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OF EGYPT**



**INVESTMENT
AND
FREE ZONES
AUTHORITY**

Sectoral Survey 7

**THE AUTOMOTIVE COMPONENTS, PARTS,
AND ACCESSORIES INDUSTRY IN EGYPT**

1982

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A GUIDE TO DOING BUSINESS IN EGYPT
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PREFACE

This report is one of a series published by the General Authority for Investment and Free Zones and designed specifically to promote the participation of U.S. companies in investment projects in Egypt.

Funded by the U.S. Agency for International Development (U.S. AID) and prepared by the Chase World Advisory Group of Chase Trade Information Corporation, these reports focus on sectors of the Egyptian economy which offer the foreign investor specific investment opportunities in significant areas of the Egyptian economy ranging from pharmaceuticals; the processing and distribution of food crops; and the production and processing of livestock, poultry, and fish products; to construction materials, components, and systems; and electrical and electronic machinery.

There are ten reports in all. This seventh report, on the production of automotive components, parts, and accessories in Egypt, is the work of a team directed by Mr. Samir A. Fahmy, Vice President, Chase Trade Information Corporation. Field research was conducted in large part by project counterparts from the Egyptian Investment Authority, whose efforts were guided by Mr. Guy Tower, a consultant to CTIC. Mr. Frank A. Ocwieja, V.P., CTIC, edited the report.

INTRODUCTION

The Arab Republic of Egypt, a nation with a sizable industrial base, is rapidly expanding both the number of motor vehicles in its national fleet, and its capacity to assemble and build them. Thus the demand for automotive components, parts, and accessories by original equipment manufacturers (OEM) and in the replacement of aftermarket is growing at a steady pace. Moreover, the automotive industry, with its many vertical and horizontal linkages and its export potential, has long been a major emphasis of the government's development efforts. Together, these conditions make Egypt an attractive country for U.S. automotive industry suppliers in which to consider investing in manufacturing operations.

This survey was conducted by the Chase Advisory Group of Chase Trade Information Corporation, on behalf of the Egyptian Investment Authority. It is designed to provide those U.S. companies with sufficient information to decide whether to seriously investigate investment opportunities in Egypt. To achieve that goal, the survey team conducted a series of 69 interviews with public and private sector Egyptian

enterprises which manufacture, import, or distribute automotive components, parts, and accessories.

Early in its work, the team narrowed its focus to encompass those product areas in which investment opportunities were most likely to be found. Thus, only the civilian market was included, since security reasons restrict the foreign investment potential of the military vehicle sector and limit the information available.

Demand for components and parts for agricultural tractors and motorcycles is growing at a rapid pace. However, the relatively smaller size of the market and time considerations did not allow the team to develop sufficient information to evaluate these markets, the characteristics of which are very different from cars, trucks, and buses. Thus the survey fully analyzes only the latter three vehicle categories.

With regard to the specific items covered by the survey, an initial selection was made of 65 components and parts which were believed to represent those which were: a) most frequently in demand, b) best suited for manufacture in Egypt by foreign firms or joint-ventures, and c) not already produced in quantities

sufficient for the domestic market. For example, gaskets were eliminated for the third reason. The team collected information on average usage rates, current and planned local production, and pricing on the 65 items on the list. That analysis resulted in a list of twenty-one best prospect product categories for possible new manufacturing ventures. Out of those, seven specific investment project opportunities were identified by virtue of a definite interest shown by one or more Egyptian companies in joining with a U.S. firm as a partner.

The subject of this survey is closely related to that of two other surveys in the series Chase Trade Information Corporation has conducted for the Egyptian Investment Authority. The Non-Electrical Machinery Industry in Egypt, published in July 1982, describes opportunities for U.S. investment in nine product categories, as follows:

- small farm tractors
- material handling equipment
- machine tools
- power-driven hand tools

- woodworking machine tools
- air and gas compressors
- blowers and suction fans
- fluid pumps
- refrigeration and freezing equipment.

The other survey, to be released later in the year, addresses investment opportunities in Egypt in maintenance and repair facilities and services.

Following the industry-specific section of this report, there is "A Guide to Doing Business in Egypt." The guide presents a general introduction on the economy, government policies, investment incentives, and practical advice on doing business, living, and traveling in Egypt.

1. EXECUTIVE SUMMARY

Egypt's automotive vehicle fleet has grown quickly in the last ten years. The passenger car fleet (including privately-owned cars, taxis, and own-use fleet vehicles) tripled in size reaching 323,000 in 1980. During the same period, the number of buses operated in Egypt by both public transportation companies and own-use fleet owners doubled to 17,000 units. The size of the truck and trailer fleet owned by the public sector freight companies, the trucking cooperatives, and private operators nearly quintupled between 1970 and 1980, reaching 130,000 units. Finally, since only 1975, the size of Egypt's agricultural tractor fleet has increased sixfold, reaching 33,000 in 1980.

The spectacular annual growth rate of 17.5 percent for Egypt's entire automotive fleet was a reflection of the country's economic liberalization which in 1974 ended a long period of close government control over the economy. Nevertheless, the number of automotive vehicles in Egypt is still low for the country's population size in comparison to other developing

countries. Because of this suppressed demand and continued prospects for economic growth of about 8 percent per year, Egypt's automotive vehicle fleet will probably grow by an average 8 percent per year through 1987, as illustrated in Figure 2-6 in the text.

By far, the majority of automotive vehicles in Egypt are imported, primarily from Italy, other European Community countries, and increasingly from Japan. Nevertheless, Egypt's domestic automotive industry produced nearly 22,000 passenger cars, 450 buses, over 7,000 trucks, and 3,000 agricultural tractors in 1980. The dominant manufacturer is the El Nasr Automotive Manufacturing Company (NASCO), a public sector company which makes cars and engines under license from Fiat, and trucks and engines under license from Deutz. Other vehicle assemblers include Arab-American Vehicles, a government joint-venture with the American Motors Company to produce jeeps, the Egyptian Company for Light Transport Equipment, which assembles buses and utility vehicles, and several smaller bus, trailer, and truck body fabricators.

A number of new automotive vehicle assembly projects are in various stages of planning or

implementation. The most serious include NASCO expansion projects under license from Fiat and IVECO, separate private joint-ventures involving Volkswagen, Ford, General Motors, and Daimler Benz, Renault, and a joint venture between the Ministry of Defense and Peugeot.

If all the projects now contemplated are implemented, local automotive vehicle production would exceed 122,000 per year by 1987, or 93 percent of gross additions to Egypt's national fleet. The government's policy is to encourage minimum local content of 40-45 percent in any Egyptian automotive projects. This could create a sizable original equipment manufacturers (OEM) market in Egypt.

The aftermarket, however, is sure to remain much more important than the OEM market in total sales of automotive components, spare parts, and accessories. A survey was conducted of demand for sixty-five selected items which constitute an estimated 82 percent of total aftermarket consumption in Egypt. It was determined that total demand for these parts, components, and accessories in 1980 was 294 million Egyptian pounds (LE) of which 14.9 percent was needed for local

automotive vehicle production. As shown in Figure 3-1, by 1987, the total market is projected to reach LE 596 million (in 1981 prices), and OEM demand will constitute 28 percent of the overall.

The Egyptian government adopted the policy of fostering a national automotive industry in 1961, with the target of attaining 43-46 percent local content. While the target has not yet been achieved, the policy has helped over 160 private and public sector companies to develop the capability to supply about 3,000 different automotive components. These include metallic and engineering, chemical and plastics, textile, and petroleum industry products.

Among these automotive suppliers, thirty-two companies make the products covered in this survey. They include ten Military Factories, which are part of the Ministry of Military Production, ten other public sector companies, and twelve private sector firms. Despite the size of the automotive aftermarket, most of the production of these companies is sold to NASCO as original equipment.

This is due in part to an inability to compete with the advertising of large foreign suppliers, and

the fragmented state of local distribution. About 75-80 percent of automotive components and parts consumption in Egypt is imported.

The total amount of demand (in 1981 retail prices) for the 21 best prospect product categories covered by this survey is estimated at LE 387 million. Egyptian public and private sector companies have indicated an interest in expanding or investing in new plants to manufacture eleven of these products in joint-venture with U.S. companies. This interest is grouped into seven joint-venture projects, listed below and profiled in the Appendix to this survey.

1. Tires and Tubes
2. Shock Absorbers, Brake Cylinders, and Brake Linings
3. Engine Rebuilding
4. Air, Oil, Fuel Filters
5. Exhaust Systems
6. Piston Sets (Complete)
7. Fuel Pumps.

Selling in Egypt's OEM market virtually means selling to NASCO at the present time. NASCO typically

purchases locally by competitive tender and works closely with its suppliers on product development and quality control.

Selling channels to Egypt's automotive aftermarket are very fragmented. Distribution of spare parts to both private and commercial customers is done through five major intermediaries. Large public trucking and transport organizations purchase directly from overseas or domestic manufacturers. Esso and Mobil have begun to establish automotive service centers which purchase parts mainly from private retail stores and importers. The latter are expanding in number since the economic liberalization which began in 1974, although public sector automotive trading companies still import and distribute a large selection of parts.

Automotive distributors and dealers have also begun to establish their own service centers for the vehicles they sell, and stock the largest quantities in the entire industry. They purchase standard parts from both foreign and domestic manufacturers.

Small and numerous private repair shops dominate automotive maintenance in Egypt. They supply themselves mainly through private retailers.

Customs duties on imported parts in Egypt range from 2 percent to 125 percent. On average, together with other charges connected with importation, imported spare parts and components have a landed cost about 60 percent above FOB cost. Distributors and dealers margins are limited by law respectively to 45 percent and 15 percent of landed or ex-factory cost.

2. EGYPT'S AUTOMOTIVE VEHICLE FLEET

Determining the demand for automotive spare parts, components, and accessories is a two-step process.

First we will seek to determine the size, composition, and rate of growth of Egypt's national vehicle fleet.

In the next chapter we will examine the two sectors of demand for parts, components, and accessories: vehicle assemblers and the aftermarket or after sales services market. Then we will derive estimates for the volume and value of demand for selected items.

Egypt's Current Automotive Fleet

According to conventional usage in Egypt, the automotive fleet is composed of the following categories of vehicles:

- o Passenger Cars
- o Taxis
- o Buses
 - .. Micro buses (up to 12 seats)
 - .. Small buses (up to 42 seats)
 - .. Medium buses (43 to 53 seats)
 - .. Large buses (53 to 110 seats)

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o Trucks/Trailers

- .. Pick-ups (up to 3 ton payload)
- .. Small trucks (3 to 8 ton payload)
- .. Small trucks and trailers (up to 20 ton payload)
- .. Large trucks and trailers (20 ton + payload)

o Agricultural Tractors/Trailers

Egypt's 130,000 motorcycles, the vast majority below 100 cc in size, are not included in this study.

Road Network and Climate Conditions

In 1980, the road network totalled approximately 28,500 kms. of which slightly over half (53 percent) represented paved (asphalt and concrete) roads and about 13,500 kms. were unpaved roads. Egypt is a level country with no mountainous, hilly, or high altitude conditions.

There has been no dramatic increase in Egypt's total road network. Slightly over 1,000 kms. have been added since 1975, and the unpaved road network has been static for the last twenty years. A recent survey by the Ministry of Transportation indicated that 40 percent of the asphalt road network was in good condition while 60 percent was in fair or poor condition.

Table 2-1
ROAD NETWORK IN EGYPT (kms)

Type of Road	1961	1975	1979	1980
Paved Roads	6,414	12,394	13,115	15,000
Unpaved Roads	13,554	14,202	13,377	13,500
TOTAL	19,968	26,596	26,492	28,500

Sources: Statistical Yearbook, 1952-1980, CAPMAS, July 1981; Egypt National Transport Study, Final Report, 1981.

The atmosphere is often dusty with tangible suspensions of pure silica of desert sands. Temperature rarely drops below freezing point but goes as high as 50 degrees Celsius in the shade in the summer (in Upper Egypt). Although Egypt is dominated by desertic climatic conditions, humidity can reach 100 percent in cities along the Mediterranean Sea and the Suez Canal.

Passenger Car Fleet

Egypt's urban population has become increasingly motorized since the liberalization of the economy in 1974. The second largest country in Africa and the largest in the Middle East, Egypt is also highly urbanized.

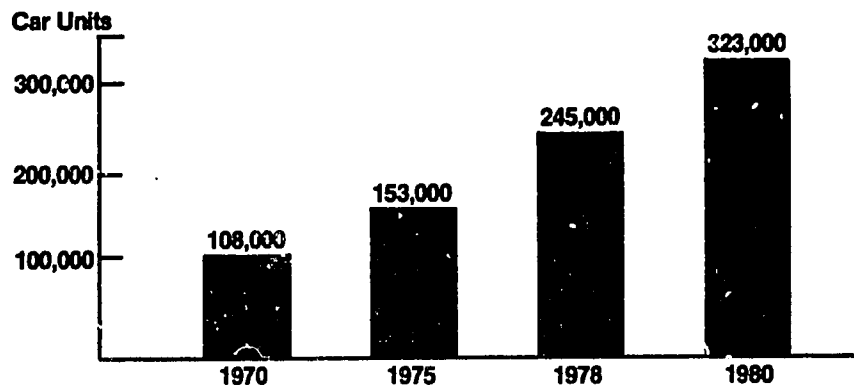
In 1982 the population was estimated to be over 44 million. Egypt has one of the highest population growth rates (2.5 - 3.0 percent) in the world. With well over 1.2 million newborn a year, the population in Egypt will reach 70 million by year 2000.

Urban centers account for 44 percent of the population. Almost one-third of the total population (28 percent) is settled in the two cities of Cairo and Alexandria, constituting 55 percent of the total urban population. However, about 73 percent of the motor vehicles in Egypt are in the Greater Cairo (Cairo/Giza) area (56 percent) and Alexandria (17 percent), whereas the Suez area accounts for 4 percent.

The privately owned passenger car has become an important feature of middle class life in Egypt, spurred not only by increased disposable income, but also by subsidized gasoline prices and the inadequacy and the apparent deterioration in public transport services. The purchase of a passenger car is constrained only by one's patience with the waiting line for the nationally produced models or one's ability to pay the high price for imported models subject to customs tariffs of 114 percent - 218 percent.

Ownership of private passenger cars has tripled from 1970 to 1980, as shown in Figure 2-1.

Figure 2-1
**Egyptian Private Passenger Car Registrations
(1970-1980)**



Source: Chase Trade Information Corporation estimates, based on figures Provided by the Ministry of Transportation, NASCO, CAPMAS, Customs Authority, Chase National Bank (Egypt), and field surveys.

