

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

TRANSPORT PLANNING AUTHORITY  
MINISTRY OF TRANSPORT  
THE ARAB REPUBLIC OF EGYPT

THE STUDY ON THE TRANSPORTATION SYSTEM  
AND  
THE NATIONAL ROAD TRANSPORTATION MASTER PLAN

**MAIN REPORT**

(VOLUME 1)

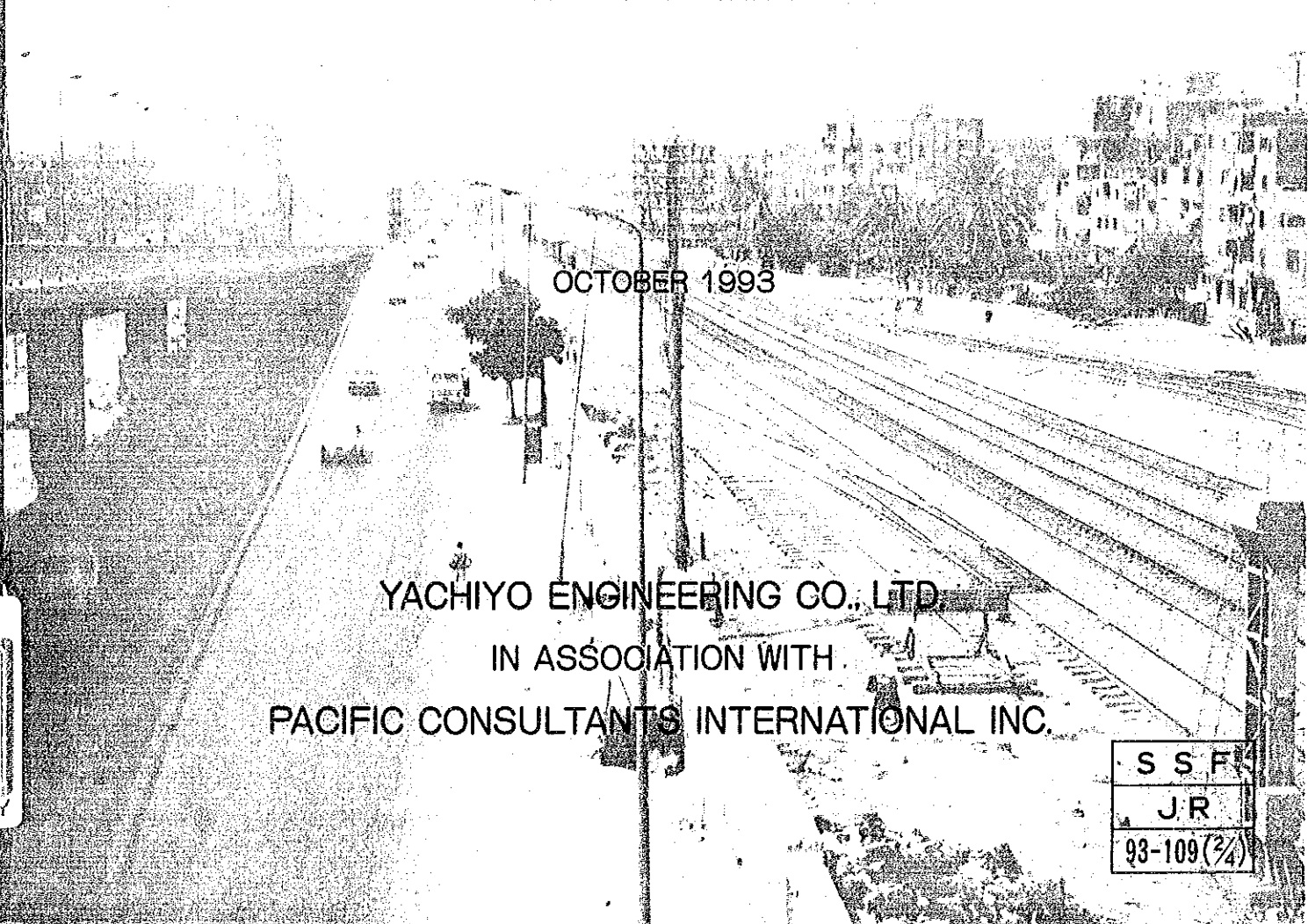
OCTOBER 1993

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IN ASSOCIATION WITH  
PACIFIC CONSULTANTS INTERNATIONAL INC.

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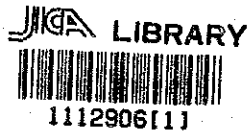
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# MAIN REPORT

(VOLUME I)



OCTOBER 1993

YACHIYO ENGINEERING CO., LTD.  
IN ASSOCIATION WITH  
PACIFIC CONSULTANTS INTERNATIONAL INC.





Mr. Kensuke Yanagiya  
President  
Japan International Cooperation Agency  
Tokyo, Japan

October, 1993

Dear Sir,

Letter of Transmittal

We are pleased to submit to you the report on the Study on the Transportation System and the National Road Transportation Master Plan in the Arab Republic of Egypt. The report contains the advice and suggestions of the authorities concerned of the Government of Japan and your Agency as well as the comments made by the Transport Planning Authority, Ministry of Transport, and the authorities concerned in the Arab Republic of Egypt. The report consists of a main report (two volumes) and an executive summary.

This report deals with the present and future transportation demand on road, rail and inland waterway in entire Egypt, and the master plans for road network and road transportation industries to cope with the demand.

In view of the road transportation efficiency and the transportation cost saving in the Arab Republic of Egypt, we recommend the plans for road network development, inter city bus and taxi services, and road freight transportation shall be implemented in the frame work of this Five Year Plan and the succeeding Five Year Plans as well. However the master plan shall be reviewed in accordance with the socio-economic changes in future, and we believe that this master plan provides the basic policy for the long term.

We wish to take this opportunity to express our sincere gratitude to your Agency, the Ministry of Foreign Affairs, the Ministry of Construction and the Ministry of Transport. We also wish to express our deep gratitude to the Ministry of Transport and the Governmental Agencies concerned in the Arab Republic of Egypt for the close cooperation and assistance extended to us during our study. We hope this report will contribute to the effort made in the development of the Arab Republic of Egypt.

Very truly yours,



Dr. Juro Kodera  
Team Leader

The Study on the Transportation  
System and the National Road  
Transportation Master Plan





## PREFACE

In response to a request from the Government of the Arab Republic of Egypt, the Government of Japan decided to conduct a master plan study on the Transportation System and the National Road Transportation Master Plan and entrusted the study to the Japan International Cooperation Agency (JICA).

JICA sent to Egypt a study team headed by Dr. Juro Koderu, and composed of members of Yachiyo Engineering Co. Ltd., and Pacific Consultants International Inc., four times between April 1992 and August 1993.

The team held discussions with the officials concerned of the Government of Egypt, and conducted field surveys at the study area. After the team returned to Japan, further studies were made and the present report was prepared.

I hope that this report will contribute to the promotion of the project and to the enhancement of friendly relations between our two countries.

I wish to express my sincere appreciation to the officials concerned of the Government of the Arab Republic of Egypt for their close cooperation extended to the team.

October, 1993



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Kensuke Yanagiya  
President  
Japan International Cooperation Agency



Study on the Transportation System and  
the National Road Transportation Master Plan

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## *Conclusions and Recommendations*

1. The population in 1990 was 55.6 million and will increase to 86.9 million or 1.56 times by 2012. Gross Domestic Product (GDP) in 1992 was estimated at 125,000 Million Egyptian Pound (M.LE) in terms of 1991/92 fixed price and will increase to 413,000 M.LE or 3.3 times by 2012. the share of agriculture sector will decrease from 16.5% in 1992 to 10.7% in 2012.
2. The total production in terms of weight in 1992 is 363 million ton and the total consumption is 357 million ton. The total production in 2012 will increase to 1,216 million ton or 3.35 times and the total consumption 1,206 million or 3.37 times by 2012.
3. The inter city passenger demand in Egypt is 2.0 million/day in 1992, and will increase to 5.7 million/day or 2.85 times by 2012. The passenger mode shares in terms of passenger/day of private car, taxi+bus and train are 9.9%, 38.3% and 51.8% respectively at present and they will shift to 9.8%, 40.9% and 49.3% in 2012.
4. The inter city freight demand is 178 million ton/year in 1992 and will increase to 591 million ton/year or 3.32 times by 2012. The freight mode shares in terms of ton/year of road, rail and waterway are 92.8%, 5.4% and 1.8% respectively at present and they will shift to 85.3%, 7.7% and 6.9% in 2012.
5. The total inter city vehicle traffic demand of private car, taxi, bus and truck in terms of trip end demand is 270 thousands veh./day in 1992 and will increase to 730 thousands or 2.70 times by 2012.
6. Highway projects consisting of 35 projects (2,986.9Km), which has been proposed by governmental agencies (LDA), and 60 projects (2,998.1Km) to maintain the present level of service (MLS) is proposed by 2012 to form a basic highway network. By these projects, the inter city highway network length will increase from 14,028Km in 1992 to 16,259Km in 2012. The percentage of 2 lane sub-standard highway will decrease from 35% to 21.6% and that of 4 and 6 lane divided highways will increase from 13.2% to 24.4%.
7. 2,033Km of highways with the cost of 877.0 M.LE in the 1st phase (1993 - 1997), 1,274.4Km of highways with the cost of 607.4 M.LE in the 2nd phase (1998 - 2002), and 2,677.6Km with the cost of 1,535.7 M.LE in the 3rd phase (2003 - 2012) are scheduled.
8. 19 new Nile bridges in addition to the present 21 bridges are proposed by 2012 to keep the maximum bridge interval at about 50Km. 8 bridges including those under

are scheduled in the phase 1, 4 in the phase 2 and 7 in the phase 3. The total construction cost is estimated at 565.5 M.LE. 12 bridges are included in the basic highway master plan network.

9. 40 out of existing 54 railway level crossings with inter city highway network are proposed to be multi-graded from the economic view point. The total cost is estimated at 840.0 M.LE. 17 crossings are included in the basic highway master plan network.
10. Vehicle Operating Cost (VOC) saving in the basic highway master plan network comparing with Do-Nothing case gives high benefit to the national economy with IRR 78.8%, NPV 21,680 M.LE under the discount rate of 12% and B/C 13.1. The total project cost of the basic highway master plan network almost matches with the 3,122 M.LE of accumulated road development investment budget for 1993 - 2012.
11. In addition to the basic highway network, 300Km of freeways (HLS) out of future 600Km is proposed to segregate local traffic from inter city flows. Two freeways of Cairo - Alexandria (169Km) and Cairo - Damietta (156Km) are planned by 2012 as toll freeways with a distance related toll system having 0.06 LE/Km charge (Passenger car). The additionally required land by freeways is 4 - 9% of that required by the basic highway master plan network. The project is planned to be commenced in the beginning of the next Five Year Plan (1998) and to be completed by 2012.
12. Total financial cost of freeways is estimated at 2,742.8 M.LE and VOC saving based on the master plan network without freeways gives a high economic return of EIRR 25.2%, NPV 86.0 M.LE under the discount rate of 12%, and B/C 1.47. VOC saving of the master plan network comparing to Do-Nothing case gives also high economic return of IRR 78.1%, NPV 1,778.0 M.LE and B/C 9.5.
13. If a loan with less than 8% interest rate is applied to the investment of freeways, accumulated deficit including operation and maintenance cost will turn to net surplus at 24 years after the initiation (2020), so the freeway project could be self sustained project. FIRR was calculated at 5.57%
14. Inter city taxis in Egypt are operating in the same manner as a small size private owned public buses. They have to operate, from economic view point, in sections where there is insufficient passenger demand for regular bus operation, and they are targeted to transport 42% of bus+taxi passenger in future. Based on this condition, the necessary bus fleet to be added and



replaced by 2012 is 12,350 buses. The fare of bus and taxi have to be raised by 15 - 20% from the present level in real terms to keep financially viable operation.

15. 143 inter city bus terminals and 305 inter city taxi terminals improvement is planned for the amenity of passenger and for reducing urban traffic congestion. The total cost is estimated at 7.40 M.LE and 12.21 M.LE respectively. Bus terminals can be improved as a part of operating expense of each bus company, and it will affect their annual expenditure by 0.3% - 0.9%. Taxi terminals can be improved from terminal fee. The accumulated surplus of terminal charge after deducting terminal operation cost can cover improvement cost by the year 2003.
16. 4 truck terminals are planned to improve transport efficiency, to re-organize trucking industries by introducing line haul and feeder system, and a truck terminal at Cairo is planned by 2012. A container freight station (CFS) for import commodities and another CFS for domestic container freight are also planned. The costs are estimated at 60.06 M.LE, 53.38 M.LE and 73.16 M.LE respectively.
17. An increase of turn over by eliminating waiting time enforced by controlling heavy vehicles to enter in urban area in day time, and improvement of loading condition, give annual benefit amounting 29.86 M.LE and high EIRR of 51.34%. The improvement of loading efficiency by CFSs for import and domestic commodities give high EIRRs of 43.1% and 62.4% respectively.
18. The minimum terminal fee for the truck terminal, which covers only terminal operation and management cost is 12.5 LE/Veh. This amount equivalents to about 10% of the present freight tariff, which will impose heavy burden to truckers, and the initial investment can not be covered by this amount. The minimum terminal fees for CFSs for import and domestic commodities are 21.9 LE/Veh. and 24.9 LE/Veh. respectively. Both can not cover their initial investment so that public fund have to support the development cost from the view point of high economic returns.
19. After completion of all the projects planned in the Third Five Year Plan, the following investments are recommended for the Fourth five Year Plan period (1998 - 2002). Net government investment will be 864.4 M.LE, excluding freeway, bus/taxi terminals and a part of truck/container terminals which are expectedly financed by non government fund.

