Country Profiles

Issues in Population and Development - Syria*

by

Khaled Alloush
Ismail Sirageldin
Department of Population Dynamics
The Johns Hopkins University

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I. Introduction

The purpose of this paper is to highlight some main themes in developmental planning that have important demographic content. Different issues that have relevance to planning are selected. The purpose is to emphasize that changes in population dynamics--its processes or structure--are an integral part of the process of development. For example, by planning for different and better trained personnel, by mobilizing physical resources, delivering new services, or organizing new coordinating agencies (planning)--all of that is part of the general process that implies changes in population dynamics. If this general process does not flow smoothly, there will be mal-absorption of personnel, especially acute in the traditional sector, leading to population redistribution and further adjustment.

The present paper is based on a review of the most current economic-demographic data. It is not intended to provide a critical or thorough analysis of the country's economy or its population dynamics. However, it is hoped that it will stimulate new policy and research direction in the field of population and development.

II. Country Background

The Syrian Arab Republic covers an area of about 185,000 square kilometeres (71,500 squares miles) stretching from the Mediterranean shore and the Lebanese border on the west to the Iraqi border on the east, and from the Turkish border on the north to the Jordanian border on the South. A narrow and fertile strip of land along the Mediterranean is flanked by the Alawite Mountains which run parallel to the sea. East of the mountains, the fertile Jezira, which contains the bulk of the cultivatable land, pasture and steppe, stretches between the Euphrates and Tigris Rivers valley. With an estimated population of 7.6 million in 1977, Syria is not densely populated and the cultivatable land per inhabitant (about 1.1 hectare or 2.7 acres) compare favorably with that of other Middle Eastern countries. However, a lack of proper irrigation facilities makes agricultural production dependent on variations in rainfall. An agrarian reform law promulgated in 1958 and modified in 1963 limits the size of individual holdings. Wheat, barley and cotton are the principal crops. Major industries have been nationalized. Industrial growth has been rapid since the 1960's with petroleum, Syria's most valuable natural resource, providing an investment base.

About 90 percent of the population is Arab; the most important minorities are Kurds, Armenians and Turks. Islam is professed by about 87 percent of the people with the remaining 13 percent being mainly Arab and Armenian Christians. Arabic is the official language, but French and English are spoken in government and business circles.

Syria was conquered by the Mongols in 1400, absorbed by the Ottoman Turks in 1517, and became a French-mandated territory under the League of Nations in 1920. A republican government, formed under wartime cinditions in 1941, secured the evacuation of French forces in April 1945 and declared the country fully independent on April 17, 1946. Political development was subsequently

marked by an alternation of weak parliamentary governments and unstable military regimes.

Since March 8, 1963, Syria has been under a socialist regime which draws its political strength from a close association with the nationalist and socialist Baath (Arab Socialist Renaissance) Party. In November, 1970 General Hafez al-Assad became president and subsequently was elected to the post of secretary general of the Baath Party. A new constitution was approved in 1973, after establishing a legislature (the first time since 1966), and a national election was held (the first since 1962) the same year with the Progressive Front of National Union, consisting of the Baath Party and its allies, winning the vast majority of seats in the legislative People's Council.

According to the 1973 Constitution, Syria is a "Socialist Popular Democracy." The president is elected by popular referendum for a seven-year term. The president appoints the prime minister and other cabinet members, military personnel and civil servants. Legislative authority is vested in a People's Council, which is directly elected for a four-year term.

For administrative purposes Syria is divided into 13 provinces and the City of Damascus, which is treated as a separate entity. Each of the provinces is headed by a centrally-appointed governor who administers in conjunction with an elected provincial council.

III. The Issues

Introduction. Six issues are selected as illustrative examples of population-development issues in Syria. In this introduction, a brief review in selected growth patterns and productivity is presented as a background for that discussion. It will be evident from this discussion that non-demographic factors played an important role in the Syrian economy during the past two decades. Nevertheless, the role of population dynamics, especially that of international migration and the persistence of very high fertility, will have an increasing influence in the future path of socio-economic change in Syria.

Based on data presented in the Syrian Statistical Abstract, 1971 and 1976, figures are given below for employment, unemployment and labor force (in thousands):

Table 1

Year	Employment	Unemployment	Labor Force
1960	1069	110	1179
1970	1471	100	1571
1976	1715	213	1828

Source: 1971 and 1976 Statistical Abstract of Syria (different tables).

The reasons for choosing these figures are as follows:

1. For 1960 and 1970 the data were derived from censuses taken at that time.
2. The 1976 figures are based on a sample survey which may not be comparable with those of the 1960 and 1970 censuses, yet seem plausible in light of the accelerating out-migration from Syria after 1975 (see Appendix III-a). Comparing figures for 1960-70 and 1970-76, there is an exponential rate of increase in the labor force per

annum (2.87 during 1960-70 and 2.53 during 1970-76). We intend to use these figures, keeping in mind the shortcoming of our conclusion.