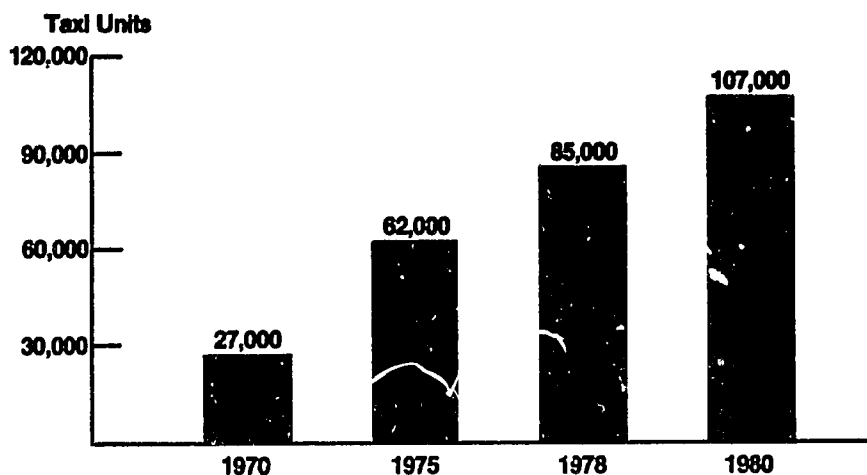
Included in these figures is the own-use fleet of passenger cars, encompassing the vehicles maintained by dozens of large public and private sector enterprises, the government, and car rental agencies.

Taxis are an important element in city and inter-city passenger traffic. They are usually run on a private basis, or through cooperatives (which is common for inter-city taxi service). The operation of taxis is supervised and controlled by the Egyptian General Syndicate for Transport Workers, which invests in taxi terminals and maintenance facilities to support operations and is partially supported by nominal dues paid by individual owners of taxis. The purchase of a taxi is often financed on liberal terms by public sector banks, particularly the Nasser Social Bank.

The size of the taxi fleet has increased at a steadier rate than has the number of passenger cars over the last ten years. Thus taxi registrations quadrupled from 1970 to 1980, as shown in Figure 2-2.

Car import and registration information is available in Egypt only by engine size. Our data regarding origin, make, and age of the automobile fleet is based on direct market research.

Figure 2-2
**Egyptian Taxi Ownership
(1970-1980)**



Source: Chase Trade Information Corporation estimates, based on figures provided by the Ministry of Transportation, NASCO, CAPMAS, Customs Authority, and field surveys.

There is a large variety of vehicle makes on the road in Egypt. Based on a survey of the Cairo area, Fiat licensed models made in Egypt and elsewhere clearly dominate the passenger car sector, with over 65 percent of the market for private cars and 77 percent for taxis. The trademarks include Nasr (Fiat produced under licence in Egypt), Seat (Fiat produced under licence in Spain), Pol-mot (Fiat produced under licence in Poland), Lada (produced in USSR), and Zastava (produced in Yugoslavia), as shown in Table 2-2.

Table 2-2
PASSENGER CAR BRAND DISTRIBUTION IN CAIRO AREA
(1981)

Brand	Country of Origin	Private Car Frequency	Taxi Frequency
Nasr	Egypt	33.6%	44.0%
Fiat	Italy	20.5	33.0
Seat	Spain	12.1	-
Peugeot	France	7.2	4.4
Mazda	Japan	5.5	0.7
V.W.	Germany	4.9	-
Mercedes	Germany	4.0	3.0
Buick	US/Europe	2.1	-
Honda	Japan	1.8	-
Toyota	Japan	1.7	-
Chevrolet	U.S.A.	0.9	-
Datsun	Japan	0.7	4.0
Renault	France	0.7	9.0
B.M.W.	Germany	0.3	-
Pony	So. Korea	-	1.6
Other	Various	4.0	0.3

Source: CTIC Survey and Central Traffic Department.

Bus Fleet

Approximately 75 percent of all city and inter-city mass transit bus transportation in Egypt is performed by six public sector, regional bus authorities or corporations. Five of these six entities report directly to the Ministry of Transport, and the sixth, Alexandria Transport Authority, reports directly to the Governorate of Alexandria. In 1980, the six corporations operated 5,460 buses, as shown in Table 2-3.

Table 2-3

PUBLIC TRANSPORTATION CORPORATIONS IN EGYPT

Total Bus Fleets

1980

1. Cairo Transport Authority (CTA)	2,046 units
2. Alexandria Transport Authority (ATA)	614 units
3. East Delta Bus Company	1,020 units
4. West Delta Bus Company	370 units
5. Middle Delta Bus Company	550 units
6. Upper Egypt Bus Company	<u>860 units</u>
TOTAL	5,460 units

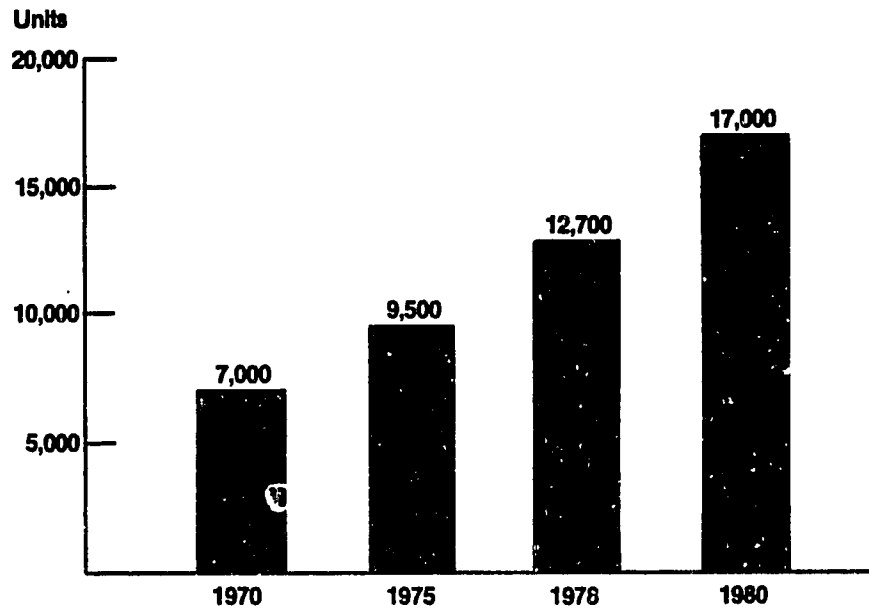
Source: Ministry of Transportation.

All six corporations operate on a regional basis with little operational overlap, and serve almost all major cities, towns, and provincial villages. A few of the larger cities, in addition to Cairo and Alexandria, have also set up their own urban or suburban bus systems. Their fleets together amount to less than 500 buses. Other vehicles employed in inter-city transportation are operated mainly by tourist organizations and large enterprises.

Equal or even larger in size than the public transport fleet is the private, or own-use fleet. All large employers, in both the public and private sectors, are required to provide transportation to and from work for their entire labor force. The total number of this category of buses exceeded 8,000 in 1980. Finally, tourist coach and school bus operators accounted for nearly 1,700 buses on the roads in 1980.

As shown in Figure 2-3, the national bus fleet, including public carriers and own-use operators, has more than doubled since 1970.

Figure 2-3
**Egyptian Bus Fleet
(1970-1980)**



Source: Chase Trade Information Corporation estimates, based on figures provided by the Ministry of Transportation, NASCO, CAPMAS, Customs Authority, and field surveys.

The most important makes of buses used in Egypt include: Nasr (Egypt), Mercedes (Iran), Pegasso (Spain), Mercedes (Germany), Mercedes (Turkey), Barreiros (Spain), Tata (India), Fab (Yugoslavia), Renault (France), and Ward (U.S.A.).

Truck Fleet

The most important freight transportation companies are the five Public Freight companies. Their transport vehicle fleets in 1979 are shown in Table 2-4.

Table 2-4

EGYPT'S MAJOR PUBLIC FREIGHT COMPANIES (1979)

	Trucks/ Tractors	Semi- Trailers	Trucks	(Full-) Trailers	Total
1. General Nile Co. for Inland Transportation	181	181	166	166	694
2. General Nile Co. for Goods Transportation	133	135	174	148	590
3. General Nile Co. for Transport Works	250	250	24	24	548
4. General Nile Co. for Direct Transport	222	222	27	-	471
5. General Nile Co. for Heavy Transport	190	190	10	10	400
TOTAL	976	978	401	348	2,703

Source: Egypt National Transport Study, Final Report, 1981.

According to the National Transport Study conducted by NEDECO for the Ministry of Transportation in 1981, there are twenty-four transportation cooperatives (mostly agricultural) organized on a governorate-by-governorate basis. These usually associate themselves with one of the above 5 companies who use their services on a permanent basis. The total number of trucks and trailers in the cooperatives in 1979 were 11,251 and 2,905 respectively.

The number of private non-organized truckers is known to be very large, although no detailed statistics exist on their operations. Moreover, many public and private sector enterprises operate own-use fleets. These can be large, as in the case of the Iron and Steel Company of Helwan, which operates 500 trucks.

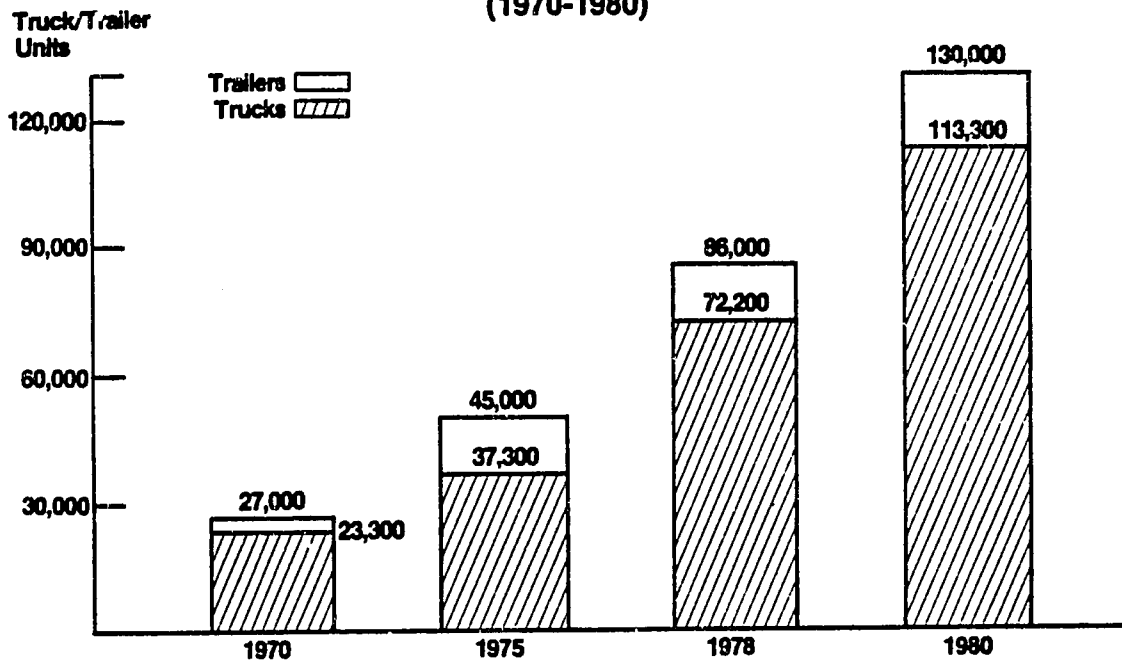
There are also two Law 43 trucking companies: Ismailia Transport Co. (established 1976) has a fleet consisting of 30 large semi-trailers, 55 truck trailers (30 T) and 2 road tankers; and the Egyptian-American Transport Co. (established 1979) who owns a fleet of approximately 50 truck/trailers.

Government-owned transportation vehicles are considerable in number. In 1979, they included 6,495 trucks and 8,280 pick-ups. For security reasons, no

statistics are available for military transportation vehicles.

Truck/trailer registrations witnessed the highest growth among all vehicles during the last ten years. This is consistent with trends set worldwide in developing countries with rapid industrial and commercial growth. As shown in Figure 2-4, truck/trailer ownership quintupled between 1970 and 1980, nearly tripling in the last five years alone. (The balance of this report will ignore trailers and only analyze trucks, since this segment of the market is the most important for automotive parts and components).

Figure 2-4
Egyptian Truck/Trailer Fleet
(1970-1980)



Source: Chase Trade Information Corporation estimates, based on figures provided by the Ministry of Transportation, NASCO, CAPMAS, Customs Authority, and field surveys.

The truck makers most numerous represented in Egypt's fleet include Saviem, Berliet, UNIC (France), Fiat, Calabrese (Italy), Nasr (Egypt), Pegasso, Barreiros (Spain), MAN (Germany), Ackerman, DAF (Netherlands), Scania, Volvo (Sweden). According to NEDECO estimates, nearly half of Egypt's trucks in 1979 had less than 3 tons in freight hauling capacity. There was a nearly equal distribution between trailers below and above 10 tons capacity.

Agricultural Tractors

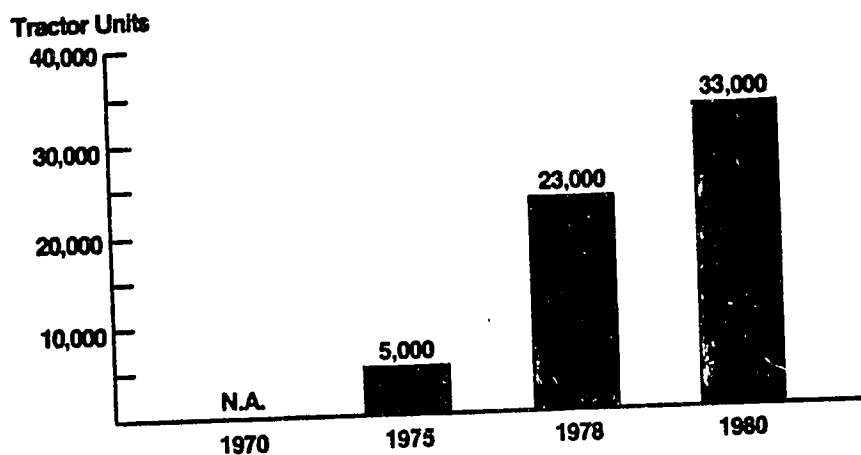
Although 40 percent of Egypt's labor force is employed in the agricultural sector, food production has been unable to keep up with demand, resulting in the need to import ever increasing amounts of food. One element of government policy aimed at food self-sufficiency has been increased mechanization of agriculture.

A number of physical and social factors limit the extent to which mechanization is possible. These include the small size of the typical farmer's plot, the attractive economics of relying on draft animals, and the frequency of canals in the surface-irrigated delta lands. Nevertheless, government sponsored cooperatives and state-owned farms have expanded their

fleets of farm tractors explosively in the late 1970s.

From 1975 until 1980, the size of agricultural tractor fleet increased sixfold, as shown in Figure 2-5.

Figure 2-5
Egyptian Agricultural Tractor Fleet
(1975-1980)



Source: Chase Trade Information Corporation estimates, based on figures provided by NASCO, CAPMAS, Foreign Trade Bulletin and Federation of Industries.