Followings are the main highway projects, which are mostly to cope with demand increase in the Delta (Please refer to Fig. 14-7-3 in Volume II for project No.).

Project	M.LE
Basic Network Projects	607.4
Freeway	662.0
Nile Bridges, not included above Projects	162.5
Truck/Container Terminal	118.1
Bus and Taxi Terminals	16.6
Total	1,566.6

- \* Cairo-Alex Freeway (6 Lane, 169.0Km)
- \* Kafr-El Zayat Bridge-Alexandria Agriculture road 6 lane widening (104.0Km, No.1001)
- \* Tanta-Zagazig road 4 lane widening (55.0Km, No.1013 and 2013)
- \* Zagagiz-Faquos road 4 lane widening (38.0Km, No. 1012)

20. TPA have to play the following roles in accordance with privatization of public passenger and freight industries.
  - review of registration and licensing condition and system of road transport industries and its follow up
  - monitor of transport tariff and fares and issuance of guidance for appropriate level
  - collection and publication of transport information
21. In the present transport system analysis, it is forecast that the transport demand for railway and river transport will increase more rapidly than road transport demand in the future. Therefore, it is advisable to develop medium - and long term plans for railway and river transportation to cope with this demand increase.

*Part I Present Condition*



## CHAPTER 1 INTRODUCTION

### 1.1 General

In response to the request of the Government of the Arab Republic of Egypt, the Government of Japan agreed to conduct the study titled "The Study on the Transportation System and the National Road Transportation Master plan in the Arab Republic of Egypt" (referred to as the Study in this report).

Japan international Cooperation Agency (JICA), the official agency responsible for the implementation of the technical cooperation program of the Government of Japan, is undertaking the Study, in close cooperation with the authorities concerned of the Arab Republic of Egypt. The Preparatory Study Team, which was organized and dispatched by JICA to Egypt in December 1991, held discussions with Egyptian officials representatives of the Ministry of International Cooperation, and the Transport Planning authority (TPA) and Road and Bridge Authority (RBA), both of the Ministry of Transport. The minutes of the meetings and Scope of Works (S/W) of the Study were agreed upon between both parties.

The Final Report contains all the work results from the initiation of the Study, including forecasts of socio-economy, production and consumption, transport demand, and highways, road passenger and freight transport master plans. The report was finalized referring the comments on the draft final report. The report consists of a main report in two volumes and an executive summary.

### 1.2 Objective and Scope of the Study

#### 1.2.1 Objectives of the Study

The objectives of the study on the transportation system and the road transport master plan (Study) are;

- (1) to analyze the transportation system in the country, and
- (2) to prepare a master plan for the improvement and upgrading of the national road network and road transportation system.

#### 1.2.2 Scope of the Study

##### (1) Study Area

The Study area covers the entire Egypt. The country is administratively divided into 26 Governorates and 295 Markaz (see Fig. 1-2-1), and the Study takes 29 Semi-Governorate Zones for analysis purpose following the system in Egyptian National Transport Study (ENTS)-II, 1979, and 188 integrated

Markaz zones for traffic assignment purpose following the system in TPA's Transport Information Center.

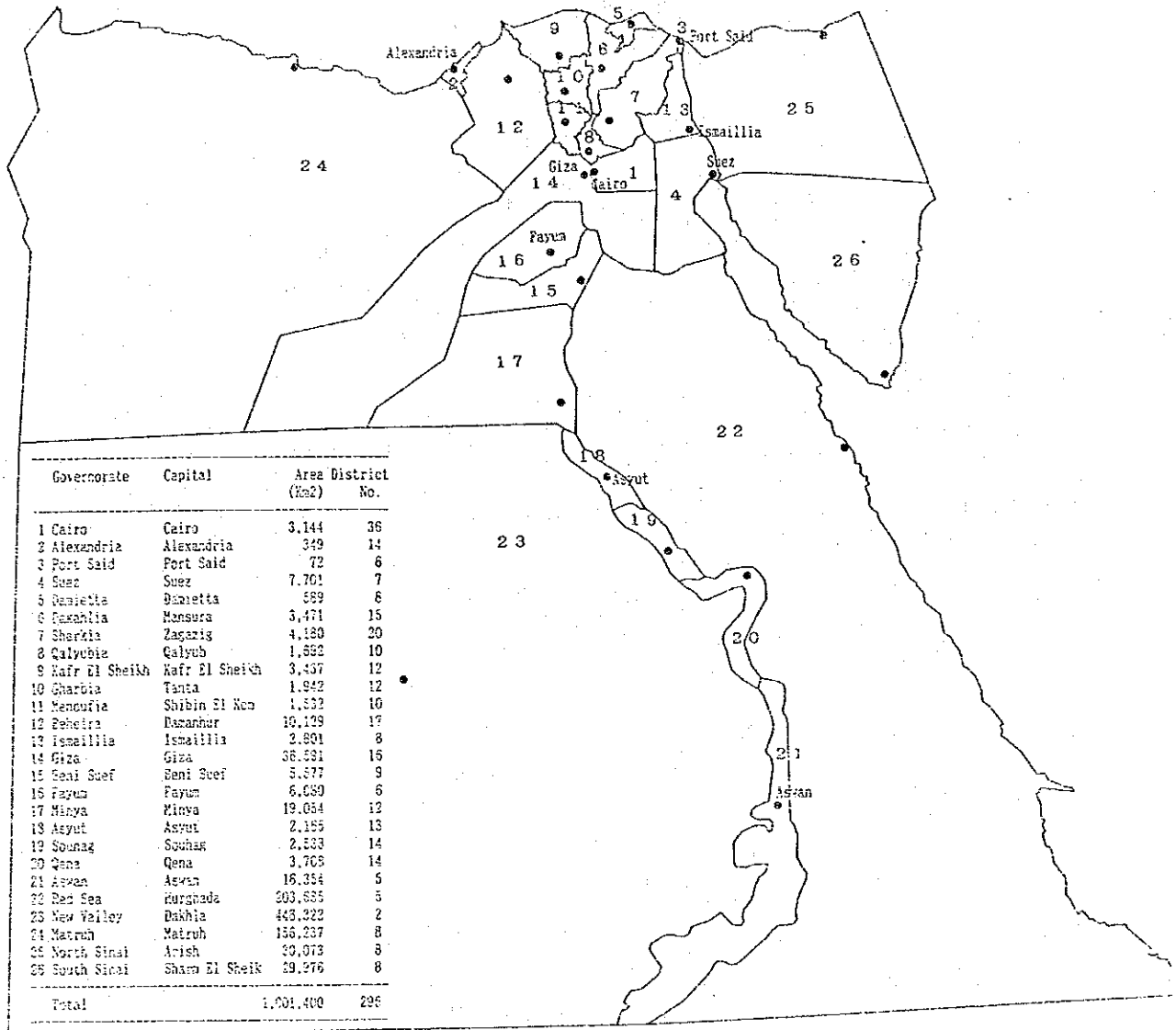


Fig. 1-2-1 Study Area

(2) Target Year

The following three target years are set;

- 1997 for short term,
- 2002 for middle term, and
- 2012 for long term.

### (3) Study Items

The contents of the Study are;

- 1) Collection, review and analysis of existing data and information,
- 2) Supplementary transport surveys,
- 3) Formulation of socio-economic framework,
- 4) Transport demand forecast,
- 5) Formulation of a master plan for the national road network and road transportation system,
- 6) Selection of priority projects,
- 7) Implementation plan, and
- 8) Conclusions and recommendations.

The supplementary transport survey was carried out from the mid June until the mid July after Pilgrimage Holidays. The supplementary transport survey included;

- road side OD survey at 62 stations,
- bus and taxi terminal survey at 228 terminals,
- commodity company survey for 210 companies, and
- transport company survey for 43 companies.

The data and information obtained through the transport surveys and from the various relevant organizations are compiled in computers for the successive analysis and forecast works. Passenger is classified into four categories of private car, taxi, bus and rail, and commodity is classified into 90 commodity items including empty and mixed commodities mostly following the system in ENTS-II, and they are integrated into 30 groups for analysis and forecast purpose.

#### 1.3 Study Schedule

The entire study schedule is presented in Fig. 1-3-1. The Study schedule is briefly divided into three stages. The data collection and analysis stage from the end of March to the end of August, the demand forecast stage from the beginning of October to the end of February, and the master plan stage from the mid of May to the end of October, 1993.

The study was initiated on March 31, 1992, following the signature on Scope of Works between JICA and TPA on Dec. 11, 1991, and the inception report was presented on April 16, the progress report on August 26, Interim Report on January 25, 1993, and Draft Final Report on August 26, 1993.

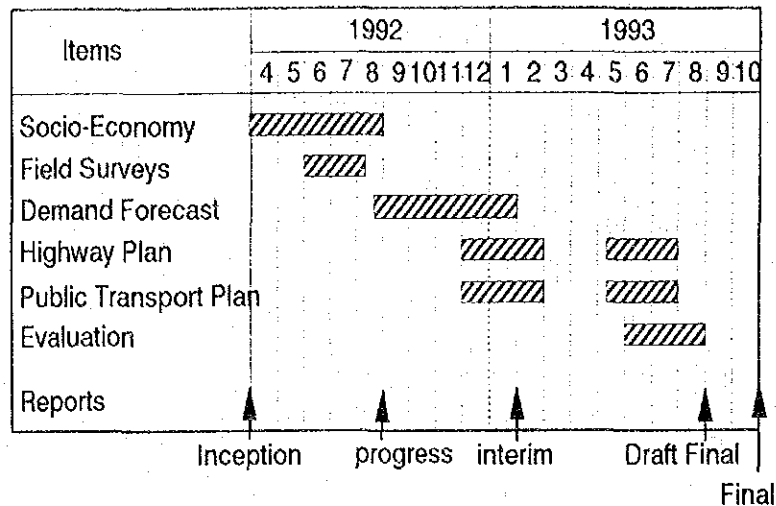


Fig. 1-3-1 Study Schedule

#### 1.4 Reports and Data

All the study results are summarized in the main report, which consists of three parts of present situation, forecast and master plan, and executive summary report. Beside these reports, the various information used in the study is compiled in Transport Information System in the Transport Information Center of TPA. These information can be classified mainly into following categories.

- (1) Information from supplement transport surveys, which includes road side OD survey, terminal survey, company survey, sample road inventory and modal choice survey.
- (2) Information from various statistics, which includes information from 1986 census such as population and employment by 295 Markaz, transport record from RBA permanent stations, ENR passenger and freight records by railway stations, RTA freight records by inland waterway ports, CTA vehicle registration, and CAPMAS import and export records.
- (3) Information on transport networks, which includes inter city highway, railway, waterway networks, and road and bridge inventories.
- (4) Forecast results, which include 1992, 1997, 2002 and 2012 population, employment, GRDP, production and consumption, passenger OD matrices by mode, freight OD matrices by 30 commodity classifications, vehicle OD matrices by vehicle classification, and loaded networks of various cases.
- (5) Source Programs produced in the Study, mostly written by FORTRAN, for data check, forecasting, and information tabulation and presentation purposes.



### 1.5 Study Organization

The study organization is shown in Fig. 1-5-1. The study is carrying out by JICA Study team in association with TPA/RBA joint counterpart team. The field surveys were carried out by sub contracting to the Egyptian consultant of TRANSPLAN under JICA team supervision. The advisory committee is established to provide technical advises to JICA team in Japan side, and the steering committee is also established to provide various information and comments to the joint study team in Egypt Side.

