the preparation of this report.

This assessment was produced by [redacted] 25X
[redacted] of the Office of Geographic and Societal 25X
Research, with a contribution from [redacted] 25X
the Office of Economic Research. Comments and queries may be addressed to the Research Director of the new Office of Near Eastern and South Asian Analysis, [redacted] 25X

This report has been coordinated with the Offices of Economic Research and Political Analysis and with the National Intelligence Officer for the Near East and South Asia. [redacted] 25X

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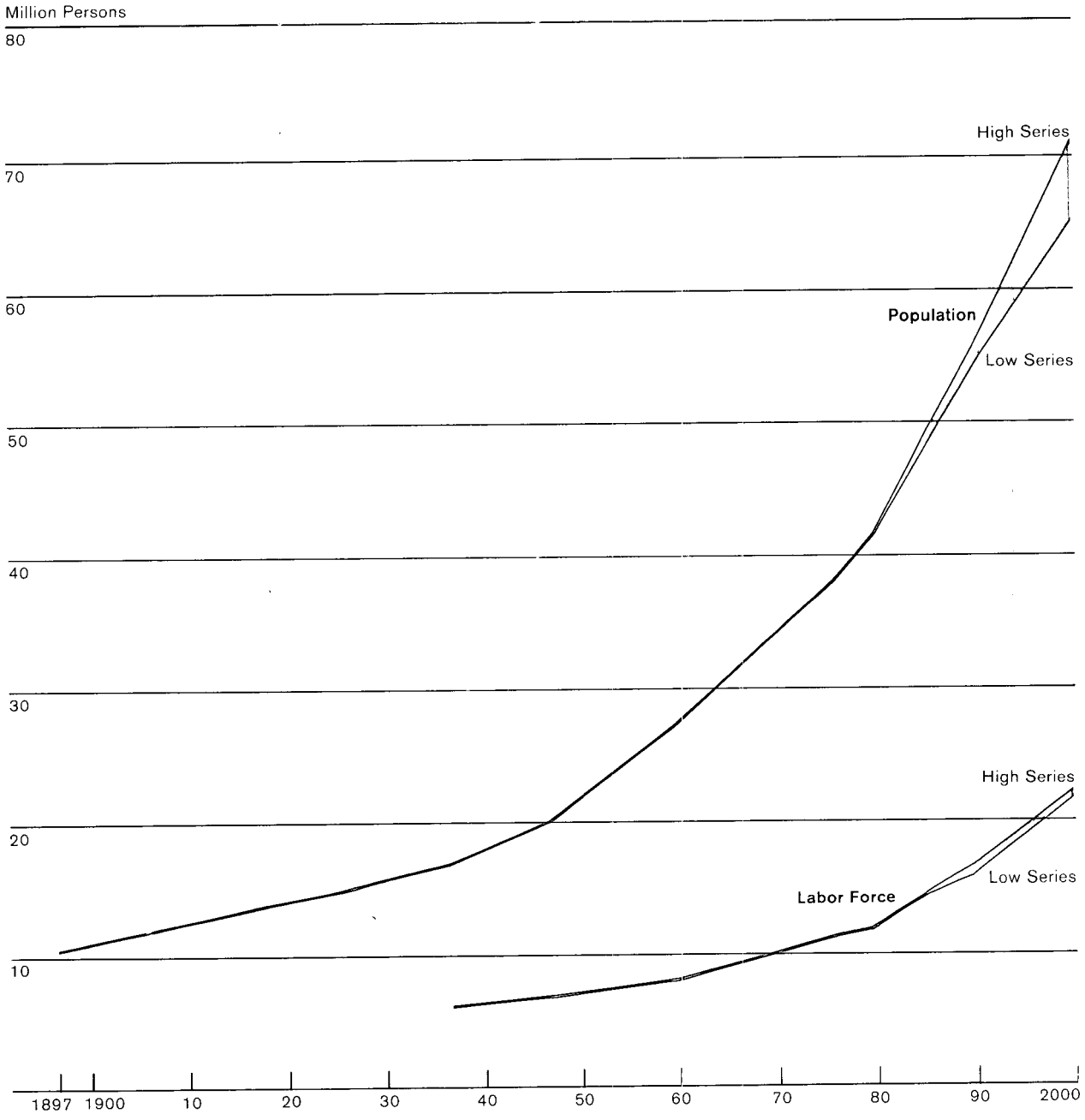
Figure 1

Egypt: Population and Labor Force



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Egypt: Impact of Accelerated Population Growth [redacted]

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Key Judgments

Accelerated population growth and the related problems of rising unemployment and rapid urbanization will lead to a decline in key aspects of Egyptian life over the next 20 years or so. No combination of wise leadership, foreign assistance, and luck is likely to alter these prospects. The effects of this decline will disappoint and anger Egyptians imbued with rising expectations engendered by recent economic successes and the end of hostilities with Israel. While there is no necessary connection between living standards and political stability, governing Egypt is likely to become more difficult in the late 1980s and the 1990s than it is today.

Because of a dramatic rise in fertility during the 1970s, Egypt's population will continue to increase rapidly through the 1980s before its growth gradually tapers off in the 1990s. Population pressures will be generating serious social strains well before the year 2000:

- Total population will increase by roughly 65 percent, to some 68 million.
- The labor force will nearly double, to some 20 million.
- Labor force growth will outdistance job creation; a million or more Egyptians might be out of work by 1985, and up to 4 million by 2000.
- Reflecting the difficulty of expanding agriculture, almost all new jobs will be in nonagricultural activities.
- The urban population will double, reaching 40 million and boosting its share of the total population from the present 48 percent to about 60 percent. Metropolitan Cairo will number some 20 million residents by the end of the century.
- Urban population growth will exceed the country's ability to expand housing, infrastructure, and amenities, leading to ever-rising congestion and deteriorating living conditions in the cities.

The problems associated with rapid population growth will probably fall heaviest on a shocked middle class. Although this class will make up roughly one-third of the population by the year 2000 (compared with 16 percent today), the quality of middle class life will have deteriorated. The increase in the number of Egyptians with middle class credentials and aspirations already is outpacing the number of high-prestige skilled and

professional jobs. The old middle class elite of military officers and public-sector employees has lost some of its status and is increasingly challenged by members of the private sector able to take advantage of Sadat's Open Door economic policies. The potential for conflict between these two groups is great.

Many of Egypt's rural and urban poor will remain politically passive. By the year 2000, the quiescent *fellah* peasantry will constitute only 35 percent of the population, down from the present 46 percent. The possibilities for mobilization against the government will increase, however. The literacy rate will rise to 70 percent, and the average Egyptian will be much better educated and probably be far more demanding than his present-day counterpart.

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Egypt: Impact of Accelerated Population Growth

Accelerated population growth is putting strains on Egypt's economic resources and its severely limited habitable area. Currently 42 million, the population will increase to between 65 million and 71 million by the turn of the century. In the next 20 years the labor force will nearly double, and unemployment will become an increasingly serious problem. Reflecting the difficulty of expanding agriculture, 60 percent of all Egyptians will live in urban areas, compared with 50 percent now. The population of Egypt's already crowded cities is expected to double by the year 2000.

The population increase will be most tellingly illustrated by the rise in population density. Although Egypt contains nearly a million square kilometers—about as much land as Texas and New Mexico combined—only the narrow strip in the Nile Valley and the Delta containing 4 percent of the land is usable (figure 2). Into this strip—an elongated oasis in the desert about the area of the Texas panhandle—are squeezed 98 percent of the population and nearly all of the agricultural land, producing a density of more than 1,000 persons per square kilometer. This is about 50 percent greater than the present density of Bangladesh, one of the world's most thickly settled mainland countries. By the year 2000, Egypt's effective population density could rise above 1,700 persons per square kilometer.

Background

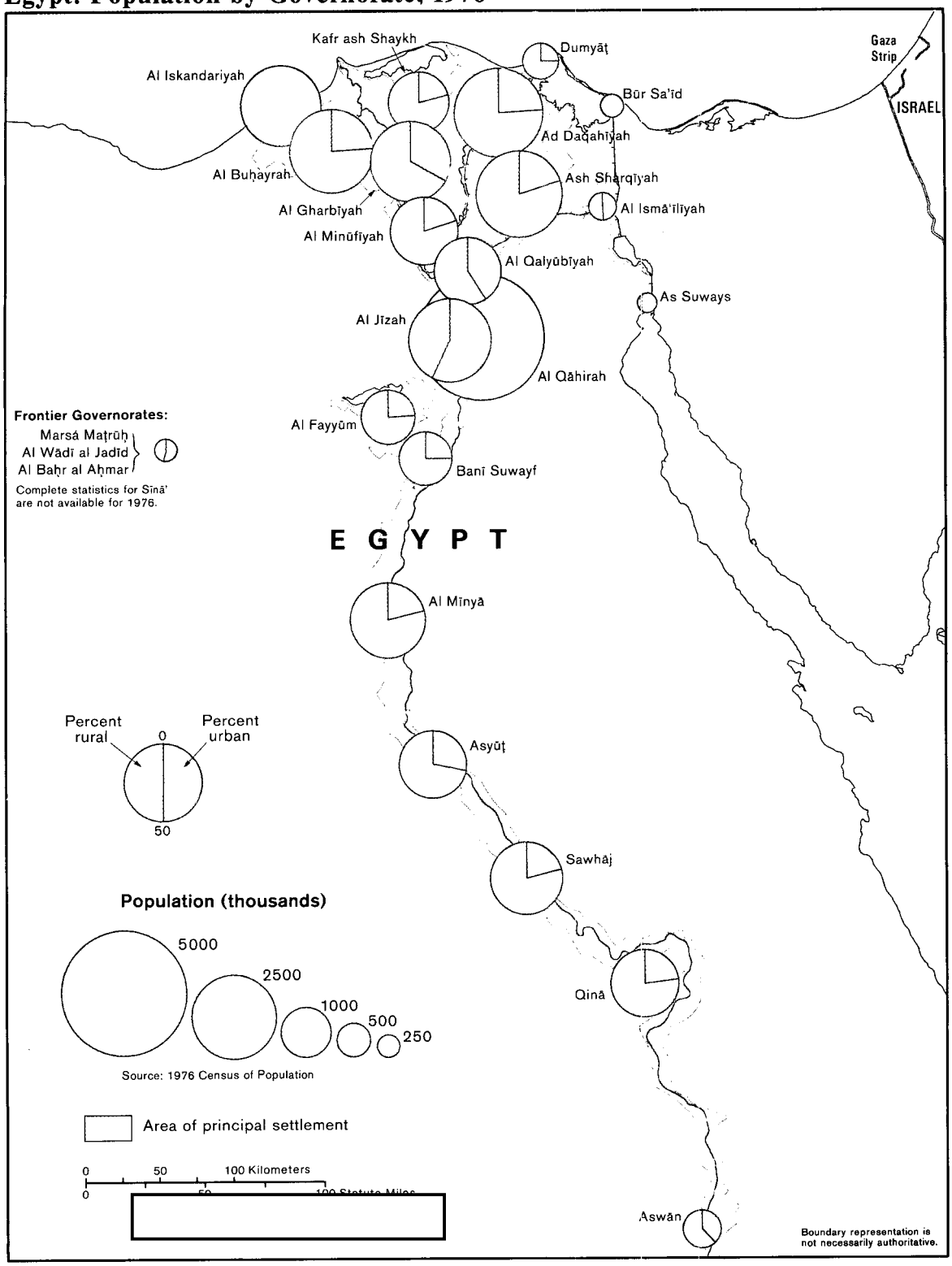
Egypt's population did not start growing rapidly until the late 1930s. Although birth rates were high, growth was restrained by correspondingly high death rates. As health care and the potable water supply improved after 1937, however, the death rate dropped—slowly under the monarchy and rapidly after the Revolution. As a result, Egypt's population increased by 11 million persons during the 23 years from 1937-60, and by another 15 million persons during the last two decades, reaching 42 million in 1980. Although the current population growth rate (3.0 percent annually) is not unusual for the area, total population is now second only to Turkey and is increasing by about 1.2 million persons annually—the largest increment in the Middle East.

Since 1960 accelerated growth of the working-age population (defined in Egyptian Government statistical publications as those aged 6 and older) has generated rapid expansion of the labor force despite substantial emigration, greatly increased school enrollments, and expanded pension programs for retired urban workers. Egypt's labor force now stands at 11.8 million and is growing by more than 200,000 workers annually—by more than 300,000 annually if immigrants are included. Periodically during the past 20 years, Egypt has had great difficulty finding sufficient jobs for the labor force, despite the heavy manpower requirement of the armed forces. Reported unemployment reached a peak of 11 percent following the 1967 war with Israel but has since dropped to about 1 percent, largely because of emigration (1 million workers and dependents since 1970) and the post-1974 economic boom. Since 1968, employment guarantees for college graduates in the public sector have also helped to hold down open unemployment—as well as to head off potentially serious student unrest. This policy, however, has contributed to high costs and inefficiency in much of the public sector.[1]

In the past two decades, rapid urbanization has been a more serious problem for Egypt than unemployment. The urban share of the population has increased from 37 percent in 1960 to 48 percent in 1980. Nearly half of urban growth has been the result of rural-urban migration, as people moved to the cities in search of

[1] The public sector accounts for about three-fourths of nonagricultural economic activity in Egypt.