From Table 1 in Appendix O we may calculate "the coefficient of differential growth" and "the coefficient of absorption" to assess the dynamics of the overall employment situation. The first coefficient, which is the excess of the annual exponential growth rate of employment in the sector over the growth rate of total employment, measures the speed of change in the proportionate share of the sector in total employment, independent of growth in the latter. While the second coefficient, which is the ratio of the annual growth rate of employment in the sector to the growth rate of total employment, shows the scope of sectoral absorption of new entrants into labor activity.[1] Our calculations are presented in the following table:

Table 2

Coefficients of Employment Dynamics by Sector in Syria

	Coefficient of Differential Growth (%)		Coefficient of Absorption (%)	
	1960-70	1970-76	1960-70	1970-76
1. Agriculture, fishing and hunting	-.25	-7.00	0.89	-1.73
2. Manufacturing	1.00	3.60	1.31	2.41
3. Mining and quarrying	4.92	2.23	2.54	1.87
4. Utilities	-1.86	10.00	0.42	4.91
5. Construction	3.65	6.91	2.14	3.70
6. Transport and communication	1.76	6.92	1.55	3.70
7. Trade	1.58	1.77	1.50	1.69
8. Other sectors	-2.76	6.82	0.13	3.66

As this table shows, fundamental changes occurred during the second period regarding the absorptive capacity of each sector. The largest changes occurred in agriculture, utilities and other sectors (which include public administration).

Before we present the growth components of GDP, it may be useful to compare the following indices for the two periods (despite the difference in number of time units).

Table 3

	Index of GDP*		Labor Index		Index of GDP/ per employee	
	1970 (1960 =100)	1976 (1970 =100)	1970 (1960 =100)	1976 (1960 =100)	1970 (1960 =100)	1976 (1970 =100)
1. Agriculture, fishing and hunting	188	163	133	77	141	212
2. Manufacturing	172	187	152	145	112	129
3. Mining and quarrying	6888	313	212	145	3249	216
4. Utilities	287	217	164	227	276	96
5. Construction	133	257	199	177	67	145
6. Transport and communication	205	131	164	176	125	74
7. Trade	153	188	161	130	95	145
8. Other sectors	267	200	104	175	257	114
All	195	184	138	117	141	157

*GDP at 1963 market prices.

Source: 1976 and 1979 Syrian Statistical Abstract.

First, the very high GDP index of mining and quarrying in 1970 reflects the large increase in both output and price of oil. Second, this high figure is related to the sharp decline in agricultural share (from 51 percent in 1970 to 33 percent in 1976) of total employment. GDP per employee in agriculture was much higher during the second period despite the difference in the number of years. Third, in six years, GDP per employee (a proxy for labor productivity) for the whole economy was higher than that for the period 1960-70. Based on data presented in Tables 2 and 3, the growth components can be calculated. They are presented in Table 4.

Table 4

Relative Magnitude of the Components of GDP Growth*

Period	GDP	Employment	Standardized GDP per Employee	Change in Industrial Structure
1960-70	6.7	3.2	3.0	0.5
1970-76	10.1	2.6	4.5	3.0
		Percentage		
1960-70	100	48	45	7
1970-76	100	26	45	29

*For detailed explanation of the calculation, see Ghazi Farooq.

As Table 4 indicates, the share of employment in the GDP growth declined from 48 to 26 percent. There is evidentally a basic structural change. For example, the share of the third coefficient, indicating change in industrial structure (last right column) increased exactly by the difference, keeping the second coefficient constant. Clearly, this table shows a fundamental change in the sources of GDP growth. However, the extent to which these changes are an artifact of data quality and consistency, i.e., a result of changes in sources or coverage of the data, is not known.

The problem with the current analysis of employment dynamics by sector is that it is implicitly assumed that the increase in sectoral employment reflects a real demand for labor on the part of that sector. However, if that were not the case (at least for some sector such as public industry or public services), then we cannot assume the independency between changes in employment level in one sector and the overall level of employment. Another problem or shortcoming with this analysis is that it tells nothing about the interaction among the three components of growth, particularly the effect of possible overemployment on productivity per employee. Thus, the question related to the impact of the level and rate of increase in employment on the performance of the economy remains open.

The same analysis can be carried out for the public sector (industry) where data were available for the period 1970-76 and where effect of population pressure on policy formulation is probably the greatest. Tables 5, 6, and 7 present the situation in that sector.

TABLE 5

Coefficient of Employment Dynamics by Sub-sector in the Public Industry, 1970-76

Industrial Activity	Coefficient of Different Growth (Compare with total employment rate)	Coefficient of Absorption (Compare with overall absorption rate)
1. Manufacturing, food, beverage and tobacco	1.67	1.65
2. Textile, clothing and leather industry	3.35	2.31
3. Wood & furniture industries	5.89	3.30
4. Paper, printing & publishing	2.77	2.08
5. Chemical industries	6.53	3.55
6. Non-metallic industries	0.85	1.33
7. Metal products	17.26	7.74
Manufacturing	3.51	2.37
8. Mining and quarrying	15.71	7.14
9. Utilities	5.40	3.11
Industry	4.92	2.92

Source: Calculated from Table 3 in Appendix 0.