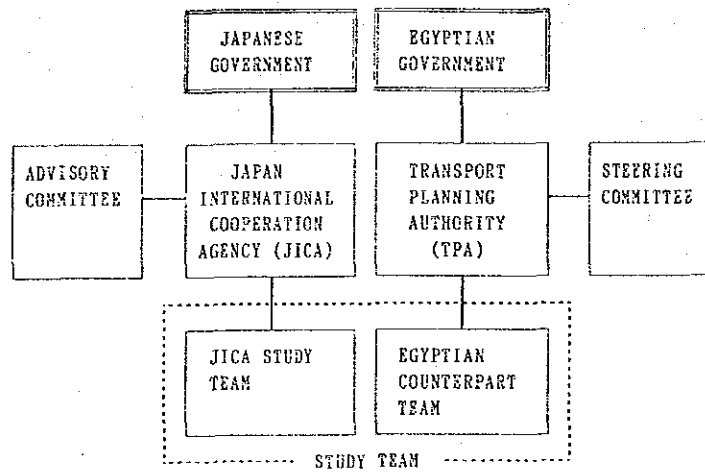


Fig. 1-5-1 Study Organization

## List of Participants

Advisory Committee	Steering Committee	
Prof. Koichi Yamagata	Dr. Ahmed Eisawi Saleh	Vice Chairman of TPA
Eng. Tetsuo Matsumura	Eng. Hussein Halim	Chairman of ENR
Mr. Kota Kishi	Eng. Fouad Abd-El-Aziz	Chairman of RBA
JICA Study Team	Eng. Zakaria Abd-Allah	Chairman of RTA
Dr. Juro Kodera	Gen. Mohamed El-Tahar	Assistant Minister of Interior
Mr. Yoshinobu Nomura	Gen. Mohamed Maher	for Specialized Police (Ex.)
Mr. Tetsuo Kawamura	Gen. Kandeel	Assistant Minister of Interior
Mr. Teruhiko Horie	Gen. Mohamed Reda Abd-El-Aziz	for Specialized Police (Ex.)
Prof. Mohamed El-Hawary	Gen. Hany Hosny	Assistant Minister of Interior
Mr. Hidetsune Ishii	Prof. Abd-El Gawad Bahgat	for Specialized Police
Mr. Mohmoud S. Riad	Dr. Sayed Abd-El-Kader	Undersecretary of Ministry of Maritime Transport
Mr. Tetsuo Horie	Dr. Mohamed Abd-El-Farah Mongi	Professor of Road at El-Azhar University
Mr. Tetsuo Wakui	Dr. Fayka El-Refaie	Vice Chairman of Industrialization Authority
Mr. Akihisa Kojima	Dr. Abd-El-Salam Gomaa	Advisor for Minister of Industry
Egyptian Counter Parts	Dr. Sayed Dohia	Deputy Governor of Central Bank for Economic Researches
Eng. Hassan Selim	Mr. Hanafy Selim Kotb	Director of Agricultural Research Center
Mr. Ibrahim Abbass	Eng. Mokhtar Mostafa Hassan	First Undersecretary of Ministry of Planning
Mr. Abd-El-Nabi El-Shasly	Egyptian Officials	Undersecretary of Economic Affairs, TPA
Mr. Onsi Fahim	Eng. Samir Labib	Undersecretary of Technical Affairs, TPA
Mrs. Taysier Zaghloul	Eng. Mohamed Salah-El-Din	Head of Execution and Districts Sector, RBA
Mr. Hamdy El-Tokhy		General Director for Roads, RBA
Eng. Mohamed El-Sabagh		
Eng. Marwa El-Bishri		
Eng. Kamal El-Din		
Eng. Assem El-Faham		
Eng. Goneim Abd-El-Hai		
Eng. Ahmed Ibrahim		
Eng. Mostafa El-Sayed		
Eng. El-Moursy Mohamed		
Eng. El-Helw		
Eng. Sameh Mohamed		
Eng. Nagy Nageeb Ramadan		

## CHAPTER 2 PRESENT SOCIO-ECONOMY

### 2.1 Administration and Area

#### 2.1.1 Governorates

Egypt has an area of 1,001,400 km<sup>2</sup> in total. Of which, the areas of the Nile and other water bodies cover 4,000 km<sup>2</sup>, and the remaining 998,000 km<sup>2</sup> is the areas without water bodies.

The latter area is administratively divided into 26 Governorates, however the local governments generally face a limited administrative independence since their budgets are dominated by the subsidies from the central government, and the governors are appointed by the central government.

There are two kinds of provincial delineation factors: availability of the Nile water and geomorphology. Areas affluent with the Nile water are further divided by the degrees of irrigation intensity.

These criteria divide whole Egypt into three regions: Lower Region (Delta Region) which spread at the lower stream of the Nile, Upper Region (Nile Valley Region), and Frontier Region (Frontier Governorates) featured by the desert.

#### 2.1.2 Districts

Each province is composed of districts for the purpose of administration. There are 295 districts in the whole country. In the same tier of government organization, urban districts are also called city, kism, and police port department. There are 147 urban districts. Rural districts are generally called markaz. Under the districts there are the smaller political units called cities, towns, villages, and hamletes. Markaz is basically rural but it may contain urban towns.

#### 2.1.3 Habitable Land

Any official data of habitual land has not been released yet. However, Second Five Year Plan estimated it to be 5.5% of the total land, while ENTS-II Report estimated it to be 4% of the total land.

#### 2.1.4 Agricultural Land

Several sources provide the data on the agricultural land. Any data indicates that the agricultural land covers less than 3% of the total land of Egypt.

- 1) FAO: 29,000 km<sup>2</sup>, equivalent to 2.9% of the total land.
- 2) Al-Ahram: the Landlord-Tenant Bill on June 4, 1992: 5.7

- million Feddans (24,00 km<sup>2</sup>).
- 3) MALR: 6 million Feddans (25,300 km<sup>2</sup>), equivalent to 2.5% of the total land.

Data on agricultural land for each governorate is provided by MALR. According to MALR, the central government invested on land reclamation every year. Despite the efforts, the rate of increase on agricultural land is only 0.3% in the period 1976-1986.

## 2.2 Population

### 2.2.1 Total Population

Egyptian census population is 48.2 million in 1986. Ten year average annual growth rate of population is 1.99% in the period 1966-1976. In the period 1976-1986, it drastically jumped up to 2.79% as shown in Table 2-2-1.

Table 2-2-1 Urban/Rural Population by Year

CENSUS YEAR	Population (x 1,000)			Share (%)	
	Total	Urban	Rural	Urban	Rural
1882	6,712				
1897	9,669				
1907	11,190	1,930	9,260	17.2	82.8
1917	12,718				
1927	14,178	3,810	10,368	26.9	73.1
1937	15,921	4,492	11,429	28.2	71.8
1947	18,967	6,363	12,604	33.5	66.5
1960	26,085	9,965	16,120	38.2	61.8
1966(2)	30,076	12,033	17,692	40.0	58.8
1976	36,627	16,037	20,590	43.8	56.2
1986	48,254	21,216	27,038	44.0	56.0

Notes:

(1) Excluding Egyptians Living abroad.

(2) Excluding population in Frontier Governorates (351,000)

Source: Annual Statistics 1991, CAPMAS

The ten year period from the mid-1970s is called "Oil Boom". In this period, an efflux of Egyptian labor force to other Arab nations became apparent. Most remarkable features are that it included the farmer migrants. Since it is believed that the farmer had been permanent settlers, it was an unprecedented phenomenon.

The number of labors migrated to foreign countries is excluded in the 1976 and 1986 census population. Separate survey estimated that the number of Egyptian labors in foreign countries in 1986 reached 2.25 million. With the 1966 census, which was conducted before the labor migration became apparent, one could speculate that the total population would have been two-fold within these 30 years, and reached at 5.5 million.

Fig. 2-2-1 shows the population distribution by age and sex for the years 1976 and 1986. The dependent population rate (productive age population to dependent population) is 77.1 and 78.0 in the years 1976 and 1986 respectively and it still shows increasing tendency.

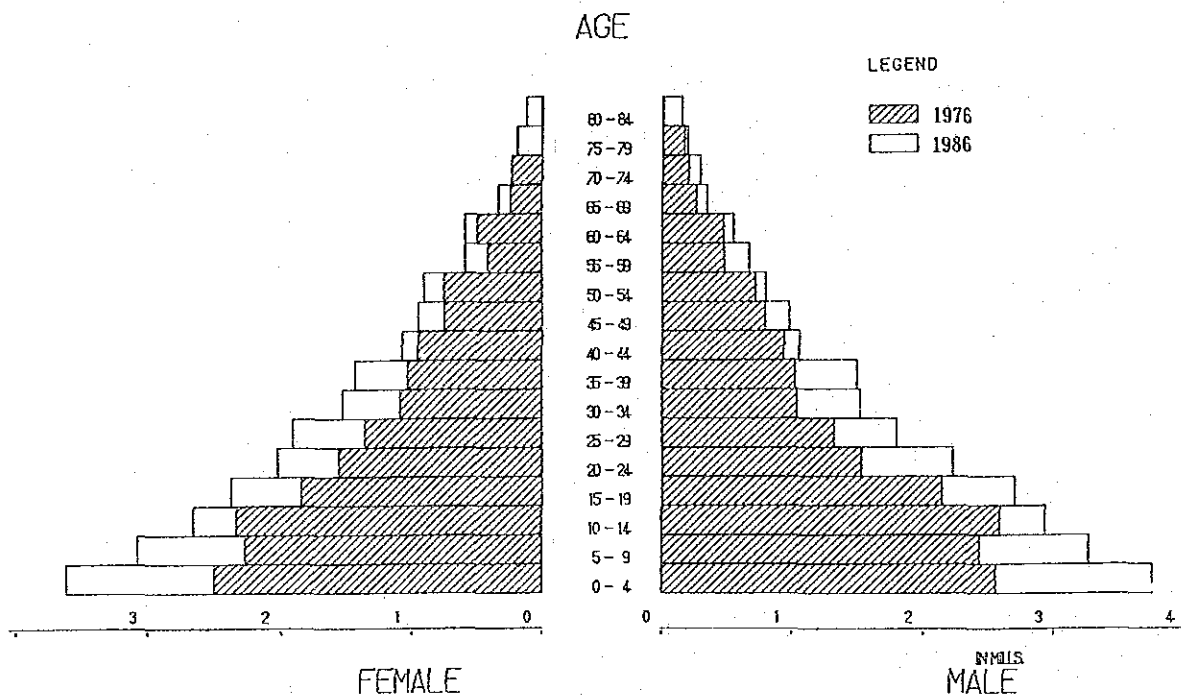


Fig. 2-2-1 Population by Age and Sex, 1986

### 2.2.2 Natural Increase Rate

The natural growth of population peaked at 3% in 1985. This figure showed an declining tendency to 2.5% in 1990. Another peak in 1979 reflects the baby-boom effect after the "October War" in 1973 (See Table 2-2-2). These figures: the birth rate, death rate, and natural increase are presented in CAPMAS mid-year population estimates based on the 1986 census.

Table 2-2-2 Mid-Year Population Estimates, and Number and Rates of Birth, Death, and Natural Increases for Years 1952, 1960, 1966 and 1976-1990

Year	Population Estimate		Births		Deaths		Natural Increase	
	(x 1000)	No.	Rate	No.	Rate	No.	Rate	
		(x 1000)	(x 1000)	(x 1000)	(x 1000)	(x 1000)	(x 1000)	
1952	21,437	969	45.2	381	17.8	588	27.4	
1960	25,960	1,114	42.9	438	16.9	676	26.0	
1966	30,188	1,235	40.9	477	15.8	758	25.0	
1976	37,858	1,384	36.6	445	11.8	939	24.8	
1977	38,794	1,455	37.5	459	11.8	969	25.7	
1978	39,767	1,487	37.4	417	10.5	1,070	26.9	
1979	40,889	1,642	40.2	446	10.9	1,169	29.2	
1980	42,126	1,580	37.5	423	10.0	1,157	27.5	
1981	43,322	1,604	37.0	434	10.0	1,170	27.0	
1982	44,506	1,612	36.2	444	10.0	1,168	26.2	
1983	45,721	1,684	36.8	445	9.7	1,239	27.1	
1984	46,990	1,815	38.6	447	9.5	1,368	29.1	
1985	48,349	1,922	39.8	456	9.4	1,466	30.3	
1986	49,863	1,928	38.7	458	9.2	1,470	29.5	
1987	51,349	1,923	37.4	468	9.1	1,455	28.3	
1988	52,827	1,933	36.6	429	8.1	1,504	28.5	
1989	54,188	1,804	33.3	441	8.1	1,363	25.2	
1990	55,571	1,790	32.2	415	7.5	1,375	24.7	

Source: Annual Statistics 1991, CAPMAS

### 2.2.3 Urban Population

The urban area started attracting and absorbing population in the beginning of the 1900s, and this tendency had lasted until the latter half of the 1970s. In 1976, the urban population ratio reached at 43.8% of the total population. In 1986, it gained slight additional share to be 44.0%. The growth of urban population turned out stagnating for the first time and it suggested the urbanization process had reached at the saturation level in this period.

Two causes are speculated: One is the active out-migration of labor to foreign countries, and the other is that the suburban economic development were active and reduced the rural-to-urban migration drive.

The Greater Cairo area has 34% of the total urban population and forms a single-core-structure. With the urban population in Alexandria together, the urban population in this area becomes 48% of the total. This suggests the important role of the Cairo-Alexandria corridor in Egyptian population distribution.

## 2.2.4 Population Distribution Structure

The pattern of the population distribution closely corresponds to the composition ratio of the agricultural land. This is shown in Table 2-2-3. The majority of population in the GIZA governorate had been sprawled out from the Cairo urban area. With this GIZA population together, 70% of the total population in Egypt inhabits in the delta region spreading around Cairo, while the remaining 30% lives in the Upper Egypt. The Frontier Governorate has minimal 1.2% of the total population.

Table 2-2-3 Number and Percent of Population in 1986 by Governorate and Urban/Rural Residence

GOVERNORATE	TOTAL		URBAN		RURAL	
	NO. (x1000)	PERCENT	NO. (x1000)	PERCENT	NO. (x1000)	PERCENT
TOTAL	50,504	--	--	--	--	--
Total Egyptian Abroad	2,250	--	--	--	--	--
Total Population	48,254	100.0	21,215	100.0	27,038	100.0
1 TOTAL URBAN GOV.	9,724	20.2	9,724	45.8	--	--
1 Cairo	6,068	12.6	6,068	28.6	--	--
2 Alexandria	2,926	6.1	2,926	13.8	--	--
3 Port-Said	401	0.8	401	1.9	--	--
4 Suez	327	0.7	327	1.5	--	--
2 TOTAL LOWER EGYPT	20,863	43.2	5,750	27.1	15,113	55.9
5 Damietta	740	1.5	186	0.9	553	2.0
6 Dakahlia	3,484	7.2	912	4.3	2,571	9.5
7 Shrkia	3,414	7.1	719	3.4	2,694	10.0
8 Qalyoubia	2,515	5.2	1,103	5.3	1,413	5.2
9 Kafr El-Shiekh	1,809	3.7	411	1.9	1,397	5.2
10 Garbia	2,884	6.0	944	4.5	1,940	7.2
11 Menoufia	2,221	4.6	446	2.1	1,774	6.6
12 Beheira	3,248	6.7	760	3.6	2,488	9.2
13 Ismailia	545	1.2	266	1.3	279	1.0
3 TOTAL UPPER EGYPT	17,101	35.4	5,415	25.5	11,686	43.2
14 Giza	3,725	7.7	2,140	10.1	1,585	5.9
15 Beni-Suef	1,449	3.0	363	1.7	1,085	4.0
16 Fayaum	1,551	3.2	359	1.7	1,191	4.4
17 Menia	2,645	5.5	549	2.6	2,095	7.8
18 Asyout	2,215	4.6	617	2.9	1,598	5.9
19 Souhag	2,447	5.1	537	2.5	1,909	7.1
20 Quena	2,258	4.7	527	2.5	1,731	6.4
21 Aswan	809	1.7	330	1.5	488	1.8
4 TOTAL FRONTIER GOV	564	1.2	325	1.5	238	0.9
22 Red Sea	89	0.2	76	0.4	12	0.0
23 New Valley	113	0.2	50	0.2	62	0.2
24 Matrouh	161	0.3	81	0.4	79	0.3
25 North Sinai	170	0.4	105	0.5	65	0.2
26 South Sinai	28	0.1	11	0.1	17	0.1

Source: Annual Statistics 1991, CAPMAS



Fig. 2-2-2 shows the population distribution by semi-governorate zone. The Greater Cairo zone occupies about 20% of the total population.