Figure 2
Egypt: Population by Governorate, 1976



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jobs. Because of the difficulty of expanding agriculture, nonagricultural activities have accounted for some 84 percent of the increase in total employment since 1960. Most migrants have headed for Cairo, the country's major industrial center as well as its capital. Cairo now houses nearly half of Egypt's urban population of 20 million. Growth has been considerably less rapid in the 17 other cities with 1976 populations of more than 100,000. Rapid urban population growth combined with insufficient resources for urban infrastructure has led to extreme congestion, a large shortage of urban housing, and a general deterioration of urban living conditions

By concentrating on a limited number of key areas, the government has been able to achieve substantial improvements in some aspects of socioeconomic welfare despite rapid population growth and urbanizaton:

- The high priority given to providing jobs has kept Egypt's male labor force participation rate—currently 63 percent—among the highest in the region.
- Control of epidemic diseases has greatly increased life expectancy, while improved maternity care has reduced infant mortality to about the regional average.
- Secondary school and college enrollment is high even by developed-country standards, although because of neglect of primary education, especially in rural areas, the number of illiterates continues to rise.
- Tightly controlled prices, subsidies, and generally ample supplies of basic foods and oil products have until recently sheltered the urban population from the worst effects of world inflation

Serious strains have emerged because of rapid growth in the number of beneficiaries of government social programs. Soaring government spending largely attributable to such programs, together with high levels of public investment spending, have pushed inflation to double-digit levels. Despite sizable recent gains in urban employment and consumption made possible by the post-1974 economic boom, urbanites resent high prices for uncontrolled items. Especially discontented are higher level public-sector employees—a large part of Egypt's small middle class—who were the most highly favored by Nasir's political and economic policies and who constituted the backbone of his political support.[2]

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Government Measures to Date

While Egyptian governments have given priority to a number of major measures to ease the effects of rapid population growth, they have been less vigorous in pursuing programs to curb it. Although cultural and religious attitudes toward contraception are not as unfavorable as in many Muslim countries, and although Egypt's network of family-planning facilities (operated in conjunction with health care centers) is more extensive than in most less developed countries (LDCs), birth control is not widely practiced. In 1978, for example, only 17 percent of women at risk of pregnancy used any form of contraceptive (only 5 to 8 percent in rural areas). One problem may be a lack of government emphasis. When President Nasir established the program in the mid-1960s, he placed the need for family planning second only to defense among national priorities. President Sadat believes, however, that the birth rate can best be brought down through changes in attitudes accompanying socioeconomic progress.

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Reclaiming the Desert. Foremost among government measures since the Revolution to ease the effects of rapid population growth have been efforts to reclaim large areas of the desert for agriculture and to obtain more—and more regular—water supplies from the Nile. The construction (with Soviet aid) of the Aswan High Dam permitted regulation of the flow of the Nile. Water could be impounded when the flow was in excess of need and released when the flow was insufficient; this facilitated multiple, year-round cropping.

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The attempted reclamation of 400,000 hectares of desert, mostly along the western edge of the Nile delta northwest of Cairo, was less successful. Only one-third of the land is even marginally productive; most

[2] For details on the impact of population growth to 1980, see appendix A

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of the rest is submarginal and some has been abandoned. Current government efforts are not likely to substantially change this situation.

New Towns. Of slightly greater promise is President Sadat's "New Town" program, initiated in the early 1970s to relieve urban population pressures while conserving cultivable land for agriculture. The program seeks to establish 10 new cities in the desert in a 160-kilometer radius around Cairo. With an aggregate population target of 5-6 million within the next two decades, the 10 cities would accommodate slightly less than one-third of the expected increase in Egypt's urban population by the year 2000. Meeting the program's goals within this period seems unlikely, however, because of the high cost and lengthy lead-times required for establishing the needed infrastructure in the desert. It will also be very difficult to attract the investment needed to create jobs.

Thus far, two cities are under construction—the Tenth of Ramadan, 40 kilometers northeast of Cairo, and Sadat City, at Salam Oasis some 120 kilometers northwest of Cairo. Each is projected to accommodate 500,000 residents by the year 2000. Planning is under way for three other new towns; no work at all has been done on the remainder. In the Tenth of Ramadan, $600 million has been spent, housing has been constructed, and industrial investments have been committed; nevertheless, it will be a number of years before the city is ready to support a significant population. In Sadat City, where initial construction has just begun and no investment commitments have been made, it will take even longer.

The Open Door. More helpful in meeting the country's immediate needs has been *Al-Infitah* (The Opening), proclaimed by President Sadat in 1974. Complementary to Egypt's changed orientation in foreign policy and domestic political liberalization, the Open Door policy provides for a more outward-looking and market-oriented economic posture to facilitate Western financial and technological assistance. Although the public sector continues to be primarily responsible for economic development, state enterprises have been freed to make more of their own decisions, and the scope for private domestic and foreign investment has been greatly increased. Sadat's policies have made possible very high levels of public investment in infrastructure and productive capacity, triggering an economic boom that has temporarily relieved Egypt's unemployment problem. The opening of large new areas to foreign oil companies has resulted in soaring oil exports. Liberalization of foreign exchange controls has helped lure a large volume of remittances from Egyptian workers abroad and made it easier for the private sector to imports goods. But these effects may be ephemeral. Oil exports could drop sharply within a decade. While domestic private investment in such fields as real estate, finance, and tourism is booming, the inflow of direct foreign (nonoil) investment remains small. 25X

Increase in Fertility

Egypt's population problems will become far worse in the years ahead as a result of the large jump in the fertility rate that began in 1973. Declining fertility from the mid-1960s through 1972 had made it appear that the country was entering the second phase of demographic transition typical of advanced developing countries. This hope was shattered when the total fertility rate (the number of children an average women would have if she lived through her childbearing years) returned from 5.3 in 1972 to the 1965 level of 6.0 in 1978 and then soared to 6.7 in 1979—by far the highest since the 1920s. The effect of the increase has been to add some 5 million persons to the projected Egyptian population in 1985 and 8 million persons to the projected population in the year 2000. 25X

The causes of the fertility increase, although probably related to termination of the war with Israel, are less clear than its dramatic impact on population growth. Operating to keep birth rates high in Egypt are deeply rooted cultural factors favoring large families: 25X

- The high value placed on children, including the benefits derived from their labor.
- The preference for male children, which leads families to have surplus children to assure survival of at least one male.
- The Islamic tradition that a woman's place is in the home, which results in early marriage and relatively low levels of education and labor force participation for women. 25X

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Table 1

Assumed Fertility and Mortality Rates for Population Projections

	1980	1985	1990	2000
Projection Assumptions				
Total fertility rate (per woman)				
High growth	6.6	6.2	5.8	4.8
Low growth	6.5	5.8	4.9	3.2
Life expectancy at birth (years)	56.1	57.8	59.4	62.4
Derived measures				
Birth rate (per thousand)				
High growth	42.1	39.8	37.3	31.4
Low growth	41.7	37.4	32.6	23.4
Death rate (per thousand)				
High growth	12.5	11.6	10.5	8.9
Low growth	12.5	11.4	10.2	8.7
Natural increase (percent)				
High growth	2.96	2.82	2.68	2.25
Low growth	2.92	2.60	2.24	1.47

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Future Patterns of Population Growth

The upswing in fertility since 1972 will have a dramatic impact on Egyptian population growth in the years ahead. We have made three projections for the natural increase in population between 1980 and 2000. Under our low projection, the population—currently 42 million—would reach 65 million by the turn of the century; under the medium projection, it would reach 69 million, and under the high projection, 71 million. Although future trends in the fertility rate are highly uncertain, over the 20-year period Egypt will almost certainly add between 1.2 million and 1.5 million persons yearly to its population compared with 725,000 yearly in the past two decades. The projections assume zero net migration; if most of the present migrants return during the next several years and few Egyptians leave, the population in 2000 could be as much as 2 million higher than our projections. Alternatively, if emigration persists at a substantial pace, our projections could prove too high. The migration question is considered in a later section.

Underlying the projections is our belief that the upswing in the total fertility rate has peaked and will be reversed in the years ahead. In the high-growth scenario, we assume that fertility will be gradually influenced by increasing urbanization, rising educational levels, and moderate government promotion of family planning. Under our low-growth scenario, we assume that an all-out government family planning effort and/or a prolonged economic recession reinforces the effects of gradual cultural change to bring down fertility more rapidly than in the high-growth scenario.

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In both scenarios we assume that Egyptian governments will continue to improve health care and sanitation so that life expectancy extends to 62 years by the year 2000 (table 1). Given increasing life expectancy and higher fertility rates, it would be almost impossible for the natural rate of population increase to return to the 1970 level of 2 percent before the early 1990s.

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Impact on the Labor Force

Growth of the Egyptian labor force will be determined by participation trends and by the increase in the working-age population which, in turn, will be affected by the net level of external migration.[3] Ignoring external migration, some 2.3 million persons will be added to the labor force during the next five years—an annual rate of increase of 3.7 percent. For the full 20-year period, the labor force will increase by between 9.8 million and 10.1 million persons (figure 3). Because the 20-year gain will to a great extent be determined by the number of Egyptians already born, it will not be much affected by our choice of population projections; thus, our totals for the labor force in the year 2000 range only from a low of 21.6 to a high of 22.0 million persons.

During the next five years the labor force will expand by 2.9 percent per year, reflecting the high birth rates of the 1940s and 1950s. As the influence of the recent increase in fertility takes effect, in 1986-90 the total working-age population will grow even faster, by 3.0 percent annually. In the 1990s growth of the working-age population will range from 2.5 to 2.7 percent annually, depending on the total population projection.

Participation. In the most likely circumstances, we expect male labor force participation to remain essentially constant at least through the late 1980s before resuming a gradual decline. An increase is unlikely, since it would require a corresponding reduction in school enrollment rates. On the other hand, a drop does not seem to be in the cards, since the effects of the two factors responsible for the 1961-80 decline—the large rise in secondary school and college enrollment rates since the late 1960s and the expansion of retirement pension programs—have already been nearly completely realized. In view of the moderate rise in investment in educational facilities planned for the 1980-84 period, educational policy will probably focus on achieving marginal improvements in primary and secondary school enrollment rates for males in the immediate years ahead. By the late 1980s and the 1990s, the rise in school enrollment rates in the 6- to 19-age group will likely accelerate, pulling down participation rates by several percentage points. 25X

We expect female participation to continue its gradual increase. Over the next five years, the rise probably will be retarded by an expected decline in the participation of farm wives in agriculture. By the late 1980s, however, it should begin to accelerate. 25X

Skilled and Professional Workers. Mainly because of the large jump in the secondary school enrollment rate beginning in the late 1960s, the number of skilled workers will increase much faster than the total labor force in the years ahead. Male skilled workers (whom we define as secondary school graduates plus 20 percent of literates with primary degrees or less) could come to make up 22 percent of the male labor force aged 15 and older by 1985, and 27 percent by 2000 (table 3). The addition of skilled women could boost the total share of skilled workers to 25 percent of the labor force in 1985 and 30 percent in 2000. (Although the proportion of illiterate males will decline substantially, the continuing school shortage in many rural areas implies that their absolute number will gradually increase. 25X 25X

The proportion of college graduates in the labor force should rise even more rapidly than the proportion of skilled workers, especially in the next several years. This reflects the fact that primary enrollment rates have not risen as much as those for secondary schools and colleges. The Sadat government has recently shown concern over the political implications of expanding the number of college graduates more rapidly than the job market can absorb them. Thus, the government may take actions that will indirectly hold down the growth of enrollment. Even so, the share of male college graduates in the labor force aged 15 and older will likely jump to 9 percent in 1985 and 12 percent in 2000. 25X

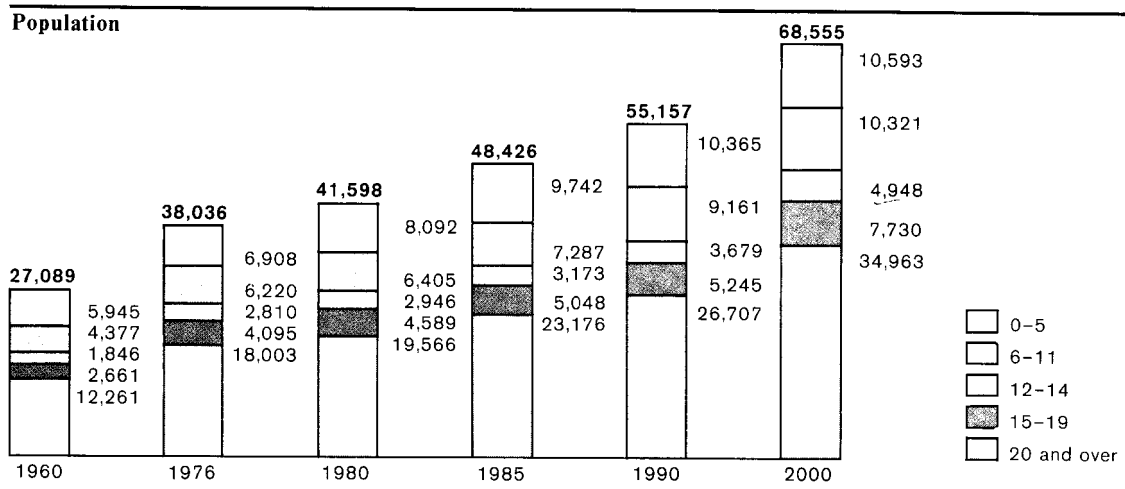
[3] For a discussion of the methodology used in projecting the impact of population growth in Egypt, see appendix B. 25X