TABLE 6

Index of Labor Supply (employment), Value Added, and Value Added per Employee in the Industrial Public Sector with 1970 = 100

Industrial Activity	Labor Index	Value Added Index	Value Added per Employee Index
1. Manufacturing, food, beverage and tobacco	129	97	75
2. Textile, clothing and leather industries	143	91	64
3. Wood and furniture industries	166	83	50
4. Paper, printing and publishing industries	138	1433	1038
5. Chemical industries and chemical products	172	268	156
6. Non-metallic industries	123	111	90
7. Metal products industries	328	297	91
Manufacturing	145	123	85
8. Mining and quarrying	299	887	297
9. Utilities	161	133	83
Industry	156	240	154

Source: Based on data presented in the Syrian Statistical Abstract, 1976 and 1979.

TABLE 7

Relative Magnitude of the Components of GDP Growth in the Public Manufacturing and Industrial Sectors, 1970-76

Industrial Activity	GDP Growth	Employment Growth	Standardized Product per Employee	Change in Industrial Structure
	Annual Exponential Rate			
Manufacturing	3.2	6.1	-3.5	0.6
Industry*	15.6	7.5	6.3	1.8
	Percentage			
	100	191	-109	19
	100	48	40	12

*This includes manufacturing, utilities, mining and quarrying.

If we compare this table with Table 4, we see a fundamental difference in the source of growth of total GDP and GDP in the public manuf cturing and industrial sectors. In particular, we can see the sharp decline in the value added per employee in the manufacturing sector. Against this background of basic structural changes and apparently implicit demographic pressure, the following economic demographic issues are highlighted.

1. Labor growth and productivity

The contribution of the active population to production is partly influenced by the size of the active group and by the amount of production per worker. Statistics from Syria (Appendix I-a) reveal that employment and labor force have been growing at an estimated annual rate of approximately 6 percent for the period 1961-69 and approximately 3 percent for the period 1970-75. The rates for the 1961-69 period are probably inflated in view of the out-migration of labor from Syria and the unchanging (or the lack of better measurement) low labor force contribution of children and particularly women, who form a rich potential source of labor (Appendix I-a and b). However, the estimates for the 1970-75 period seem to provide a reasonable estimate of the positive rate of growth of the labor force in Syria.

On the other hand, the output per worker seems to be on the decline over the same period in the public manufacturing sector and in agriculture. In the public manufacturing sector, although employment increased at an annual rate of 6.2 percent during the period 1970-76, gross output per employee declined steadily to 67 percent of the 1970 value in 1975 and rose slightly in 1976 to 70 percent of that value (Appendix I-c). Comparison of the trend in the gross output index with the trend in the employment index in the total economy and in the public manufacturing sector gives further evidence of the decline in the productivity per worker in the latter sector (Appendix I-c).

Despite questions that could be raised about the accuracy of the data in indicating the exact levels of output per employee, there does seem to be evidence of a declining trend in productivity in the manufacturing sector which needs to be investigated. Several factors can be suggested for a study as possibly influencing labor productivity:

a. The rate of capital investment: If the rate of capital investment in Syria does not match the rate of increase in employment, the resulting decline in the capital-labor ratio would be a factor in the declining labor productivity.

b. Changes in the labor structure: Because of generally lower wage rates in the public sector as compared to the private sector and to wage rates outside the country, the skilled and trained workers may be gradually moving out of the public sector, which could explain the declining labor productivity.

c. Inefficiency and mismanagement: This factor could also be responsible for the observed changes in labor productivity in the manufacturing sector.

Considering labor productivity in agriculture, we note a sharp decline over the period 1963 to 1969 with productivity in 1969 reaching 40 percent of its value in 1963 (Appendix I-e). Starting with 1970, however, gross agricultural output has been fluctuating with some tendency to increase (Appendix I-e).

Moreover, we find labor productivity in agriculture to have declined from 43 to 31 and from 31 to 29 percent of the economy-wide average for the entire labor force during the periods 1964-66 compared to 1967-69 and 1970-72 compared to 1973-75, respectively, (Appendix I-f). This is one reason why the share in agriculture in GDP declined from 27.3 percent in 1963-69 to 18.8 percent in 1970-76.*

Again, consideration should be given to the accuracy of the data which suggests the decline in labor productivity in agriculture. Such a decline could be attributed to a decline in land-labor ratio or capital-labor ratio. The rural-to-urban migration could also be contributing to the decline by selectively removing from the rural areas the most productive workers. Other elements, not directly related to population--for instance, form of agricultural land property, type of technology, price and wage policies ---could be exerting an influence on labor productivity in agriculture.

2. Internal migration and urbanization

As in many developing countries, Syria is experiencing a rapid rate of urbanization. Such that there is a high rate of urban growth as a consequence of high rate of natural population increase and a sizable, but thus far not adequate documents, rural-to-urban migration. Evidently, there is a need to fill the information regarding the causes and consequences of such imbalance in the population increase.

Total population in Syria increased at an annual rate of 3.23 and 3.10 percent during 1960-1970 and 1970-1976, respectively. However, the rate of annual increase in the urban population averaged 4.87 and 4.52 percent over the same periods (see Appendix II-2 for details). Differentials in the rates of growth undoubtedly reflected the impact of rural-to-urban migration.