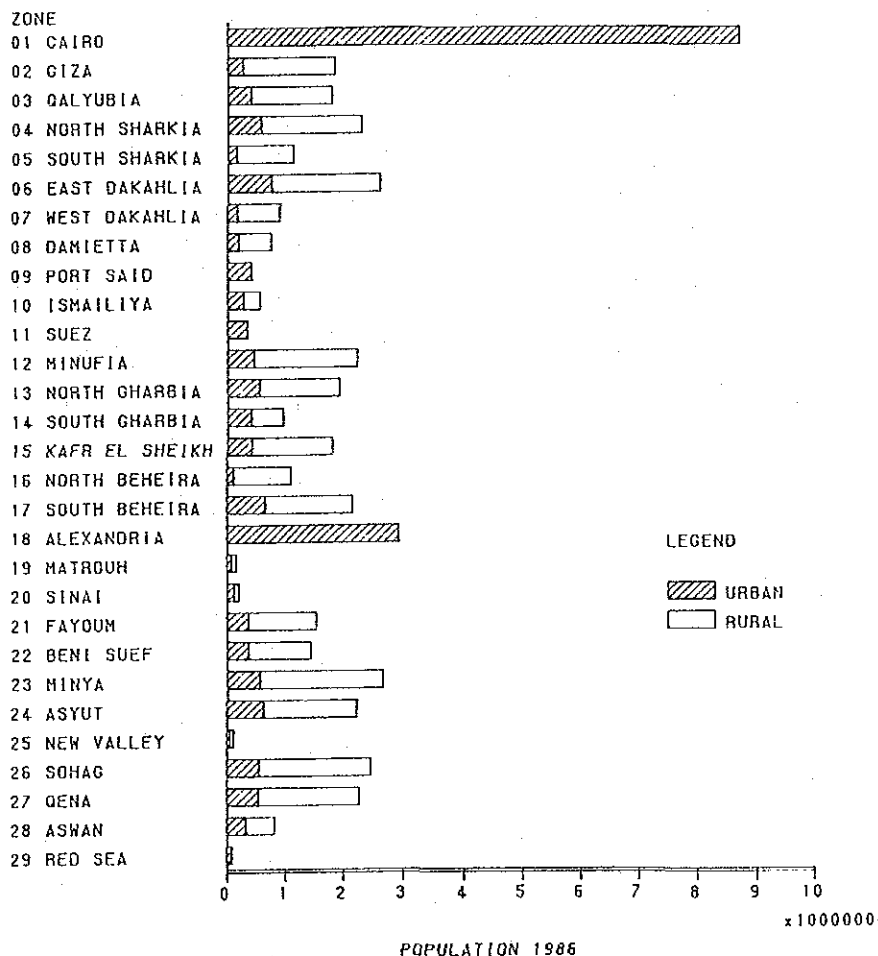


Fig. 2-2-2 Population Distribution by Semi-Governorate Zone

### 2.2.5 Average Household Size

1986 Population Census reported that the average household has 4.5 persons in suburban regions and 5.5 persons in rural region. National average is 4.9 persons (See Table 2-2-4). The government "family planning" policy seems to had made little effect to reduce the population in the rural area since there are stubborn needs for harvesting labors there.

Table 2-2-4 Average Size of Household (1986 Census)

Governorate	No. of households (x1000)	No. of persons (x1000)	Average Size of Household (psn/HH)
1 Cairo	1,350	6,025	4.5
2 Alexandria	640	2,906	4.5
3 Port-Said	87	394	4.5
4 Suez	69	325	4.7
Total Urban Governorate	2,148	9,651	4.5
5 Damietta	154	739	4.8
6 Dakahlia	699	3,476	5.0
7 Sharkia	658	3,405	5.2
8 Kalyubia	509	2,505	4.9
9 Kafr-El-Sheikh	329	1,804	5.5
10 Gharbia	578	2,876	5.0
11 Menuofia	445	2,217	5.0
12 Beheira	593	3,241	5.5
13 Ismailia	110	542	4.9
Total Lower Egypt	4,078	20,808	5.1
14 Giza	781	3,708	4.7
15 Beni-Suef	281	1,445	5.1
16 Fayum	291	1,549	5.3
17 Menia	542	2,637	4.9
18 Asyut	432	2,198	5.1
19 Souhag	457	2,440	5.3
20 Qena	448	2,251	5.0
21 Aswan	156	801	5.1
Total Upper Egypt	3,391	17,033	5.0
22 Red Sea	17	85	4.8
23 New Valley	17	110	6.2
24 Matruh	27	158	5.9
25 North Sinai	31	169	5.3
26 South Sinai	5	25	4.4
Total Frontier Governorate	99	548	5.5
Total	9,718	48,043	4.9

Note: Excluding Residents of Public Building.  
Source: Annual Statistics 1991, CAPMAS

### 2.3 Employment

Zonal distribution of employment was surveyed in 1986 together with the population. Table 2-3-1 shows employed persons by zone and by sector in 1986. The total employed persons were 12.3 million in 1986, of which 40% was in the agriculture, 24% was in the finance and service sectors, and 13% was in the manufacturing. The sectors of transport share of about 5% of the total, 661,000 jobs.

Table 2-3-1 Employment by Zone, 1986  
Unit:1,000 Emp.

Zone	Sector										Total	(%)
	Agri	Mini	Manu	Elec	Cons	Comm	Tran	Fina	Serv	Othe		
1 CAI	108	11	532	24	290	292	184	135	676	153	2,405	19.6
2 GIZ	175	1	77	4	45	33	23	5	61	23	447	3.6
3 QAL	148	1	62	3	26	25	25	6	100	34	431	3.5
4 SKS	259	1	43	4	28	27	23	8	137	18	548	4.5
5 SKN	184	0	12	1	8	12	9	2	43	9	282	2.3
6 DKE	295	1	56	3	35	36	28	9	151	25	639	5.2
7 DKW	127	0	13	2	12	11	8	2	39	9	223	1.8
8 DAM	68	0	54	1	14	15	9	2	37	5	206	1.7
9 PTS	15	1	11	1	6	17	24	3	40	6	124	1.0
10 ISM	41	1	9	3	16	10	15	3	35	4	136	1.1
11 SUZ	9	1	18	2	9	9	13	1	21	3	87	0.7
12 MIF	250	1	43	4	22	23	23	8	130	18	523	4.3
13 GHS	202	1	58	3	25	27	25	9	125	12	486	4.0
14 GHN	83	0	60	1	14	11	9	3	50	7	238	1.9
15 KAF	282	0	38	2	14	21	15	4	79	12	468	3.8
16 BHS	168	0	11	1	8	9	9	2	47	10	266	2.2
17 BHN	311	1	66	5	22	27	19	4	77	22	554	4.5
18 ALX	82	4	212	11	83	97	84	26	189	34	822	6.7
19 WDS	21	2	2	0	4	3	2	0	7	1	42	0.3
20 SIN	20	1	1	1	5	3	4	1	13	2	51	0.4
21 FAY	256	0	23	2	18	18	12	3	65	8	406	3.3
22 BES	220	0	17	1	16	16	11	4	69	7	360	2.9
23 MYA	434	1	28	3	15	28	20	5	113	17	664	5.4
24 ASY	337	1	26	3	21	26	16	5	99	15	547	4.5
25 NEW	10	0	1	0	2	1	1	0	11	1	27	0.2
26 SOH	344	1	23	2	41	33	17	5	92	23	581	4.7
27 QEN	260	2	33	3	57	26	20	4	89	16	510	4.2
28 ASW	65	2	12	6	12	11	10	2	45	8	174	1.4
29 RED	2	7	1	0	3	1	2	0	6	1	25	0.2
Total	4,777	44	1,541	97	873	868	661	259	2,647	504	12,270	100.0
(%)	38.9	0.4	12.5	0.8	7.1	7.1	5.4	2.1	21.6	4.1	100.0	

The zonal distribution of the total sectoral employment in 1986 had the same tendency as in GRDP and population, however the percentage shares differed a little. Zone 01 (Greater Cairo) had 2.41 million jobs with a share of 20% and 18 (Alexandria) had 0.82 million jobs of 7% followed by 23 (Minya) 5% and 06 (East Dahkalia) 5%. In Greater Cairo the agriculture sector had jobs corresponding to 4.5% of the zonal total and Alexandria 10%. But in Minya and East Dahkalia the share was 65% and 46%, respectively.

## 2.4 Urbanization

### 2.4.1 Urbanization Trends within Districts

Characteristics of population data by district, and by urban and rural on the 1966, 1972, and 1986 censuses are summarized below:

Urbanization process had been most active in each capital in the late 1960s and the early 1970s. And then core region of urbanization had shifted to local towns.

In the period 1966-1976, growth rate of urban population in a capital of each governorate recorded a higher figure than that in the period 1976-1986. And in the ten years from 1976 to 1986, population growth rate in whole governorate is higher than the rate in a capital. These facts suggest that urbanization has progressed in the late 1960s and the early 1970s. In the following ten years, urbanization in local towns had progressed more active than in a capital, except in Minufia and Sohag.

Note: This is not true for Giza, Qalyubia, and Behira since they absorbed a population sprawled from the Cairo-Alexandria region.

### 2.4.2 Labor Migration

Egyptian migration became apparent in the mid-1970s. The labor migration had some impacts to socio-economic structure; however, until mid-1980s, the specific number of the labor migration and its impacts were not investigated.

Three researches conducted in the mid-1980s report the estimated number of emigration as follows:

- (1) National Population Council (NPC)  
- Egyptian Emigration Survey (EES)-:  
Total Number: 1.47 million in 1984
- (2) A Team of Experts from Several Government Ministries:  
Total Number: 2.25 million in 1986
- (3) CAPMAS:  
Total Number: 1.964 million in 1987

Despite the range of the figures above, one could estimate about 2 million workers migrated to foreign countries.

The Ministry of Manpower recently reported that there were 2.37 million Egyptian workers in Arab countries (See Table 2-4-1). 1.25 million in Iraq in 1984. These workers came back to Egypt during the Gulf Crisis in 1990 from Iraq, Kuwait, Jordan and other nations near the Gulf.

Table 2-4-1 Number of Egyptian Workers Abroad

Country	Workers	Country	Workers
Libya	1,000,000	Oman	12,000
Saudi Arabia	850,000	Baharain	2,000
Iraq	150,000	North America	205,400
Kuwait	120,000	Europa	60,800
Jordan	112,000	Australia	56,400
United Arab Emirates	84,000	Other Countries	80,500
Qatar	22,000		
Yemen	21,000	Total	2,776,100

Source: Figures for Arab Countries 1987, CAPMAS

In the same year, the Egyptian workers moved to Libya after the Egypt-Libya border had opened. Recent World Bank Quarterly Report mentioned that about one million Egyptian workers immigrated to Libya, and that the total number of Egyptian workers in foreign countries reached the level before the Gulf War.

The total number of Egyptians labor force in foreign countries is still controversial. This is because the data collection process is uncertain; the data may be manipulated by political reasons. Nevertheless, what is certain is that the labor emigration from Egypt affected to reduce the rural-urban migration.

EES reported that 10% of the total Egyptian work force is in foreign countries, and that 25% of the total workers have work experiences in foreign countries.

#### 2.4.3 Expansion of Non-Agriculture Employment in Rural Area

Structure of non-agriculture employment can be analyzed in the 1976 and 1986 census data. Two major points are indicated below:

- (1) Construction, manufacturing, finance, and transportation industries employed about 350,000 people (See Table 2-4-2). These industries are stimulated by the remittance from the Egyptian workers in foreign countries. Usually, the primary use of the remittance is on new residential developments and renovations. The next use is on durable goods. The total amount of remittances, according to IMF, was 2.5 billion US dollars in 1986, and 5.5 billion US dollars in 1990 (See Table 2-4-3).