Figure 3

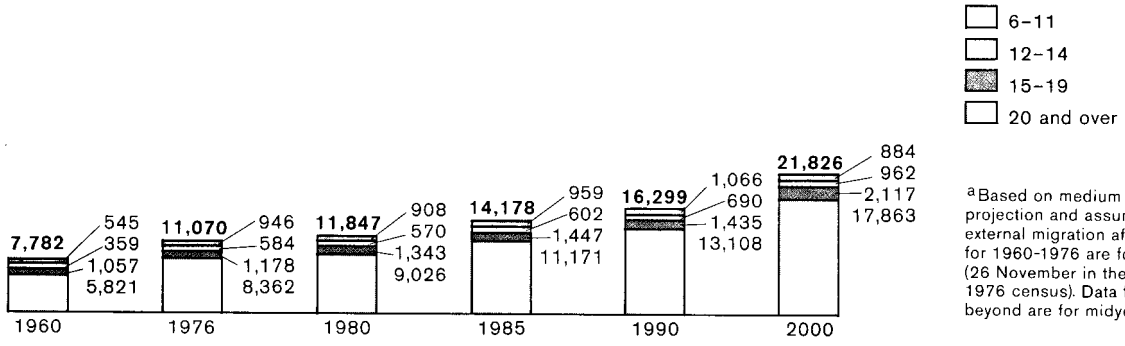
Egypt: Population and Labor Force by Age Groups, 1960-2000[a]

1,000 Persons

Population



Labor Force



[a] Based on medium population projection and assuming zero net external migration after 1980. Data for 1960-1976 are for census dates (26 November in the case of the 1976 census). Data for 1980 and beyond are for midyear.

Growth of Total Population, Working Age Population, and Labor Force

Average Annual Percent Change

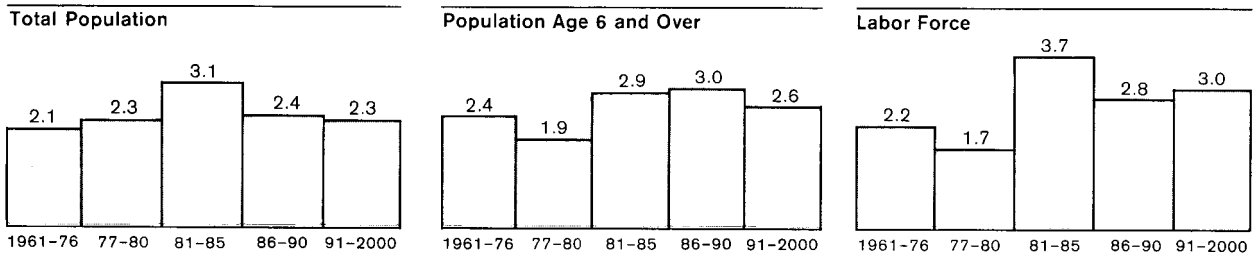


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Table 2

Percent

Labor Force Participation Rates, by Sex [a]

			Estimated	Projected		
Age Groups	1960	1976	1980	1985	1990	2000
6 and older total	36.8	34.5	35.3	36.6	36.4	37.7
Male	67.6	63.4	63.4	64.0	62.6	62.2
Female	5.9	6.6	7.0	8.3	9.2	12.2
6-11 total	12.4	15.2	14.2	13.2	11.6	8.6
Male	17.8	21.8	20.0	18.0	16.0	11.0
Female	6.7	8.1	8.1	8.0	7.0	6.0
12-14 total	19.4	20.8	19.3	19.0	18.8	19.3
Male	29.2	34.0	32.0	30.0	28.0	26.0
Female	8.8	5.6	6.1	7.5	8.9	12.5
15-19 total	39.7	28.8	29.3	28.7	27.4	27.4
Male	68.0	49.9	49.9	48.0	46.0	43.0
Female	9.5	5.1	5.6	6.6	7.8	10.9
20 and older total	47.5	46.4	46.1	48.2	49.1	48.0
Male	93.9	86.7	86.5	87.0	87.0	87.0
Female	4.5	6.6	7.0	8.6	10.2	14.3

[a] Assuming medium population growth and zero net migration after 1980.

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Impact on Employment

The accelerated growth of the labor force poses a major challenge for present and future Egyptian governments, which will be expected to provide the jobs to meet the population's needs and aspirations. The number of jobs created will be determined not only by the government's wage and employment policies but also by the overall rate of Egyptian economic growth and the job-creating capacity of the economic sectors' driving growth. To evaluate job market conditions in the years ahead, we have examined three alternative economic growth scenarios—high, low, and intermediate—covering (a) the next five years and (b) the final 15 years of this century. In each instance we have varied the rates of growth of output and employment for industry and other nonagricultural sectors to take account of historical differences in rates of output increase and in employment creation among them at alternative gross domestic product (GDP) growth rates. [redacted] 25X

1981-85. For the first half of the 1980s, we chose the following scenarios:

- High economic growth (9 percent annually), with a continuation of the oil- and industry-led rate of expansion that prevailed during 1975-80.
- Intermediate economic growth (7 percent annually), with industrial growth slightly ahead of the other nonagricultural sectors.
- Low economic growth (5 percent annually) with a return to the services-led rate of expansion of 1961-74. [redacted] 25X

Table 3

Thousand persons

Male Labor Force by Educational Attainment [a]

		Estimated	Projected	
	1976	1980	1985	2000
College graduates	406	620	927	2,052
Secondary school graduates	739	1,113	1,705	3,454
Primary school graduates	597	3,250	3,856	5,677
Read and write	2,432			
Illiterate	4,668	4,698	4,955	5,917
Total	**8,842**	**9,681**	**11,443**	**17,100**
Of which:				
Skilled workers [b]	1,345	1,763	2,476	4,589
Percent of total	15.1	18.3	21.6	26.8

[a] Age 15 and older.
[b] Defined as secondary school graduates plus 20 percent of the total of primary school graduates and those able to read and write.

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Intermediate Growth. Egypt's actual average growth performance is most likely to approximate the intermediate scenario over the next five years, which would reflect a moderate slowdown from the 1976-80 pace. Although total receipts may well increase substantially in the next year or two, they seem likely to stagnate subsequently and then begin to decline by the end of the period. Under this scenario we assume that:

- By 1982 increases in oil export earnings begin to slow because of rapidly growing domestic oil consumption; by 1984 the added impact of falling oil production causes oil earnings to begin to decline.[4]
- Through 1985 foreign economic assistance commitments remain close to the 1981 level; by 1984 rising repayment obligations begin to reduce net receipts.
- Future worker remittances do not offset a major portion of the foregoing.

Economic growth of 7 percent annually would generate about 300,000 new jobs a year, compared with our projected labor force growth of more than 450,000 annually (table 4). Driven by construction, the number of new jobs in industry would increase by about 6 percent annually while other nonagricultural jobs would rise about 3 percent (table 5).[5] With agricultural output growing slowly, farm employment should rise by only 0.5 percent.

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By 1985 this growth scenario would lead to a substantial rise in unemployment; about 6.5 percent of the labor force—916,000 persons—would be without jobs. Unemployment would remain concentrated among women and (largely illiterate) males under 15 seeking nonagricultural jobs. With sustained economic growth of the stipulated magnitude, the demand for skilled and professional workers could be expected to grow more than proportionately, judging by the experiences of other countries under similar circumstances. Consequently, skilled labor would continue to be scarce even without significant external migration. Even so, in view of the increase expected in the

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[4] Assuming that the real price for Egypt's oil increases by 5 percent annually and that present intensive oil exploration results in the discovery of 1.5 billion barrels of new reserves. These are both moderately optimistic assumptions.

[5] In this and in the remaining scenarios through the year 2000, we would expect growth of the services sector to be driven to a large extent by the affluent private sector, perhaps enabling Egypt to become a major Middle Eastern financial and commercial center.

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Table 4 Thousand persons

Employment and Unemployment Projections to 1985 [a]

	1980	1985
High economic growth (9 percent)		
Agriculture	4,984	5,109
Industry	2,390	3,379
Other[b]	4,374	5,144
Total employed	11,748	13,632
Unemployed	99	546
Unemployment rate (percent)	0.8	3.9
Intermediate economic growth (7 percent)		
Agriculture	4,984	5,109
Industry	2,390	3,140
Other	4,374	5,013
Total employed	11,748	13,262
Unemployed	99	916
Unemployment rate (percent)	0.8	6.5
Low economic growth (5 percent)		
Agriculture	4,984	5,134
Industry	2,390	2,856
Other	4,374	4,925
Total employed	11,748	12,915
Unemployed	99	1,263
Unemployment rate (percent)	0.8	8.9

[a] Labor force aged 6 and older.
[b] Including transportation, communications, trade, finance, and services.

[redacted]

Table 5 Average Annual Percent

Output, Employment, and Productivity Growth Rates, 1961-80, and Projections Through 2000

	Output	Employment	Productivity
1961-80			
Total	6.1	2.2	3.8
Agriculture	2.6	0.7	1.9
Industry	7.8	5.0	2.6
Other	8.6	3.1	5.4
1981-85			
High growth			
Total	9.0	3.0	5.8
Agriculture	3.0	0.5	2.5
Industry	12.0	7.2	4.5
Other	9.7	3.3	6.2
Intermediate growth			
Total	7.0	2.4	4.4
Agriculture	2.6	0.5	2.1
Industry	9.0	5.6	3.2
Other	7.7	2.8	4.8
Low growth			
Total	5.0	1.9	3.0
Agriculture	2.1	0.6	1.5
Industry	5.7	3.6	2.0
Other	6.0	2.4	3.5
1986-2000			
High growth			
Total	8.0	3.0	4.8
Agriculture	3.0	0.5	2.5
Industry	11.0	6.2	4.5
Other	7.6	2.7	4.8
Intermediate growth			
Total	6.0	2.7	3.2
Agriculture	2.6	0.5	2.1
Industry	7.5	5.4	2.0
Other	6.2	2.6	3.5
Low growth			
Total	4.0	1.9	2.1
Agriculture	2.1	0.6	1.5
Industry	3.7	3.2	0.5
Other	5.0	2.3	2.6

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number of college graduates, substantial unemployment among new graduates could probably be averted only by retention of government employment guarantees. The small expansion of agricultural jobs relative to the rise in the rural population would tend to depress agricultural wages, thereby increasing the urban-rural differential and boosting migration from the countryside.

High Growth. Economic growth of 9 percent annually through 1985 would generate about 380,000 new jobs each year. Even at this rate, unemployment would climb to about 550,000, or 4 percent of the labor force.

Low Growth. Economic growth of 5 percent annually would produce only about 230,000 new jobs each year. If our projected participation rates held, unemployment would rise to 9 percent of the labor force. Urban labor force entrants, mainly women and young illiterates, could be expected to bear the brunt of unemployment, although joblessness among college graduates also would be high; comparatively few skilled workers would be affected.

1986-2000. Egypt's economic performance is almost certain to decline somewhat after 1985. To evaluate job market conditions during 1986-2000 we have selected the following scenarios:

- High economic growth of 8 percent yearly, led by industry.
- Intermediate economic growth of 6 percent yearly, led by services.
- Low economic growth of 4 percent yearly, led by services.