A wide range of estimates of the internal migration in Syria have been reported. According to a World Bank study, the total gross migration into and out of the 13 Syrian provinces, in addition to Damascus City, during 1960-70 amounted to 445,800 persons (this figure includes 106,800 war displaced persons). This estimate, with the exception of Damascus City, does not take into consideration migration from rural-to-urban or urban-to-rural within each province.[2] The UN 1980 mission reported that about 18 percent of

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*Syrian Statistical Abstract (Tables 15/17), p. 739.

the 1970 Syrian population (equivalent to 1,135 thousands) have moved from their permanent place of residence over the last 10 years. The same report indicated that during the period 1966-76 about 120,000 Syrian workers had migrated internally and 55 percent of the migrants had left rural areas.[3] If we assume that the natural rate of population increase was the same in rural and urban areas (which is a conservative assumption), and ignoring the movement from urban-to-rural, then about 414 and 815 thousand persons must have left the rural areas during the periods 1960-70 and 1970-76, respectively (see Appendix II-b for details and discussion of this assumption).

In general, little information is known about the pattern of the internal migration in Syria. Basic and essential data related to the size and trend of migration, and to the basic characteristics of migrants, simply do not exist.

Questions related to the causes and consequences of migration remain open. This lacking knowledge represents a serious obstacle in launching any effective economic or social urban development plan.

There are various conceptual models of the process of migration that have been developed recently (see Todaro 1976 for a recent review). However, in the case of Syria it seems there is a need to answer some basic questions that serve as a prerequisite for adapting a given methodology. The following are some questions that require special studies:

a. Do people migrate from rural areas because of the lack of social services, or is it because of the slow economic progress in that area?

b. How much impact does the inequality in income earnings have on rural-to-urban migration?

c. Is there a difference among migrants regarding the size of their agricultural land holdings?

d. How much are the educational system and communication networks contributing to internal migration?

e. What kinds of information on alternative opportunities are available to the migrants?

f. What is the impact of internal migration on agricultural output, land utilization, or special segments of the labor market?

g. What is the impact on the urban areas?

3. Population growth and housing

There is a large and aggravating housing deficit in Syria, particularly in the urban areas. Expenditures on dwellings averaged more than 20 percent of the gross fixed capital formation in Syria over the period 1963-76,[4] and if we use physical units, we find the floor area of the residential buildings increased from 1721 to 3218 thousand square meters over the period 1970-76 (an annual rate of 9.4%).[5] However, the estimated housing deficit increased from 53,000 to 165,000 to 180,000 units in 1970, 1975, 1980. The housing deficit has been particularly critical in large cities such as Damascus and Aleppo. For instance, in 1970, 52 percent (27,300 units) of the housing deficit was in Damascus and another 23 percent (12,300 units) was in Aleppo, despite the fact that the combined share of these two cities in total housing built in provincial centers was 58 percent. Meanwhile, the housing surplus in rural areas in 1970 amounted to 38,000 units. However, the quality of housing is not comparable, as only 10 percent of the houses in rural areas had amenities in 1970 compared with more than 80 percent of the urban houses. To get some idea about the financial burden of providing the required housing units, we may take the total estimated housing need (387,000 units) over the period 1975-80, and if we assume the average cost is $10,000 (which is certainly an underestimate of the real cost), then about two-thirds of 1976 GNP must go to housing construction to meet current needs.[6]

Three factors related to population may be contributing to the housing problem in Syria:

a. the rapid natural rate of population growth (about 3.3%).

b. the shift from extended to nuclear families, and in the case of the urban areas, we add

c. the rural-to-urban migration.

Although the impact of all three factors is clear, what may not be clear is the magnitude of the impact. It requires a special study to determine the separate impact of each element on the housing problem.

Two other elements of a different nature may also be related to the housing problem in the urban areas:

d. As a result of rent controls and other tenant protection rights, many owners hold housing off the market to wait further increase in prices or to find foreign tenants. This tendency was evident from the 1970 census where the overall vacancy rate in urban areas was 5 percent and in Damascus 3.5 percent.[7]

e. Building materials and skilled construction workers have been in critically short supply, and this has hampered the expansion of housing construction and raised the cost of housing tremendously.

4. International migration

The main points in this section are the following:

a. It appears that Syria has lost a considerable proportion of its stock of the needed human capital.

b. International migration, by its selective nature, created bottlenecks in the domestic supply of some skilled categories.

c. In general, the basic reason for migration from Syria is economic. The gap between domestic and foreign wage rates has been very large and this is especially true in the case of trained and skilled workers.

In the period 1956-69, Syria lost 8,182 scientists (57 percent of the total), 2,769 doctors (65 percent) and 3,049 engineers (61 percent).[8] According to the World Employment Study by ILO in 1975, there were 70,415 Syrians working in the neighboring Arab States (4 percent of the domestic labor force), and if we add to this figure the accompanied family members of the migrant workers, then the Syrian population in the Arab States reaches 159,000 persons.