Table 2-4-2 Composition of Non-Farm Rural Employment, 1976 and 1986

Sector	Employment		Net New Jobs	Growth Rate (%)
	1976	1986		
Agriculture (Urban+Rural)	4,426,417	4,566,945	140,528	0.3
(Rural)	4,426,417	3,938,386	-488,031	-1.2
Others				
Mining, Quarrying	11,983	18,510	6,527	4.4
Manufacturing	322,685	412,341	89,656	2.5
Electricity, Gas, Water	17,404	32,693	15,289	6.5
Construction	123,757	283,618	159,861	8.6
Commerce., Rest., Hotels	244,860	216,873	-27,987	-1.2
Transport	110,341	202,775	92,434	6.3
finance	15,996	29,706	13,710	6.4
Social, Personal, Repair Service	519,717	915,545	395,828	5.8
Others	78,509	460,181	381,672	19.3
Sub Total	1,445,252	2,572,242	1,126,990	5.9
Total	5,871,669	7,139,187	1,267,518	2.0

Source: Population Census 1986 20% Sample Result, CAPMAS

Table 2-4-3 Remittances from Egyptian Workers Abroad

Year Million US\$		Year Million US\$	
1982	2,181	1987	2,604
1983	3,688	1988	3,770
1984	3,981	1989	4,253
1985	3,216	1990	5,527
1986	2,515		

Source: Cairo Today June 1992 Egypt's Future

- (2) Social, personal and repair service sector created new job opportunities of about 400,000. This industrial sector and the majority of electricity, gas and water sector together form the public sector employment.

In the 1980s, the public sector expanded. Its role in creating the job opportunity was significant in both urban and rural areas.

1.3 million people were employed in the public sector (the government and government-owned enterprises). Of which, 80% were government employees in administration, social services, education and health departments.

Suburban employment expanded remarkably in the 1980s because of the public sector's great contribution. This leads to the weakening of rural-urban migration drive, and at the same time, this phenomena resulted in acceleration of urbanization of rural areas.

#### 2.4.4 Fundamental Considerations on Future Urbanization

During the period 1976-1986, further progress of urbanization was avoided by the factors mentioned above. But one can not be optimistic about the future. This is attributable to the following reasons:

- (1) Job expansion in public sector is null in near future.

Egyptian Civil Law has guaranteed employment opportunity for the graduates of the higher educational institute since 1952; however, eight years of waiting period after graduation, privatization programs, and rationalization of administration tend to increase unemployment, not employment.

- (2) The number of Egyptian workers in foreign countries faces a limit of growth:

Each nation has its absorbing capacity of immigrants depending on the economic condition even if it was an Arab country. In addition, Western nations have their standards on the skills and knowledge to foreign workers so that the possibility of sending more workers to those nations is limited for Egypt in the future.

- (3) Drastic increase in agriculture employment cannot be expected by its nature.

For these reasons mentioned above, it is expected that a rural-to-urban migration drive will be accelerated in near future.

## 2.5 Gross Domestic Product (GDP)

### 2.5.1 Gross Domestic Product

Analysis of this section is based on the official data compiled by the MOP (See Table 2-5-1, Table 2-5-2). The period 1981/82-1986/87 corresponds to the period of the first Five Year Plan, and the period 1986/87-1991/92 the Second Five Year Plan. The first year of the first Five Year Plan (1981/82) fell on the mid-year of the ten years period of high-economic growth period started in 1974.

In order to keep the economic growth, and to fill the shortage in capital, the Egyptian government had to depend on loans from overseas. However, the debt was accumulated over 30 years, and reached 120 % of GDP in 1986. Debt service ratio become 30% of GDP, and it was judged as "not-sustainable". The debt service was rescheduled in 1987 Paris Club. Several measures were taken to alleviate the capital shortage, but the Gulf War damaged the Egyptian economy further. Finally, the government initiated the long term shift of its economic structure to market economy. The year 1991/92 was the third year since the reform program started in 1990.

Table 2-5-1 General Estimate of Gross Domestic Product at Factor Cost from (81/82-86/87) at Prices of (81/82) in Million L.E.

Item	GDP(M.LE)		Growth Rate (%)	81/82 Structure (%)
	81/82	86/87		
Agriculture	4,053	4,695	3.0	19.6
Industry	2,736	4,250	9.2	13.3
Petroleum	2,713	3,863	7.3	13.2
Electricity	128	253	14.6	0.6
Building/Constr.	1,170	1,445	4.3	5.7
Total Commodities	10,800	14,506	6.1	52.4
Transport/Commnu.	1,525	2,250	8.1	7.4
Suez Canal	642	668	0.8	3.1
Trade	2,653	3,701	6.9	12.9
Finance	845	1,040	4.2	4.1
Insurance	28	33	3.3	0.1
Tourism/Rest./Hotels	226	299	5.8	1.1
Total Prod.Services	5,919	7,991	6.2	28.7
Housing	372	580	9.3	1.8
Public Utilities	50	83	10.7	0.2
Governmental Services	2,360	3,195	6.2	11.4
Private Services	1,127	1,473	5.5	5.5
Total Soc.Services	3,909	5,331	6.4	18.9
<b>Total</b>	<b>20,628</b>	<b>27,828</b>	<b>6.2</b>	<b>100.0</b>

Source:3rd 5 year Plan, MOP



During five years period 1981/82-1986/87, the Egyptian economy enjoyed the momentum of "Oil Boom", and achieved 6.2% average annual increase of GDP (See Table 2-5-1).

On the other hand, in the period 1986/87-1991/92, the growth rate dropped to 3.9% because of the reform program (See Table 2-5-2).

Table 2-5-2 General Estimate of Gross Domestic Product at Factor Cost from (86/87-91/92) at Prices of (86/87) in Million L.E.

Item	GDP(M.LE)		Growth Rate (%)	Structure(%)	
	86/87	91/92		86/87	91/92
Agriculture	10,111	11,622	2.8	20.7	19.7
Industry	8,137	10,325	4.9	16.7	17.5
Petroleum	1,873	1,908	0.4	3.8	3.2
Electricity	528	705	6.0	1.1	1.2
Building/Constr.	2,822	3,609	5.0	5.8	6.1
Total Commodities	23,471	28,169	3.7	48.1	47.7
Transport/Commnu.	3,203	3,856	3.8	6.6	6.5
Suez Canal	840	925	1.9	1.7	1.6
Trade	9,097	10,727	3.4	18.7	18.1
Finance	2,172	2,630	3.9	4.5	4.4
Insurance	37	42	2.6	0.1	0.1
Tourism/Rest./Hotels	459	1,018	17.3	0.9	1.7
Total Prod.Services	15,808	19,198	4.0	32.4	32.5
Housing	697	1,159	10.7	1.4	2.0
Public Utilities	154	224	7.8	0.3	0.4
Governmental Services	4,475	5,702	5.0	9.2	9.6
Private Services	4,160	4,655	2.3	8.5	7.9
Total Soc.Services	9,486	11,740	4.4	19.5	19.9
Total	48,765	59,107	3.9	100.0	100.0

Source:3rd 5 year Plan, MOP

World Bank calculated GDP per capita. The Egyptian GDP per capita in 1989 was 630 US dollars. Petroleum industry lost GDP share from 3.8% to 3.2% in ten years from 1981/82 to 1991/92. Totals-goods share went down as low as 50%. Dependency to the service sectors became apparent.

Agriculture sector constantly kept 20% of GDP; manufacturing sector gained its share from 13.1% in 1981/82 to 17.4% in 1991/92, and offset the loss of petroleum sector. Trade sector expanded its GDP share, and became the second largest at 18.2 % in 1991/92, following the agriculture sector.

Public sector shared 36.5% of GDP in 1986/87, and its ratio increased to 40% in 1991/92. The increase is attributable to the increases in oil price and the Suez Canal toll. Except for another increasing item of electricity, the

public sector is steadily reducing the share of GDP.

Productivities among the sector are compared by entering a ratio: sectoral GDP/Sectoral employment. the average sector's GDP per employment shows the lowest value in the agriculture and mining of LE 4,290 and the highest value in the manufacturing sector of LE 22,550 and the other in between.

### 2.5.2 Gross Regional Domestic Product (GRDP)

Gross Regional Domestic Products are not shown in statistical data. GRDP are distributed among the zones as in Table 2-5-3, in accordance with the employment by sector in a zone.

Table 2-5-3 Estimated GRDP by zone and by Sector 1991

Zone	GRDP by Sector (M.LE in 90/91 Fixed Price)						Total	Pop (1,000)	GDP/Pop (1,000LE)
	Agr	Ind	Elc	Const	Prod Serv	Social Serv			
1 CAI	466	11,907	499	2,019	14,625	5,028	34,544	9,934	3.48
2 GIZ	755	1,711	77	315	1,468	509	4,835	2,289	2.11
3 QAL	639	1,387	68	183	1,340	816	4,433	2,193	2.02
4 SKS	1,123	970	81	193	1,383	938	4,688	2,620	1.79
5 SKN	798	272	20	58	569	318	2,035	1,297	1.57
6 DKE	1,276	1,254	72	241	1,756	1,067	5,666	2,950	1.92
7 DKW	549	298	45	83	501	287	1,763	1,008	1.75
8 DAM	295	1,190	21	100	612	258	2,476	858	2.89
9 PTS	66	247	18	44	1,044	280	1,699	498	3.41
10 ISM	178	208	54	109	649	240	1,438	682	2.11
11 SUZ	40	426	45	66	540	144	1,261	428	2.95
12 MIF	1,084	969	89	151	1,281	902	4,476	2,544	1.76
13 GHS	875	1,285	60	176	1,431	831	4,658	2,178	2.14
14 GHN	358	1,314	14	99	552	345	2,682	1,073	2.50
15 KAF	1,220	827	43	99	968	555	3,712	2,067	1.80
16 BHS	729	245	28	55	491	346	1,894	1,267	1.49
17 BHN	1,346	1,466	107	156	1,200	596	4,871	2,447	1.99
18 ALX	354	4,737	230	579	4,944	1,353	12,197	3,304	3.69
19 WDS	90	74	7	29	135	48	383	194	1.97
20 SIN	87	52	11	38	186	87	461	231	2.00
21 FAY	1,108	517	33	124	805	443	3,030	1,820	1.66
22 BES	951	379	29	114	724	456	2,653	1,664	1.59
23 MYA	1,878	628	57	107	1,282	789	4,741	3,016	1.57
24 ASY	1,459	574	53	144	1,116	691	4,037	2,547	1.59
25 NEW	41	20	4	15	48	71	199	139	1.43
26 SOH	1,490	523	42	283	1,313	697	4,348	2,774	1.57
27 QEN	1,127	767	65	396	1,190	638	4,183	2,613	1.60
28 ASW	283	319	126	80	550	326	1,684	930	1.81
29 RED	10	184	10	20	84	44	352	115	3.06
Total	20,675	34,750	2,008	6,076	42,787	19,103	125,399	55,680	2.25

The table shows a large concentration of GRDP in 01 (Greater Cairo) 28% and 18 (Alexandria) 10%. In those zones products in agriculture are less than 3%, while around the 30% is for industrial sector. the zone of 06 (East Dakahlia) is ranked at the 3rd in the value of GRDP, however the percent share of the industry is 16% and the agriculture 22%. The same tendency is found in other zones in the Lower Egypt Region, although the percent shares are different.

In the zone 21 Fayum, zone 22 Beni Suef, zone 24 Asyut and others in the Upper Egypt region, the agriculture is a dominant sector having a share of 35% or so, which the industry sector registers about 10% of the zonal GRDP.

GRDP per population is shown in the same table, which shows the ratios in the two large urbanized zones are approximately two times higher than those in the Lower region and three times higher than those in the Upper Egypt.

The agriculture is the largest sector providing the jobs for 4.8 million persons, a 40% of the total employed in the country in 1986. Increase in productivity of the agriculture sector are a crucial factor to raise the income level of those engaged in the sector. A characteristic pattern of the agriculture can be said that rice is predominant in the zones near the Mediterranean Coast, cotton and bean are in the middle of the Delta Region, and sugar canes are in the Upper Egypt. A various fruits and vegetables are produced in all zones.

If the ratio of GRDP/Employment is calculated, the following examples are shown: Greater Cairo 5.25, Alexandria 5.31, East Dahkalia 3.59, Fayum 3.82, Beni Suef 4.02, and Minya 3.06. Differences among these are less than the ratios of GRDP/(Zonal population) in Table 3-5-3. GRDP per employment among the regions have less range of differences would mean excessive employment in the urbanized zones resulting in their lower values in terms per employment.

## 2.6 Inflation Rate

Wholesale price index showed annual inflation rate of 20.3% from 1985 to 1990 (See Table 2-6-1). According to the consumer price index, during the same five years, the inflation rates were 19.6% in urban areas and 19.4% in suburban areas. From 1984 to 1985 it was 11%, but after 1985 the rate fluctuated at around 20%. In 1991, the Ministry of Finance reported that the inflation rate reached 25.7%.

Table 2-6-1 Index of Wholesale Prices

Year	All Items	All Categories	
		Urban	Rural
65/66	100.0		
66/67		100.0	100.0
1984		469.9	545.4
1985	487.8	532.4	609.2
1986	572.1	652.5	747.8
1987	650.2	781.0	848.1
1988	820.9	918.9	1,023.3
1989	1,044.9	1,114.5	1,265.3
1990	1,220.3	1,301.3	1,478.7
Inflation Rate(%) 1985-1990	20.1	19.6	19.4

SOURCE:CAPMAS

Inflation rate for food and lumber increased to 20%. The price of medical supply has been artificially kept low by subsidies since impacts of this price increase to society is considered to be large. The rent control has kept the housing prices low.

The high inflation rates are caused by the reduction of subsidies and the government consumption to reduce the debt. The government increased the energy prices and electricity by 220% in five years from 1985 to 1990. In May 1990, electricity tariff was raised by 38%; fuels and kerosene tariff were raised by 43%. Gasoline price was raised in September 1990; however, gasoline has been receiving subsidies, and despite the raise it is only 50% of the international price. Other than these items, the government has raised prices of manufacturing goods, and various services.