Egypt's farm tractors are used probably only 30 percent of the time for cultivation purposes. The remainder of the time, they serve as rural freight haulage vehicles. For this reason, the most common size in use is 65 horsepower. (The Ministry of Agriculture believes that a 45 horsepower tractor would be more suitable for mechanizable agricultural tasks in Egypt.) The most important makes of farm tractors are NASCO (Egypt) which builds under license from IMR (Yugoslavia), UTB (Rumania), and Massey Ferguson (Canada); as well as International Harvester and Caterpillar (U.S.), and Komatsu (Japan).

Future Growth of Vehicle Fleet

Underlying Factors

The average annual compound growth rate for the entire fleet of automotive vehicles in Egypt during the last five years (1975-1980) amounted to a spectacular 17.3 percent.

This growth rate was not evenly distributed among all vehicles. Tractors, trucks, and passenger cars in that order were the leaders as shown in Table 2-5.

Table 2-5

ANNUAL RATE OF GROWTH
OF EGYPTIAN AUTOMOTIVE FLEET BY TYPE OF VEHICLE

(1975-1980)

Vehicle Type	Growth over Previous Year					5-Year Average
	1976	1977	1978	1979	1980	
Passenger Cars	14%	19%	18%	16%	14%	16.1%
Taxis	13%	6%	15%	13%	11%	11.5%
Buses	14%	5%	12%	16%	15%	12.3%
Trucks & Trailers	27%	14%	32%	22%	24%	23.6%
Agricultural Tractors	60%	68%	57%	27%	18%	43.1%

Source: CTIC field survey.

We believe that the dramatic average growth rate shown above is a reflection of suppressed demand accumulated during the years prior to the implementation of the Open Door Policy. In comparison with a number of other countries, Egypt lags behind in achieving a level of motorization more typical of its state of economic development.

Table 2-6

MOTORIZATION INDEX IN SELECTED COUNTRIES

1979

Country	No. of Automotive Vehicles [*] per 1000 population
Egypt	12.2
Kenya	13.7
Morocco	27.0
Brazil	76.9
Saudi Arabia	108.7
Spain	227.3
U.S.A.	714.3

* Passenger cars, taxis, trucks, and buses.

Source: CTIC field survey; World Motor Vehicle Data, 1981.

The remarkable improvement in Egypt's motorization level since 1975 (from 7.9 vehicles per 1000 population in 1975 to 12.2 in 1979 to 14.2 in 1980) reflects the rapid growth in the national economy and an increase in disposable income during that period.

During those five years, Egypt's GDP increased by an average 8.5 percent per year in real terms. This resulted in an average improvement in real per capita income of approximately 5.5 percent per year. With continued development of its oil and gas resources and continued stability in its domestic and regional political situation, Egypt should be able to sustain an average rate of GDP growth of approximately 8.0 percent into the foreseeable future.

The ratio between growth in the size of Egypt's automotive fleet and GDP growth between 1975 and 1980 exceeded two-to-one. Although better than it was five years ago, Egypt's level of motorization is still low by world standards, and demand for automotive vehicles is still suppressed. Therefore, we project that automotive fleet growth will continue at least to equal real GDP growth over the next five years.

It should be mentioned that in July, 1982, the Government introduced a new tax on "luxury" consumer

goods. The rate on locally manufactured or assembled cars is 5%, that on imported 4 cylinder cars is 15%, and on 6 cylinder imported cars the rate is 25%. Nevertheless, and assuming no more stringent government measures are taken, the pressure of suppressed demand should keep passenger car fleet growth at virtually the same level.

Conclusions Drawn by Parallel Studies

This conclusion is further supported by the results of parallel studies and field surveys. For example, a recent study was undertaken by a major bank in Egypt, related to the financing of an automotive joint-venture project which is now operational. Taking a conservative approach, the bank estimated that the rate of growth per annum for vehicles in Egypt will be approximately in the range of 9 percent to 11 percent.

The study recently undertaken for the Ministry of Transportation by NEDECO estimated that freight transportation, totaling 145 million tons in 1979, will more than double by 1987 to reach 300 million tons. Moreover, the share of total freight that is transported by road, now representing 78 percent, is expected to increase to 83 percent by 1987. That same study concludes that the rate of growth for the

population of all types of vehicles will average 15 percent per annum.

Finally, in interviews given by individuals and firms in the automotive trade, they have stated their belief that the growth rate per annum in the automotive fleet will easily surpass 10 percent; some estimated the range between 15 percent to 20 percent. Traders and local manufacturers point to many factors influencing their opinions, chief of which are the following:

- Employment is on the rise in Egypt, allowing more individuals to join the consumers' group.
- The economy is steadily improving and disposable income is increasing, allowing more resources for leisure and week-ends. Therefore, cars have become a necessity - and not a luxury anymore - for middle class families.
- Public transportation is overburdened and in a less than desirable operational state of repair, to the extent that people shift to car ownership, even if it requires great financial sacrifice.

- Inter-city travel and transport between the major cities of Egypt is rapidly increasing for the business, freight and tourist sectors.
- New corporations, joint ventures, and factories are being established at an increasing rate, pushing up the business demand for passenger cars and minibuses, as well as for trucks.
- The rate of vehicle replacement is increasing due to consumers' desire to change cars every 3 to 4 years.

Projected Rates of Growth

Based on the above analysis and sources, we project a conservative average growth rate of approximately 8 percent in the size of Egypt's vehicle fleet between 1982 and 1987. The rate should initially be somewhat higher, continuing its current trend; but it will gradually moderate during the period. In addition, as illustrated in Table 2-7, there will be minor differences in the rate of growth according to the category of vehicle.

Table 2-7

PROJECTED RATE OF GROWTH OF VEHICLE FLEET IN EGYPT
(1982-1987)

Category	Projected Rate Per Annum (%)					
	1982	1983	1984	1985	1986	1987
Passenger Cars	9	9	8	8	8	8
Taxis	7	7	6	6	6	6
Buses	10	10	9	8	8	8
Trucks	9	8	8	8	7	7
Agricultural Tractors	12	11	10	9	9	8

Source: CTIC field survey.

Rate of Retirement/Replacement

Actual vehicle demand will be determined by the combination of the required vehicle fleet growth and the rate of retirement and replacement of vehicles in use.

The average automotive retirement rate in Egypt can vary widely for different types of vehicles. In the U.S., for instance, a typical car has a life of 6 1/2 years after which it is (in principle) retired from the market. Our research indicates that in Egypt,

passenger cars have historically remained on the roads for a much longer period of time, commonly up to 15 years. Conversely, because they are on the road 16 hours a day all year round, buses used by public transportation companies are sometimes forced to be prematurely retired due to abuse and lack of proper maintenance.

As shown in Table 2-8, we believe that retirement/replacement rates, which historically have reflected anomalies of the Egyptian market, will trend more towards standard over the next five years.

Table 2-8

HISTORICAL AND PROJECTED
RETIREMENT/REPLACEMENT RATES FOR VEHICLES IN EGYPT

Category	Historical Annual Rate (1975-1980)	Projected Annual Rate (1982-1987)
Passenger Cars	1.2%	5.0%
Taxis	3.0%	6.0%
Buses	13.0%	9.0%
Trucks	10.7%	9.0%
Agr. Tractors	5.0%	5.0%

Source: CTIC field survey.

Projected Vehicle Fleet Growth, 1982-1987

The foregoing assumptions support the projections shown in Table 2-9 for vehicle fleet growth during 1982-87. (The methodology in Table 2-9, was adopted from NASCO.)

The market for vehicles will continue to grow in Egypt. However, the growth rates will not reach the peaks they attained during the years 1975-1980. The combined rate of growth for the automotive vehicle fleet during the years 1982-1987 will be approximately 8.3 percent per annum, closely following a GDP growth estimated to be 8 percent per annum. As shown in Figure 2-6, the size of the fleet of all types of vehicles, estimated to be composed of 706,000 units in 1982, will reach the million unit mark in 1987, totaling 1,052,000 units. New vehicles needed in the market for all types of vehicles combined will total 84,435 units per annum in 1982 and will surpass a quarter of a million units per annum in 1987.

Table 2-9

AUTOMOTIVE VEHICLES IN EGYPT: PROJECTED DEMAND, FLEET SIZE
1982-1987

	1982	1983	1984	1985	1986	1987
<u>Passenger Cars</u>						
Units At Start Of Year	354,000	388,000	424,700	460,200	499,200	541,200
Demand Through Growth	32,000	35,000	34,000	37,000	40,000	43,300
Demand Through Replacement	18,000	19,500	21,000	23,000	24,000	27,100
Gross Demand	50,000	54,500	55,000	60,000	65,000	70,400
Loss Due To Retirement	16,000	18,000	19,500	21,000	23,000	25,000
Cars On Road, Year-end	388,000	424,700	460,200	499,200	541,200	586,600
<u>Taxis</u>						
Gross Demand	15,100	16,200	16,000	17,200	18,200	19,400
Loss due to retirement	6,000	7,000	7,500	8,000	8,600	9,100
Taxis on Road, Year-end	124,300	133,500	142,000	151,200	160,800	171,100

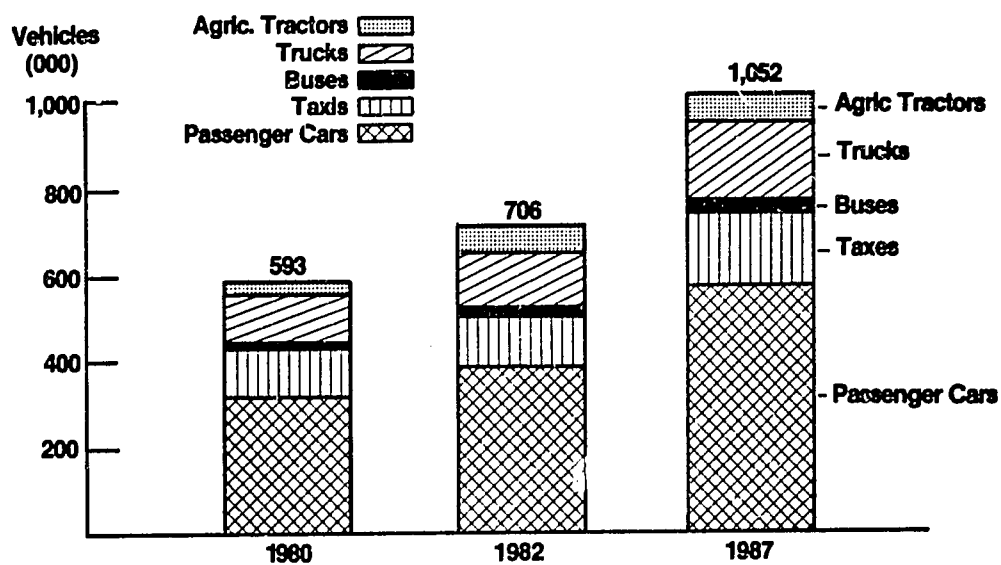
Table 2-9 (cont'd)

AUTOMOTIVE VEHICLES IN EGYPT: PROJECTED DEMAND, FLEET SIZE
1982-1987

	1982	1983	1984	1985	1986	1987
<u>Buses</u>						
Gross Demand	3,610	4,000	4,200	4,352	4,800	5,200
Loss due to retirement	1,530	1,710	1,890	2,100	2,304	2,500
Buses on Road, Year-end	21,100	23,300	25,600	27,900	30,400	33,000
<u>Trucks</u>						
Gross Demand	21,400	22,300	24,200	26,300	27,000	29,000
Loss due to retirement	9,000	10,700	11,800	12,800	13,900	15,200
Trucks on Road, Year-end	130,700	142,300	154,700	186,200	181,300	195,000
<u>Agricultural Tractors</u>						
Gross Demand	6,290	6,680	6,947	7,220	7,860	7,900
Loss due to retirement	1,650	1,850	2,100	2,300	2,600	2,800
Tractors on Road, Year-end	41,640	46,470	51,317	56,237	61,497	66,597
Total Vehicle Fleet	705,740	770,270	833,817	902,737	975,197	1,052,297

Source: CTIC estimates based on CTIC field survey and NASCO projections.

Figure 2-6
**Projected Egyptian Automotive Vehicle Fleet
 (1980-1987)**



Source: Chase Trade Information Corporation

3. EGYPTIAN DEMAND FOR AUTOMOTIVE PARTS, COMPONENTS, AND ACCESSORIES

Local Manufacturers of Automotive Vehicles

Egypt built its first automotive assembly plant in 1950. In that year, the Ford Motor Company plant at Smouha, Alexandria began assembly of all types of vehicles ranging from small passenger cars to heavy-duty trucks and agricultural tractors. The productive capacity of the plant - targeted to cover some of the needs of Egypt, Sudan, and Turkey - was 12 vehicles/day or 3,000 units per year, to be assembled from completely knocked-down components. The activities of the plant included engine reconditioning and a fully equipped service school.

In 1962, 1963, and 1964, Ford Consul, Tannus, and Anglia models assembled totaled 1,440, 1,534, and 1,345 respectively. By 1968, however, the plant was closed due to stiff restrictions on imported components and scarcity of foreign exchange.

NASCO

The largest operating vehicle production and assembly plant in Egypt today got its start in February, 1959, when a licensing agreement was signed

between Kloeckner Humboldt Deutz of West Germany and a newly formed Egyptian state company, El Nasr Automotive Manufacturing Company (NASCO). The agreement called for the production of 4,100 six-ton and eight-ton trucks, 600 buses, and 500 engines.

In 1961, NASCO entered into a licensing agreement with FIAT for local manufacture of 10,000 Fiat Model 1100 and local assembly of 2,000 Fiat Model 2300 passenger cars. Also in 1961, NASCO entered into a licensing agreement with W.G. Blumhardt of West Germany for the production of 1,000 trailers of 6.8 and 12 ton payload. Later NASCO entered into a new agreement with Pol-Mot (Poland) for the assembly of CKD parts in which locally produced Fiat 125cc engines could be installed. NASCO is also producing agricultural tractors under foreign licenses.

Total NASCO production more than doubled between 1975 and 1980, reaching 29,000 vehicles as shown in Table 3-1.

Table 3-1

NASCO'S ANNUAL PRODUCTION (1975-1979)

Vehicle\Year	1975	1976	1977	1978	1979	1980
1. Passenger Cars	10,000	9,200	13,000	14,000	16,000	21,630
2. Buses	300	370	470	470	550	448
3. Trucks	940	1,400	1,700	1,200	2,300	3,400
4. Trailers/Semi-trailers	300	660	230	100	570	501
5. Agri. Tractors	1,435	1,694	2,761	2,925	2,783	3,000
Total Vehicles	12,975	13,324	18,161	18,695	22,203	28,979

Source: NASCO.

NASCO has been quite flexible regarding the types of vehicles produced, and has adapted its production to market requirements. For instance, it stopped producing semi-trailers in 1977 to focus its resources on passenger car production. Table 3-2 presents the current list of products delivered by NASCO.