These two figures give a crude participation rate for the Syrians in the Arab States of more than 44 percent (70,415/159,000 x 100) compared with 25 percent at home. If we take what seems to be the official estimates of the Syrians abroad (the differences between the estimates of total Syrian population which include Syrians abroad and the ones which do not, Appendix II-a), 100 thousand in 1960, 487 thousand in 1970 and 1110 thousand in 1976, we can see the sizable and accelerating out-migration from Syria where total population was estimated to be about 8 million in 1976. As we mentioned before (Appendix II-a for details), it is not clear how the official estimate of the Syrians abroad were obtained.

However, since the decline in birth rates in Syria during the 1970's, if any, is very unlikely to be as high as that in the death rates, the apparent difference in the annual rate of population increase (3.23 percent during the 1960's and 3.1 percent during the 1970's) might have been caused by acceleration in the rate of out-migration. In fact, neither the actual number nor the characteristics of the migrants are known (which makes the lack of data part of the problem). But, one thing is clear: that the rate of out-migration was much higher after the 1973 economic boom and the high demand for labor in the oil-producing countries in that region was a result of the higher price of oil (see Appendix III-a). Furthermore, with the exception of Jordan, where most of the estimated 20,000 Syrian migrant workers were unskilled, the proportion of trained and highly qualifed personnel who migrated was considerably

high and this is precisely what makes the study of international migration so important (see Appendix III-b).

In the case of Syria, the following areas related to a special study to determine:

1. the size and characteristics of out-migrants;
2. the economic impact of such selective migration, in particular, how that affects output in different sectors of the economy, labor structure, wage rates, income distribution, price level;
3. the social impact of the international migration--for instance, marriage, divorce, fertility, household relationships;
4. to what extent emigration acts as a factor in sustaining high fertility levels in Syria. This is a basic, although difficult, question.

5. Population growth and expenditure on social services

On one hand there is a direct relationship between population growth and distribution and expenditure on social services such as education and health. On the other hand, expenditures on such services compete directly with expenditures in other productive activities for allocating limited resources. For instance, if population increases at 3 percent annually, then a similar increase should occur in the expenditure on such services just to keep the share per capita constant. Since economic resources are limited, any increase in expenditures on social services implies a corresponding decline in the amount available for investment in other activities.

In Syria, public expenditures on education, health and other social services increased in real terms from SLM* 485 in 1970 to 831 in 1977 (7 percent annual increase). However, the share and trend of public expenditures on different services were not the same. For instance, the education budget

increased in real terms at 10 and 26 percent per annum for intermediate and higher education over the period 1970-76. Yet the number of illiterate people in 1976 exceeded that of 1960 by more than 6 percent. Public expenditures on health declined in real terms from SLM 68 in 1970 to SLM 33 in 1976. That decline, combined with more than 3 percent annual increase in population, caused a sharp reduction in the per capita share of health expenditures. This undoubtedly contributed to the slow improvement in the health status of the Syrian population where infant mortality (about 110/1000 births), for example, is five times that for the developed countries.

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*millions of Syrian pounds

A. Notes

1. See Ghazi Farooq, Economic Development and Cultural Change, 1973.

2. Table 5.3 of the World Bank Report, Vol. II, p. 127.

3. The UN Mission Report, 1980, pp. 46-49.

4. Calculated from Tables SA2B-7 and SA2C-2 of the World Bank Report, Vol. IV, pp. 45 and 117.

5. Table SA11-B3 of the World Bank Report, Vol. IV, p. 253.

6. All the data about having needs and deficit are reported in the World Bank Report, Vol. II, pp. 137-142.

7. Table SA11B-1 of the World Bank Report, Vol. IV, p. 251.

8. The UN 1980 Mission Report, p. 18.

B. Statistical Tables

	1960		1970		1976
A. Irrigated land (thousand hectares)	522		451		516
As percentage of total area	3%		2%		3%
Rainfed land	2826		2848		3184
As percentage of total area	15%		15%		17%
Cultivated land	6341		5909		5476
As percentage of total area	34%		32%		30%
B. Enumerated population (in thousands)	4565		6305		7595
Exponential growth rate per annum		3.23%		3.1%	
Sex ratio	106		105		107
Crude birth rate			47.8%		
Crude death rate			15.5%		
General fertility rate	7.1		7.6		7.6
Gross reproductive rate	3.5		3.7		3.7
Fertility schedule ($\bar{m}$)	29.0		30.0		30.0
Share of urban areas in total population	37%		43%		46%
Exponential growth rate of urban population		5%		4.5%	
Age groups 0-14 and 65+ as a percentage of total population	51.0%		54%		51%
C. Proportion of population that is economically active (crude participation rate)	25.8%		24.9%		23.7%
Total labor force (in thousands)	1179		1571		1818
Exponential rate of growth per annum		2.9%		2.5%	
Open unemployment (in thousands)	110		100		116
Open unemployment as a percentage of total labor force	9.3%		6.4%		6.4%
D. Illiteracy (in thousands)					
Illiteracy rate (10 years of age and over)	66%		53%		40%
Number of students at primary level (1000)	--		845		1274
Average annual rate of increase				6%	