## 2.7 Foreign Trade Balance

### 2.7.1 Commodity Import/Export Balance

In 1985, the import exceeded the export by LE 6 billion, and in 1990 it became LE 18 billion (see Table 2-7-1). The 1990 price went up three times in four years. However, since the rate of export exceeded the rate of import by 30%, the rate of import excess is being reduced.

Table 2-7-1 Balance of Trade Between Egypt and Foreign Countries, by Year

Year	Exports		Imports		Surplus/Deficit	
	1,000 LE	Index	1,000 LE	Index	1,000 LE	Index
1952	150,172	7.3	227,698	2.8	-77,526	1.3
1985	259,941	12.7	693,061	8.6	-433,120	7.2
1986	2,053,959	100.0	8,051,432	100.0	-5,997,473	100.0
1987	3,046,010	148.3	11,357,837	141.1	-8,311,827	138.6
1988	3,994,436	194.5	16,308,572	202.6	-12,314,136	205.3
1989	5,734,726	279.2	16,623,623	206.5	-10,888,897	181.6
1990	6,953,762	338.6	24,823,240	308.3	-17,869,478	298.0

Source: CAPMAS

Economic structure of this import excess is caused by two major economic policies. Firstly, the government subsidized and kept the price of the staple food low for social stability. Secondly, the industrialization policy focused on heavy chemical industry to achieve an import substitute.

Egyptian export industry heavily concentrated on petroleum and textile. The oil price decrease in 1984 revealed the vulnerability of Egyptian economy in earning foreign exchange. Those two industries (petroleum and textile) in 1990 occupy 65% of the total import even after the oil price decrease (Table 2-7-2). This bitter experiences form the base for setting goals to strengthen export industries other than textile.

As for the import by commodity, "Machinery, and Mechanical and Electrical Appliances" and "Agricultural Products" are the top two categories of import. Those two items have 34.7% of total import. Main agricultural commodities of import are cereals like wheat and maize, and their flour.

Table 2-7-2 Imports and Exports by Items  
Unit: Million LE

Items	Imports		Exports	
	1990	90/86(%)	1990	90/86(%)
All Imports & Exports	24,823.23	208.30	6,753.77	238.60
1 Living Animals and related Products	1,341.26	181.80	98.46	569.50
2 Vegetables Products	4,074.65	291.20	535.80	345.30
3 Fats, Oils, related Products	606.73	41.70	6.47	192.40
4 Prepared Foodstuff Beverages & Tobacco	1,857.79	279.10	124.60	509.40
5 Mineral Products	943.51	45.70	2,060.48	95.40
6 Chemical Products	2,405.55	306.20	310.84	1,023.00
7 Artificial Resin & Plastic Materials, Cellulose & Rubber	1,325.73	299.30	35.28	1,390.50
8 Raw Hides & Skins, Furs & Fur Products	15.36	167.80	33.38	622.50
9 Wood & Wood Products, Wood Charcoal, Cork, Basketwar	1,358.83	231.70	17.17	5,924.90
10 Paper, Paperboard, Paper-making Materials & related Articles	972.16	430.30	42.59	200.20
11 Textiles & Textile Articles	909.97	775.40	2,445.73	282.00
12 Footwear, Headgear, Umbrellas & Artificial Flowers	4.84	199.40	47.91	1,288.00
13 Product of Stones, Plaster, Cement, Asbestos & Glass	262.91	161.90	36.76	1,629.60
14 Pearls, Precious & Semi Precious Stones, costume Jewelry & Coins	12.75	187.70	0.74	82.00
15 Base Metals & Related Prod.	2,495.07	156.80	736.49	574.70
16 Machinery & Mechanical Appliances, Electrical	4,265.01	170.40	38.81	1,418.20
17 Vehicles, Aircraft & related Parts	1,334.45	192.90	3.95	7,880.00
18 Optical, Cinematographic Surgical Instruments & Watches	508.29	175.50	14.04	2,925.60
19 Arms, Ammunitions & related Parts	4.04	11.80	0.34	-
20 Miscellaneous Manufactured Products	124.03	194.60	162.75	3,359.10
21 Works of Art, Collector's Pieces & Antiques	0.30	-	1.18	344.00

Source: CAPMAS

### 2.7.2 Current Balance of Payments

MOP provided the service balance in 91/92. In 91/92, the export of service sector is to exceed import by L.E. 13 billion (see Table 3-7-3). The fare raise of the Suez Canal and the recovery of tourism are the major reasons of the

surplus in the service sector. Remittance from foreign countries together with these two are the major items of invisible inflows.

The total balance of foreign trade is chronically suffered from deficit and the difference is financed by the foreign loan. The deficit is estimated to be LE 22.9 billion in 1991/92. In the total of LE 22.9 billion, the deficit of commodities and services is LE 10.6 billion.

Petroleum and related products in the goods category shared 40% of the total goods exports in 1981/82, but in 1986/87, the amount of petroleum and related goods dropped to one third. This decrease changed the government financial operation policies. The new policies, in fact, affected to increase once stagnated commodity exports in 1991/92: In 1981/82 the share of commodity exports was as high as 50% of the total revenue. It dropped to 26% in 1986/87, but after the policy it went up to 28% in 1991/92.

Services exports has been gradually increasing since 1981/82. Its percentages to the current revenue are 24%, 29%, and 39% in years 1981/82, 1986/87, and 1991/92 respectively. The Suez Canal toll and tourism boom contributed to this phenomenon. Remittance from workers in overseas became 33% of the total. It had dropped during the Gulf Crisis, but it recovered to 21% in 1991/92.

The four largest sources of revenue in Egypt are petroleum, Suez Canal, tourism, and remittance. The sum of the four occupies 72.8%, 55%, and 5.5% of the current revenue in 1981/82, 1986/87, and 1991/92 respectively.

Exports of agricultural and industrial commodities excluding petroleum products went up from 10.7% in 1981/82 to 12.2% in 1991/92. However, the share is still small in international trade market. Further growth of export industry will provide the base for sound Egyptian economy. Reduction of import seems to be another measure for sound economy, but it cannot be realistic. Consumption control policy may reduce production of final consumer goods. In strengthening export industry, mid-products and investment products must be imported.

Table 2-7-3 Current Balance of Payments Estimated for  
(1991/92) Compared to (1981/82) & (1986/87)

Description	81/82	86/87	91/92 Expected	Growth Rate(%)		Structure(%)		
				82/87	87/92	81/82	86/87	91/92
Agricultural	454.9	517.8	1,575.0	2.6	24.9	5.7	4.4	2.6
Industrial	395.6	924.6	5,762.0	18.5	44.2	4.9	7.9	9.6
Petroleum	1,914.6	634.1	5,545.0	-19.8	54.3	23.9	5.4	9.3
Foreign Partners' Share	562.1	274.0	1,557.0	-13.4	41.5	7.0	2.3	2.6
Exports for Oil Investment	660.0	694.0	2,266.0	1.0	26.7	8.3	5.9	3.8
Total Export Goods	3,987.2	3,044.5	16,705.0	-5.3	40.6	49.9	26.0	27.9
Insurance	4.1	91.3	144.0	86.0	9.5	0.1	0.8	0.2
Navigation	401.2	558.5	2,090.0	6.8	30.2	5.0	4.8	3.5
Suez Canal Toll	636.2	803.6	6,030.0	4.8	49.6	8.0	6.8	10.1
Tourism	325.5	518.1	5,170.0	9.7	58.4	4.1	4.4	8.6
Others	559.2	1,460.1	9,983.0	21.2	46.9	7.0	12.4	16.7
Total Export Services	1,926.2	3,431.6	23,417.0	12.2	46.8	24.1	29.3	39.1
Expatriate Remittances	1,731.3	3,884.0	12,646.0	17.5	26.6	21.6	33.1	21.1
Investment Returns	213.9	409.4	2,466.0	13.9	43.2	2.7	3.5	4.1
Other Receipts						0.0	0.0	0.0
Total Return Receipts	1,945.2	4,293.4	15,112.0	17.2	28.6	24.3	36.6	25.2
Transfers to Indivi.& Agencies	103.4	276.3	827.0	21.7	24.5	1.3	2.4	1.4
Transfer to Governments	35.7	685.9	3,869.0	80.6	41.3	0.4	5.8	6.5
Total Current Transfer Receipts	139.1	962.2	4,696.0	47.2	37.3	1.7	8.2	7.8
Total Current Revenue	7,997.7	11,731.7	59,930.0	8.0	38.6	100.0	100.0	100.0
Consumer	2,142.8	2,325.5	11,220.0	1.6	37.0	21.8	17.5	19.5
Intermediate	2,569.4	3,711.9	19,060.0	7.6	38.7	26.1	28.0	33.1
Investment	1,856.8	2,441.5	9,920.0	5.6	32.4	18.9	18.4	17.2
Total Imported Goods	6,569.0	8,478.9	40,200.0	5.2	36.5	66.8	63.9	69.7
Insurance	11.1	78.2	124.0	47.8	9.7	0.1	0.6	0.2
Navigation	118.9	222.4	412.0	13.3	13.1	1.2	1.7	0.7
Tourism	198.3	174.1	385.0	-2.6	17.2	2.0	1.3	0.7
Government Expenses	190.5	200.0	1,598.0	1.0	51.5	1.9	1.5	2.8
Others	756.0	1,892.2	5,720.0	20.1	24.8	7.7	14.3	9.9
Petroleum Investment	660.0	694.0	2,266.0	1.0	26.7	6.7	5.2	3.9
Total Service Expenditure	1,934.8	3,260.9	10,505.0	11.0	26.4	19.7	24.6	18.2
Interest on Loans	641.0	1,080.8	4,910.0	11.0	35.4	6.5	8.1	8.5
Other Returns	120.0	171.0	470.0	7.3	22.4	1.2	1.3	0.8
Expend. to Foreign Partners	562.1	274.0	1,557.0	-13.4	41.5	5.7	2.1	2.7
Total Return Paid	1,323.1	1,525.8	6,937.0	2.9	35.4	13.5	11.5	12.0
Current Transfer Payment	1.6	2.1	3.0	5.6	7.4	0.0	0.0	0.0
Total Current Expenditure	9,828.5	13,267.7	57,645.0	6.2	34.2	100.0	100.0	100.0
Trade Balance	-2,581.8	-5,434.4	-23,495.0					
Service Balance	-8.6	170.7	12,912.0					
Goods+Servs. Balance	-2,590.4	-5,263.7	-10,583.0					
Return Balance	622.1	2,767.6	8,175.0					
Transfer Balance	137.5	960.1	4,693.0					
Current Transaction Balance	-1,830.8	-1,536.0	2,285.0					

Source: MOP



## 2.8 Development Plans

### 2.8.1 Third Five Year Plan (1991/92-1996/97)

#### 1) Background

The Second Five Year Plan started in 1986/87 has a role to provide a foundation of policies up to the year 2001.

Production goals are to double the agricultural production and quadruple the industrial production by the year 2001. In achieving these goals, it is reported, GDP growth rate shall be targeted at 6%-7%, and about 20% of GDP shall be invested.

The Second Five Year Plan also had a long-term vision to provide the basic human needs to all the expected population of 70 million in the year 2001. This target necessitates a conservation of farmland, establishment of new settlement patterns and physical reallocation of people.

The plan did have problems. Since the price of crude oil dropped, international trade has not been balanced. The rapid increase of national debt required the debt rescheduling (Total debt was 14% of GDP). For this financial difficulties, the government of Egypt consulted closely with IMF and World Bank, and shifted its economy from socialist economy to market economy.

Currently, the two-years economic reform program, which started in 1990, is under implementation. This economic reform program aims at strengthening the fundamentals of macro-economy.

While implementing the restructuring program, the Egyptian government is required to pursue the long-term goals set in the Second Five Year Plan.

#### 2) Goals of the Third Year Plan

##### (1) Population Control and Employment Expansion

Every year job opportunities of 49,000 are created. The government shall employ 25% of this additional labor force, and the private sector and government owned companies shall employ remaining 75%.

##### (2) Reduction of International Trade Deficit

Expansion of industrial products export, and reduction on import are the issues.

##### (3) Reduction of National Debt

In the planning period, the national debt shall be reduced

from current 8% of GNP to 3.5%.

### 3) Synopsis of the Plan

#### (1) Population

The number of people in Egypt is approximately 55.9 million in 1991/92; it is estimated to be 62.9 million in 1996/97 (see Table 3-8-1). Growth rate of population in these five years is set at 2.38%, keeping the declining tendency from 3.0% at the peak in the year 1985. The figure reflects decreasing tendency of natural growth rate.

The number of Egyptian workers in overseas has declined temporarily after the Gulf Crisis in 1990, but it is recovering. The population of this kind of workers is estimated to increase from 2.1 million in 1991/92 and 2.4 million in 1996/97.

Table 2-8-1 Population Estimates

Year	Birth Rate	Death Rate	Natural Increase	Total Pop. (1,000)	Egyptian Abroad (1,000)	Egyptian in Country (1,000)
1981	36.6	10.0	26.6	43,914	1,890	42,024
1982	36.5	9.9	26.6	45,114	2,090	43,024
1983	37.7	9.6	28.1	46,356	2,300	44,056
1984	39.2	9.5	29.7	47,670	2,540	45,130
1985	39.3	9.3	30.0	49,106	2,340	46,766
1986	38.1	9.2	28.9	50,639	2,200	48,439
1987	37.0	8.6	28.4	52,088	1,950	50,138
1988	35.8	8.1	27.7	53,567	2,260	51,307
1989	34.8	7.8	27.0	55,051	2,350	52,701
1990	33.8	7.7	26.1	56,537	2,100	54,437
1991	32.9	7.6	25.3	58,013	2,120	55,893
1992	32.0	7.5	24.5	59,481	2,150	57,331
1993	31.2	7.4	23.8	60,938	2,200	58,738
1994	30.4	7.3	23.1	62,388	2,250	60,138
1995	29.7	7.2	22.5	63,830	2,310	61,520
1996	29.0	7.1	21.9	65,266	2,380	62,886

Source: 3rd 5 Year Plan

#### (2) Urban Population

The ratios of urban population to the total population are 44% according to both the 1976 and 1987 censuses. The unchanged ratios imply the end of urbanization process. MOP projections are based on the same census data (see Table 2-8-2).