Table 3-2

TYPES OF NASCO VEHICLES PRODUCED - 1982

Vehicle	Characteristics
1. Passenger Car	Fiat Model 128, 125, 131, 133*, RITMO
2. Buses	Medium (up to 50 passengers), heavy (up to 110 passengers) and inter-city (between 48 to 60 seats with added luxury)
3. Trucks	Medium and Heavy
4. Trailers/ semi-trailers	Payload of 4.5T, 8T, 12T, 15T, 20T, 24/26T, 26/28T, 28/30T
5. Tractors	62HP, 65HP

* Model 133 to be discontinued by February 1982 and replaced by Model 127.

Source: NASCO.

In addition to the above assembly line capacity, NASCO has the following production/assembly capacity for automotive components:

- a) Gasoline engine production shop, manufacturing up to 10,000 engines per year of the 1500cc water cooled type engines mounted on the Fiat 125 model passenger car.
- b) Truck and tractor diesel engine manufacturing and assembly plant with the capacity to produce:
 - 4,700 air cooled diesel engines for Magirus-Deutz trucks and buses (production and assembly).
 - 3,500 Perkins water cooled diesel engines for agricultural tractors (assembly and part production).

The above engine shops incorporate lines for the production of major components for air cooled diesel engines, including cylinder blocks, cylinder liners, crankshafts, camshafts, cylinder heads, fly wheels, connecting rods, oil pans, etc.

- c) Mechanical components shops and production lines manufacture axles, complete with their

components, gear boxes, different chassis parts, on regular production lines or using special and general purpose machines.

- d) The press shop produces all sheet metal parts, including all bus bodies and truck and tractor cabin parts and fenders.
- e) The heat treatment shop equipped with different types of heat treatment facilities and techniques, including salt baths, carbonizing, high frequency induction, etc.
- f) A tool room equipped to produce tools and dies, maintain jigs, fixtures and dies, and to sharpen and grind different types of general and special tools.

Due to its own manufacturing capabilities and procurement from Egyptian OEM suppliers, NASCO has succeeded in reaching the following percentages of local content, in value, in its assembly lines:

Buses	about 75% in value
Trucks	about 70% in value
Agricultural Tractors	about 20% in value
Passenger Cars	about 17% in value.

Other Vehicle Assemblers

While NASCO is by far the largest and most diversified manufacturing/assembly company in Egypt, there are a few other companies that deserve some attention.

Arab-American Vehicles (AAV) was originally conceived to be - and still remains - a military facility with the capacity to assemble yearly 10,000 American Motors' jeeps from CKD kits. A subsidiary of the Arab Organization for Industrialization (AOI, now called EOI, the Egyptian Organization for Industrialization), it was founded and funded by Egypt and other Arab states. The Arab states froze their contribution, however, following the Camp David accords. Some of AAV's idle capacity is used by NASCO which has sub-contracted to AAV for the assembly of certain vehicles.

EOI is still producing jeeps, but at a rate far below capacity. The plant turned out 2,584 military and commercial jeeps in 1979 and 3,623 in 1980. The local content of AAV's vehicles is about 25 percent of the total cost, including some sheet metal, tires, batteries, leaf springs, and flat glass.

Another company experienced in both vehicle assembly and component manufacture is the Egyptian Company for Light Transport Equipment (El Tramco). El Tramco presently has licensing agreements with Eastern Europe and Spain and is engaged in the assembling of semi-knocked down kits for small buses (11 and 28 passengers), utility vehicles, motorcycles and bicycles. It also builds bus bodies.

It has recently terminated its assembling of Rumanian jeeps (ARO 240), but continues to assemble about 100 Pegaso minibuses per year and the following vehicles supplied by ZUK of Poland: 540 minibuses, 270 pick-ups, 90 delivery vans, and 80 ambulances. The only local content in these vehicles is tires and batteries. However, El Tramco plans to increase its value added in future expansions of its minibus assembly line.

Misr Engineering and Tools Company (MECAR), another public company, produces, on request, agricultural trailers, full and semi-trailers, lorries, boxes, and tippers. In 1979, it produced 385 agricultural trailers and 150 commercial trailers. MECAR also annually assembled about 25 CKD kits for Autosan 41-seat buses imported from Poland.

Four other companies fabricate bus bodies and install them on foreign chassis imported in semi-knocked-down form.

- Engineering Enterprise for Steel Works (STEELCO), a public sector structural steel fabricator, imports 20-30 Hino chassis per year from Japan.
- General Nile Company for Automotive Repairs, also in the public sector, builds bodies for up to 120 chassis per year supplied by Saviem (France), Ward (U.S.), or TAM (Yugoslavia).
- Misr Car Bodies Building Company, which is privately owned, fabricates bodies for 30 Hino and Dodge chassis per year imported from Japan.
- Fakhry Company for Body Building, another private concern, fabricates bus bodies which are installed by Anglo-Egyptian Motors on the TATA chassis it imports from India. Its capacity is said to be 160 per year.

In addition to the above companies, there are about 27 small companies producing agricultural trailers with payloads up to six tons. Production is usually made to order and no distribution network is necessary.

Except for NASCO and AAV, however, none of Egypt's current local assemblers are considered to be serious potential customers for local OEM suppliers. Therefore, for purposes of this survey, total local production for all types of vehicles, is shown in Table 3-3.

Table 3-3

EGYPTIAN PRODUCTION OF AUTOMOTIVE VEHICLES
1976-1980

Vehicle Type	1976	1977	1978	1979	1980
Passenger Cars/Taxis	9,000	13,000	14,000	16,000	21,630
Buses	370	470	470	550	450
Trucks	1,400	1,700	1,200	4,754	7,023
Agricultural Tractors	1,694	2,761	2,925	2,783	3,000 (e) *
Total	12,464	17,931	18,595	24,087	32,103

* Estimated.

Source: Ministry of Transportation, NASCO.

Proposed New Projects

A number of the major automotive manufacturers have submitted to the Investment Authority their prefeasibility studies and economic viability proposals for the manufacture and/or assembly of trucks, buses, and passenger cars in Egypt.

The following is a brief summary of the serious proposals submitted to the Egyptian authorities:

NASCO Expansion Projects. These projects are planned to expand current NASCO capacity for passenger cars, trucks, and buses. Originally, NASCO was to have entered into joint-venture agreements with Fiat for passenger cars, and with an equity group including the Arab Contractors, and three German companies for the trucks and buses. The new plan is for NASCO to purchase the technology and designs under license agreements with the European firms.

The passenger car project will increase NASCO output to 30,000 cars per year during its first phase, and to 49,000 per year several years later. The models to be built are:

- Fiat 65/75
- Fiat 131 restyled
- Seat 127 restyled (3/5 door)
- Polski 125.

Local content in NASCO assembled cars will increase from the present 17 percent to a minimum 40 percent in value. Production under the first phase can begin 60 days after final Government approval.

The new truck and bus project will use Iveco (for chassis), Deutz (engines), and Z.F. (gears) to expand NASCO's output to 5,400 medium and heavy trucks and 1,000 buses. Local content will be 62 percent for the trucks and 75 percent in the case of the buses. Those percentages would be reached by the fifth year of operations mainly through subcontracting to other Egyptian or joint-venture companies.

Volkswagen. The Board of the General Authority for Investment and Free Zones approved a project for the assembly of VW passenger cars in February, 1981. The project contemplates the assembly of VW passenger cars at an annual rate of 10,000, to be reached in the second year of production. Three models would be produced, namely:

- Beetle, 113
- BX, 2-door, Hatchback
- BX, 4-door, Notchback.

As an alternative to the BX series, the plant may produce the Brazilia Type 104.

The Volkswagen project is only for an assembly plant with no in-plant production of components or parts. Some local content would be purchased from existing feeding industries in Egypt, estimated to reach a maximum of 21 percent of total production value after the fifth year of operations.

Although this project has had all official government approvals since 1981, its implementation has been frozen by the investors for the time being.

Daimler Benz Project. This project incorporates the assembly and production of trucks and buses in Egypt. The annual targeted capacity of the contemplated venture is as follows:

- Trucks of 9 tons payload	1,200
- Trucks of 11 & 13 tons payload	800
- Trucks of 19 & 26 tons payload	2,000
- Passenger Cars	1,000
- City & Inter-city Buses	<u>600</u>
Total	5,600 units

The project's application memorandum contemplates 45 percent local content in the venture's production. The project will be a joint venture between Daimler Benz and Arab and Egyptian interests, including the Arab Contractors. The project has secured the approvals of the Ministry of Industry, GOFI, and the General Authority for Investment and Free Zones. The founders final agreement, and the articles of incorporation have yet to be signed by the equity participants, and the final location of the plant site has not been decided.

Ford Motor Company Project. This project contemplates a truck assembly plant in Alexandria, at the original Ford Motor Company factory in Smouha. The planned start-up capacity is 4,000 units per year working on 2 shift basis, producing 1,600 units of light trucks (below 4 tons payload) and 2,400 units medium trucks (4 to 10 tons payload). This capacity could be raised to 10,000 units per year 18 months after start-up of production, as justified by growth in domestic demand. The planned local content of the production should initially reach 30 percent in value, and ultimately increase to 40 percent in value.

Ford Motor Company will have NASCO as a minority joint-venture partner. The project has secured the final approvals of the Ministry of Industry, GOFI, as well as the General Authority for Investment and Free Zones. However, the founders agreement and the final articles of incorporation have not as yet been signed.

General Motors. This project proposes the production/assembly of 5,400 units of trucks and buses in Phase I, to be increased gradually to reach an ultimate production level of 14,500 units in Phase II, by the year 1990. The eventual product mix is to be as follows:

Light Trucks (Below 4 tons, payload)	9,300
Medium Trucks (4-10 tons payload)	4,150
Buses	1,050

The contemplated local content is to reach 30 percent in value in Phase I, increasing gradually to a minimum of 40 percent in value in Phase II.

A majority of the paid-up equity is to be shared between General Motors Company and Isuzu Motors, with the remainder held by private Egyptian and Arab interests. The project has been approved by the

Investment Authority, and the joint-venture company was formed in 1981.

Peugeot/Ministry of Defense Project. Peugeot has signed a protocol with the Ministry of Defense to produce 8,000 passenger cars per year for delivery to the Egyptian Army. All the vehicles will be assembled in the military's own automotive shops at Markebat.

Attainment of a very high local content level is projected, representing 80 percent of the value of the finished car. Locally produced components will include tires, batteries, inside door panels, seat frames, seat covers, plastic foam, electrical wirings, exhaust pipes, silencers, radiators, jack and wheel spanners, carpets, side windows, front and rear windscreens, shock absorbers, and miscellaneous parts. The actual list of local parts will be determined following a survey conducted by the sponsors.

Renault Project. In June 1982, Renault submitted a proposal to the Egyptian Government to establish a new plant with the capacity to produce up to 10,000 Renault 5 and 10,000 Renault 9 passenger cars on two shifts. The project would be undertaken as a joint-venture, with minority shares owned by Renault, a group

of Egyptian banks, NASCO and El Tramco, and several Arab and Egyptian private partners.

Production would begin approximately 20 months after all agreements were signed, beginning with totally imported CKD kits except for batteries. A five-phase plan would eventually bring local content up to 48 percent of the value of the finished cars

No site has yet been selected for the plant and official approvals have yet to be secured.

Total Local Automotive Production

Should all the projects now planned actually be realized, total local Egyptian production of motor vehicles in 1987 would more than triple to 122,150 units, as shown in Table 3-4. This would be the equivalent of 93 percent of projected gross annual additions to Egypt's civilian fleet. Because many of these locally produced vehicles would be absorbed by the military, and some might be exported, we believe that the market could easily sustain the implementation of all the proposed projects described above.

If the Government's goal of 40-45 percent local content were achieved, the market for domestically produced original equipment represented by these

projects could be a sizable one by 1987. Nevertheless, it will be significantly smaller than the aftermarket discussed below.

Table 3-4

PROPOSED 1987 EGYPTIAN MOTOR VEHICLE PRODUCTION

Maker	<u>Type of Vehicle</u>			Agric. Tractor
	Passenger Car	Truck	Bus	
<u>Currently Operating</u>				
NASCO	20,000	3,400	660	3,000
AAV	-	10,000	-	-
EL TRAMCO	-	-	200	-
<u>New Projects</u>				
NASCO	19,000	2,000	340	-
Volkswagen	10,000	-	-	-
Daimler-Benz	1,000	4,000	600	-
Ford-NASCO	-	10,000	-	-
General Motors/ Isuzu	-	9,230	720	-
Peugeot	8,000	-	-	-
Renault	20,000	-	-	-
Total	78,000	38,630	2,520	3,000

Source: CTIC survey.

Aftermarket For Auto Parts

Present Consumption of Parts

Although an average car is assembled from 15,000 parts and components, the study in Egypt focused on approximately 80 major car components, as listed in Table 3-6. Large numbers of agents, importers, distributors and retail stores were visited, often more than once. Local manufacturers of vehicle components and local manufacturers and assemblers of vehicles were also interviewed. Very rapidly, the research justified subdividing the spare parts business into three major categories as shown in Table 3-5: slow moving items, special orders items, and fast moving items.

Table 3-5

FREQUENCY OF DEMAND FOR
SELECTED AUTOMOTIVE COMPONENTS IN EGYPT

	Slow- Moving	Special Order	Fast- Moving
<u>Body and Chassis</u>			
1. Windshield frames	x		
2. Bumpers		x	
3. Exhaust systems			x
4. Fifth wheel	x		
5. Frames	x		
6. Hoods		x	
7. Pipes, fuel pipes	x		
<u>Drive Train & Steering System Parts</u>			
1. Axle housings shafts		x	
2. Axles	x		
3. Differentials and parts		x	
4. Drive shafts		x	
5. Gear, transmission & clutch boxes			x
6. Hydraulic fluid power pumps	x		

Table 3-5 (cont'd)

FREQUENCY OF DEMAND FOR
SELECTED AUTOMOTIVE COMPONENTS IN EGYPT

	Slow- Moving	Special Order	Fast- Moving
7. Rear axle housings	x		
8. Steering mechanisms	x		
9. Tie rods	x		
10. Transmission housings and parts		x	
<u>Electrical System Parts</u>			
1. Vehicular lighting equipment			x
2. Storage batteries			x
3. Ignition systems (contact points)			x
4. Wiring harness sets, other than ignition	x		
5. Directional signals			x
6. Defrosters	x		
7. Heaters	x		
8. Horns			x
9. Instruments board assemblies	x		

Table 3-5 (cont'd)

FREQUENCY OF DEMAND FOR
SELECTED AUTOMOTIVE COMPONENTS IN EGYPT

	Slow- Moving	Special Order	Fast- Moving
10. Windshield wiper blades	x		
11. Alternators	x		
12. Condensors			x
13. Lights and bulbs			x
14. Spark plugs			x
<u>Engine Parts</u>			
1. Carburetors	x		
2. Pistons (complete)			x
3. Valves			x
4. Engine bearings			x
5. Camshafts		x	
6. Choker rods	x		
7. Connecting rods		x	
8. Crankshaft assemblies		x	
9. Cylinder heads		x	
10. Filters: oil, fuel, air			x

Table 3-5 (cont'd)

FREQUENCY OF DEMAND FOR
SELECTED AUTOMOTIVE COMPONENTS IN EGYPT

	Slow- Moving	Special Order	Fast- Moving
11. Fuel pumps			x
12. Fuel Systems & parts	x		
13. Gas tanks	x		
14. Governors, control equip- ment, injectors	x		
15. Lubrication systems & parts	x		
16. Manifolds	x		
17. Engine Rebuilding			x
18. Radiators, radiator shells and cores			x
19. Tops, winterfronts except stamped metal	x		
20. Universal joints		x	
21. Injector nozzles		x	
22. Belts			x
23. Oil seals			x

Table 3-5 (cont'd)

FREQUENCY OF DEMAND FOR
SELECTED AUTOMOTIVE COMPONENTS IN EGYPT

	Slow- Moving	Special Order	Fast- Moving
<u>Suspension Parts</u>			
1. Shock Absorbers			x
2. Springs			x
<u>Wheels, Tires, and Brake Parts</u>			
1. Tires and tubes			x
2. Brake cylinders	x		
3. Brake drums	x		
4. Brakes and brake parts, linings, shoes			x
5. Rims, wheels		x	
6. Tire valve cores			x

Source: CTIC field survey.