High and Intermediate Growth. Although Egypt will probably have some periods of rapid economic growth during the last 15 years of the century, sustained performance at either the high or intermediate level is unlikely. The 8-percent rate is possible given extraordinarily good luck and wise economic policies. The 6-percent rate is possible with wise economic policies alone. These economic policies, however, might be very foolish—indeed, almost suicidal—political policies. Such policies would have to include continued (and highly inflationary) devaluations of the Egyptian pound, higher prices for farm products, the removal of subsidies from basic goods, and a general cutback on social programs as government spending is shifted away from consumption toward investment. It is very doubtful that either Sadat or a successor could establish and maintain such policies over a long period and still remain in power. 25X1

25X1

If Egypt's economy grew at an average rate of 8 percent a year over the 15 years, some 500,000 new jobs would be created annually—roughly the number needed to keep pace with increases in the labor force. Under the intermediate scenario, only 430,000 new jobs would be created each year. With high growth, 25X1
the unemployment rate (other things being equal) would still rise from its current very low level to about 5 percent by the year 2000; with intermediate growth it would rise to 9.4 percent (table 6). 25X1

Low Growth. Egypt's actual economic performance in 1986-2000 will probably fall somewhere between our low and intermediate scenarios—possibly closer to the low scenario. Under this scenario, we assume that Cairo is forced by circumstances and outside pressure 25X1
to adopt many of the reforms needed for a wise economic policy. These reforms are not likely, however, to be introduced in a systematic and controlled fashion, but rather will be belated and piecemeal responses to foreign payments and other crises, producing a series of shocks requiring lengthy recovery periods and generating few incentive benefits. Economic growth of 4 percent would create about 300,000 new jobs annually. 25X1

The slow rate of job creation under the low-growth 25X1
scenario would create large-scale unemployment. By 1990 unemployment would amount to 1.7 million, and by 2000 to more than 4 million—nearly 20 percent of the labor force. While women and young illiterates would be the most seriously hurt, few other economic groups would escape unscathed. Extensive unemployment among skilled workers would drastically reduce wage premiums for skills. With the rate of economic expansion slower than the rise in the number of college graduates, widespread unemployment among the members of this group would be averted only to the extent that they found work abroad or accepted jobs in Egypt below their qualifications and aspirations. 25X1

Table 6 Thousand persons

Employment and Unemployment Projections, 1986-2000 [a]

	1985 [b]	1990 [c]	2000 [c]
High economic growth (8 percent)			
Agriculture	5,109	5,237	5,497
Industry	3,140	4,245	7,765
Other [d]	5,013	5,720	7,444
Total employed	13,262	15,202	20,706
Unemployed	916	1,097	1,120
Unemployment rate	6.5	6.7	5.1
Intermediate economic growth (6 percent)			
Agriculture	5,109	5,232	5,497
Industry	3,140	4,085	6,901
Other	5,013	5,700	7,379
Total employed	13,262	15,017	19,778
Unemployed	916	1,282	2,048
Unemployment rate	6.5	7.9	9.4
Low economic growth (4 percent)			
Agriculture	5,109	5,267	5,584
Industry	3,140	3,674	5,024
Other	5,013	5,625	7,088
Total employed	13,262	14,566	17,696
Unemployed	916	1,733	4,130
Unemployment rate	6.5	10.6	18.9

[a] Because of rounding, components may not add to totals shown.
[b] Intermediate growth scenario for 1981-85 is used as the base.
[c] Medium population growth. Unemployment rates for 2000 using the low population growth series are as follows: high economic growth, 4.3 percent; intermediate economic growth, 8.6 percent; low economic growth, 18.2 percent. Unemployment rates for 2000 for using the high population series are as follows: high economic growth, 5.8 percent; intermediate economic growth, 10.0 percent; low economic growth, 19.5 percent.
[d] Transportation, communications, trade, finance, and services.

[redacted]

Impact on Urbanization

Population growth in the next two decades will accelerate rural-urban migration. We estimate that between 90 and 95 percent of jobs created over the next 20 years will be nonagricultural. Although the share of rural residents holding nonagricultural jobs will almost certainly rise, we expect the rate of growth of the urban population to average about 4.6 percent annually through 1985 (figure 6, foldout) and then to slow to an average of about 3.3 percent in the last 15 years of the century. This would bring the urban share of the population to nearly 60 percent by 2000. It would mean a rise of a million people per year in the urban population, doubling it to about 40 million—well above the expected natural increase. Despite the substantial rural-urban migration, however, the rural population would also continue to increase by 1.3 percent yearly. [redacted] 25X

The geographic pattern of urban expansion will be determined mainly by the locations of new nonagricultural jobs; in turn, these locations will be heavily influenced by the locations of agricultural and natural resources and existing transportation, electric power, and communications networks. While some small towns and cities may surpass the 100,000 mark, most will probably grow slowly, as in the past. Although the Tenth of Ramadan may well achieve a considerable part of its 500,000 target population by 2000, we doubt that the other new towns will make much progress in this time period. [redacted] 25X

We expect urban growth to be concentrated in Cairo and the 17 other major cities of the Alexandria-Cairo-Aswan corridor and the Canal Zone, where infrastructure is most fully developed. Given the rapid expansion of nonagricultural employment since 1976, we estimate that the population of the 17 cities grew a little more than 6 percent annually during 1977-80 and will continue to expand by a little more than 5 percent annually in 1981-85 before slowing to about 4 percent annually during the last 15 years of the century. By the year 2000, populations of 6.0-6.5 million in Alexandria and close to 1 million each in Mahalla el Kubrah, Kafr el Dwar, Mansoura, Tanta, and Assyout would be consistent with past and prospective trends. [redacted] 25X1 25X

The impact of urban growth on metropolitan Cairo will depend heavily on government policy regarding the siting of new industry, most of which has hitherto been located in the city. We believe that population growth in Cairo during 1977-80 was substantially

slower than in the other 17 cities as a group, reflecting the fact that many Cairo residents moved back to the Canal cities after 1975. Cairo's intrinsic cultural, political, and economic attractions, most of which cannot be transferred elsewhere, will nonetheless ensure substantial growth in the years to come. During the next five years, Cairo's population growth should at least equal that of the other 17 cities. By the year 2000, natural increase alone could push the metropolitan area population to 16-17 million. Even in the absence of a deliberate policy of shifting growth to the other large cities, however, increasing restrictions could well keep Cairo's population growth below that of the other large cities as a group in the last 15 years of the century. Thus, a range of 19-21 million seems reasonable for the population of Cairo by the year 2000

Demand for Egyptian Workers Abroad

While foreign demand for Egyptian workers will continue to expand in the years to come, it is likely to grow at a substantially slower pace than in the past 10 years (figure 4). We believe that such demand might expand by 5 percent yearly through 1985 and then by about 3 percent annually through the rest of the century. Thus, assuming a 1980 base of 1.1 million Egyptian workers abroad, foreign jobs could provide employment for about 1.4 million Egyptians in 1985 and 2.2 million in 2000.

Iraq is by far the best prospect for absorbing substantial amounts of expatriate Egyptian workers, especially farmers and unskilled manual laborers. From an estimated base of 350,000 Egyptian workers in Iraq in 1980, we believe that demand for emigrants could grow to 600,000 by 1985 and to well over a million by 2000. Iraq would therefore account for much of the increase in demand through the year 2000. This projection assumes strong growth in the Iraqi economy and an absence of major regional disruptions due to war or political antagonism.

Libya will likely be the second largest customer for additional Egyptian labor, unless—as is quite possible—political and cultural antagonism stems the flow. Although Libya's shortage of indigenous labor will grow even more acute, Tripoli can get workers from other Mediterranean countries if political tensions with Egypt worsen. Jordan, which is expected to continue recording high economic growth rates, could also offer increased, although limited, opportunities for Egyptian nationals; it has a shortage of domestic skilled laborers because so many Jordanian workers find employment in the Persian Gulf. 25

The states of the Arabian Peninsula, traditional absorbers of Egyptian labor, already have about as many Egyptian workers as they can handle. They will not absorb many more through 1985 and may even need fewer during 1986-2000. Saudi Arabia, which employs an estimated 250,000 Egyptians, hopes to severely limit the growth of its foreign population in the future. While healthy economic growth is expected to continue and plans for limiting expatriates may be unrealistic, opportunities for additional Egyptian labor are dim. In the construction sector, the Saudis have been turning to contractors from the Far East who provide everything involved including labor. Although Egyptian professionals will remain important in the areas of teaching and administration, they may face increasing competition from Saudi citizens. About 1.5 million Saudis (out of the native population of 5 million) are now in school. As these students graduate they will take over professional jobs now held by foreigners. The same situation is likely to be found in Kuwait and other Persian Gulf countries such as Qatar, the United Arab Emirates, Oman, and Bahrain. The need for foreign labor in these countries is also likely to be filled mostly by workers from South Asia and the Far East 25

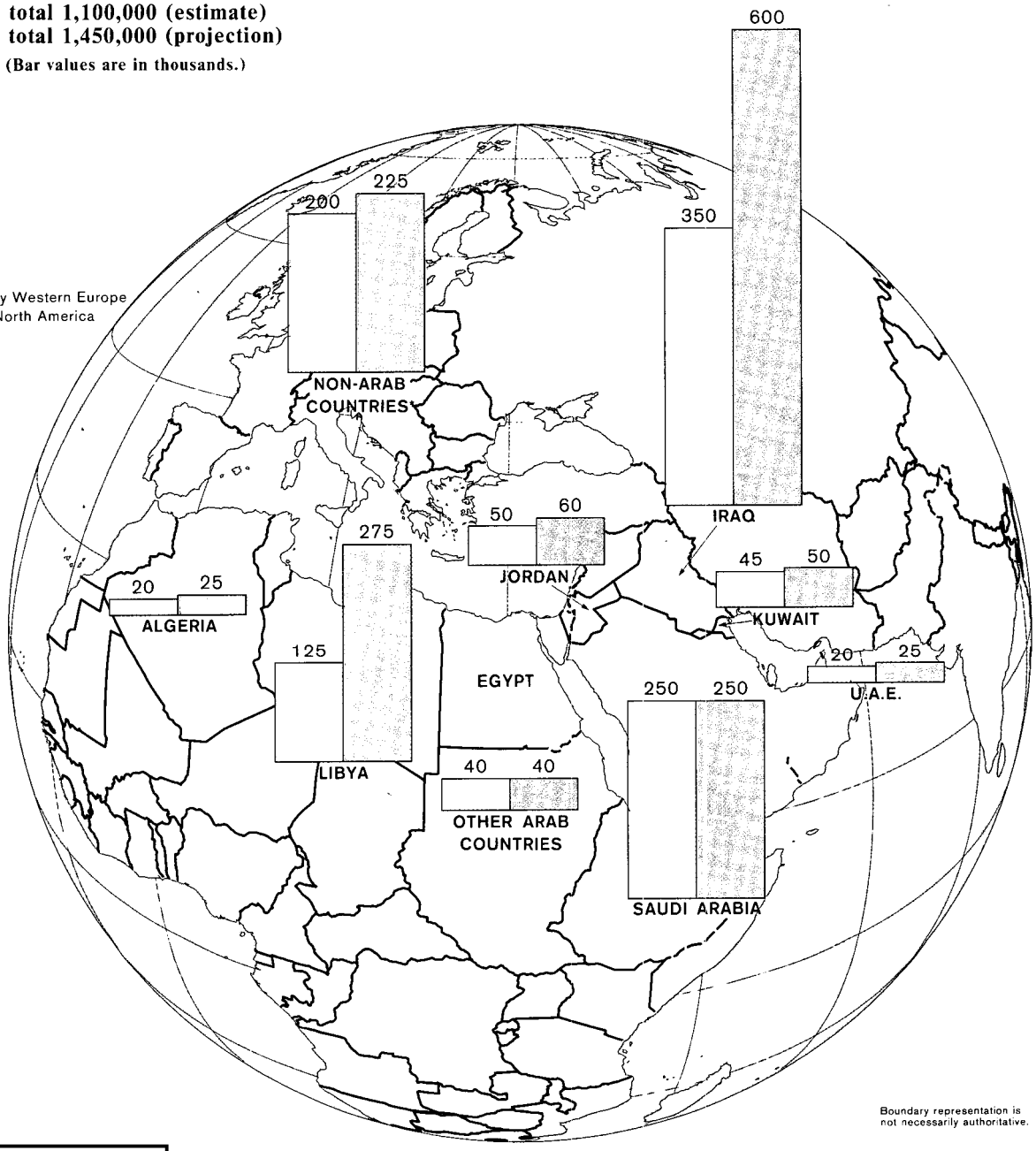
Government Options

Egypt's population will continue to grow rapidly despite any measures the government may take. Nevertheless, by greatly increasing the priority given to family planning efforts, the government could bring fertility down to levels close to those assumed in the low population projection. With increased priority, public health workers could be expected to put more effort into the program, contraceptives of all types could be made available on a far more abundant and

Figure 4
Egyptian Workers Abroad

1980 total 1,100,000 (estimate)
1985 total 1,450,000 (projection)

(Bar values are in thousands.)



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25X

reliable basis, and programs to supply user motivation could be greatly intensified. A pilot project in one village in Menoufia governorate recently demonstrated that with such efforts participation in family planning could be raised to more than 30 percent of women at risk of pregnancy—approaching rates in such countries as Taiwan, Korea, and Singapore that have successfully reduced fertility.

We doubt, however, that the government will make the effort required to greatly improve the effectiveness of family planning, at least not within the next five to eight years. A marked change in government priorities with regard to family planning would probably come only after dramatic evidence revealed the existence of a population crisis that could affect political stability. Consequently, we believe population growth in Egypt will most closely approximate our high projection for some years to come.

Employment and Unemployment. Accelerated growth of the working-age population will almost certainly cause a sharp rise in unemployment from its present extremely low level. Moreover, Egyptian governments will have fewer options in the future for limiting open unemployment. The still undermobilized armed forces are large for Egypt's needs and financial resources. Further large increases in retirement pension programs or in secondary school and college enrollment rates would be costly and, in the latter case, only temporary solutions. In view of the sizable body of unneeded workers already employed by the public sector, we believe that the Egyptian Government would only increase their numbers greatly if such action was necessary to defuse a serious political crisis. Thus, the government's only real option, aside from increasing the number of jobs through economic growth, is to encourage external migration.

