CHAPTER IV

INDUSTRIAL DEVELOPMENT OF LIBYA
CHAPTER IV

INDUSTRIAL DEVELOPMENT OF LIBYA

It is obvious that Libya depends upon only one source of income. It needs diversification to have a more stable base of the economy. Industry will help the country to diversify the economy. But in developing industry, Libya should not neglect its agriculture and other sectors of the economy. Rather it should develop its industry and agriculture in a way that one should form the base of the other.

The agricultural sector of the country can help the manufacturing sector in a number of ways. At present the manufacturing sector of Libya mainly consists of food processing industries. About 252 large establishments are engaged in food processing. The main output of these industries are canned fruits, vegetables and fish, confectionary, processed vegetables, oils, bakery products, milled flour, and soft drinks. Agriculture can provide the food for the people employed in these industries and at the same time can provide the basic raw material for these food processing industries which is otherwise imported at higher price. And in this way the government can save a lot of foreign exchange which can be used for other development purposes. The development of agriculture and industry in Libya is complementary for each other's progress. An increase in agricultural productivity will support industrial development by supplying the food and raw material and by deepening the internal market for finished goods. Similarly industrial development can contribute to agricultural development.

by consuming the increased food products and raw materials and by produc­
ing goods for rural consumption. The economic history of the world
provides an evidence of the fact that growth and development in agricul­
ture had fostered and smoothed the way for the establishment and growth
of industry. The leading industrialised countries of today were once
predominantly agricultural countries. Therefore in Libya economic devel­
opment should start in the agricultural sector but industrial sector
should also be developed as it will have to play a decisive role in the long
run development of the economy.

Several arguments are put forward by the past and contemporary econo­
mists regarding this view. The case for industrialisation is generally
based on these lines. First it is argued that in more advanced nations, a
significant proportion of their population is employed in manufacturing
sector; in underdeveloped countries the proportion employed in this sector
is relatively small. It is also argued that the income per head in
industry is generally higher than in agriculture. Another argument is
that since at higher income level people spend the increasing proportion
of their income on non-agricultural products, development implies an
increase in the proportion of population employed in the occupations
other than agriculture, and among these manufacturing is one of the most
important. It is also pointed out that the terms of trade are generally
unfavourable to agriculture and they have shown a long tendency to
deteriorate.2

These arguments may be true for some countries but could not be universally applied to all countries. Industrial policy of any country should be motivated by more than a desire for industrialisation. Such policy should be based on the country's available resources, needs, and to its comparative advantage. It is realized from the experience of many oil producing countries that industrial development is not always achieved by heavy capital expenditure or even superficial adoption of modern technology. Certain political, social, and cultural adjustments are also necessary.

The supply of different factors of production like capital, technology, and human and natural resources varies from one country to another. For a successful industrial programme, the most suitable combination of these productive factors in the individual country must be found and utilised efficiently. There is a serious shortage of skilled manpower in the Libyan economy, which is most important in the industrial sector to operate the complex machinery and modern techniques of production. In Libya the problem is two fold it is not only in short supply but unskilled also. The industrialisation of Libya begin with the oil industry. The most important industry outside oil sector is the steel industry. This industry has good prospects as iron in Libya is now much higher than once thought possible. Nearly four billion tons of mainly high grade ore (some five per cent of world total reserves) are located in the Wadi Shatty, in Fezzan area of southern Libya. Before suggesting the guidelines for industrial development of the country it will be worthwhile to go into some detail about the structure of the existing Libyan industry.
Industry In The Libyan Economic Structure

Before oil was discovered and in the early years of its discovery, there was no modern industry in Libya excluding the oil industry itself. The country produced some handicrafts to meet the need for manufactured goods. At that time, the manufacturing in Libya consisted largely of the inadequately developed tanning industry, the related salt industry, the boot and shoe industry, the manufacturing of various types of leather goods, the wine, olive and fish processing and flour milling. These few industries in Libya were mostly for processing local agricultural products to provide for the need of the domestic markets. And most of these industries were owned by the foreign rulers.