Slow Moving Items. These are parts in the vehicle that are built to last, with very little replacement (such as a chassis); or with very little demand (such as defrosters and heaters). These items are imported in response to specific orders and do not constitute new opportunities for local manufacturing.

Special Orders Items. In this category, there are two types of products: some, such as bumpers, can be easily installed locally by repair shops. Others, such as drive shafts, cylinder heads, and crankshaft assemblies, are either locally produced or imported to supply one main customer: NASCO. NASCO specifies the quantity and quality it requires yearly, and products are made to fill these specific orders. While most of these products do not reach a broader market, the quantity of demand for some might offer opportunities for new or expanded local manufacturing.

Fast Moving Items. These components represent the highest turnover in the market and might very well offer the best opportunities for local manufacturing.

Average Rate of Parts Consumption per Vehicle

The average rate of parts consumption per vehicle in the automotive aftermarket in Egypt is probably higher than in the U.S. or other industrialized

countries for several reasons. In general, vehicles in Egypt are subjected to overloading, lack of preventive maintenance, and abuse from bad road conditions and climatic conditions (heat and dust/sand); therefore, breakdowns frequently occur.

As an example, the Cairo Transportation Authority (CTA) which runs the public transportation system in Cairo, has a fleet of 2,050 buses (1980 figures). About 20 percent of that fleet, or approximately 410 buses, is under repair and maintenance at any one time. Buses' working hours average 16 hours a day, for a total of 310 days per year. The average occupancy per bus is 87 percent year-round, invariably surpassing 100 percent during peak hours. Moreover, average mileage ranges between 250 and 300 kms. per day. Based on a normal lifetime ranging between 500,000 to 600,000 kms., CTA's buses should be eligible for retirement shortly after 6 years of usage. However, for various economic and budgetary reasons, they are never retired on schedule. A constant infusion of spare parts and repair kits keeps them on the road for many more years.

While the example above is excessive in the sense that it pictures one of the most abused types of

vehicle in Egypt, the comparison remains valid for all other types of vehicles and the conclusion remains the same: As is the case with other developing countries, vehicles live twice as long in Egypt, thanks to a combination of ingenuity and spare parts transfusions.

An additional contributing factor is the generally poor quality of automotive parts available on the market. A history of high tariffs and controls on the importation of luxury goods has led to the saturation of dealers' shelves with inexpensive foreign made items or domestic items which are not up to international performance standards.

No sufficiently detailed statistics exist regarding local production or imports of automotive parts on which to base an estimate of normal consumption rates in Egypt. Therefore, agents, dealers, and others in the automotive parts industry were interviewed to arrive at an approximation. The results of that survey are presented in Table 3-6.

CTIC also surveyed the industry to determine the annual mileage per type of automotive vehicle in the national fleet. These averages were subsequently corroborated by the National Transport Study conducted for the Ministry of Transport, and are shown in Table 3-7.

Table 3-6

AVERAGE RATE OF AFTERMARKET CONSUMPTION IN EGYPT
FOR SELECTED AUTOMOTIVE COMPONENTS BY TYPE OF VEHICLE

Item	Passenger Cars/Taxis	Trucks	Buses
<u>Body & Chassis</u>			
Windshield frames	only when accidents occur		
Bumpers	demand too low to estimate		
Exhaust systems and parts	every 22,000 km for all categories		
Fifth wheels	demand too low to estimate		
Frames	demand too low to estimate		
Hoods	demand too low to estimate		
Pipes, fuel pipes	demand too low to estimate		
<u>Drive Train and Steering System Parts</u>			
Axle housing shafts	only when accidents occur		

Table 3-6 (cont'd)

AVERAGE RATE OF AFTERMARKET CONSUMPTION IN EGYPT
FOR SELECTED AUTOMOTIVE COMPONENTS BY TYPE OF VEHICLE

Item	Passenger Cars/Taxis	Trucks	Buses
Axles	only when accidents occur	according to extra loading or 2% of total fleet	
Differentials/parts	minimal for cars	every 100,000 kms.	every 80,000 kms.
Drive shafts	only when accidents occur		
Gear, transmission, clutch boxes	only when accidents occur	every 85,000 kms.	every 50,000 kms.
Hydraulic power pumps	demand too low to estimate		
Rear axle housings	demand too low to estimate		
Steering mechanisms	only when accidents occur	every 50,000 kms.	
Tie rods	set every 50,000 kms.		

Table 3-6 (cont'd)

AVERAGE RATE OF AFTERMARKET CONSUMPTION IN EGYPT
FOR SELECTED AUTOMOTIVE COMPONENTS BY TYPE OF VEHICLE

Item	Passenger Cars/Taxis	Trucks	Buses
Transmission housings and parts	demand too low to estimate		
<u>Electrical System Parts</u>			
Vehicular lighting equipment	only when accidents occur		
Storage batteries	every 2 years	yearly	every 6-12 months
Ignition systems (contact points)	every 9,000 kms.	-	-
Wiring harness sets	demand too low to estimate		
Directional signals	demand too low to estimate		
Defrosters	demand is minimal		

Table 3-6 (cont'd)

AVERAGE RATE OF AFTERMARKET CONSUMPTION IN EGYPT
FOR SELECTED AUTOMOTIVE COMPONENTS, BY TYPE OF VEHICLE

Item	Passenger Cars/Taxis	Trucks	Buses
Heaters	demand too low to estimate		
Horns	every 3 years	every 2 years	every 1 1/2 years
Instruments board assemblies	demand too low to estimate		
Windshield wiper blades	set once every 2 1/2 years		
Alternators	every 200,000 kms.	every 150,000 kms.	every 150,000 kms.
Condensers	every 10,000 kms.	-	-
Lights & bulbs	unpredictable demand (light bulbs could last 3 months to 3 years)		
Spark plugs	4 per year	-	-
<u>Engine Parts</u>			
Carburetors	demand too low to estimate		
Piston sets (complete)	1 set every 150,000 kms.		

Table 3-6 (cont'd)

AVERAGE RATE OF AFTERMARKET CONSUMPTION IN EGYPT
FOR SELECTED AUTOMOTIVE COMPONENTS BY TYPE OF VEHICLE

Item	Passenger Cars/Taxis	Trucks	Buses
Valves	1 set every 70,000 kms.		
Engine bearings	every 100,000 to 150,000 kms.		
Camshafts	demand too low to estimate		
Choker rods	demand too low to estimate		
Connecting rods	demand too low to estimate		
Crankshaft assemblies	demand too low to estimate		
Cylinder heads	demand too low to estimate		
Filters: oil, fuel	every 10,000 kms.	every 8,000 kms.	every 5,000 kms.
Air filters	every 10,000 kms.	every 8,000 kms.	set of 3 every 5,000 kms.
Fuel pumps	every 60,000 kms.	-	-
Gas tanks	demand too low to estimate; only when accidents occur		

Table 3-6 (cont'd)

AVERAGE RATE OF AFTERMARKET CONSUMPTION IN EGYPT
FOR SELECTED AUTOMOTIVE COMPONENTS BY TYPE OF VEHICLE

Item	Passenger Cars/Taxis	Trucks	Buses
Injection pump parts (plunger & sleeve; delivery valve)	low demand	every 20,000 kms.	
Lubrication systems and parts	demand too low to estimate		
Manifolds	demand too low to estimate		
Engine rebuilding	every 200,000 kms.	every 300,000 to 350,000 kms.	
Radiators, shells, cores	every 5 years	every 2 years	
Tops, winter-fronts, except stamped metal	demand too low to estimate		

Table 2-6 (cont'd)

AVERAGE RATE OF AFTERMARKET CONSUMPTION IN EGYPT
FOR SELECTED AUTOMOTIVE COMPONENTS BY TYPE OF VEHICLE

Item	Passenger Cars/Taxis	Trucks	Buses
Universal joints	every 100,000 kms.	every 60,000 kms.	every 40,000 kms.
Injector nozzles	low demand	set every 75,000 kms.	
Belts	every 50,000 kms.	every 30,000 kms.	
Oil seals	every 100,000 kms.	every 60,000 kms.	every 50,000 kms.
<u>Suspension Parts</u>			
Shock absorbers	set of 2 every 50,000 kms.	-	set of 2 every 6 months for front only
Springs	demand too low to estimate		
<u>Wheels, Tires, and Brake Parts</u>			
Tires and tubes	set of 5 every 50,000 kms.	set of 7 every 25,000 kms.	set of 7 every 20,000 kms.

Table 3-6 (cont'd)

AVERAGE RATE OF AFTERMARKET CONSUMPTION IN EGYPT
FOR SELECTED AUTOMOTIVE COMPONENTS BY TYPE OF VEHICLE

Item	Passenger Cars/Taxis	Trucks	Buses
Brake cylinders	every 50,000 kms.		
Brake drums	only when accidents occur	set of 2 every 100,000 kms.	set of 2 every 30,000 kms.
Brakes & Parts, linings, shoes	2 sets every 30,000-50,000 kms.	2 sets every 20,000-30,000 kms.	2 sets every 10,000-15,000 kms.
Rims, wheels	demand too low to estimate		
Tire valve	set of 5 every 50,000 kms.	set of 7 every 25,000 kms.	set of 7 every 20,000 kms.

Source: CTIC field survey.

Table 3-7

**AVERAGE ANNUAL MILEAGE AND SPARE PARTS
CONSUMPTION PER VEHICLE IN EGYPT**

Type of Vehicle	Vehicles On The Road (1980)	Annual Mileage (km)	Spare Part Consumption Per 1000 km. (LE)	Average Spare Part Consumption/ Vehicle (LE)
Passenger Car	323,000	25,000	5	125
Taxi	107,000	100,000	10	1,000
Small Bus	10,200	60,000	35	2,100
Large Bus	6,800	80,000	68	5,440
Pick-up	53,300	25,000	6	145
Small Truck	54,600	40,000	17	680
Medium Truck/ Trailers	13,000	50,000	21	1,050
Large Truck/ Trailer	9,100	75,000	35	2,625
TOTAL*	577,000	-	-	915

* Excludes agricultural tractors.

Source: CTIC field survey; Egypt National Transport Study, Ministry of Transport, 1981.

Total Demand for Automotive Parts

According to the Ministry of Transport study, the average annual consumption of spare parts for all motor vehicles in Egypt was LE 915 in 1980. In order to arrive at an independent estimate of demand for the selection of parts, components, and accessories listed above, we calculated the numbers required as original equipment on assembled automotive vehicles, and added them to the annual consumption by the total vehicle fleet (except trailers and agricultural tractors, for which usage rates were not developed).

Parts suppliers and manufacturers were surveyed to determine an average retail price for the selection of components under study. The resulting average price was used to evaluate the financial size of the Egyptian market. According to these calculations, the total market for automotive components, parts, and accessories in 1980 was at least LE 475 million (in 1981 retail prices), as shown in Table 3-8. The equivalent landed or ex-factory value of this demand is estimated to be LE 297 million. The OEM portion of this market was close to 15 percent, estimated at LE 44 million ex-factory.

Table 3-8

ESTIMATED TOTAL DEMAND IN EGYPT FOR
AUTOMOTIVE SPARE PARTS, COMPONENTS, AND ACCESSORIES

1980

Components	<u>Annual Consumption (000 units)</u>				Est. Retail Value LE MM (at 1981 prices)	Of Which Total OEM Market
	Passenger Cars/Taxis	Trucks	Buses	Total		
Tires + Tubes	1,900	1,161	405	3,466	LE 173	4.8%
Pistons (complete)	159	55	8	222	16	52.0%
Valves	268	58	16	342	8	8.8%
Batteries	215	113	11	339	20	8.8%
Contact Points	2,000	-	-	2,000	2	1.1%
Brake Cylinders	376	82	23	481	19	6.2%
Axles Housing Shafts	22	7	1	30	11	100.0%

Table 3-8 (cont'd)

ESTIMATED TOTAL DEMAND IN EGYPT FOR
AUTOMOTIVE SPARE PARTS, COMPONENTS, AND ACCESSORIES

1980

Components	<u>Annual Consumption (000 units)</u>				Est. Retail Value LE M. (at 1981 prices)	Of Which Total OEM Market
	Passenger Cars/Taxis	Trucks	Buses	Total		
Axles	22	7	1	30	1	100%
Thick Shell Bearings	150	28	9	187	1	16.0%
Thin Shell Bearings	150	28	9	187	1	16.0%
Brake Drums (pair)	44	55	38	137	3	43.7%
Brake Linings	1,300	412	231	1,943	21	6.2%
Brake Shoes	750	275	154	1,179	..*	10.2%
Air Filters	1,900	515	694	3,109	19	1.0%

Table 3-8 (cont'd)

ESTIMATED TOTAL DEMAND IN EGYPT FOR
AUTOMOTIVE SPARE PARTS, COMPONENTS, AND ACCESSORIES

1980

Components	<u>Annual Consumption (000 units)</u>				Est. Retail Value LE MM (at 1981 prices)	Of Which Total OEM Market
	Passenger Cars/Taxis	Trucks	Buses	Total		
Fuel Filters	1,900	515	231	2,646	4	1.1%
Oil Filters	1,900	515	231	2,646	8	1.1%
Connecting Rods	88	42	8	138	3	100.0%
Cylinder Heads	22	7	1	30	6	100.0%
Differentials and Parts	22	41	14	77	7	40.0%
Exhaust Systems and Parts	850	187	52	1,089	22	2.8%
Fuel Pumps	313	-	-	313	9	8.6%