During the next five years, there are few practical steps that the government can take to increase the number of jobs beyond the level depicted in our intermediate growth scenario. Thus, in the absence of external migration, the number of unemployed—mostly women, young illiterates, and other new labor force entrants—would rise to about 6.5 percent of the labor force. Even if all Egyptians who could be absorbed abroad actually emigrated, the unemployment problem would remain serious unless the demand for Egyptian workers abroad greatly exceeds our expectations. For example, if 70 percent of the expected emigrants over the next five years were replaced from the ranks of the unemployed, their departure would lower the 1985 unemployment rate by only 1.5 percentage points at most. 25X

During the final 15 years of this century, Egypt's success in increasing jobs will depend mainly on its progress in the politically difficult task of implementing economic reforms. Since these reforms would almost certainly require a reduction of consumption in favor of investment, they would be highly unpopular in Egypt. Deterring quick implemention will be Egypt's weak system of public administration, with its overcentralized authority at the top; divided responsibility among overlapping jurisdictions at the operating level; and frequent turnover at the cabinet, subcabinet, and senior technician levels. In view of these obstacles, we believe that economic growth will slow down after 1985—perhaps to the range of 4 to 6 percent. 25X

Egypt's unemployment problem will thus continue to worsen after 1985, with joblessness probably spreading to experienced workers in most occupational categories. If economic growth averaged 5 percent annually during 1986-2000, for example, the number unemployed could reach about 3.1 million in the absence of external migration—14 percent of the labor force. In these circumstances, at least 90 percent of Egyptian emigrants probably could be replaced from the ranks of the unemployed. Over the 15-year period, a net emigration of 800,000 Egyptian workers could therefore reduce projected joblessness by some 720,000 persons, cutting the projected unemployment rate to 11 percent 25X 25X

Urbanization. For a variety of reasons, including the fact that most new jobs will be created in the cities, little can be done to stem the tide of urbanization.

With the rapid urban growth we expect during the next five years, urban infrastructural expansion and improvement almost certainly will fail to keep pace with population increases despite high investment levels. Although urban population growth should slow in subsequent years, industrial, agricultural, and other demands on limited investment funds will probably cause urban housing and services to continue to deteriorate and urban congestion to continue to grow.

The steps that Cairo could take seem more likely to spread than to significantly reduce the burden. Such steps could include: moving part of the bureaucracy away from Cairo; establishing free-trade zones and new export-oriented industries in the Canal Zone; locating low-cost public housing and new factories in the outskirts of cities; constructing better commuter transport facilities; and lifting rent controls in city centers to stimulate both private urban renewal and the exodus of workers to the suburbs. Since many, perhaps most, towns and cities of less than 100,000 population largely lack urban infrastructure and amenities, any attempt to implement a small-town development strategy to ease pressures on larger cities would be costly and difficult.

Implications for Political Stability

In the years ahead, rapid population growth and its byproducts will make Egypt a much different place to live in than it is today. If present trends continue:

- The labor force will number close to 22 million by 2000, and nonagricultural employment will make up 68 to 72 percent of the total (28 to 35 percent in industry), depending on whether economic growth during 1986-2000 averages 4 or 6 percent annually.

- Some 70 percent of the population aged 10 and older will be literate by the year 2000—72 percent of the men and 64 percent of the women.

- The middle class—skilled and professional males with secondary school and college educations and their families—will make up one-fifth of the population by 1985 and almost one-third by the year 2000, compared with 16 percent at present.

- With continued growth of the relatively affluent private sector, members of this group will come to represent an increasingly larger share of the middle class in numbers, wealth, and political influence; at the same time, the share of middle class members with relatively low incomes and no political influence will climb substantially.

- The politically passive *fellahin* (peasantry) will shrink from 46 percent of the populace to about 35 percent by 2000; at the same time, the politically unaware though far from passive urban lower classes [6] will decline from 40 percent to about 35 percent of the populace.

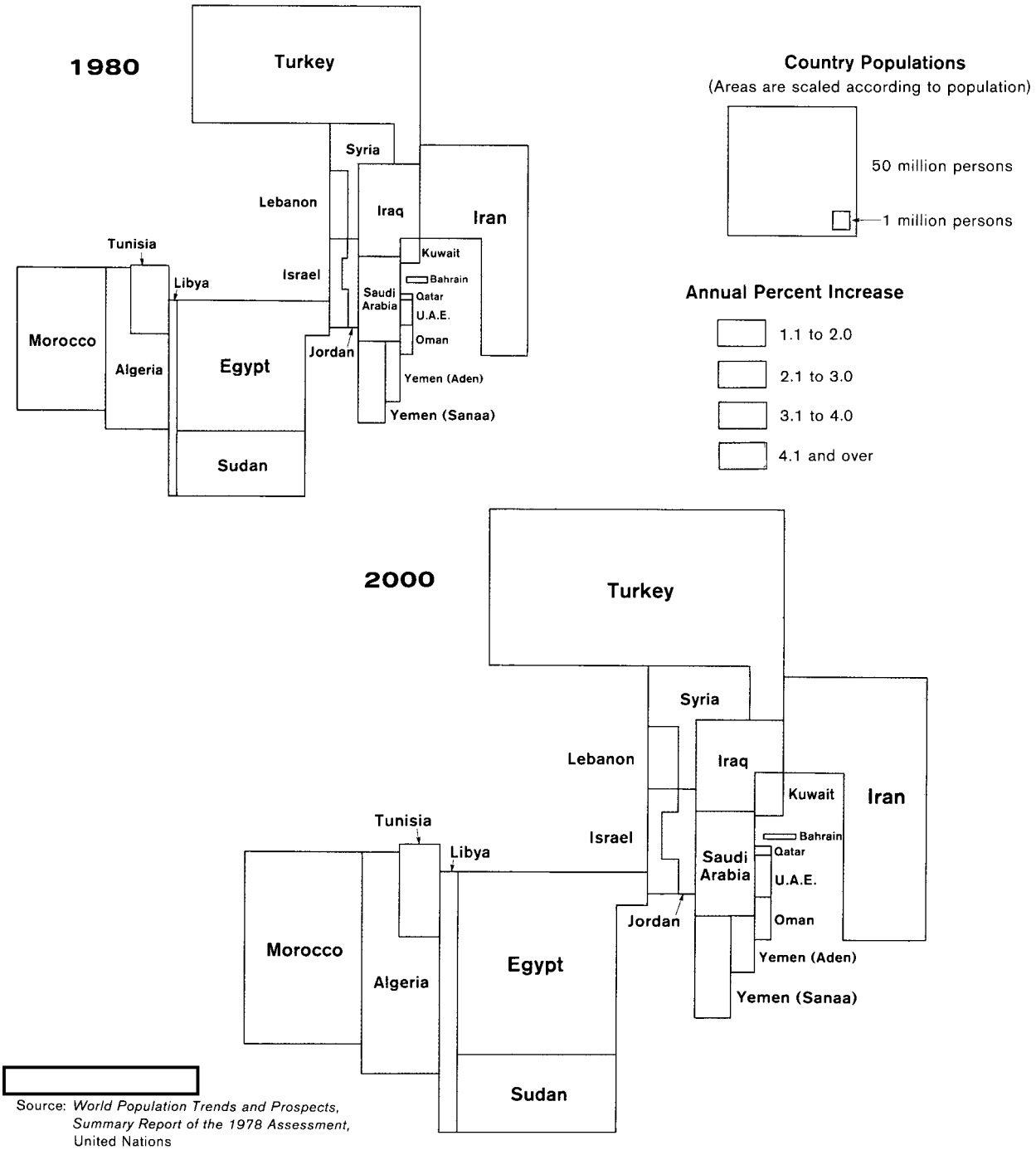
- Although its population growth rate is slower than those of some neighbors, Egypt will remain (after Turkey) the second most populated country in the Middle East through the year 2000 (figure 5).

These byproducts of rapid population growth will reinforce and accelerate sociopolitical changes already taking place under the Sadat government: the rapid increase in the share of the population with middle class credentials and aspirations; the division of the middle class between civilian and military public sector employees on one hand and private sector entrepreneurs and their employees on the other; the greatly increased number of secondary school and college graduates who fail to achieve positions of prestige or influence; the rising educational level of the average Egyptian, making him better informed of conditions both in Egypt and elsewhere, more demanding that the government serve his interests, and perhaps less likely to follow Egypt's pharonic tradition of giving allegiance to whoever is in power.

During the next half decade or so, the rise in the share of output that must be diverted from consumption to investment to cope with rapid population growth will tend to increase social tension and strain. This will be especially so as the urban populace comes to realize not only that few postpeace increases in consumption are possible but also that substantial further—and not necessarily equal—sacrifices will be necessary. Especially vulnerable will be higher level civilian and

[6] That is, families headed by males with primary school educations or less.

Figure 5
The Middle East: Projected Population Growth, 1980 to 2000



Source: *World Population Trends and Prospects, Summary Report of the 1978 Assessment,* United Nations

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military public sector employees who are already suffering growing malaise under Sadat, the result of a pronounced shift in income distribution in favor of private sector entrepreneurs.

Middle class public sector employees, both military and civilian, have numerous grievances against the Sadat government. Some are upset by Egypt's isolation from other Arab countries as a result of the peace treaty with Israel. Some feel Sadat's commitment to Islam is weak. But the bottom line is the relative decline in their economic fortunes, hastened by inflation. Most of all, they resent their replacement by the private sector as Egypt's economic elite. A few speak fondly of the good old days under Nasir.

This malaise will be alleviated by expanding career opportunities in the private sector and continuing, though reduced, external migration. Even so, since the middle class public sector employees will probably continue to bear much of the brunt of whatever diversion of resources from consumption to investment is needed to cope with rapid population growth, the malaise could continue to intensify. On the other hand, if the position of private entrepreneurs were eclipsed by a resurgence of the old elite as the result of restoration of restrictions on private investment, or a new military adventure—perhaps against Qadhafi in Libya, the malaise could quickly disappear.

25X

25X

As the 1980s segue into the 1990s, rapid population growth coupled with reduced economic growth will mean little increase in real living standards for Egyptians outside the affluent private sector. Slower economic growth will not only bring greatly increased unemployment but also slower expansion of housing and other elements that contribute directly to the quality of life, such as potable water and sewage systems, public transportation, and home electrification. Contrasts between socioeconomic progress in Egypt and in the oil-rich Arab states could become glaring. Urban areas obviously will suffer most. As one scenarist for the year 2000 puts it, "Downtown Cairo, with its skyline dominated by new hotels and office buildings, will wear the look of the future, while surrounding it is one of the world's largest and most miserable slums, in which the real Egypt is tucked away from world view."

25X

25X

Appendix A

Impact of Population Growth to 1980

Rapid population growth in Egypt did not get under way until the late 1930s. At the time of the first accurate census in 1897, the population totaled 10 million, only 25 to 50 percent higher than during Roman rule. In the next 40 years, the population increased by only 6.5 million persons. Although birth rates were close to physiological limits, population growth was restrained by correspondingly high death rates, particularly for infants.

With improvements in health care and potable water supplies since 1937, the death rate has dropped. By 1980, it stood at 12.5 per thousand, compared with 33 in 1937 (table A-1). At the same time, despite a large temporary decline from the mid-1960s to 1972, the birth rate in 1980 was only about 10 percent below that of 1937. The consequence has been rapid population growth, especially since 1972. The population increased by 10.6 million persons (64 percent) during the 23 years 1937-60. Despite the substantial out-migration of Egyptian workers and their families to other Arab countries since 1970, another 15 million persons (55 percent) were added in the past 20 years, bringing the population to 42 million in 1980. Although its current natural growth rate—3.0 percent annually—is typical of those of the Middle East, Egypt's total population is now second only to that of Turkey

Labor Force

Partly reflecting gradually improving socioeconomic welfare among most Egyptians, the labor force grew more slowly than the population as a whole until 1960. This resulted mainly from the large increase in the share of the population enrolled in school, as well as from a substantial decline in the share of the population in the working ages, caused in turn by the acceleration of population growth after 1937. Since 1960 the rate of growth of the labor force has increased, despite the out-migration of workers, and now stands at about the same rate as population growth. Although work force participation continued to decrease with rising school enrollment rates and the expansion of government pensions for retired urban workers, the effect was offset by stepped-up growth of the working age population as the post-1937 population bulge entered the working ages. Currently, the labor force stands at 11.8 million and is growing by more than 200,000 workers annually (table A-2). Among the Middle Eastern countries, Egypt is second only to Turkey in the size of its labor force 25X

Despite the decline in recent decades, Egypt's male labor force participation rate—63.4 percent of all males aged 6 and older (table A-3)—remains high by the standards of the Middle Eastern Muslim countries, reflecting both the government's strong urban job creation efforts since the early 1960s and the relatively greater economic opportunity in Egypt compared with many of the other countries. Egypt differs from developed countries in the use of child labor; about 60 percent of the labor force consists of unpaid family workers aged 14 and younger. It also differs by virtue of the relatively large proportion of the labor force occupied by workers over 65—even though Egypt's pension system for urban workers brings this proportion well below those in most other LDCs. Nevertheless, the age distribution of male participation in the Egyptian work force otherwise conforms closely to those of industrial countries, which is mainly the result of Egypt's exceptionally high school enrollment rates in the 15- to 24-year age groups. Male labor force participation is lower in urban than in rural areas by about 10 percentage points (table A-4), mainly because of the greater availability of educational opportunities in urban areas. 25X

In common with most other Muslim countries, Egypt's female labor force participation rate—while gradually edging upward—remains extremely low whether compared with developed or other developing

Table A-1

Vital Statistics

	1927	1937	1947	1960	1970	1980
Birth rate (per thousand)	50.5	47.0	49.1	45.2	36.5	42.1
Death rate (per thousand)	33.7	32.9	26.8	19.9	17.3	12.5
Natural increase (percent)	1.7	1.4	2.2	2.5	1.9	3.0
Infant mortality (per thousand live births)	230	175	140	108	116	90 [a]
Life expectancy (years, at birth)	NA	36	41	48	50	56
Total fertility rate (per woman)	5.8 [b]	5.6	5.7	6.0	5.5	6.6

[a] 1975
[b] 1930

25X

Table A-2

Thousand persons [a]

Labor Force and Employment by Economic Sector

	1937	1947	1960	1970	Estimated 1980
Agriculture and fishing	4,023	4,091	4,311	4,879	4,984
Industry	505	709	899	1,886	2,390
Mining and quarrying	362	570	20	33	
Manufacturing			690	1,367	
Electricity, gas, and water	22	27	35	62	
Construction	121	113	154	424	
Other	1,288	1,845	2,399	3,467	4,374
Transport, storage, and communications	141	203	251	480	
Trade, restaurants, and hotels	439	593	617	857	
Finance, insurance, business services				88	
Community, social, and personnel services	704	1,050	1,315	1,760	
Of which:					
Public administration and defense	Negl	Negl	Negl	906	
Not classifiable	3	0	216	182	
Total employed	Negl	Negl	7,609	10,132	11,748
Unemployed	Negl	Negl	173	838	99
Total labor force	5,816	6,645	7,782	10,970	11,847

[a] Because of rounding, components may not add to the totals shown.