Table 2-8-2 Population Distribution Between Urban & Rural

Year	Urban		Rural		Total (1,000)
	(1,000)	(%)	(1,000)	(%)	
1981	18440.1	43.9	23,584	56.1	42,024
1982	18883.2	43.9	24,141	56.1	43,024
1983	19345.0	43.9	24,711	56.1	44,056
1984	19825.6	43.9	25,304	56.1	45,130
1985	20553.7	44.0	26,212	56.0	46,766
1986	21298.6	44.0	27,140	56.0	48,439
1987	22045.7	44.0	28,092	56.0	50,138
1988	22559.7	44.0	28,747	56.0	51,307
1989	23172.7	44.0	29,528	56.0	52,701
1990	23936.0	44.0	30,501	56.0	54,437
1991	24576.2	44.0	31,317	56.0	55,893
1992	25208.5	44.0	32,123	56.0	57,331
1993	25827.1	44.0	32,911	56.0	58,738
1994	26442.7	44.0	33,695	56.0	60,138
1995	27050.4	44.0	34,470	56.0	61,520
1996	27651.0	44.0	35,235	56.0	62,886

Source: 3rd 5 Year Plan

(3) Labor Force and Employment

The total labor force is 15.3 million in 1991/92. Of them, 13.9 million people are employed at present and the remaining 9% seeks for job. Reduction of unemployment rate to 7.5% by 1996/97 is thus one of the major policy targets (see Table 3-8-3). Another target is to create additional 490,000 job opportunity annually. The production sector is assigned to absorb 45.8% of new employees and the service sector remaining 54.2% (see Table 2-8-4).

Table 2-8-3 Estimates of Workforce, Employment and its Rate, Unemployment and its Percent to Workforce

Unit: 1,000

Year	Employment		Unemployment		
	Work Force				
	No.	Rate(%)	No.	Rate(%)	
91/92	15,268	13,900	91.0	1,368	9.0
96/97	17,669	16,350	92.5	1,319	7.5

Source: 3rd 5 Year Plan

Table 2-8-4 Employment Estimates for (96/97) Compared with Base Year of (91/92) & Increase in Employment No. During the Third Five Year Plan (92/93-96/ & the Annual Growth Rate)

Unit:1,000 Emp.

Economic Sector	91/92	96/97	Increase	Annual Increase
Goods	7,542	8,664	1,122	224
Agriculture	4,588	4,922	334	67
Industry/Mining	1,902	2,399	497	99
Petroleum	38	48	10	2
Electricity	103	120	17	3
Building/Construction	911	1,175	264	53
Prod.Services	2,264	2,839	575	115
Transp/Commun/Suez Canal	622	789	167	33
Trade/Finance/Insurance	1,491	1,866	375	75
Tourism/Rest/Hotels	151	184	33	7
Social Services	4,094	4,847	753	151
Housing	220	247	27	5
Private Services	1,351	1,735	384	77
Pub Utilit/Gov.Serv	2,523	2,865	342	68
Total	13,900	16,350	2,450	490

SOURCE:MOP

#### (4) GDP

GDP's annual growth rate of 5.1% is targeted during the five year planning period. To reach 5.1%, goods sector needs to expand at higher rate; especially manufacturing and construction industries need to achieve annually 6-7% increase (see Table 2-8-5).

Average annual growth rate of production should be 5% to achieve GDP annual growth of 5.1%. In order to achieve the goal, the private sector growth is expected most among all the industries.

As for the manufacturing industry, it is expected that the private sector plays a great role in achieving the goal. Indispensable conditions are to increase the share of private manufacturing industry to GDP from 55.4% to 65.0%, and to achieve its growth rate of 9.9%. Share of "Total Goods" is required to gain additional 5% (See Table 2-8-6). In "Trade Sector" and "Tourism Sector", private sector are expected to occupy 95%.

Table 2-8-5 Gross Domestic Product Aimed Through the  
Forth Five Year Plan (97/98-2001/2002)

Economic Sector	91/92		96/97		01/02			
	M.LE	(%)	M.LE	(%)	Growth Inc- Rate(%)rease	M.LE	(%)	Growth Inc- Rate(%)rease
Goods	63,511	50.6	80,042	49.8	4.7 126.0	111,550	50.7	6.9 139.3
Agriculture	20,675	16.5	24,555	15.3	3.5 118.7	30,287	13.8	4.3 123.3
Industry/Mining	21,409	17.1	30,090	18.7	7.0 140.5	48,947	22.2	10.2 162.6
Petroleum/Prod.	13,342	10.6	14,022	8.7	1.0 105.0	15,038	6.8	1.4 107.2
Electricity	2,009	1.6	2,755	1.7	6.5 137.1	3,978	1.8	7.6 144.3
Building/Construction	6,076	4.8	8,620	5.4	7.2 141.8	13,300	6.0	9.1 154.2
Prod.Services	42,784	34.1	55,420	34.5	5.3 129.5	74,925	34.0	6.2 135.1
Transp/Commun	8,018	6.4	10,358	6.4	5.3 129.1	14,443	6.6	6.9 139.4
Suez Canal	6154	4.9	7467	4.6	3.9 121.3	9085	4.1	4.0 121.6
Trade/Finance/Insurance	26,658	21.3	34,245	21.3	5.1 128.4	45,977	20.9	6.1 134.2
Tourism/Rest/Hotels	1,954	1.6	3,350	2.1	11.4 171.4	5,420	2.5	10.1 161.7
Social Services	19,104	15.2	25,345	15.8	5.8 132.6	33,750	15.3	5.9 133.1
Housing/Pub.Utilities	1,677	1.3	2,755	1.7	10.4 164.2	3,750	1.7	6.4 136.1
Other Services	17,427	13.9	22,590	14.0	5.3 129.6	30,000	13.6	5.8 132.8
Total	125,399	100.0	160,807	100.0	5.1 128.2	220,225	100.0	6.5 136.9

Table 2-8-6 Production Aimed Through Five Year Plan

Economic Sector	91/92				96/97				Annual Growth Rate				
	Public	Private	Total	Share of	Public	Private	Total	Share of	Pub	Priv	Total		
	M.LE	M.LE	M.LE	(%)	M.LE	M.LE	M.LE	(%)	(%)	(%)	(%)		
Commodities	51,324	72,299	123,623	59.3	58.5	54,673	103,160	157,833	59.2	65.4	1.3	7.4	5.0
Agriculture	1,170	29,067	30,237	14.5	96.1	1,043	34,270	35,313	13.3	97.0	-2.3	3.3	3.2
Industry/Mining	26,445	32,900	59,345	28.5	55.4	28,380	52,710	81,090	30.4	65.0	1.4	9.9	6.4
Petroleum/Prod.	14,622	2,252	16,874	8.1	13.3	14,645	3,255	17,900	6.7	18.2	0.0	7.6	1.2
Electricity	3,452		3,452	1.7		4,630		4,630	1.7			6.0	6.0
Building/Construction	5,635	8,060	13,715	6.6	58.9	5,975	12,925	18,900	7.1	68.4	1.2	9.9	6.6
Prod.Services	20,663	40,133	60,796	29.2	66.0	22,614	55,078	77,692	29.2	70.9	1.8	6.5	5.0
Transp/Commun	6,099	5,685	11,784	5.7	48.2	7,200	7,660	14,860	5.6	51.5	3.4	6.1	4.7
Suez Canal	6270		6,270	3.0		7600		7,600	2.9		3.9		3.9
Trade	3,471	29,591	33,062	15.9	89.5	2,075	39,525	41,600	15.6	95.0	-9.8	6.0	4.7
Finance	3951	1368	5,319	2.6	25.7	5010	1750	6,760	2.5	25.9	4.9	5.0	4.9
Insurance	344	77	421	0.2	18.3	412	95	507	0.2	18.7	3.7	4.3	3.8
Tourism/Rest/Hotels	528	3,412	3,940	1.9	86.6	317	6,048	6,365	2.4	95.0	-9.7	12.1	10.1
Social Services	12,586	11,329	23,915	11.5	47.4	16,632	14,323	30,955	11.6	46.3	5.7	4.8	5.3
Housing	137	1,272	1,409	0.7	90.3	172	2,058	2,230	0.8	92.3	4.7	10.1	9.6
Public Utilities	438		438	0.2		615		615	0.2		7.0		7.0
Social Insurance	100		100	0.0		130		130	0.0		5.4		5.4
Governmental Services	11,911		11,911	5.7		15,715		15,715	5.9		5.7		5.7
Private Services		10,057	10,057	4.8	100.0		12,265	12,265	4.6	100.0		4.0	4.0
Total	84,573	123,761	208,334	100.0	59.4	93,919	172,561	266,480	100.0	64.8	2.1	6.9	5.0

As for "Total Social Services", private share is to reduce its share from the 47.4% in 1991/92 to 46.3% in 1996/97 since those are within the scope of government services by its nature except "Housing Sector" and "Private Service Sector". And "Government Service Sector" is to expand its share at the rate of 5.7 annually. As a whole, private sector is to gain additional 5% of share to the total GDP in a course of the privatization process.

(5) Resources and Their Uses

It is apparent that the government aims at restoring the budgetary balance and strengthen its control on the national economy (See Table 2-8-7). The government economic policies are set as follows:

Table 2-8-7 The Resources & Uses of Economic in 96/97 Compared with 91/92

Item	Resources and Uses (M.LE)		Share to GDP Growth Market Price Rate		
	91/92	96/97	(%)	91/92	96/97
<b>Resources</b>					
GDP at Factor Cost	125,485	160,807	5.1	92.1	91.9
Net Indirect Taxes	10,705	14,200	5.8	7.9	8.1
GDP at Market Price	136,190	175,007	5.1	100.0	100.0
Imports	50,705	58,780	3.0	37.2	33.6
<b>Total Resources</b>	<b>186,895</b>	<b>233,787</b>	<b>4.6</b>	<b>137.2</b>	<b>133.6</b>
<b>Uses</b>					
Final Consumption	110,026	133,281	3.9	80.8	76.2
Government Consumption	12,130	16,230	6.0	8.9	9.3
<b>Total Consumption</b>	<b>122,156</b>	<b>149,511</b>	<b>4.1</b>	<b>89.7</b>	<b>85.4</b>
Fixed Capital Formation	24,417	30,500	4.5	17.9	17.4
Inventory Increase	200			0.1	0.0
<b>Total Capital Formation</b>	<b>24,617</b>	<b>30,500</b>	<b>4.4</b>	<b>18.1</b>	<b>17.4</b>
Exports(Goods and Services)	40,122	53,776	6.0	29.5	30.7
<b>Total Uses</b>	<b>186,895</b>	<b>233,787</b>	<b>4.6</b>	<b>137.2</b>	<b>133.6</b>

SOURCE:MOP

- Reduction in share of final consumption to GDP from 80.8% to 76.2%.
- Reduction in share of import to GDP from 37.2% to 33.6%.
- Expansion in share of export to GDP from 29.4% to 30.7%.
- Expansion in share of net indirect taxes from 7.9% to 8.1%

However, it is noteworthy that the share of capital forma-

tion to GDP is to fall from 18.1% to 17.4%. It would be an issue in establishing the strong economic fundamentals for long term economic prosperity.

## 2.8.2 New Towns

### 1) Background

Government efforts for New Town Policy commenced in the late 1960s by the Greater Cairo Planning Commission. The purpose was to make a progress in farmland conservation and to accelerate a decentralization process. The conflict of farmland preservation and residential development has been an issue for more than thousand years, however.

The 1968 Regional Plan mapped out four new satellite cities to be developed in desert areas. Those are 10th of Ramadan city, Sadat city, New Ameria city and 15th of May city. Each of them had 250,000 km<sup>2</sup> land. Later in the planning period, these four New Towns' development scales were changed. In 1979, three new towns around Cairo were added. In 1981, only a few houses were built.

In 1982, "NATIONAL URBAN POLICY STUDY", funded by USAID grant, was conducted. The plan was not officially received by the government because it suggested changes in on-going New Towns Development program. The study valued practical urban development and emphasized investment efficiency. The study accepted the government's urban development policies; however, it requested a postponement of the independent urban development, and recommended more practical town development scheme with absorptive capacity for an rapidly expanding population.

In 1992, 10th of Ramadan city functions as a satellite city of the greater Cairo area while it was originally designed to be an independent city. 15th of May City became a residential town for Helwan (industrial district of Cairo), and the City is still expanding now. Sadat City and 6th of October City developments are continuing and forming city shapes. Development of New Aeria City is slightly behind the schedule. In El Obor City and El Amar City adjacent to Cairo, development has not started yet.

### 2) New Towns Plan

#### (1) New Towns Plan

GOPP released New Towns Plan in 1992. A new design concept "Twin Cities" are identified in the report for the first time. Its concept is defined as that: new towns located in desert areas adjacent to the existing towns, and supported by the agglomerated urban functions and facilities of the existing towns. New Towns Plan listed seventeen new towns including the on-going New Towns projects (see Table 2-8-8).