Table 3-8 (cont'd)

ESTIMATED TOTAL DEMAND IN EGYPT FOR
AUTOMOTIVE SPARE PARTS, COMPONENTS, AND ACCESSORIES

1980

Components	Annual Consumption (000 units)				Est. Retail Value LE MM (at 1981.prices)	Of Which Total OEM Market
	Passenger Cars/Taxis	Trucks	Buses	Total		
Gears	22	48	23	93	2	32.2%
Injection pump parts	-	203	58	261	4	17.2%
Horns	140	55	11	206	1	14.6%
Engine Re- building	94	14	4	112	34	-
Radiators, Shells, Cores	86	55	8	91	6	33.0%
Rims, Wheels	110	24	5	139	3	100.0%

Table 3-8 (cont'd)

ESTIMATED TOTAL DEMAND IN EGYPT FOR
AUTOMOTIVE SPARE PARTS, COMPONENTS, AND ACCESSORIES

1980

Components	<u>Annual Consumption (000 units)</u>				Est. Retail Value LE MM (at 1981 prices)	Of Which Total OEM Market
	Passenger Cars/Taxis	Trucks	Buses	Total		
Shock Absorbers	430	-	68	498	20	9.2%
Steering Mechanisms	22	82	23	127	10	23.6%
Tie Rods	376	82	23	481	7	16.2%
Tire Valve Cores	1,900	1,161	405	3,466	1	4.8%
Transmission Housing	22	7	1	30	4	100.0%
Transmission Clutch Box	22	7	1	30	..	100.0%

Table 3-8 (cont'd)

ESTIMATED TOTAL DEMAND IN EGYPT FOR
AUTOMOTIVE SPARE PARTS, COMPONENTS, AND ACCESSORIES

1980

Components	<u>Annual Consumption (000 units)</u>				Est. Retail Value LE MM (at 1981 prices)	Of Which Total OEM Market
	Passenger Cars/Taxis	Trucks	Buses	Total		
Universal Joints	188	69	29	286	3	10.5%
Windshield Frames	22	7	1	30	..	100.0%
Windshield Wiper Blades (pairs)	172	44	7	223	2	13.4%
Alternators	94	27	8	129	6	23.2%
Condensers	1,900	412	115	2,427	4	1.2%
Injector Nozzles	-	343	92	435	2	11.0%
Springs	88	28	3	119	4	100.0%

Table 3-8 (cont'd)

ESTIMATED TOTAL DEMAND IN EGYPT FOR
AUTOMOTIVE SPARE PARTS, COMPONENTS, AND ACCESSORIES

1980

Components	<u>Annual Consumption (000 units)</u>				Est. Retail Value LE MM (at 1981 prices)	Of Which Total OEM Market
	Passenger Cars/Taxis	Trucks	Buses	Total		
Belts	375	138	38	551	1	5.4%
Oil Seals	188	69	23	280	1	10.7%
Spark Plugs	1,720	-	-	1,720	1	5.1%
Total					470	14.9%

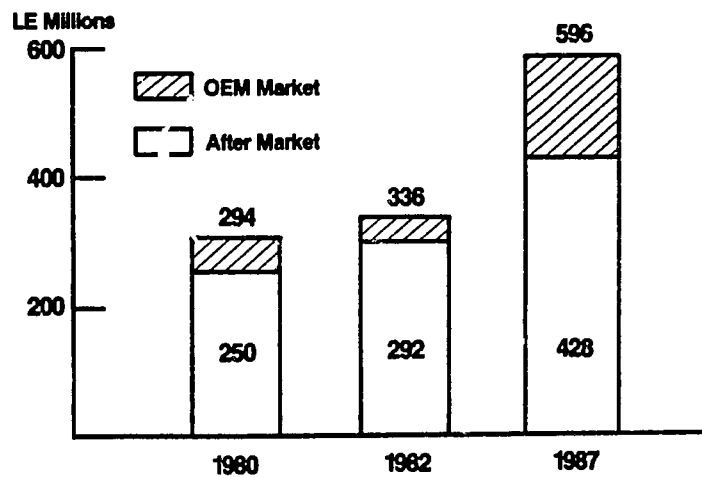
* .. = less than L.E. 500,000

Source: CTIC field survey.

The large aftermarket identified in this survey was equivalent to LE 250 million ex-factory. At retail, this demand amounted to LE 400 million or LE 754 per vehicle. This is equivalent to 82 percent of the Ministry of Transport's estimate of LE 915 per vehicle, and indicates that the most significant spare parts in demand in Egypt have been included in this survey.

Based on the national vehicle fleet growth projection in Chapter 2, demand for automotive spare parts is projected to grow by an average of 8 percent per year. In addition, the value of demand for original equipment by local vehicle producers is expected to more than triple by 1987. Together, this will bring the value of the components, parts, and accessories market to LE 596 million in 1981 prices, as shown in Figure 3-1.

Figure 3-1
**Projected Value of Egyptian Market for
Automotive Components, Parts, and Accessories
(1981 ex-factory prices)**



Source: Chase Trade Information Corporation

4. LOCAL PRODUCTION OF AUTOMOTIVE COMPONENTS, PARTS, AND ACCESSORIES

Development of the Industry

At the time when the automotive industry really started in 1961, there was hardly any automotive "feeding industry" in Egypt, with the exception of a tire factory in Alexandria and few battery factories. Other items such as plastic parts, straight glass, and exhaust mufflers were also produced, but quite irregularly and without adherence to any accepted standard specifications.

In order to support local production, the government restricted imports of foreign parts and vehicles. However, new local suppliers/producers of parts and components had to be created, and existing ones had to be trained to adhere to exact specifications and delivery schedules.

The national policy included a target of 43-46 percent local content in locally-assembled vehicles. A special permanent committee was formed to implement the policy, composed of executives from NASCO, the Five Year Industrial Plan Organization, and the military factories. At that time, only the

military factories had the assets, discipline, and structure to implement industrial decisions of such magnitude. A large number of military factories is still engaged in the civilian production of vehicle components.

Today, thanks to this policy and with the additional support provided by the Open Door policy, about 3,000 automotive vehicle components are supplied by over 160 suppliers, private companies or publicly owned entities. Among the items produced locally at the present are the following:

Metallic and Engineering Industries: casting (ferrous and non-ferrous) including pressure die castings; forgings, leaf springs, cables; exhaust mufflers; bolts and nuts; various pressings; wooden parts; spark plugs; horns; air and oil filters; gaskets; brake linings; pistons; rings; inlet and exhaust valves; bearing shells.

Chemical Industries: rubber parts; plastic parts; tires; glass; paints; chemicals needed for painting.

Textile Industries: most of the materials required for the upholstery and trim.

Petroleum Industries: oil; lubricants, thinners.

Egypt has several important resources which favor

the further development of the automotive industry. Chief among them, as will be evident later in this chapter, is that the machine-tool and metalworking industry, particularly in the factories which report to the Ministry of Military Production, is relatively advanced and has excess capacity. The various military factories already are among the chief automotive parts manufacturers in Egypt. Many of them are interested in expanding or joint-venturing in this field.

An equally important resource is Egypt's abundant, if unskilled labor force. That Egyptian workers and technicians are apt and reliable is attested to by the presence of hundreds of thousands of them in other Arab countries holding skilled, technician, and management level jobs. The Egyptian Government offers assistance and support in training both private and public sector industrial workers. One of the leading institutions is its Engineering and Industrial Design Development Center (EIDDC), which is affiliated with the Government Organization for Industrialization (GOFI) in the Ministry of Industry.

Capabilities of Major Companies

There are fourteen companies in Egypt for which the automotive components covered in this study are an

important product line. For most of them, NASCO is the major customer. However, the aftermarket has recently become a more important source of demand particularly for fast-moving items such as spark plugs, tires, and filters. The increasing attractiveness of the aftermarket has drawn other companies into the automotive parts industry, and is leading the original companies into expansion.

The major companies, their product lines, and expansion plans are summarized in Table 4-1. In Table 4-2, additional companies, with less important activities in the automotive industry, are listed by the product category.

A new potential entrant to the industry is the Egyptian Company for Car Services and Maintenance, recently formed as a joint-venture between NASCO (55%) and other Egyptian interests. This company has already begun discussions with foreign sources of technology on the establishment of repair parts manufacturing operations in Egypt.

Table 4-1

MAJOR EGYPTIAN AUTOMOTIVE PARTS MANUFACTURERS

1981

	Employees	Automotive Products	Comments
<u>Military Factories</u>			
Helwan Engineering Industries (Military Factory #99)	850	Pistons, piston rings, piston pins, thick and thin cylinder liners, piston retainer rings, bushings, accessories for the brake system. Capacity: 220,000 piston assemblies	Interested in a joint venture to produce piston kits and cylinder liners, and acquire new technology in manufacturing of parts, to reduce scrap percentage. Aluminum foundry has a capacity of 600,000 pistons per year. Also interested in a joint venture to produce 130,000 car wheels (11 offers have been received already of which Gotens Co. from the U.S.) and shock absorbers.

Table 4-1 (cont'd)

MAJOR EGYPTIAN AUTOMOTIVE PARTS MANUFACTURERS

1981

	Employees	Automotive Products	Comments
Helwan Iron Foundries (Military Factory #9)	2,500	6-cylinder diesel engine blocks, castings for chassis, axle boxes for tramway and railway wagon. Production capacity: 6,000 blocks/year.	Supplies blocks to Military Factory #909 to make Deutz engines. Company is interested in joint venture for castings.
Maadi Company for Engineering Industries (Military Factory #54)	NA	Radiators (core and complete radiators), 7,000 unit annual capacity.	Interested in joint venture to increase production of radiators.
Maasara Company for Engineering Industries (Military Factory #45)	350	Ball bearings (F.A.G.), fasteners, (bolts, nuts, screws); capacity limited to 2000 tons/year.	A new factory will be inaugurated in June 1982 with a capacity of 5,000 tons of fasteners and all bearings. Interested in joint venture to produce ball bearings and fasteners and to improve its technology.

Table 4-1 (cont'd)

MAJOR EGYPTIAN AUTOMOTIVE PARTS MANUFACTURERS

1981

	Employees	Automotive Products	Comments
<u>Other Public Sector</u>			
Egyptian Company for Fine Mechanical Industries (SABI)	NA	Manufactures spark plugs under licence from Smith Co. (U.K.) and since 1978 has used the KLG trade- mark. Horns were also produced but production was stopped. Produc- tion capacity: 1.2 million units (spark plugs); actual production: 1 million units, mainly to private sector at LE 0.60 per unit.	Best selling imported plugs in the market are: Champion (USA), Marelli (Italy), NJK (Japan), N.D. (Japan), Marshal (France), Bosche (Germany), Lodge (U.K.), Peru (Germany), PAL (Czechoslovakia).

Table 4-1 (cont'd)

MAJOR EGYPTIAN AUTOMOTIVE PARTS MANUFACTURERS

1981

	Employees	Automotive Products	Comments
General Company for Batteries (GENBAT)	17,500	Batteries. It has a joint venture with Chloryde (UK) to produce wet cell batteries. Production is expected to reach 1/2 million per year by 1984/85.	--
General Metals Company	1,460	Non-ferrous metal and alloy products, including oil tanks, cylinder heads, heavy castings, fuel filters, valve cover, inlet manifold, thin castings, oil pumps, light alloy castings, blowers (rotors and starters) - over 80 automotive parts.	1980/81 sales were LE 28.6 million. Interested in joint venture in the following areas: automotive parts, other castings, continuous casting of copper rods.

Table 4-1 (cont'd)

MAJOR EGYPTIAN AUTOMOTIVE PARTS MANUFACTURERS

1981

	Employees	Automotive Products	Comments
El Nasr Company for Rubber Products (NAROBIN)	2,500	Rubber mountings, fan belts, weather strips, door buffers, high pressure hoses, fuel pump diaphragm, rubber mats and carpets, brake shoes, oil seals, brake hoses.	Narobin has the capability to produce any rubber product except tires. Company is presently negotiating final agreement with EMS Co. (France) and Egyptian partners (Ideal, National Bank, Egyptian Bank and Societe Generale) to produce V belts and expand into new products.

Table 4-1 (cont'd)

MAJOR EGYPTIAN AUTOMOTIVE PARTS MANUFACTURERS

1981

	Employees	Automotive Products	Comments
El Nasr Forging Company	2,000	Gear box accessories, shafts, flanges automotive and tractor parts, chains, valves, finished and forged rear axles, crank-shafts, pinions, connecting rods, rear axles, tappets, all forging parts for trucks, tractors. Capacity: 12,000 tons per year.	Most of the production was exported to USSR, Europe, Poland. Now idle capacity due to depressed automotive market overseas. Welcome joint venture if new markets could be found.

Table 4-1 (cont'd)

MAJOR EGYPTIAN AUTOMOTIVE PARTS MANUFACTURERS

1981

	Employees	Automotive Products	Comments
National Plastics Company	2,500	30,000 batteries (agreement with Auto-Light, USA) with a value of L.E. 2.5 million. Also upholstery materials, leather items and plastic parts.	Interested in forming joint-venture company to produce 400,000 wet cell batteries, mainly for export.

Table 4-1 (cont'd)

MAJOR EGYPTIAN AUTOMOTIVE PARTS MANUFACTURERS

1981

	Employees	Automotive Products	Comments
Springs and Transport Company (YAYAT)	800	Leaf springs for buses, lorries, trucks, wagons and passenger cars; hot coiled helical springs for rail-way wagons, brake linings for passenger cars, buses and trucks; clutch facings for passenger cars; valve springs. Capacity: 8,000 tons for brake linings and clutch facings.	A hot coiled spring line is under erection and will start operations in June, 1982. Technology comes from Czechoslovakia and Germany. The company is not interested in a joint venture formula; however, it would like to acquire technology to develop and expand present production of brake linings and clutch facings and small cold coiled springs.

Table 4-1 (cont'd)

MAJOR EGYPTIAN AUTOMOTIVE PARTS MANUFACTURERS

1981

	Employees	Automotive Products	Comments
Transport and Engineering Company	NA	Tires (external and inner tubes) under the brand name El Nisr. Production capacity: 800,000 tires. Actual production: 620,000 tires.	The company has decided to increase its production (as of January 1982) to 1 million tires, as well as to produce radial tires. Dunlop (UK) is presently conducting a feasibility study and the project is to start production within the next three years. Company interested in other licensing arrangements for export markets.