25X

Table A-3

Percent

Labor Force Participation by Age and Sex, 1976

Age	Males	Females	Total
6-11	21.8	8.1	15.2
12-14	34.0	5.6	20.8
15-19	49.9	5.1	28.8
20-24	71.7	12.4	41.9
25-29	92.8	10.8	50.8
30-39	97.5	6.7	51.4
40-49	96.9	3.9	50.9
50-59	96.0	2.9	50.4
60-69	65.0	4.6	33.7
70 and over	35.4	0.1	16.9
6 and over	63.4	6.6	34.5
12 and over	74.1	6.3	40.6

countries. In 1976 the share of females aged 6 and over in the labor force amounted to 6.6 percent, compared with 5.5 percent in 1960. Women in the 20- to 24-year age group are most likely to be found in the work force; thereafter, participation drops off sharply. Females have gained by far the greatest acceptance in the largest cities, where participation rates average 2 percentage points above the urban average and 5 percentage points above the overall average. Although female participation in agriculture has dropped sharply in recent decades, a rise in the share of rural women employed in nonagricultural activities has prevented a corresponding decrease in rural female participation rates. Female participation in agriculture remains highest in the cotton-producing governorates of Kafr el Sheikh and Behera in Lower Egypt.

25

25

Table A-4

Percent

Labor Force and School Participation Rates, by Region, 1976 [a]

			Urban			Rural		
	All Egypt	Urban Governorates [b]	Lower Egypt	Upper Egypt	Urban Average	Lower Egypt	Upper Egypt	Rural Average
Males								
Labor force	63.4	58.4	58.2	57.6	58.2	67.4	70.0	68.7
Full-time school	28.2	32.7	32.6	33.4	32.8	27.0	21.2	24.1
Retired/handicapped	3.5	4.1	3.6	4.5	4.0	2.7	3.5	3.1
Other	4.9	4.8	5.6	4.5	5.0	2.9	5.3	4.1
Females								
Labor force	6.6	11.5	8.5	7.2	9.5	4.8	3.6	4.3
Full-time school	17.5	30.3	25.8	20.7	26.5	12.7	7.0	10.3
Other	75.9	58.2	65.7	72.1	64.0	82.5	89.4	85.4

[a] Population aged 6 and older.
[b] Cairo, Alexandria, Suez, and Port Said.

25

Table A-5 Thousands Persons

Educational Structure of the Labor Force, 1976 [a]

	Total	Males	Females
Illiterate	4,848	4,668	180
Read and write	2,493	2,432	61
Primary school graduates	638	597	41
Secondary school graduates	1,032	739	293
College graduates	526	406	120
Total	9,537	8,842	695

[a] Aged 15 and older.

[redacted]

As a result of the uneven expansion of the educational system in the last 20 years and the heavy outmigration of skilled workers to neighboring Arab countries since 1970, the labor force in Egypt is characterized by a high level of illiteracy, a shortage of skilled workers, and a surplus of college graduates (table A-5). Illiterate males are most heavily employed in agriculture. In 1976, however, some 30 percent of the males aged 15 and older working in nonagricultural sectors were illiterate; such males composed 92 percent of the workers in retail trade, 86 percent of those in domestic services, and 48 percent of those in industry and transport. Only 26 percent of the female labor force participants were illiterate in 1976; they were also concentrated in agriculture. In 1976 skilled workers aged 15 and older (defined as secondary and primary school graduates of both sexes) numbered only 1.7 million, 18 percent of the total labor force (32 percent of the nonagricultural labor force)—low for a country at Egypt's stage of economic development. The scarcity has put strong upward pressure on wages for skilled workers compared with either college graduates or with illiterates. [redacted]

At 526,000 or 5.5 percent of the labor force in 1976, the number of economically active college graduates appears to be excessive. For example, the Egyptian ratio of college graduates to other primary and secondary school graduates is 32 percent, well above the US ratio (for whites) of 27 percent. In response to serious unrest among college students in late 1968 that was triggered largely by mounting difficulties in finding jobs,[7] the Egyptian Government has since then guaranteed employment in government administration or state-owned enterprises to holders of college degrees. As a result many college graduates in Egypt are performing tasks that could be performed equally well by workers of lower educational attainment. [redacted] 25X

Employment. Despite rapid labor force growth, the Egyptian governments have managed to generate enough jobs to meet the needs of the labor force during much of the past 20 years. They have been helped by the heavy manpower needs of the armed forces and exceptionally rapid economic growth (6.1 percent annually). Over the full period, an average of 207,000 new jobs were created annually, compared with an annual labor force growth averaging 203,000. From 1962-74, however, employment growth of this magnitude was made possible partly by policies that required government-owned enterprises (which now account for some 75 percent of nonagricultural activity) to take on more employees than they needed. Job market conditions have greatly improved with the large rise in output since 1974 and unemployment has been substantially reduced; total employment is currently growing by more than 400,000 annually and now stands at 11.7 million. [redacted] 25X

About 84 percent of the increment in employment since 1960 has been absorbed by nonagricultural activities. With the acceleration of industrial expansion, employment in industry rose nearly twofold, increasing its share of total employment from 12 to 20 percent. At the same time, employment in trade and finance, transportation and communications, and services (including government administration and defense) grew by about 80 percent and has come to account for 37 percent of the total. While much of the latter gain has been in low-productivity jobs in such fields as personal and domestic services and retail 25X

[7] Student demands also included greater participation in college management, liberalization of the curricula, and more popular participation in government. Joined by young unemployed workers, in November the students underscored their demands by staging three days of mass demonstrations that started in Mansoura and quickly spread to Cairo, Alexandria, and other cities. The demonstrations were suppressed by the Army, leaving scores dead. [redacted] 25X

trade, a sizable share represents an increase in relatively well-paid jobs in large-scale enterprises, government administration, and the military. Expansion of the armed forces probably accounted for about one-eighth of the increase; Egypt's military forces now number about 500,000—again second only to Turkey in the Middle East.

Reflecting the slow growth of agricultural output, its already high labor intensity, and the lack of additional land suitable for farming, agricultural employment increased by only 7 percent during 1937-60 before jumping about 16 percent in the last 20 years, to 5.0 million (42 percent of the total). Although major projects were initiated to reclaim desert lands, these have not met expectations. The rise mainly reflects increased demand for labor stemming from the shift to perennial farming for many crops made possible by completion of the Aswan High Dam in the early 1960s. Despite expropriation and redistribution of farms in excess of 20 hectares in the decade following the revolution, about 60 percent of farmers work for cash wages; the landholdings of most of the remaining farmers amount to less than 2 hectares per farm unit.[8] In 1976 some 640,000 workers—13 percent of the agricultural labor force—were unpaid family members aged 6 to 14 years.

Women have made substantial progress in recent decades in gaining acceptance in urban economic life. Female employment in nonagricultural activity jumped to 540,000 by 1976, more than double the 1960 level, suggesting that the traditional antipathy to women working outside the home is being eroded by the shortage of skilled male workers and increased female educational levels. At the same time, female employment in agriculture, mostly farm wives, dropped by 110,000. In 1976 only 22 percent of the females in the labor force worked in agriculture. Nonagricultural female employment is largest in health,[9] education, and welfare services, where females made up 38 percent of total employees, followed by trade and finance (12 percent), government administration (10 percent), and manufacturing (7 percent) (table A-6).

[8] About 65,000 farm owners hold farm units of 4 to 20 hectares totaling about 400,000 hectares.

[9] About one-fourth of Egypt's physicians are females, for example.

Unemployment and Underemployment

One result of the relatively slow rate of job creation between 1960 and 1974 has been a large increase in the difficulty new labor force entrants encounter in finding employment. At 2.2 percent of the labor force in 1960, joblessness jumped sharply after the end of the 1956-65 boom and soared to some 11 percent in 1968 following the closure of the Suez Canal. By the time of the census in 1976—the second year of the current boom—some 838,000 Egyptians (7.6 percent of the labor force) were unemployed. Of these, 95 percent were seeking their first jobs, and nearly one-third were in the 20- to 29-year age group, mostly with secondary school or college training. Only 5 percent of the jobless—about 40,000 persons—were experienced workers. As a result of the greater difficulty they encounter in obtaining their first jobs, 30 percent of the females in the labor force were unemployed compared with 5.6 percent of the males (table A-7). For men, urban unemployment rates substantially exceed rural rates, mainly because rural-urban migration tends to depress rural unemployment.[10] With the acceleration of job creation and out-migration to other Arab countries since 1976, we estimate that by 1980 unemployment had slipped to 100,000, less than 1 percent of the labor force

In the past, most observers have considered the seasonality of agriculture as the main source of underemployment in Egypt. With the stagnation of agricultural employment during 1937-60, the increase in perennial cropping after 1962, and the apparent rise in the share of rural residents holding nonagricultural jobs, agricultural underemployment probably is now much reduced.[11] During the 1966-74 period of economic stagnation, underemployment (in the sense of featherbedding) became substantial in urban areas with the hiring by the public sector of unneeded college graduates, discharged military personnel, and other workers in order to hold down open unemployment. While still a significant factor, urban underem-

[10] Higher unemployment rates for women in rural areas, most of whom are seeking nonagricultural employment, largely reflect their lower mobility.

[11] Only 84 percent of employed rural residents aged 6 and older were classified as having jobs in agriculture in 1976

Table A-6 Thousands Persons

Structure of Employment, 1976 [a]

	Males	Females	Total	Aged 6-14	Age 65+
Agriculture, forestry, and fishing	4,723	156	4,879	789	179
Agriculture and inland fishing	4,629	153	4,783	775	176
Wood cutting and charcoal	1	NEGL	1	NEGL	NEGL
Sea fishing	92	2	94	14	3
Extraction	32	1	33	1	NEGL
Crude oil and natural gas	10	NEGL	10	NEGL	NEGL
Extraction of ores	4	NEGL	4	NEGL	NEGL
Other mining and quarrying	18	1	19	1	NEGL
Manufacturing	1,277	90	1,367	69	17
Food, beverages, and tobacco	164	9	173	6	2
Textiles, clothing, and leather	499	52	551	27	6
Wood and wood products, including furniture	158	3	161	19	5
Paper, paper products, and printing and publishing	41	3	44	1	NEGL
Chemicals and chemical petroleum, rubber, and plastic products	85	11	96	1	NEGL
Glass, pottery, and other nonmetallic mineral products n.c.c.	65	3	68	4	1
Basic metal products	60	2	62	1	NEGL
Fabricated metal products, machinery, and equipment	196	7	203	9	2
Other manufacturing	9	NEGL	9	1	1
Electricity, gas, and water	57	5	62	NEGL	0
Electricity, gas, and steam	41	4	45	0	0
Water	16	1	17	NEGL	0
Building and construction	417	7	424	15	6
Commerce, restaurants, and hotels	808	49	857	35	41
Wholesale trade	50	5	55	1	1
Retail trade	661	40	701	30	37
Restaurants and hotels	97	3	100	4	3
Transportation, storage, and communications	464	16	480	6	4
Transport and storage	417	9	426	6	4
Communications	47	7	54	0	0
Finance, insurance, real estate, and business services	71	17	88	1	1
Financial institutions	39	9	48	NEGL	NEGL
Insurance	12	5	17	NEGL	NEGL
Real estate and business services	21	1	22	1	1

Table A-6 Thousands Persons

Structure of Employment, 1976 [a] (continued)

	Males	Females	Total	Aged 6-14	Age 65+
Community, social, and personal services	1,433	327	1,760	44	16
Public administration and defense	813	93	906	0	0
Sanitary and related services	20	1	21	0	NEGL
Education, health, and related community services	277	170	547	NEGL	3
Recreational and cultural	27	5	32	NEGL	NEGL
Personal and household services	291	58	349	44	13
International and other	4	1	5	NEGL	NEGL
Not adequately described	151	31	182	31	2
Total	9,432	699	10,132	992	266

[a] Because of rounding, components may not add to totals shown.