The registered manufacturers listed in the industrial census of 1964 totalled 36,938 plants which employed from 100,000 to 100,466 people. Seventy five per cent of these plants employed one worker each and only 460 units each employed over 20 full time workers. Since independence till revolution there was an increase of about 50 per cent in the industrial output. But the percentage contribution of industry in national income had actually dropped. It had dropped from 5.6 per cent in 1962 to 1.7 per cent in 1969. During this period, in spite of the increased revenues from oil, the share of industry in national income had declined. It was because of the fact that industry was not being properly taken care of or well planned. The Libyan government had left the development of industry to the private enterprise, and most of these were foreigners. The government had only tobacco and salt industries under its supervision. Thus the opportunities provided by the increased oil revenues to create
an industrial base were largely missed by the Libyan authorities during the pre-revolutionary period.

**Industrialisation Of Libya**

It is only after 1970 that large number of industrial projects have been undertaken in Libya. The new revolutionary government stresses on industrial development and increasing the productive capabilities to meet the country's urgent needs and to lessen its dependence on oil as the only source of income. Industrial planning covers big projects such as petrochemical plants which need a high degree of technology and huge capital, medium industrial projects concerned with processing various agricultural and other products and small and traditional industries.

Oil revenues provide enough capital to start growth, but the country does not have all the needed labour skilled and unskilled for the growth of this sector. The Libyan population of some 2.5 million could not supply all the manpower needed for rapid economic growth. A great part of working force consists of non-Libyans. The rate of expansion of the number of Libyans entering the working force has been slower than the overall rate of population growth (1.7 per cent compared with 3.6 per cent per annum respectively). The small number of the indigenous people with limited educational qualifications means that with an increasing economic growth Libya's reliance on imported labour will also increase. The following table number 1 shows the increasing number of non-Libyans in the working force. The percentage of foreign workers is highest in construction and manufacturing which is particularly important for Libya's future development.
TABLE No.1

Growth Of Non-Libyans In The Labour Force

<table>
<thead>
<tr>
<th>Year</th>
<th>No. of non-Libyans</th>
<th>% of total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1972</td>
<td>81,000</td>
<td>-</td>
</tr>
<tr>
<td>1973</td>
<td>118,345</td>
<td>-</td>
</tr>
<tr>
<td>1974</td>
<td>169,765</td>
<td>-</td>
</tr>
<tr>
<td>1975</td>
<td>223,000</td>
<td>32.09</td>
</tr>
<tr>
<td>1976</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>1977</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>1978</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>1980</td>
<td>383,600</td>
<td>41.3</td>
</tr>
</tbody>
</table>

Source: Middle East Economic Digest.

In the process of industrialisation most of the developing countries face two serious problems: over population and lack of capital. Libya has not to surmount these two serious obstacles. Another advantage which the country possessed over is that it is able to start its development with recently invented more efficient technology developed by the more advanced nations. This is possible for Libya because it can pay cash prices and import the most modern machinery, and highly advanced technology which need a lesser number of skilled workers. Libya has no surplus labour needing a high number of jobs and thus country's path of industrialisation should be through capital using and labour saving technology, resulting in more production per worker. Technology is the vital element in the industrialisation of the country. The use of appropriate technology allowed the United States to produce 75 per cent of its agricultural products with 2 per cent of its labour force. It is this kind of technology
that can cause Libya to become an industrial nation.

Role Of Government In The Industrial Development Of Libya

The Libyan government receives directly the greatest part of the country's national income from its oil revenues. A more productive way of channelling the government's income would be through industrialising the country. More jobs can be created in industry, more production can be realised and the country's need for diversification can be satisfied. But industrialisation is not an easy task since there are many obstacles in the way. The industries in Libya suffer from lack of skilled manpower, the high price rate paid by the industry for the necessary electricity, and the relatively small size of the local market.