		1960		1970		1976
	Number of students at intermediate level	--		206		334
	Average annual rate of increase				7.1%	
	Number of students at secondary level	--		75		130
	Average annual rate of increase				8.2%	
	Number of students at university level	--		37		65
	Average annual rate of increase				8.5%	
	Education budget - prehigher (millions of Syrian pounds)	--		202		772
	As percentage of consolidated budget	--		7.3%		4.7%
	Average annual real growth rate				10.1%	
	Education Budget - higher education (millions of Syrian pounds)	--		55		541
	As percentage of consolidated budget			2%		3.3%
	Average annual real rate of increase				26%	
E.	Share of the primary sector in total labor force	48%		48%		32%
	Share of the secondary sector in total labor force	16.4%		20.4%		27.8%
	Share of the tertiary sector in total labor force	35.6%		31.6%		40.2%
	Share of the primary sector in GDP	20.7%		20.5%		18.5%
	Share of the secondary sector in GDP	22.7%		22.6%		26.3%
	Share of the tertiary sector in GDP	56.6%		56.9%		55.2%
	Share of the primary sector in gross fixed capital formation	--		25%		7.4%
	Share of mining and manufacturing in gross fixed capital formation	--		18%		44.0%
	Share of other sector in gross fixed capital formation	--		57%		48.6%
	Exponential Growth Rate PGDP per annum (in 1963 M.P) in					
	The primary sector		6.3%		8.1%	
	The secondary sector		6.3%		12.4%	
	The tertiary sector		6.5%		9.3%	

		1960	1970	1976
F.	Private consumption (millions of Syrian pounds in 1963 market price)	3123	4099	5495
	As a percentage of GDP	71%	74%	74%
	Public consumption	713	1091	1914
	As a percentage of GDP	16%	20%	26%
	Domestic savings	562	329	39.3
	As a percentage of GDP	12.8%	6%	0.5%
	National savings	667	466	1312
	As a percentage of GDP	15.2%	8.4%	17.6%
	Gross domestic investment	600	772	2014
	As a percentage of GDP	13.6%	14%	27%
	Per capita income (U.S.$)	--	290	560
	Exports of merchandise (millions of Syrian pounds)	--	865	3441
	Imports of merchandise ( )	--	1488	5697
	Merchandise trade balance (net)		-643	-2256
	Goods and services trade balance		-269	-2174
	Balance on current account		-233	+281
	Terms of trade (export price/import price)	99	100	161
	Medium and long-term loans (millions of U.S.$)	--	13.8	871.5
	Wholesale price index (Damascus, 1962 = 100)	100	123	209
	Retail price index (Damascus, 1962 = 100)	104	123	209

Source: All these figures are presented or based on data presented in the Syrian Statistical Abstract, 1971, 1976, 1978, 1979.

Table 3. Distribution of Employment in the public Sector in Syria.

Industrial Activity	Employment 1970	Employment 1976	Exponential Rate of Increase in Employment per Annum
1-Manufacturing, food, beverage & tobacco	1390	17956	4.23
2-Textile, wearing apparel & leather industries	22158	31588	5.91
3-Wood & wood products, incld'g furniture	380	631	8.45
4-Paper, printing & publishing industries	324	446	5.33
5-Chemical industries & chemical products	3649	6294	9.09
6-Non-metallic industries	3807	4670	3.41
7-Metal products industries	1139	3740	19.82
Manufacturing industry	45387	65325	6.07
8-Mining & quarrying	3791	11347	18.27
9-Utilities	7743	12482	7.96
Industrial sector	56921	89154	7.48

Source: Table of 1979, The Syrian Statistical Abstract.

Basic References

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Appendix I

a) Size and Rate of Growth of the Labor Force and Employment in Syria (in thousands)

	1961	1969	Annual Rate* of Growth	1970**	1975	Annual Rate* of Growth
Size of labor force	1186	1971	6.35	1571	1838	3.14
Total employment	1091	1886	6.84	1473	1750	3.45

Sources: Table (SalA.4) of the World Bank Report, Vol. IV, pp. 26.

*It is an exponential rate with t_1 = 8 years (the first period) and t_2 = 5 years (the second period).

**The 1970 figures are from the 1970 census whereas the figures for the other years are from labor surveys. Hence the figures may not be comparable.

b) Distribution of the Labor Force by Sex in Syria (in thousands)

	1960	1970	1976
Number of males	1018	1403	1657
Number of females	161	168	171
Total	1179	1571	1828

Sources: Table (4) in Composition and Growth of Population in Syria.

Distribution of the Labor Force by Age Group in Syria (in thousands)

Age Group	1960	1965	1970
10-14	74	90	105
15-64	1169	1301	1491
65+	40	50	63
All	1278	1441	1659

Sources: It is calculated from table (SAlb.3) of the World Bank Report, Vol. IV, pp. 29.