The new concept is employed to city planning in the Nile Valley. The list of New Towns and its basic data are on a separate table. MOP sets the average growth rate of urban population at 2.8%; GOPP sets it at 2.7%. The reason for the difference is unknown.

Urban population, according to GOPP projection, will become 47.4% of total population in the year 2000. Population projection for each governorate is based on the past trend, and new town developments are planned for the governorates that have high urban growth rates.

## (2) New Urban Development in the Third Five Year Plan

The Ministry of Housing and New Communities reported New Cities scheme in the Five Year Plan period on May 10, 1992. It says that some villages with 3 million people will be developed in Sinai. In addition, with the Nile's ice, 400,000 feddan (168,00 ha) farm land will be developed in the peninsula. Eight new cities mentioned in the report are as follows:

- El Obour
- Badr
- El Shark
- Katamia
- Sheik Zoaid
- New Beni Snef
- New Menia
- El Nobaria

Five new cities from the top are located near Cairo. The purpose is to absorb urban population in Cairo and to alleviate the excessive concentration of population. This purpose is based on the GOPP Master Scheme in 1984. New Beni Snef and New Menia are Twin Cities located in Upper-Egypt. El Bobaria is located near Alexandria.



NAME	LOCATION (City/Marhaz)	AREA IN FADAN	AREA IN Km	POP. IN 1989	TARGET POP. 2000	AFTER- WARDS INCREASE	LABOUR ESTIMATED	TYPES OF INDUSTRY	NOTES
1 SIX OF OCTOBER	WAHAT ROAD Giza	2,400	360	13,000	350,000	500,000	8,325	FOOD - WEAVING - WOOD PAPER-CHEMICAL-PETROLEUM METAL - CAR FIXING	INDUSTRIAL & TOURISM URBANIZED CENTER WITH THE OBJECTIVE OF EASING DENSITY OF CAIRO
2 TENTH OF RAMADAN	CAIRO - ISMAILIA SAHRAWY ROAD	220	388	20,500	500,000		23,280	HEAVY INDUSTRY (ELECTRIC CABLES-HEALTH MATERIALS REFRIGERATORS) - BLANKETS SPINNING	
3 EL SABAT CITY	CAIRO - ALEXANDRIA 95 Km FROM CAIRO	625	48	11,000	500,000		3,665	HEAVY INDUSTRY-TEXTILE PRINTING-FURNITURE MANUAL INDUSTRY,HOUSING MATERIALS	URBANIZED SOCIETY DEPENDS ON INDUSTRY & AGRICULTURE
4 15TH OF MAY	15TH OF MAY	36	27	65,000	260,000				URBANIZED CITY
5 NEW EL ARAB TOWER (EL AMBRIA)		220	48	3,000	42,000	510,000	2,305	SPINNING & WEAVING	URBANIZED CENTER TO ABSORB PRESENT & FUTURE INCREASE OF POP.
6 NEW EL SALHEYA	Ismailia Gov.	19	6	3,500	70,000	100,000	1,136	INDUSTRIES DEPENDING ON AGRICULTURE(FOOD IND., CANNING,PRESERVING FRUITS & VEGETABLES AGROINDUSTRIES	CITY IN LAND RECLAMATION AREA (23000 FADAN) DEPEND ON AGRICULTURE & AGROINDUSTRIES
7 NEW DUMIAT	Danietta el Gedida City	100	17	2,000	105,000	270,000	427		URBANIZED COMPLEX TO LIMIT GROWTH OF DOKKI ALONG ARABE LAND
8 NEW ASUIT (EL SAFA)	12 Km FROM ASUIT	250	17	8	120,000	131,000	26,000	CONSTRUCTION MATERIALS FURNITURE-WEAVING-LEASER CHEMICAL-METAL INDUSTRY WOOD-CLOTH-AGRICULTURE	TWINS TO EASE THE URBANIZED PROBLEMS OF MOTHER ASOUT CITY

SOURCE:GOPP

Table 2-8-8 New Cities

NAME	LOCATION (City/Marwaz)	AREA IN FADAN	AREA IN BUILD UP Km	POP. IN 1989	TARGET POP. 2000	AFTER- WARDS INCREASE	LABOUR ESTIMATED	TYPES OF INDUSTRY	NOTES
9 NEW SUHAG (ELKAWHEL)								WEAVING-CONSTRUCTION MATERIAL-FOOD INDUSTRY WOOD-CHEMICALS ENGINEERING INDUSTRIES	TWINS TO ABSORB THE POP. INCREASE OF BOTH SUHAG & EHRMIM CITIES
10 NEW EHRMIM (ELKOLA)								CLAY BRICKS-HARBLE-CONCRETE TEXTILES-WEAVING CARPETS-VOCATION INDUSTRY	TWINS TO ABSORB THE POP. INCREASE OF BOTH SUHAG & EHRMIM CITIES
11 NEW ASWAN		4	4	80,000	100,000				TWINS TO ABSORB INCREASE OF POP. OF ASWAN CITY
12 EL AUBOUR	BELBEES SAHRAWY ROAD	2,400	42	52,000	146,000	477,000	84,000	FUNDAMENTAL INDUSTRIAL MANUAL INDUSTRY	SATELITE CITY IN DESERT LAND
13 BADR	Badr City	69	6	250,000	280,000		280,000	ACCORDING TO WORK OPPORTUNITIES OFFERED BY ECONOMICAL ACTVY.	SATELITE CITY IN DESERT LAND
14 NEW NUBARIA		28	5	50,000				ACCORDING TO WORK GENERATED BY INDUSTRY. DEPENDING ON AGRICULTURE	CITY IN LAND RECLAMATION (30000 FADAN) DEPENDS ON AGRICULTURE, AGROINDUSTRY
15 NEW BENI SUEF	Beni Suef El Gedidda City	1,600	40	22	90,000	120,000	30,000	FOOD INDUSTRY	TWINS TO BASE DENSELY POP. OF BENI SUEF CITY
16 NEW MENIA	EASTERN KNOLL EAST OF NILE Minya El Gedidda City	291	84	6	120,000		20,000	MANUAL VOCATION INDUSTRY FURNITURE & CAR FIXING	TWINS
17 8 NEW CITIES AROUND CAIRO		1,868			200,000	150,000	42,000		URBANIZED COMPLEXES

SOURCE: GOPP

Table 2-8-8 New Cities (continued)

## 2.9 Car Ownership

Table 2-9-1 shows the vehicle numbers by Governorate registered in the Central Police Department in Dec. 1991. The total vehicles are 1.5 million and the percentage of passenger car is 58.2%, taxi 13.3%, bus 2.1% and truck 26.4%.

Table 2-9-1 Vehicle Registration in Dec. 1991.

GOVERNORATE	P.CAR	TAXI	BUS	TRUCK	TOTAL	POP 91	PCAR/1000P
1 CAIRO	410,973	41,921	15,100	86,120	554,114	6,513	63.1
2 ALEXANDRIA	152,659	26,476	5,524	58,834	243,493	3,183	48.0
3 PORT SAID	13,236	3,685	165	2,552	19,638	454	29.2
4 SUEZ	7,998	3,014	522	1,514	13,048	382	20.9
5 DAMIETTA	6,443	2,997	87	6,326	15,853	811	7.9
6 DAKHLIA	19,298	10,253	506	23,147	53,204	3,836	5.0
7 SHARKIA	14,321	5,973	1,122	17,506	38,922	3,768	3.8
8 QALYUBIA	17,260	13,930	893	21,075	53,158	2,841	6.1
9 KAFR EL SHEIKH	6,245	4,565	525	10,699	22,034	1,972	3.2
10 GHARBIA	20,413	10,232	1,203	22,891	54,739	3,127	6.5
11 MINUFIA	10,983	9,104	647	13,406	34,140	2,451	4.5
12 BEHEIRA	7,254	6,087	510	24,958	38,809	3,599	2.0
13 ISMAILIA	10,087	4,132	419	9,762	24,400	617	16.3
14 GIZA	131,561	26,687	2,151	34,567	194,966	4,214	31.2
15 BENI SUEF	4,943	1,942	199	5,658	12,742	1,588	3.1
16 FAYUM	6,380	2,965	222	5,949	15,516	1,714	3.7
17 MINYA	7,239	1,401	323	11,001	19,964	2,920	2.5
18 ASYUT	10,700	6,338	490	9,909	27,437	2,455	4.4
19 SOHAG	5,818	3,975	129	8,804	18,726	2,695	2.2
20 QENA	5,019	6,041	508	7,483	19,051	2,491	2.0
21 ASWAN	2,923	4,468	405	3,849	11,645	884	3.3
22 RED SEA	1,150	750	239	2,095	4,234	106	10.8
23 NEW VALLEY	395	201	43	1,089	1,728	126	3.1
24 MATROUF	913	752	18	3,677	5,360	180	5.1
25 NORTH SINAI	2,194	1,282	47	3,719	7,242	193	11.4
26 SOUTH SINAI	437	392	68	1,017	1,914	33	13.2
<b>TOTAL</b>	<b>876,842</b>	<b>199,563</b>	<b>32,065</b>	<b>397,607</b>	<b>1,506,077</b>	<b>53,153</b>	<b>16.5</b>

EXCLUDING TRACTOR, DIPLOMAT, TEMPORARY AND CUSTOM'S CARS

The share of all vehicles registered in Cairo Governorate occupies 36.8% of the total, and the share of passenger car is 46.9%, while that of truck is 21.7%. The car ownership of passenger car per 1,000 population is 16.5 veh. in the whole Egypt, and that in Cairo is 4 times higher than the average. The share of three urban governorates of Cairo, Giza and Alexandria occupies 79.3% in passenger car, 47.6% in taxi, 71.0% in bus and 45.2% in truck.

Table 2-9-2 shows the average annual growth rate of vehicles by governorate during 10 years period of 1981 - 1991. The average annual growth rate of whole vehicles is 7.83% per annum. The annual growth rates in the rural governorates are

higher than that in the urban governorates.

Table 2-9-2 Annual Growth Rate of Vehicles by Governorate

Governorate	P.CAR	TAXI	BUS	TRUCK	TOTAL
1 Cairo	7.39	4.25	5.11	7.06	7.00
2 Alexandria	6.46	3.32	5.57	6.89	6.14
3 Port Said	7.24	3.84	0.96	3.16	5.85
4 Suez	10.70	6.48	5.45	-2.99	6.64
5 Damietta	8.02	4.19	3.75	9.88	7.81
6 Dakahlia	10.68	5.81	-3.32	12.66	10.05
7 Sharkia	8.84	6.64	10.54	9.66	8.86
8 Qaliubia	10.27	4.99	0.85	9.99	8.77
9 Kafar El Sheikh	6.94	5.54	4.08	11.89	9.46
10 Gharbia	9.63	6.04	3.16	7.97	8.00
11 Minufia	11.61	12.17	6.28	13.10	12.18
12 Beheira	16.47	8.63	9.04	12.18	12.20
13 Ismaillia	16.55	14.51	-0.31	13.28	14.03
14 Giza	8.27	6.99	6.54	8.56	8.11
15 Beni Suef	13.99	10.11	1.95	13.44	12.63
16 Fayum	11.67	11.05	4.84	12.74	11.87
17 Minya	8.52	0.52	3.28	9.65	8.13
18 Asyut	12.28	7.11	9.88	15.69	11.73
19 Sohag	14.08	5.76	2.79	11.53	10.53
20 Qena	10.07	9.58	5.27	9.57	9.56
21 Aswan	7.08	8.69	6.54	10.30	8.66
22 Matruh	5.45	0.52	6.05	11.27	7.82
23 Red Sea	9.13	13.10	8.07	8.54	9.35
24 New Valley	9.06	19.45	0.98	9.56	9.84
25 North Sinai	32.06	3.95	20.98	8.45	10.51
26 South Sinai	23.26	20.06	17.12	10.20	14.01
TOTAL	7.92	6.05	5.09	8.95	7.83

Fig. 2-9-1 shows the relationship between per capita GDP in 1987 fixed price and passenger car ownership for the period of 1974 - 1990. The decrease of growth rate is seen from the year 1986 reflecting the regulation to control passenger car import, however the linear regression analysis gives the high correlation coefficient of 0.98.

P.CAR/1,000 POP.

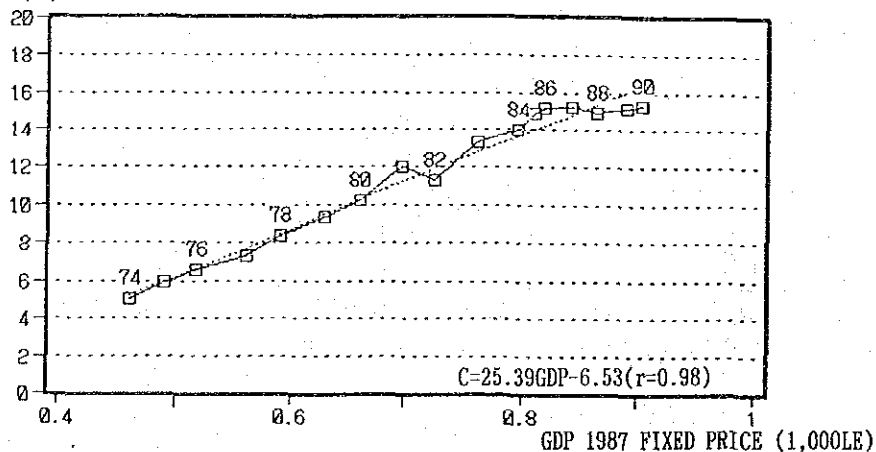


Fig. 2-9-1 Per Capita GDP and Passenger Car Ownership