Table 4-1 (cont'd)

MAJOR EGYPTIAN AUTOMOTIVE PARTS MANUFACTURERS

1981

	Employees	Automotive Products	Comments
<u>Private Sector</u>			
Abou-Youssef Engineering Office	700	Light and heavy sheet manufacture. Production capacity: 6,000 air filters for trucks, 3,000 hood units, 2,000 fuel tanks, 20,000 wheels (iron frame), 30,000 tractor fenders, 150 truck containers a month, 30,000 exhaust systems. Actual production: 6,000 air filters for buses and trucks; 600 tractor hoods, 200 exhaust pipes/month.	Interested in a joint venture to produce and expand product line such as oil filters, fuel filters, metal forms. The company does not have a marketing department.

Table 4-1 (cont'd)

MAJOR EGYPTIAN AUTOMOTIVE PARTS MANUFACTURERS

1981

	Employees	Automotive Products	Comments
Central Fouad House and Company	NA	Flat (leaf) springs, 4-12 cm width, 6-20 mm thickness. Actual production: 15 ton per day or L.E. 400,000/year.	The company is interested in participating in a joint venture for the manufacture of coil springs. Also needs the technology and machinery for rolling eyelets of the main leaf as those leaves are being manufactured manually.

Source: CTIC field survey.

Table 4-2

SELECTED EGYPTIAN MANUFACTURERS OF
AUTOMOTIVE COMPONENTS, PARTS, AND ACCESSORIES

1981

<u>Items Produced</u>	<u>Company Name</u>
<u>Bearings; Diesel Engines</u>	Helwan Diesel Products Co. (Military Factory #909)
<u>Filters (oil, fuel, air)</u>	Mahmoud Gomaa Factory for Filters (Private)
	Aeroplane Factory (Military Factory #36)
	SEDCO (Private)
<u>Injectors, Nozzles</u>	Engine Factory (Military Factory #135)
<u>Electrical System Parts</u>	Canal Electron (Private)
	Egyptian Co. for Electric Cables (Private)
	AIAMCO/Kamal Mounir Khella (Private)
	Military Factory #27
	Military Factory #144
	Al Sharkiya Al Masrya for Trade and Industry (Private)

Table 4-2 (cont'd)

SELECTED EGYPTIAN MANUFACTURERS OF
AUTOMOTIVE COMPONENTS, PARTS, AND ACCESSORIES

1981

Items Produced	Company Name
<u>Brake systems parts</u>	El Nasr Co. for Steel Pipes (Public Sector)
<u>Wheels</u>	MICAR Company (Private)
<u>Springs</u>	The World Company for Springs (Private)
<u>Mufflers and Exhaust Systems</u>	Alexandria Metal Products Company (Public)
	Heliopolis Aero Factory (Military Factory #72)
	Aeroplane Factory (Military Factory #36)
	Arab Company for Exhausts (Private)
	Alexandria Company for Exhaust Systems (Private)

Source: CTIC field survey.

Three conclusions may be drawn from our survey of automotive parts companies.

1. The bulk of the local manufacturing of spare parts and components is still in the hands of the public sector, which has the experience, staffing, and existing infrastructure to produce, distribute and sell its products.
2. The private sector is showing strong signs of growth in this sector but, with a few exceptions, lacks adequate financing for large-scale investment in machinery to tap the huge market in need of its products. In fact, for most of the private companies visited, sales mainly consisted in supplying NASCO or responding to periodic government tenders.
3. One of the reasons that the aftermarket for finished products in spare parts and automotive components has yet not attracted the majority of local producers is the need for a more efficient distribution system. Moreover, local manufacturers are not experienced in consumer marketing and are not prepared to mass merchandise their products in competition with large foreign suppliers.

In general it is believed that about 75 to 80 percent of the market requirements are still procured through imports.

Local Product Manufacturing Opportunities

Net Demand for New Production

The gap between local production of automotive components and spare parts and imports is very large. Official statistics tell only part of the story. As shown in Table 4-3, the value of automotive spare parts imports increased by over three times during 1975-1979, to approximately L.E. 111 million. This represented a doubling in the value of spare parts imports per automotive vehicle in the national fleet. However, the total amount of imports actually decreased in 1979, probably due to the younger average age of the fleet.

At retail, officially-reported imported spare parts and components in 1979 amount to approximately L.E. 232 million (based on the average tariff rates and mark-ups discussed in Chapter 5 below). This was the equivalent of over 50 percent of the total 1979 market.

By 1981, we estimate that domestic Egyptian production was able to satisfy only about 20 percent of demand for automotive components and spare parts. The remaining 80 percent of demand has either been imported or left unfilled. This gap represents the size of the

Table 4-3

IMPORTS OF AUTOMOTIVE SPARE PARTS AND COMPONENTS

1975-1979
(L.E. million c.i.f.)

	1975	1976	1977	1978	1979
Rubber Tires and Inner Tubes for Tractors & Automobiles	9.0	7.6	9.5	20.8	8.8
Piston Engines for Tractors & Automobiles	2.2	1.9	3.7	3.6	4.2
Parts for Piston Engines	3.8	5.4	7.4	10.6	10.8
Transmission Shafts, Cranks	0.9	1.3	2.3	11.4	2.8
Automobile Chassis	0.1	..	1.4	0.1	0.2
Automotive Spare Parts, n.e.c.	<u>17.7</u>	<u>32.7</u>	<u>39.6</u>	<u>83.5</u>	<u>84.5</u>
	33.7	48.9	63.9	130.0	111.3

Source: Egyptian Central Agency for Mobilization and
Statistics (CAPMAS).

market which can be targeted by projects to expand
current production or to start-up new production in
Egypt.

In Table 4-4, we quantify the size of this market
in 1980 for the twenty-one best prospect products.
These products were selected based on the size of net

Table 4-4

NET DEMAND IN EGYPT FOR SELECTED AUTOMOTIVE PRODUCTS
(1980)

Component	Est. Market Demand (000 units)	Local Prod. Capacity (000 units)	<u>Net Demand</u> (000 units) LE MM *	
Tires & Tubes	3,466	1,100	2,466	118
Tire Valve Cores	3,466	-	3,466	0.7
Air Filters	3,109	15	3,094	19
Oil Filters	2,646	-	2,646	8
Fuel Filters	2,646	-	2,646	4
Condensers	2,427	-	2,427	4
Brake Linings	1,943	110	1,843	20
Contact Points	2,000	-	2,000	2
Spark Plugs	1,720	1,000	720	0.6
Brake Shoes	1,179	-	1,179	0.2
Exhaust Systems	1,089	20	1,069	22
Belts	551	10	541	0.8
Brake Cylinders	481	-	481	19
Tie Rods	481	-	481	7
Shock Absorbers	498	-	498	20

Table 4-4 (cont'd)

NET DEMAND IN EGYPT FOR SELECTED AUTOMOTIVE PRODUCTS
(1980)

Component	Est. Market Demand (000 units)	Local Prod. Capacity (000 units)	Net Demand (000 units) LE MM *	
Fuel Pumps	313	-	313	9
Injection Pump Parts	261	30	231	4
Engine Rebuilding	112	10	102	31
Pistons (Complete)	222	30	192	14
Axle Housing Shaft	30	13	17	6
Radiators, Shells Cores	91	15	76	5
Total				387.3

* Estimated 1981 retail value.

Source: CTIC.

demand after existing local production as well as indicated interest among Egyptian companies in joint-venturing to make them. The total demand, valued at retail, for these products was L.E. 387 million in 1981.

Proposed Public Sector Projects

The General Organization for Industrialization (GOFI), as well as El Nasr Automotive Manufacturing Co. have been involved in planning various projects in order to increase the local content of the automotive industry in Egypt.

The Government of the Arab Republic of Egypt highly encourages the development of automotive ancillary industries, both through direct support of public sector and joint-venture projects, and by requiring automotive assembly projects to increase the local content of their finished product.

In the first quarter of 1981, the Ministry of Industry, through GOFI and the Central Department for Foreign Agreements, published a status report of proposed public sector projects. These included the expansion plans of Yayat Company mentioned above. Pre-feasibility studies have been conducted by P.E. International on increasing Yayat's production of brake

linings and clutch facings as well as small cold-coiled helical springs.

Two other GOFI projects envision possible joint-venture investments. One, for the production of exhaust systems, is the subject of a 1978 project outline developed by P.E. International. The other is for the production of 100,000 telescopic strut shock absorbers. Further details should be secured directly from GOFI.

Highest Potential Foreign Investment Opportunities

The markets for certain spare parts/components appear to be very attractive as targets for potential manufacturing investments in Egypt, by virtue of the value of net Egyptian demand after existing local production. Among them, the survey identified seven in which a local Egyptian company indicated an interest in joint-venturing, as follows:

1. Tires and Tubes
2. Shock Absorbers, Brake Cylinders, and
Brake Linings
3. Engine Rebuilding
4. Air, Oil, Fuel Filters
5. Exhaust Systems
6. Pistons Sets (Complete)
7. Fuel Pumps.

A profile of each of these potential projects is included in the Appendix to this report. The manufacture of the other items listed in Table 4-4 also presents opportunities for investment in Egypt, including injection pump parts, radiators, tie rods, condensers, axle housing shafts, valves, contact points, belts and wheel rims. Further exploration of these possibilities with existing Egyptian producers or importers may lead to serious investment opportunities.

5. DISTRIBUTION AND PRICING

The market for automotive components, spare parts, and accessories in Egypt is very fragmented. With a well-organized marketing effort, however, its sizable demand for the products highlighted in Chapter 4 can provide a good sales base for new local manufacturing enterprises. This chapter will briefly survey the major sales channels for automotive products in Egypt, and describe the pricing practices of the industry as well.

Original Equipment Market

NASCO is the only current domestic assembler of automotive which does an important amount of local procurement. This public sector company now purchases a range of at least 373 components and parts from 58 local suppliers (of which 20 are in the private sector).

NASCO typically purchases locally by competitive tender against detailed specifications and performance standards. Upon awarding a contract, it provides engineering support to a supplier and constantly monitors its production to assure quality control.

The majority of NASCO's components and parts, however, are imported. The small size of its

production runs necessitates reliance on foreign manufacturers for specialized components and those which are redesigned frequently.

Aftermarket Distribution

In Egypt, there are no distribution/warehousing companies stocking many thousands of products for different types of vehicles as are found in the U.S. The distribution market is still at a stage of early development and is extremely fragmented.

Distribution of spare parts to vehicle owners in both the commercial and consumer sectors is done through five major channels:

1. Large public organizations
2. Service centers
3. Agent/dealer network
4. Private retail stores/importers
5. Private workshops.

Large Public Organizations

Large public transport and industrial organizations usually import their components directly from overseas. Where local manufacturing facilities exist, the public sector will place orders with them, supplying detailed specifications. Among these public organizations are the bus and trucking companies, oil

companies, and other own-use fleet operators. In addition, the General Nile Company for Motor Car Repair, a public company, services some public sector truck, bus, and car fleet operators and stocks a large selection of parts. It also operates three service stations as well as its main workshop in Alexandria.

Service Centers

Service centers are a recent phenomenon in Egypt. The largest networks belong to the Esso and Mobil gasoline station chains. The public sector stations of Misr Petroleum do not offer comparable service. A typical gasoline station may include a small components retail store as well as a workshop for tune-ups, engine overhaul, wheel and brake service, and electrical work.

It should be noted that even the large service centers do not stock significant quantities of parts. Rather, they go to nearby shops to purchase parts as needed.

Automotive Distributors and Dealers

NASCO has established service centers to perform warranty period and other maintenance on the cars it sells in Cairo and Alexandria. As of this writing, a new joint-venture company has just been formed with majority NASCO ownership to open new large automotive

repair centers in Nasr City and Giza (both near Cairo) and Alexandria. Known as the Egyptian Company for Car Services and Maintenance, the joint-venture has begun discussions with foreign companies on acquiring technology to manufacture repair parts as well.

Major automotive distributors have now begun to establish their own service centers for the vehicles they sell. This is a response to increased vehicle owner demand for quality parts and service, and has become an important element of competition among dealers. Most distributors have expanded the number of dealers and showrooms, as well as service centers bearing the name and brand of the agency represented.

Imported vehicles now arrive with approximately 10 to 20 percent of their value in spare parts and components. Dealers and service centers are encouraged to stock spare parts, thanks to credit facilities provided by the distributor. Consumers themselves are becoming increasingly brand-conscious: the more expensive the vehicle, the more demanding they will be in asking for genuine spare parts. Consumers in general buy parts on a cash basis.

In addition to the parts supplied by their principals, distributors buy certain standard parts

from other foreign or domestic suppliers. These dealership networks probably stock the largest quantities of spare parts in the entire industry. The major automotive distributors are listed in Table 5-1.

Table 5-1

MAJOR EGYPTIAN AUTOMOTIVE DEALERS, AGENTS, REPRESENTATIVES

1981

Agent/Dealer/Representative	Model	Country of Origin	Average Imports/Year (Units)
<u>Anglo-Egyptian Motors</u> 27 Adly Street Cairo	Ford	USA	NA
	Plymouth	USA	NA
	Ward (Buses)	USA	280
	Tata	India	NA
	Citroen	France	NA
<u>Abou El Fetouh</u> 44 Bamalek Club Shopping Center Cairo	B.M.W	W. Germany	600
<u>Arab American Vehicles Co. (AAV)</u> Tarik El Suez Cairo	AMC Jeep	USA)	410
	AMC CJ	USA)	
	AMC Wagoneer	USA)	

Table 5-1 (cont'd)

MAJOR EGYPTIAN AUTOMOTIVE DEALERS, AGENTS, REPRESENTATIVES

1981

Agent/Dealer/Representative	Model	Country of Origin	Average Imports/Year (Units)
<u>Dafrawi Motors</u> 8 Zaafarani Street, Cairo	Zestava Micro-Buses	Yugoslavia Yugoslavia	NA NA
<u>Development & Trading Center</u>	Peugot Simca/ Chrysler	France France	1,500 600
<u>General Engineering Work</u> 9/11 Orabi Street, Cairo	LADA	USSR	480
<u>Gizah Motors</u> 59 Wadi El Nil Street, Giza	Pony/Hyundai	S. Korea	700

Table 5-1 (cont'd)

MAJOR EGYPTIAN AUTOMOTIVE DEALERS, AGENTS, REPRESENTATIVES

1981

Agent/Dealer/Representative	Model	Country of Origin	Average Imports/Year (Units)
<u>Egyptian Cars Transworld Co.</u> 37 Lutfi Hassouna Street, Cairo a.k.a. Mohammed Nasseir	Renault	France	1980
<u>Elektessadia/Eltigaria</u>	Dodge	USA)	NA
	Chrysler	USA)	
	Mack (Trucks)	USA)	
	Mitsubishi	Japan)	
	Int'l		
	Harvester	USA)	
	Wayne (Buses)	USA)	
<u>International Motors</u> 43 Loutfi Hassouna Street Dokki	Citroen	France	150
	Buses	France	100

Table 5-1 (cont'd)