The shortage of skilled manpower is reflected in the figures of the composition of the labour force and its occupational distribution. About 58 per cent of the total labour force employed in managerial and professional activities are non-Libyans. The percentage is 35.2 and 27.5 for technicians, and skilled and semi-skilled labour respectively. The percentage in clerical jobs and jobs requiring unskilled labour is 16.4 per cent and 42.2 per cent respectively. The overall dependence of the country on the migrated labour has increased and is likely to increase in the coming years because of the increased economic activity in every field. The total percentage has increased from 32.9 per cent to 41.3 per cent during the period 1975-1980. The size of the market is limited due to lack of transportation facilities. Moreover the local goods have to face competition from foreign goods. The Libyan markets are full of foreign goods because it is cheaper to buy foreign goods rather than to
produce them locally. And whatever is produced it is not as good in quality as the foreign goods, as the combined effects of all these obstacles, the development of industry in Libya is very challenging for which the government has to make a rigorous effort.

In faith of the role of industrialisation in building and supporting the country's economic structure and in comprehension of the necessity to encourage and protect the national industries so that they can proceed in production and compete imported products, the government has undertaken the following measures.

1) Subsidies To Electricity And Connection Of Electric Currents:

Since Libyan government is in the hold of oil industry—a source from where the government is getting huge amount of revenues; it is possible for government to undertake the development of infrastructure in a big way by means of providing subsidies especially for those inputs which are considered more important for the social development of the country. Electricity is a necessary input for the heavy and basic industries; and is also necessary for the general benefit of the society. In comprehension of the importance of this vital element, the Central People's Committee issued in April 1970 a decision fixing the price of electric current for factories licenced by the Secretariate of Industry and the Secretariate bears the difference of price amounting to 8 dirhams per kilowatt through invoices from the General Electricity Corporation. In addition to this, the Secretariate of Industry is bearing 50 per cent of the cost of connecting electric current with the factories established in the municipalities indicated in the decision of the General People's Committee, provided that such contribution should not exceed 10,000 LD.
2) Promotion Of The National Products:

In an unindustrialised economy there is little or no demand for manufactured goods. The main problem is to increase the scope for the local production in home and world market. The market for a particular class of manufactured goods is inadequate to take the minimum output of an efficient manufacturing plant, as the workers in the plant are not likely to spend their whole income on this product only. They would rather like to spend their income on a variety of goods and services. Thus one way to increase the internal market is to set up a number of manufacturing plants producing a range of different goods, the market for the product of each will be enlarged and, the demand of the workers in the group of plants would provide the market for the products of each of the plant. The co-ordination of investment in a balanced group of manufacturing activities will be profitable and will increase the local market. Another important reason for the small local markets is lack of transportation facilities. Extension of local markets by developing communication and transportation system is another way of increasing the demand for local products. In order to push the demand of local products in the world market the government should carefully choose those products which can be easily sold in the world market at a cheaper cost. Thus external markets can be increased by better production and governmental help through trade agreements.

The Libyan government make publicity through various information media of its local products. Conferences, meetings and exhibitions were held with the object of activating contractual relations between national industries and world industries. This facilitates the transfer of the
means of the modern industrialisation, the improvement of existing industrial operations and the training of citizens.

3) Industrial Areas:

The government has created industrial areas in Tripoli and Benghazi. It is expected that these industrial areas in the country will help to develop national industries and facilitate the provision of services and public utilities such as electricity, roads, telephones, drainage, fuel etc. at symbolic prices. They are symbolic in the sense that they do not represent the real cost of these services. The real cost of these services will be much higher.

4) Import Licence System:

In order to protect national industries and make them steadyfast to face competition from imported products, the system of licences of imports was adopted to import the local requirements beyond local production. Simultaneously custom duties were increased on such imports. The imports of some commodities similar to national products has been confined to the companies of the industrial public sector, with the co-ordination between the productive nature and the commercial nature of these companies.