(d) Number of Employee, Gross Output, and Implicit Price Deflator of the Public Manufacturing Sector

Year	Number of Employees	Gross Output (millions of Syrian pounds (current prices)	Implicit Price Deflator (1963 = 100)
1970	45387	1488	115.1
1971	48410	1624.1	119.8
1972	53308	1658.2	130.5
1973	56009	1850.7	154.8
1974	60080	2132.3	177.0
1975	63158	2621.9	216.5
1976	65945*	3469.4	262.6

Source: Tables (SA8B.1), (SA8B.2) and (SA2B.5) of the World Bank Report, Vol. IV, pp. 43, 174 & 175.

*It is a revised figure reported in 1979 Statistical Abstract of Syria.

From the above table, we calculate gross output (at constant prices) per employee and the productivity index as it is shown below.

	1970	1971	1972	1973	1974	1975	1976
Gross manufacturing output per employee (Syrian pounds at constant prices)	28484	28004	23836	21346	20051	19175	20034
Productivity index	100	98	84	75	70	67	70

d) Labor Cost and Average Annual Earnings per Employee in the Public Manufacturing Sector and the Consumer Price Index

Year	Labor Cost (millions of Syrian pounds (current prices)	Consumer Price Index (1975 = 100)	Average Annual Earnings per Employee (Syrian pounds, constant price)
1970	149.5	59	5583
1971	163.8	62	5457
1972	200.5	62	6066
1973	229.0	75	5452
1974	272.7	86	5278
1975	338.4	100	5358
1976	496.6	115	6548

Source: 1. The first column is reported in Table (SA8B.2) of the World Bank Report, Vol. IV, pp. 175.

2. The source for the second column is the International Financial Statistics, 1978.

3. The third column is the product of dividing the first column by the first column of the table in part c - above after adjusting for the price level.

From the above table we construct the real wage index, then by dividing this index by the productivity index from part c, we get the unit wage cost index as it is presented below.

	Year						
	1970	1971	1972	1973	1974	1975	1975
(1) Real wage index	100	98	109	98	95	96	117
(2) Productivity index	100	98	84	75	70	67	70
[(1)/(2)] x 100 = the unit wage cost index	100	100	130	131	136	143	167

e) Gross Agricultural Output, Total and Per Employee, and Labor Productivity Index

Year	Gross output in Agriculture (3 year moving average, millions of Syrian pounds, constant prices of 1963)	Employment in Agriculture (in thousands)	Gross Agricultural output per employee (Syrian pounds)	Labor Productivity Index
1963	1485	517.9	2867	100
1964	1492	556.0	2683	94
1965	1452	676.8	2147	75
1966	1419	784.7	1808	63
1967	1354	959.3	1411	49
1968	1467	1102.6	1330	46
1969	1480	1307.8	1139	40
1970	1519	738.4	2057	100
1971	1565	891.8	1575	77
1972	1581	907.7	1742	85
1973	1741	850.2	2048	100
1974	1814	863.6	2100	102
1975	2112	894.9	2360	115

Source: 1) The first column is calculated from table (9/17) of the Syrian Statistical Abstract, 1979.

2) The second column is reported in Table (SAlA.4) of the World Bank Report, Vol. lV, pp. 26.

f) Total Agricultural Output per Employee (Gross). (Syrian pounds, at constant prices of 1963).

	1964-66	1967-69	1970-72	1973-75
Total output	5044	4180	5841	6914
Agricultural output	2161	1306	1786	2024
Agricultural output as a percentage of the total	43	31	31	29

Source: Calculated from Table 9/17 of the Syriak Statistical Abstract and from Table (SA1A.2), pp. 24, of the World Bank Report, Vol. IV.

Appendix II

a) Table (1). The Rate of Population Increase in Syria.**

	Number in thousands			Annual rate of growth*	
	1960	1970	1976	1960-70	1970-76
Urban population	1685	2741	3596	4.87	4.52
Rural population	2880	3564	3999	2.13	1.92
Total population	4565	6305	7595	3.23	3.10

Source: Figures in the first column are reported in Table (SA1A.2) of the World Bank Report, Vol. IV, pp. 24.

* It is an exponential rate with the assumption that t_1 (the first period is 10 years, and t_2 (the second period(is exactly 6 years.

** Although it is not stated explicitly, it appears that these figures do not include the Syrians abroad.

Table (2) includes the Syrians abroad as it is stated explicitly in the Syrian Statistical Abstract, 1978, and if we calculate the rate of growth, we get the following:

				Annual (exponential) Rate of Growth	
	1960*	1970+	1976	1967-70	1970-76
Total population	4665	6792	8705	3.76	4.14

Source: Table (2/18), pp. 104 of the Syrian Statistical Abstract, 1978.

* 1960 and 1970 are derived from censuses, while the 1976 figure is an estimate.

If we take the difference between the figures which do include the Syrian abroad and those which presumably do not, we find the following are the official estimates of the Syrians abroad:

	1960	1970	1976
The net out-migration (in thousands)	100	487	1110

It is not clear how these figures obtained and judging from the growth rates in Table 2, it appears that these figures probably over-estimate the number of Syrians abroad.

b) If we take the calculated rates in Table (1) in part (a) above and apply the exponential formula, we get the following hypothetical figures for the rural population:

$P_{70} = 2880\ (=P_{60})\ (.0323)^{10}$ which is equal to 3978 thousands

$P_{76} = 3564\ (=P_{70})\ (.031)^{6}$ and this is equal to 4816 thousands.