MAJOR EGYPTIAN AUTOMOTIVE DEALERS, AGENTS, REPRESENTATIVES
1981

Agent/Dealer/Representative	Model	Country of Origin	Average Imports/Year (Units)
<u>Trans World Trading Co.</u> 16 Gawad Hosni Street, Cairo	Seat	Spain	NA
<u>MAGAR Bros.</u> 19 Talaat Harb Cairo	Buick/ Cadillac/ Pontiac Vauxhall Nasr	USA UK Egypt	500 NA NA
<u>Mansour Chevrolet</u> P.O. Box 2514 Cairo	Isuzu Chevrolet/ Oldsmobile	Japan USA	NA 500

Table 5-1 (cont'd)

MAJOR EGYPTIAN AUTOMOTIVE DEALERS, AGENTS, REPRESENTATIVES

1981

Agent/Dealer/Representative	Model	Country of Origin	Average Imports/Year (Units)
<u>Misr Car Trading Co.</u>	Volkswagen	W. Germany	1500
Abdel Khalek Sarwat Street Cairo	Mercedes	W. Germany	900
<u>Modern Motors</u>	Datsun	Japan)	3000
28 Mesaha Street	Suzuki	Japan)	
Dokki	Oshkosh	USA)	
	Koehring	USA)	
	Motor Iberica	Spain)	
<u>NAHDA Cars</u>	Mazda	Japan	NA
43 Ramses Street, Cairo			

Table 5-1 (cont'd)

MAJOR EGYPTIAN AUTOMOTIVE DEALERS, AGENTS, REPRESENTATIVES

1981

Agent/Dealer/Representative	Model	Country of Origin	Average Imports/Year (Units)
<u>Nasr Automotive Manufacturing Co. (NASCO)</u> Al Thawra Building Alfi Street Cairo	Fiat	Italy	23,400
	Ritmo	Italy	NA
	Fiat 128	Yugoslavia	NA
	Fiat 131 Murat	Turkey	NA
	Deutz Magirus	W. Germany	NA
	Seat	Spain	NA
	Pol-Mot	Poland	NA
<u>Nasr El Futaim for Trading</u> 8 Zaki Street, Cairo	Honda	Japan	NA
	Hinu (Trucks)	Japan	NA
<u>Nasr Import Export Co./</u> <u>Toyota Egypt</u> 28A Talaat Harb Street, Cairo	Toyota	Japan	500
<u>Youssef Khalil</u> 4 America El-Latineya, Cairo	Polonez-Polat	Poland	50

Source: CTIC field survey.

Private Retail Stores/Importers

As a result of the nationalization of foreign trade in the early 1960s, private retail stores were required to purchase parts through the public trading companies. These included Misr Car Trading Co., The Engineering General Co., and the Tractor and Engineering Co. When laws were liberalized in 1974, the private import trade expanded rapidly. There are currently some 3,000 private companies that import spare parts and accessories.

Private Repair Shops

The automotive maintenance industry in Egypt is dominated by private repair shops. These numerous workshops benefit from the country's cheap and abundant labor and utilize simple repair tools and equipment. Most of these shops are very small. They perform various kinds of auto repair, with an emphasis on body work, tire service, and electrical work. There are a few hundred of them and like the large service centers, they supply themselves with needed parts from nearby retail shops.

Pricing Factors

Customs Duties

Imported automotive components and spare parts are subject to varying levels of customs duties, calculated ad valorem on the C.I.F. price. As shown in Table 5-2, the rate structure for automotive vehicles tends to favor local assembly of completely knocked down (CKD) kits compared to completely built units (CBU). However, as shown in Table 5-3, the tariff structure for individual components and spare parts is almost chaotic, reflecting varying degrees of success in securing protection for local production. Specific rates range from 5 percent for filters and 2 percent for carburetors to 125 percent for window glass. Together, these two tables paint a picture that is not systematically favorable to the development of the domestic Egyptian parts and components industry.

Other Charges

Industry sources have indicated an average range for the other costs involved in handling spare parts. Shipping charges amount to approximately 22 percent of FOB; insurance amounts to 0.5 percent of FOB. There is a 1 percent charge (Free Zone tax) for having goods discharged in the Free Zone or a bonded warehouse and

Table 5-2

EGYPTIAN CUSTOMS DUTIES ON AUTOMOTIVE VEHICLES

ITEM		CUSTOM DUTY & CIF
Trucks	CBU	22.13
	SKD	32.43
	CKD	27.28
Truck Tractor	CBU	53.03
	SKD	53.03
	CKD	27.28
Trailers & Semi Trailers (CBU, SKD, & CKD)		63.33
Buses	CBU	27.28
	SKD	37.58
	CKD	28.28
Agr. Tractors	CBU	13.89
	SKD	19.04
	CKD	16.98

Table 5-2 (cont'd)

EGYPTIAN CUSTOMS DUTIES ON AUTOMOTIVE VEHICLES

ITEM		CUSTOM DUTY % CIF
	CBU	114.83
4 Cyl	SKD	114.83
Passenger Cars	CKD	38.25*
	CBU	217.83
6 Cyl	SKD	217.83
	CKD	42.00*

* As a special concession, NASCO imports of CKD kits are taxed at 27.28%.

Source: CTIC, NASCO, Customs Department, Ministry of Finance.

Table 5-3

EGYPTIAN CUSTOMS DUTIES ON AUTOMOTIVE PARTS

ITEM	CUSTOM DUTY (%) CIF
Engines CBU & SKD	0
CKD	13.89
Gear Boxes CBU	27.28
Gears	13.89
Specialty	16.89
Bars	32.43
Steel	Sheets
Angles	13.89
Pipes & tubes	32.43
	32.43

Table 5-3 (cont'd)

EGYPTIAN CUSTOMS DUTIES ON AUTOMOTIVE PARTS

ITEM	CUSTOM DUTY (%) CIF
<u>Spare parts:</u>	
Oil & Air Filters	5
Belts	15
Fans	10
Fuel and Water Pumps	5
Frames/Chassis	50
Carburetors	2
Springs	40
Tires and Inner Tubes	50
Glass Items for Windows	125
Body Parts	15
Batteries	40
Dynamos	5
Spark Plugs	25
Condensers, Starters	25
Lights, Electrical	25
All other parts	25 to 40 percent

Source: CTIC, NASCO, Customs Department, Ministry of Finance.

another 1 percent of FOB for handling charges. Local transportation amounts to approximately 0.02 to 0.05 percent and banking charges (interest and Letter of Credit fees) usually are equivalent to 10 percent of the FOB cost.

Mark-ups

Mark-ups are regulated by Law 119 which puts a ceiling on profits from distribution. The law allows a 35 percent profit margin to the importer/distributor on landed cost plus custom duties, with another 10 percent profit margin to be realized from foreign exchange transactions. In addition, the usual margin allowed to retail dealers is 15 percent of the landed cost.

Together the price of the typical automotive part at retail may be 2 1/2 times the FOB price, as illustrated in Table 5-4.

Table 5-4

PRICE OF VEHICLE COMPONENTS FROM
SUPPLIER TO CONSUMER IN EGYPT

1981

Base Price (FOB)		LE 100.0
Shipping	22	
Insurance	<u>0.5</u>	
<u>Price (CIF)</u>		122.5
Customs duties	25	
Banking Charges, L/C	10	
Free Zone Tax	1	
Handling Charges	1	
Local Transportation	<u>0.05</u>	
<u>Landed Cost</u>		159.6
Distributor's Margin (45%)	71.8	
Dealer's Margin (15%)	<u>23.9</u>	
Price Paid by the Consumer		LE 255.3

Source: CTIC field survey.

APPENDIX

Profiles of Investment Opportunities

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Profile 1

TIRES AND TUBES

Project Description: Joint venture with existing tire maker to diversify and expand production of tires and tubes for passenger cars, taxis, trucks, buses, and agricultural vehicles.

Market Potential: Total demand, estimated to be 3.7 million units in 1980, is expected to grow in line with gross national product, or approximately 8 percent annually, reaching 6.1 million in 1987. Total value of market, in 1981 retail prices, was LE 183 million.

Market Segments: OEM demand estimated at 4.5 percent of market in 1980, and projected to grow to 9.5 percent by 1987. Aftermarket distribution is very fragmented.

Local Production and Imports: About one-third of the total demand is satisfied by existing output of Transport and Engineering Company, the sponsor of this project. The balance is imported.

Egyptian Interest: Transport and Engineering Company, a public sector entity, is the largest producer of tires in Egypt. It is interested in increasing its production from 620,000 tires to over 1 million tires. Transport and Engineering Company is holding negotiations with major international suppliers, such as Michelin, Dunlop, Goodyear, and Firestone, but wishes to enlarge its negotiations with more U.S. suppliers such as Armstrong, Mohawk, Lee, and Cooper.

Role of U.S. Firm: Equity position, supply of technology, and assistance in exporting to neighboring countries.

Profile 2

BRAKE LININGS, BRAKE CYLINDERS, SHOCK ABSORBERS

Project Description: Expansion of production of brake linings, and establishment of capability to make brake cylinders and shock absorbers for passenger cars, trucks, and buses.

Market Size: In 1980 total demand was estimated to be 2 million units for brake linings, about 1/2 million units for brake cylinders, and 1/2 million units for shock absorbers. Projected growth by 1987 would bring demand to 3.3 million, 825,000, and 1.4 million respectively in 1987. Total value of market in 1981 at retail was LE 62 million.

Market Segments: Opportunities to supply original equipment for local automotive vehicle assemblers should grow rapidly for these products, and reach 12.4 percent of total demand for brake linings and brake cylinders, and 21.8 percent of total demand for shock absorbers by 1987. Serving the aftermarket would involve important investment in advertising and sales.

Local Production and Imports: There is presently no local production of shock absorbers or brake cylinders. Yayat, sponsor of this project, is the sole local producer of brake linings, making about 110,000 units per year. The balance is imported.

Egyptian Interest: The Springs and Transport Company (Yayat), a public sector company, is interested in expanding its line to include these items. It is already producing leaf springs and brake linings among many other products. Yayat would prefer buying the technology.

In addition, Helwan Engineering Industries Co. (Military Factory #99) has studied a project to make 300,000 shock absorbers per year. They would like to identify a joint-venture partner for this new facility.

Role of U.S. Firm: To provide technology to Yayat for increasing its production and expanding its product line.

Profile 3

ENGINE REBUILDING

Project Description: Joint-venture to establish a facility to rebuild automotive engines on contract to service centers or fleet operators.

Market Potential: Total demand was estimated to be around 112,000 engines per year in 1980 with a 1981 retail value of L.E. 34 million. By 1987, demand should grow to approximately 190,000 engines per year.

Market Segments: Major demand for engine rebuilding would come through automotive service centers, which are increasing in number. In addition, own-use truck and bus fleet operators outside the transport industry would be important customers.

Local Production and Imports: About 10,000 engines are rebuilt locally per year in private shops and by major transport company or military workshops.

Egyptian Interest: Two companies are well qualified to provide engine rebuilding services and presently have in place the needed infrastructure: Nasr Automotive Company (NASCO), the largest assembler/manufacturer of vehicles in the Middle East, and the Arab-American Vehicles Co. (AAV). NASCO has recently formed a joint-venture with other Egyptian partners, the Egyptian Company for Car Services and Maintenance, to acquire or invest in new foreign technology and shop management techniques in this field.

Role of U.S. Firm: Supply of capital and technology.

Profile 4

AIR, OIL, AND FUEL FILTERS

Project Description: New joint-venture to manufacture air, oil, and fuel filters for passenger cars, taxis, buses, trucks, and agricultural tractors.

Market Potential: Total demand was estimated to be over 8 million units per year in 1980, with a 1981 retail value of L.E. 31 million. By 1987, annual consumption is projected to reach 14.5 million units.

Market Segments: Original equipment demand for filters is only a minor part of this market (1% in 1980, 2% in 1987). Retail distribution channels are fragmented and heavy sales and advertising expense will be necessary to capture market share in competition with imports.

Local Production and Imports: Only an insignificant fraction is produced locally; in general, the demand is satisfied through imports.

Egyptian Interest: Abou-Youssef Engineering Office, a private concern, presently produces air filters for buses and trucks. SEDCO, a small private producer of 10-15,000 filters per year is also interested in expanding production through a joint-venture.

Role of U.S. Firm: To provide capital, technology, and marketing assistance.

Profile 5

EXHAUST SYSTEMS

Project Description: New joint-venture to manufacture exhaust systems (mufflers and pipes) for all types of vehicles.

Market Potential: Total demand was estimated to be over 1 million units in 1980 with a 1981 retail value of L.E. 22 million. By 1987, demand should reach 1.9 million units.

Market Segments: The OEM market for exhaust systems will grow from 2.4 percent of total demand in 1980 to 5.3 percent in 1987. The large aftermarket is served primarily by small shops which buy from individual retail parts dealers.

Local Production and Imports: About 20,000 units are locally produced; the bulk of market demand is satisfied through imports.

Egyptian Interest: Abou-Youssef Engineering Office, a private concern, presently produces 200 exhaust pipes per month, which makes it the largest exhaust component producer in Egypt.

Role of U.S. Firm: To provide capital, technology, and marketing assistance.

Profile 6

PISTON SETS

Project Description: Joint-venture to produce/assemble complete piston sets for passenger cars and trucks and to a lesser degree buses.

Market Potential: Total demand in 1980 was estimated to be about 222,000 sets per year, with an estimated value at retail of L.E. 16 million. Demand is projected to triple to 668,000 sets by 1987.

Market Segments: The domestic automotive vehicle industry is a large component of this market. In 1980, OEM demand constituted 52 percent of total demand. This share is projected to attain 74 percent by 1987. Major fleet operators would be the prime customers in the aftermarket, and could be supplied by direct sales.

Local Production and Imports: Local production is currently 30,000 units per year. Most are made by NASCO as original equipment. Military Factory #99, sponsor of the project, mainly supplies the army. The balance is being imported.

Egyptian Interest: Helwan Engineering Industries (previously Military Factory #99) is presently producing piston components for the Army, NASCO, and the aftermarket. The company is planning ambitious development in the near future to also produce car wheels and shock absorbers.

Role of U.S. Firm: Licensing agreements, technology transfer, equity investment, production management.

Profile 7

FUEL PUMPS

Project Description: New joint-venture to produce fuel pumps mainly for passenger cars/taxis.

Market Potential: Total demand was estimated to be around 313,000 units per year in 1981, and projected to reach 530,000 in 1987. The 1981 retail value of this market was approximately L.E. 9 million.

Market Segments: The local OEM market for fuel pumps amounted to about 8.6 percent of total demand. By 1987, the OEM share should exceed 11 percent. The aftermarket is very fragmented, and covering it would require a well-organized sales effort.

Local Production and Imports: Fuel pumps are not locally produced in Egypt; the total demand is satisfied through imports.

Egyptian Interest: Helwan Diesel Products Co. (previously Military Factory #909) is presently producing engine components as well as water pumps.

Role of U.S. Firm: Capital, technology, support through licensing or joint-venture.