5) Industrial Licence System:

To establish industries on scientific and studied bases and to enable the private sector to perform its role successfully in economic and social development the Secretariat of Industry issued a number of industrial licences for the establishment of new industries of various types.

6) Quality Control:

In order to have local products in line with the most modern scientific and technical means, the Secretariat of Industry issues regular bulletins including standard specifications of produced commodities to
the benefit of both the producer and consumer.

7) Exemption System:

This system is aimed at reducing the cost of national products by granting some exemptions to new factories, according to the law of Encouragement of National Industries No. 15 for 1956, and latter amended by the law issued in 1966. These exemptions are: from the income tax for five years from the start of production and exemption of custom duties on cost of machinery, tools, instruments, spare parts and raw materials. Since 1969 and until 1977, 255 such decisions were issued for the exemptions. In addition, to these exemptions, it has been decided to introduce some exemptions in customs tariff regarding materials used in national industries, while custom duties were increased on other materials used in non-industrial purposes.

8) Government Purchases:

In addition to this, the Secretariats and companies of public sector are directed to make their purchases from national products taking into consideration the factors of quality and price.

9) Industrial And Real Estate Loans:

The Industrial Real Estate Bank is awarding industrial loans to support the national industry. Before the revolution the bank's role was confined to award the loans to craftsmen and proprietors of industrial establishments, whether being already existing or new ones. After revolution, the bank is carrying a fundamental role by effective participation in the execution of objectives related to economic and social development in the country.
In order to ensure an effective use of the industrial loans, the following policy regarding industrial loans has been fixed:

— The maximum limit of a loan for an individual has been fixed at 20,000 LD, provided that these individuals are craftsmen. Loans are provided to them to improve their skills.

— Encouragement of agricultural co-operatives by developing them and giving them priority in having the necessary loans.

— Issue of loans to the companies of the public industrial sector and the joint companies in which this sector is participating, without a maximum limit for such loans. Loans are also provided to persons with medium and higher bracket income at low interest rates provided that these establishments are beneficial for the society.

It is in the oil based industries that the fastest growth is taking place. At present Libya has six oil refineries with an annual capacity of 3,820,000 tonnes. Besides the government has established many new petro-chemical projects in different parts of the country. Other industrial projects are concerned with the processing of agricultural products and manufacturing of agricultural equipments. There has been a considerable growth in such industries as food processing, leather, wood and metal work, textile, shoe and lime etc. It is reported that between 1970-77, 20 out of 56 industrial projects were completed. We give below a brief description of the important companies for industrial growth.

**General Tobacco Company:**

This company was founded in 1923 with a foreign capital but now it is 100 per cent public sector undertaking and is completely national one. The purpose of this company is to purchase local tobacco and import raw tobacco, cigarettes, cigars and other tobacco requirements, as well as all requirements for tobacco industry and import and marketing of matches.
General National Mills And Fodder Company:

It is a joint stock company with a capital of LD 4,300,000 and was established in 1973. It is also a public enterprise and its purpose is milling the grains, and to provide marketing facilities. The affiliated companies are Tripoli Grain Mill, Zliten Grain Mill, Sebha Grain Mill, Garabulli Fodder Plant, Al-Abiar Fodder Plant, Zliten Fodder Plant, Sorman Fodder Plant, and Sebha Fodder Plant.

General Company For Dairy Products:

The purpose of this company is to industrialise the dairies through various means with the object of increasing their production, provision of various products and marketing thereof, according to the modern scientific means. The company has been entrusted with the import and distribution of dry and concentrated milk and dairy products so as to cover the country's requirements. It is a public enterprise with a capital of 5,000,000 LD.

General National Company For Industrial Contracting:

It is joint stock company established in 1973 with a capital of 3,000,000 LD. The company's purpose is carrying out civil engineering contracting works such as foundations, building and various premises including roads, drainage, electricity, for the public or private sectors.