By subtraction (3978-3564 and 4816-3999), we get the hypothetical number of rural-to-urban migration (414 and 817). Judging from the average family size, 5.4 in urban and 5.6 in rural areas in 1970 and from the average number of survival births in urban versus in rural in the same year, we see why utilizing such an assumption about equality in natural growth rate is probably on the conservative side.

Appendix III

a) To see how the increase in the price of oil since 1973 and the economic boom in the oil exporting countries encouraged migration from the non-producing oil nations (such as Syria), we may look at changes in the number of the Syrian departures to Saudi Arabia.

	Syrian Departures to All Arabic States and to Saudi Arabia			
	1969-71	Percentage of total	1976-78	Percentage of total
Total departures	50,039	100	377,569	100
Departures to Saudi Arabia	17,355	35	319,986	85

Source: The Syrian Statistical Abstract, 1971 and 1979.

As it is seen, the difference between the number of Syrians who went to Saudi Arabia (the major oil producing country in that region) is very large both in absolute and relative terms.

b) To get some idea about the composition of the Syrian migrants, we may look at the occupational distribution of Syrian migrant workers in Kuwait by skill level, 1975.

Occupation Category		Number	Percentage
A-	Professional jobs usually requiring a science or mathematics-based university degree	280	1.7
A-2	Professional and subprofessional jobs usually requiring a university arts degree	260	1.6
B-	Technicians and other jobs which usually require one to three years of post-secondary education training	1440	8.7
C-1	Skilled and semi-skilled office and clerical occupations	3490	21.1
C-2	Skilled and semi-skilled manual occupations	6560	39.8
D-	Unskilled occupations	4470	27.1
	Total	16500	100

Source: Table 26, pp. 145 in International Migration and Development in the Arab Region, 1980

Appendix O

The following table presents the distribution of Syrian employment by economic activity (in thousands).

Table 1.

	1960		1970		1976		Growth Rate per Annum	
	No.	%	No.	%	No.	%	1960-70	1970-76
1-Agriculture, fishing & hunting	566	.5300	752	.5112	576	.3359	2.84	-4044
2-Manufacturing	125	.1169	190	.1292	275	.1603	4.19	6.16
3-Mining & quarrying	4	.0037	9	.0061	12	.007	8.11	4.79
4-Utilities	7	.0065	8	.0054	17	.0099	1.33	12.56
5-Construction	58	.0543	115	.0075	203	.1188	6.83	9.47
6-Transport & communication	39	.0365	64	.0435	113	.0659	4.95	9.48
7-Trade	90	.0842	145	.0986	188	.1096	4.77	4.33
8-Other sectors	180	.1684	188	.1278	330	.1924	0.43	9.38
	1069	100.00	1471	100.00	1715	100.0	3.19	2.56

Source: The Syrian Statistical Abstract, 1978 and 1979.

Table 2. Value Added in the Public Sector (millions of Syrian pounds, at constant prices).

Industrial Activity	1970	1976
1-Manufacturing, food, beverage & tobacco	161.2	156.5
2-Textile, clothing & leather industries	178.5	162.8
3-Wood, & furniture industries	2.4	2.0
4-Paper, printing & publishing industries	0.9	12.8
5-Chemical industries & chemical products	36.1	96.7*
6-Non-metallic industries	38.0	42.0
7-Metal products industries	18.3	54.4
Manufacturing	435.4	527.4
8-Mining & quarrying	106.2	941.7
9-Utilities	73.6	97.7
Industry	615.2	1566.8

Source: The Statistical Abstract of Syria, 1976 and 1979.
*This figure is from the World Bank Report, Vol. IV, Table (SA8b.1), pp. 174.

		1960	1970	1976
F.	Private consumption (millions of Syrian pounds in 1963 market price)	3123	4099	5495
	As a percentage of GDP	71%	74%	74%
	Public consumption	713	1091	1914
	As a percentage of GDP	16%	20%	26%
	Domestic savings	562	329	39.3
	As a percentage of GDP	12.8%	6%	0.5%
	National savings	667	466	1312
	As a percentage of GDP	15.2%	8.4%	17.6%
	Gross domestic investment	600	772	2014
	As a percentage of GDP	13.6%	14%	27%
	Per capita income (U.S.$)	--	290	560
	Exports of merchandise (millions of Syrian pounds)	--	865	3441
	Imports of merchandise ( )	--	1488	5697
	Merchandise trade balance (net)		-643	-2256
	Goods and services trade balance		-269	-2174
	Balance on current account		-233	+281
	Terms of trade (export price/import price)	99	100	161
	Medium and long-term loans (millions of U.S.$)	--	13.8	871.5
	Wholesale price index (Damascus, 1962 = 100)	100	123	209
	Retail price index (Damascus, 1962 = 100)	104	123	209

Source: All these figures are presented or based on data presented in the Syrian Statistical Abstract, 1971, 1976, 1978, 1979.