25X

Table A-7 Percent

Unemployment Rates, 1976 [a]

	Male	Female
Total, age 6 and over	**5.6**	**30.0**
Age 6-11	29.0	73.0
Age 12-14	24.0	41.0
Age 15-19	8.3	29.0
Age 20-24	12.8	34.0
Age 25-29	3.8	7.9
Urban, age 6 and over	**7.2**	**25.0**
Urban governorates [b]	7.3	22.0
Lower Egypt	7.2	30.0
Upper Egypt	6.9	27.0
Rural, age 6 and over	**4.5**	**38.0**
Lower Egypt	4.5	32.0
Upper Egypt	4.3	47.0

[a] About 95 percent of the unemployed were seeking their first jobs. The similarity of unemployment rates among Egypt's main geographical regions masks fairly wide differences among the governorates. Although other factors are involved, in Egyptian urban areas unemployment rates for males tend to be high where net in-migration is large; in rural areas unemployment rates for males tend to be low where net out-migration is large.
[b] Cairo, Alexandria, Suez, and Port Said.

ployment probably has also decreased markedly with the large expansion of nonagricultural output since 1974. In 1977 employment guarantees in public sector enterprises were terminated, remaining in effect only in public administration.

25X

Internal Migration and Urbanization

Reflecting the expansion of urban jobs and the relative attractiveness of urban life to many Egyptians, rural-to-urban migration since the turn of the century has helped to steadily increase the share of the population in towns and cities with 20,000 inhabitants or more.[12] Since 1947 the urban population has grown at an average rate of 3.3 percent annually, boosting the urban share of the population to 37 percent in 1960 and 44 percent in 1976—still well below the urban shares in most of Egypt's Muslim neighbors. The estimated net flow of migrants to urban areas averaged 85,000 to 95,000 annually during 1947-60, and 145,000 to 155,000 annually after 1960. The rural population nevertheless continued to increase by 1.7 percent annually during 1948-76.

25X

[12] Egypt defines the urban population as the residents of the urban governorates, and the capitals of (a) other governorates and (b) districts (markaz). Most observers believe this equivalent to including the residents of all towns and cities with populations of 20,000 or more.

25X
25X

Cairo, the country's major industrial center as well as its capital, has been the preferred destination for most rural-urban migrants. In 1960 about 30 percent of Cairo's residents were migrants, and the share has grown since then. During 1947-60 seven out of 10 rural migrants ended up in Cairo; since then, the number has climbed to nine out of 10. As a result, the Cairo metropolitan area, with a 1976 population of 8.3 million (nearly double the 1960 figure), now accounts for half the nation's urban population.

Before 1960 some 17 additional cities of 100,000 or more inhabitants (1976 population) were important destinations of migrants; as a group, they have since lost much of their attraction. Notable among these were the diversified industrial city of Alexandria (the nation's second largest urban area), the Lower Egyptian cities of Tanta, Mahalla el Kubrah, and Mansoura (in the center of the nation's cotton growing and processing area), and the Canal cities of Port Said, Suez, and Ismailia. The three Canal cities lost sizable shares of their populations—largely to Cairo—as a result of the closure of the Suez Canal from 1967-75, although they were well on the way to recovery by 1976. The 17 cities accounted for 33 percent of the total urban population in 1976, down from 37 percent in 1960. Towns and cities of between 20,000 and 100,000 inhabitants have been consistent net sources of migrants to the larger cities; their combined growth fell well below the natural population increase throughout 1948-76.

The typical rural migrant is a young, unskilled male whose first contact in the city is with a friend or relative from his original village. Although he tends to be better educated than the average for either urban or rural areas, recent studies indicating that 30 percent of migrants to Cairo are illiterate place him at about the national average for males in his age group. He is most likely to have come originally from Souhag, Beni Suef, or Kena in the Upper Egypt or Menoufia in Lower Egypt.[13] He usually finds a job quickly, soon marries—frequently a girl from his original village, and establishes residence in a quarter of the city occupied predominantly by migrants from his home region. 25X

[13] Based on comparison between actual and natural population increase averaged over the 16 years 1961-76. During the 1970s rural-urban migration apparently originated mainly from Behera in Lower Egypt and Fayoum, Beni-Suez, and Assyout in Upper Egypt, the governorates with the lowest rural unemployment rates for males in 1976.

External Migration

Although Egypt traditionally has exported lawyers, teachers, physicians, and other professional workers to neighboring Arab countries, large-scale out-migration did not get under way until after the 1973-74 oil price hikes. The heaviest outflows from Egypt occurred in 1974-75, with Egyptian workers going not only to the oil-rich countries such as Libya, Saudi Arabia, Iraq, and Kuwait, but also to such countries as Jordan and the Sudan to replace migrants from those nations to the oil-rich countries. By 1976 the estimated number of Egyptian workers in the other Arab countries numbered about 500,000, some 4 percent of the Egyptian labor force; with their dependents, they totaled about 750,000. While professionals remained important in the stepped-up outflow, large numbers of skilled and unskilled workers, especially construction workers, were also included. For example, the 1975 Kuwaiti census distributes the skill levels of the 37,500 Egyptian workers there at the time as follows: professional and semiprofessional, 32 percent; skilled and semiskilled, 34 percent; and unskilled 34 percent. 25X

Continuing strong demand abroad sustained a substantial net outflow of Egyptian migrants in 1977-80. 25X
We estimate that by 1980 Egyptian workers abroad numbered about 1.1 million, an increase of some 600,000 over the 1976 figure. Included among recent emigrants are increasing numbers of middle class former public sector employees (both military and civilian), even some from the subcabinet level. But since the largest number by far of workers emigrating after 1976 have been skilled and unskilled construction, factory, and farm workers probably not taking their families, we estimate that the increase in worker dependents abroad was hardly more than 50,000 persons during the period. Even though external migration has aggravated shortages of certain types of skills—from the good manager to the experienced carpenter or welder—the departure of many unskilled and semiskilled workers (from one-third to one-half of the total) probably has contributed significantly to the current low level of Egyptian unemployment. 25X 25X

Table A-8

Middle East: Comparative Socioeconomic Indicators [a]

Country	Per Capita GDP [b]	Urbanization [c]	Literacy Rate [c]	Life Expectancy [d]	Infant Mortality [e]	Death Rate [f]
Arab States						
Egypt	290	44	42	55	90	13
Algeria	1,390	52	25	55	127	14
Bahrain	5,130	78	40	61	78	9
Iraq	1,720	66	30	55	NA	13
Jordan	870	42	52	58	88	11
Kuwait	11,780	NA	60	68	39	5
Lebanon	NA	60	86	61	65	11
Libya	7,280	30	35	50	139	13
Morocco	510	38	20	51	162	15
Oman	4,880	NA	10	47	NA	19
Qatar	20,000	NA	25	NA	NA	10
Saudi Arabia	9,800	NA	15	48	NA	18
Sudan	320	20	8	45	141	19
Syria	770	49	40	62	81	9
Tunisia	910	NA	50	53	135	8
UAE	15,500	NA	25	NA	NA	9
Yemen (Aden)	310	33	10	NA	NA	21
Yemen (Sana)	330	NA	15	NA	NA	25
Other						
Iran	2,160	47	37	57	112	12
Turkey	1,130	45	62	57	125	12

[a] Data for Egypt are for 1976. For the remaining countries, data are for the most recent year available, mostly in the mid-1970s; data on life expectancy, infant mortality, and crude death rates are mostly evaluated estimates.
[b] US dollars.
[c] Percent.
[d] Years, at birth.
[e] Per 1,000 live births.
[f] Per 1,000 population.

25)

Welfare

Egyptian socioeconomic advances, which have boosted the country's socioeconomic ranking among its Muslim neighbors in the past 20 years (table A-8), have been concentrated in four areas: jobs, health care, secondary and higher education, and low cost food supplies, oil products, housing, and public services, effected through price controls and subsidies. Despite rapid population increase and diversion of much of the nation's resources to the war effort during 1967-73, welfare benefits in these areas have been striking, especially for the urban population. They have made a substantial contribution to Egypt's achievement of a high degree of social stability, at least by Middle Eastern standards. At the same time, most of these programs have helped to build up a vast clientele of Egyptians dependent on their continuation, thus dangerously reducing the government's political freedom to redirect or prune them as changing circumstances require

25)

Health Care. Apart from jobs, some of the most striking socioeconomic gains in recent decades have been made in the area of health care. This has been largely a byproduct of the increase in trained medical personnel. Life expectancy (at birth) has risen from 41 years in 1947 to 48 years in 1960 and 56 years in 1980, significantly above that in most of Egypt's Muslim neighbors.

Aided by a large increase in the number of physicians (18,000 in 1971 compared with 4,800 in 1950), the greatest progress apparently has been made in the control of epidemic and other communicable diseases. Progress against diseases caused by inadequate infrastructure, such as poor sanitation, has been less notable. While improvements in potable water supplies have reduced deaths from gastrointestinal diseases, along with parasitic diseases they remain among the nation's top killers—especially of infants. Although reduction of infant mortality—mainly through improved maternity care—was a major factor in increasing life expectancy before 1960, since then progress against infant deaths—currently 90 per 1,000 live births compared with 108 in 1960—has slowed sharply. Infant mortality in Egypt remains far above the rates in nearby Jordan, Iraq, and Syria

Education. Since the Revolution, Egypt has made remarkable progress in expanding the educational system, albeit most of the gain in primary education came before 1960. Although foreign groups had long sponsored private schooling, the public primary education system did not even get started until the 1920s. By 1954 some 42 percent of children in the primary school age group (6 to 11) were enrolled. After school attendance became free and compulsory (where schools were available), the primary enrollment rate shot up to 61 percent by 1960. Since then, the primary enrollment rate has stagnated, edging up to 64 percent by 1976 (table A-9). More than half the gain since 1960 represents increased female enrollments; the male enrollment rate rose only from 72 percent to 74 percent during the period.[14] The stagnation of primary enrollment rates reflects the government's neglect of the many rural areas that still have few or no primary schools.

[14] About 80 percent of primary students who do not continue their educations beyond the primary level stay long enough to become literate but drop out before earning primary certificates.

Table A-9 Percent

School Enrollment Rates for Full-Time Students, 1976

	Both Sexes	Male	Female
Egypt, age 6 and older	23.0	28.2	17.5
Age 6-11	64.4	73.9	54.1
Age 12-14	52.7	62.9	40.9
Age 15-19	36.8	45.5	27.1
Age 20-24	14.0	19.9	8.1
Age 25-29	1.9	3.1	0.8
Urban, age 6 and over	29.7	32.8	26.5
Of which: Urban governorates [a]	31.6	32.7	30.3
Lower Egypt	29.3	32.6	25.8
Upper Egypt	26.8	33.4	20.7
Rural, age 6 and over	17.5	24.5	10.3
Of which: Lower Egypt	20.4	27.0	12.7
Upper Egypt	14.2	21.2	7.0

[a] Cairo, Alexandria, Suez, and Port Said.

Expansion of public primary education increased the literacy rate from 15 percent in 1937 to 42 percent in 1976 (of those aged 10 and older), well above that in many of Egypt's Muslim neighbors (Lebanon, Jordan, Turkey, Kuwait, and Tunisia are the exceptions). The literacy rate among Egyptian males, 56 percent, far exceeds that among women, 27 percent. As a result of the increased emphasis placed on female education since the Revolution, however, this is changing. In 1976 in the group aged to 10 to 24 years (the children born since the Revolution), 42 percent of the females were literate, compared with 66 percent of the males. Of children in the group aged 10 to 14 years, 72 percent of the males and 50 percent of the females were literate. Despite this educational progress, the number of illiterate males rose by 800,000 during 1961-76, while the number of illiterate females soared by 2 million, to 9.6 million.

The Egyptian Government clearly has given one of its highest priorities to the expansion of secondary and higher education, especially since the late 1960s. School facilities have been increased enormously. All students who are able to meet academic standards are admitted free of charge. By 1976 half the males in the group aged 15 to 19 years and 20 percent in the group aged 20 to 24 years were enrolled full time in school. These enrollment rates equal or exceed those in the United States and West Germany. Even though the effect of the jump in enrollments since the late 1960s had not yet been fully felt, the number of Egyptians holding advanced degrees was large in 1976, totaling 526,000 (406,000 males, 120,000 females). At 2.2 percent of the population aged 10 and older, the share of Egyptians holding advanced degrees compared well with that of some European countries. Although excessive emphasis on liberal academic disciplines has intensified the difficulties for Egyptian college graduates in finding jobs in recent years, this is beginning to change.

The combined effect of the school enrollment and employment drives has been to hold below 10 percent the proportion of urban males aged 10 and older who are neither in school nor in the labor force—both nationally and within each governorate. This proportion is strikingly low by the standards of LDCs (especially Muslim countries) and comparable with the proportions in the industrial nations.

Housing. Although rent controls keep urban housing costs very low, Egyptians are poorly housed. Perhaps in no other area of meeting the needs of the urban population has Egypt fallen farther behind than in providing modern housing. During 1961-73 only about 400,000 new urban dwelling units were constructed—at a time when the urban population was increasing by 400,000 persons, or some 80,000 families annually. Despite the construction of new urban luxury housing during the current boom, we estimate the increase in the backlog of unmet urban needs at 800,000 to 1 million dwelling units since 1960.

Rural housing does not appear to constitute a problem. Rural dwellings, essentially unchanged from Roman times, typically are easily built, reed-roofed adobe buildings with two or three small, dimly lit rooms housing five to eight persons as well as the family's livestock. These houses are closely packed in congested villages to limit the sacrifice of cultivable land. While crude, they well suit the needs of their *fellahin* owners, who tend to prefer them to modern rural bungalows. 25X

While neglecting housing construction, the government has made efforts during the past 20 years, especially in urban areas, to provide potable water and electricity. In 1976, 61 percent of urban dwellings had inside piped water, compared with only 4 percent of rural dwellings. Some 36 percent of rural dwellings had no access to piped water at all, either inside the dwelling or nearby, compared with 12 percent of urban dwellings. At the same time, 77 percent of urban dwellings were equipped with electricity, compared with 19 percent of rural dwellings. 25X

Income Distribution. The government's socioeconomic programs, together with the expropriation of most private business and large agricultural landholdings in the late 1950s and early 1960s, contributed both to a substantial improvement in the well-being of the urban population generally and, until the mid-1970s, to the replacement of Turko-Egyptian landowners and private businessmen by a new Egyptian elite composed of the upper levels of the government bureaucracy, the military, and government enterprises. Moreover, the expansion of higher education increased the opportunities for the able and ambitious to join its ranks. At the same time, the *fellahin* also received new benefits, such as the redistribution of most of the expropriated agricultural land to landless farmers, reduced farm rents, and increased wages for farm laborers. These benefits placed a floor under rural incomes and helped to obscure the fact that agriculture was in effect being heavily taxed to provide low-cost food for the urban population. 25X

25X

25X

As a result of the very substantial gains from accelerated economic growth since 1974, most of the urban populace—although not nearly as well housed—is now much better fed and clothed than on the eve of the 1967 war.[15] But with Sadat's broad encouragement of the private sector, private businessmen [16] and their employees (together with the recipients of worker remittances) are capturing the greatest share of the benefits. Many urbanites fear that the government will again try to terminate the subsidies and greatly increase prices.[17] Middle class employees in public administration, the military, and government enterprises—including the previous elite—are unhappy because their wage increases are limited roughly to the rise in the official cost of living index which, heavily influenced by controlled prices, substantially understates the true cost of living for all but the lowest income groups [redacted] 25X

[15] Annual gains in real personal consumption per capita, which averaged 1.3 percent in 1966-74, soared to 7 percent in 1975-77 and probably continued close to this rate through 1980. [redacted]

[16] Mostly in real estate, finance, business services, hotels and other tourist facilities, construction, and trade. [redacted]

[17] In January 1977 the government announced without warning that because of cuts in subsidies the prices of such staples as bread, flour, tea, sugar, butane, and gasoline would double. The result was a spontaneous explosion of discontent by the urban masses that shook the Sadat government, with fierce rioting that spread from Cairo and Alexandria to numerous other cities, forcing Sadat to order the Army into the streets and suspend the price increases. At least 50 people were killed and more than 700 injured. A threatened repetition in August 1980, when rumors spread of another attempt to raise prices, was averted only by swift government action to deny them [redacted] 25X 25X 25X

Appendix B

Methodological Notes

Projecting Labor Supply

Our projected labor participation rates are based on the job market conditions we consider most likely over the next five to eight years; beyond that, they are increasingly conjectural. Even in the near term, they could change significantly if job market conditions differ substantially from what we expect. For example, if economic growth and job creation were sufficiently rapid to produce excess demand for labor, we would expect participation rates, especially for women, to rise to close the gap. The effect on female participation would be magnified if strong economic growth were accompanied by heavy external migration of male workers. Since the size of the labor force is highly sensitive to changes in participation rates, only comparatively small changes would be required to effect adjustments. For example, a 2-percentage-point increase in the 1985 participation rate for the 20 and older age group would add almost a half million workers to the labor force. 25X

Projecting Labor Demand

To evaluate job market conditions in the years ahead, we have examined three alternative economic growth scenarios—high, low, and intermediate—covering (a) the next five years, and (b) the final 15 years of this century. In each instance we have varied the rates of growth of output and employment for industry and other nonagricultural sectors to take account of historical differences in rates of increase in output and in labor productivity growth at alternative GDP growth rates. Demand for labor in each sector is associated with a specific level of labor productivity. Labor demand is derived by dividing output by average labor product; that is, $L=O/P$ where L equals employed workers, O equals value added (in 1975 Egyptian pounds), and P equals average labor product. 25X

Our projections are based on the historical relations prevailing during 1961-80. During this period, when economic growth was led by services, each 1-percentage-point gain in real GDP generated a rise in total employment of about one-fourth of a percentage point. Put another way, each 1-percentage-point increase in employment required a 4-percent rise in real GDP. Accompanying these gains were average annual improvements in productivity of about 2 percent in agriculture, 2.5 percent in industry, and 5 percent in other nonagricultural sectors—transportation and communications, trade and finance, and services. Largely because of changing government job-creation and military mobilization policies, these relationships did not remain stable throughout the period: when growth of industrial output slowed, productivity gains dropped far more than job creation, while the reverse held for the two other sectors. 25X

The ratio of the increase in employment to the rise in real GDP in Egypt during 1961-80 is unusually low by LDC standards. This mainly reflects deficiencies in deflating Egyptian national accounts—particularly the output of services—that cause an overstatement of real economic growth which shows up as exaggerated gains in productivity. In our projections we assume no change in inflation rates or in present methods for deflation of Egyptian national accounts. If, in fact, inflation drops or deflation methods are improved during the next five to 10 years, the job-creating capabilities of a given observed real growth rate could be somewhat increased. [redacted] 25X

In making our projections, we adjusted the historical relations between employment and productivity growth for agriculture and other nonagriculture to conform to the more usual experience that reduced capital accumulations will permit some employment growth to take place in these sectors even at fairly low growth rates. One effect of these adjustments is to boost the rise in total employment by about 0.3 percentage points for each 1-percentage-point gain in real GDP at the 6-percent growth level. [redacted] 25X

Projecting Educational Levels

Our projection of literacy rates for the population aged 10 and older through the year 2000, based on 1976 census data on literacy rates for each age group, is obtained by a method analogous to the use of labor force participation rates to project the size of the labor force. In 1976 literacy rates for the 10- to 14-year age group correspond very closely to school enrollment rates for the 5- to 9-year age group; our projection assumes that this relationship will hold throughout the 20-year period. Our projection of educational attainment levels for males in the labor force aged 15 and older, based on 1976 census data on educational attainment rates for each age group in the labor force, is obtained by essentially the same method as for literacy rates. We project the increase in educational attainment levels for females in the labor force at one-half the increase for males. [redacted] 25X

Projecting Urbanization

In projecting the size of the urban population, we assume (a) that 1976 urban-rural differentials in dependency ratios and in labor force participation and unemployment rates will remain unchanged throughout the 20-year period and (b) that the proportion of nonagricultural jobs held by residents of rural areas will remain as it was in 1976, namely 18.5 percent. Thus, while nonagricultural employment is the most important single factor, urbanization is in fact driven by multiple factors in our projection. [redacted] 25X

This report is based heavily on data contained in the detailed 1976 Egyptian census, as adjusted by the Foreign Demographic Data Division of the US Bureau of the Census to correct for the undercounting of certain (mostly young) age groups. A major effect of the adjustment is to raise the total by 3.8 percent, from 36.6 million as reported by the Egyptian census to 38.0 million. The 1980 population statistics used here are those projected by the Census Bureau from 1976, adjusted by us to reflect the estimated outflow of Egyptian workers and their

dependents to other Arab countries since 1976. Because the population totals from Egyptian censuses prior to 1976 shown here would not otherwise be comparable with our adjusted 1976 figures, we have adjusted them upward by 3.8 percent as well; it is anyway not unlikely that the previous censuses also failed to count all citizens. Throughout the report, we have applied the population adjustments uniformly to all of the country's geographic and administrative subdivisions.

The census data have been supplemented by reference to the relatively small but growing unclassified literature on current (since 1970) issues in Egyptian demography, economics, sociology, and politics. None of this literature draws on the results of the 1976 census. The following bibliography lists the key unclassified sources used in the preparation of this report.

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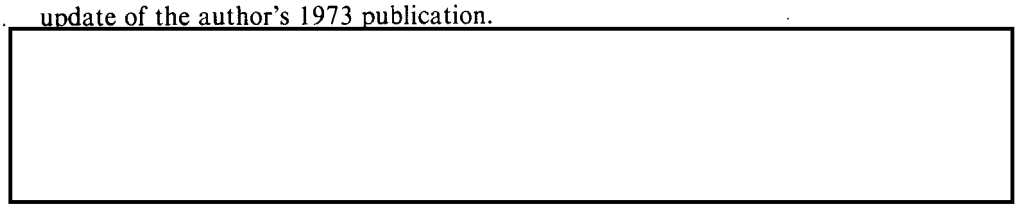

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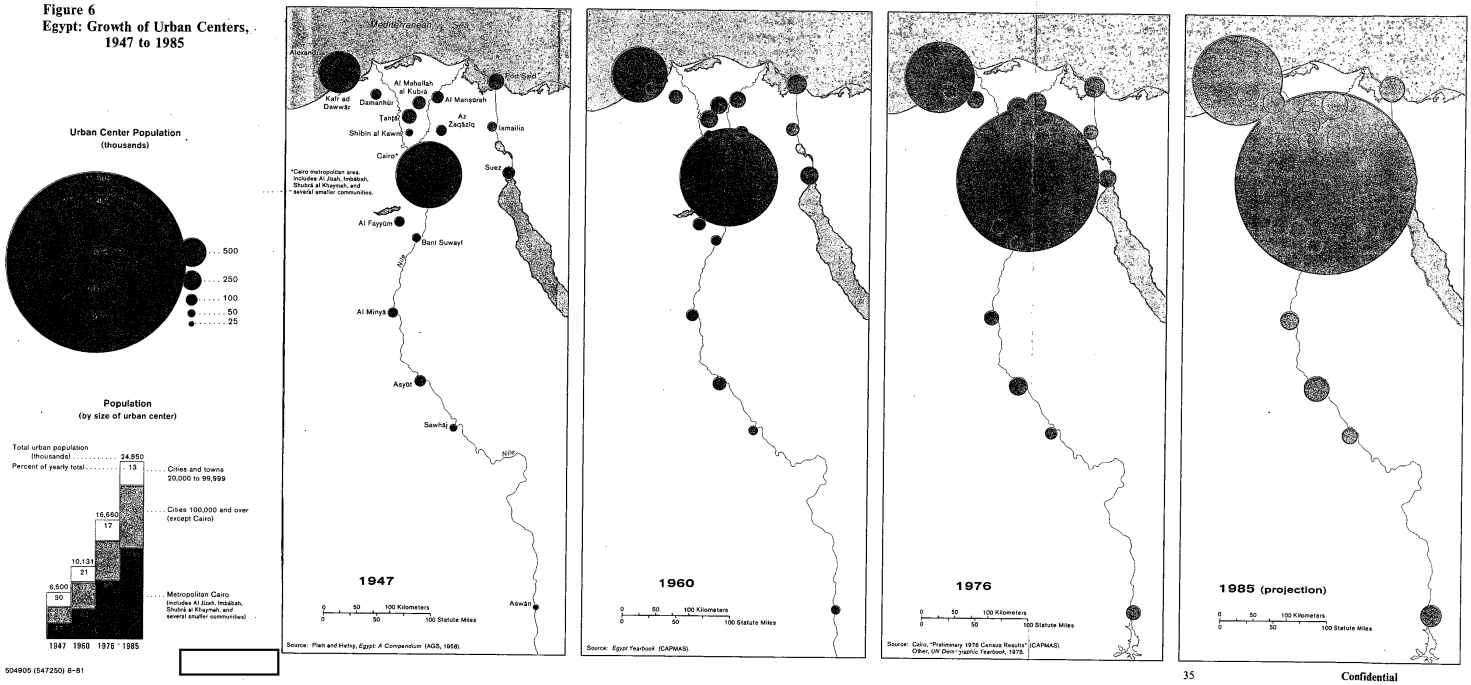
Figure 6
Egypt: Growth of Urban Centers, 1947 to 1985



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