Souk El-Khamis General Company For Cement And Building Materials:

This company was established in 1975 with a capital of 50,000,000 LD. The purpose of this company is industrialisation of cement, lime and other building materials and marketing of these materials inside and outside the country. Souk El-Khamis cement company and Souk EL-Khamis lime factory
are the two affiliated factories.

**General National Weaving And Spinning Company:**

It was founded in 1975 and is a public enterprise. The purpose of the company is to run the plants for spinning, weaving, dyeing, finishing and marketing cloth of various kinds. The affiliated factories are weaving, dyeing and finishing plant at Janzur, readymade suits plant at Derna, wool washing and spinning plant at Marj.

**General Company For Leather Industries And Products:**

The foundation of this company was laid in 1976. Its capital is 10,000,000 LD and it is a public enterprise. The purpose of this company is partial or complete tanning of hides, manufacture of footwear, bags and other products from leather or its substitutes and marketing thereof inside and outside the country. The affiliated plants are, footwear plant at Misurata, Tajura Modern Jennery at Benghazi, and Tannery and Compressed leather sheets plant at Tajura.

**Aman Tyre And Battery Company:**

The purpose of this company is to manufacturing of all kinds of tyres and dry and liquid batteries as well as marketing them. Dry battery and liquid batteries plants are its two affiliated plants.

**General Company For Electric Wires And Products:**

The company's purpose is to manufacture the electric cables and wires and other electric, electronic and telecommunications instruments and marketing them.

Other public enterprises in Libya are General Furniture Company, Libyan Cement Company, National Cement And Building Material Company, Company For
Glass products, National Company For Manufacture Of Pipes, Libyan Tractor Company, Libyan Trucks Company, National Flour Mills. These are the industries to which Libya looks to provide a base after oil has run out.

The most important industrial project outside the oil and petrochemical industries is the Steel Complex at Misuratha. The project is likely to cost $1 billion and is being managed by a separate state company, the Misuratha Steel Mill Construction Corporation in consultation of an Indian firm, Lastur of Calcutta. The plan of Libya to create an iron and steel industry is a good indication that the country is going in the right direction towards industrialisation. This project is the biggest in the country, and is expected to be completed in 1984. The steel industry is always very important for the country's economic growth, it is the industry which can help the other industries. It can help to develop the infrastructure of the country. It can help to produce machines, tools, roads, ports, dams etc which constitute the economic structure of the country. The steel industry of Libya can help the economy in future by providing producer's goods and can also be a foreign exchange earner by exporting steel at a cheaper cost.

Government’s Organisations To Improve The Country’s Industrialisation

For the sake of establishing a strong and competent public sector in line with the most modern scientific means, to perform the public sector's role in industrial development in Libya, in the light of the industrial policy announced in 1977, and for the implementation of this policy, the state has established and supported the following structures:
1) Secretariate Diwan (Bureau): Law Nr.79 for 1970 was enacted regarding the reorganisation of the sector of industry so that the Secretariat of industry will run affairs related to planning, following up, organisation and supervision of industrial activities, exploitation of mines and quarries, within the framework of general industrial policy, development plans, laws and regulations applicable in the country.

2) Libyan Industrial Real Estate Bank: This bank was established in 1965, but after 1969 the bank's policy was reviewed, funds for industrial activities were earmarked and fields of movements were fixed. The plans and programmes of industrial development during the revolutionary era have been marked with the allocations of big sums for investment in industrial projects in order to build up an industrial base which can provide welfare and prosperity to Libyan Arab masses and consequently liberate the national economy from dependence and influence of oil.

The following table shows the development allocations as well as expenditure on industrial sector, in million dinars:

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Allocations</th>
<th>Expenditures</th>
</tr>
</thead>
<tbody>
<tr>
<td>1968-69</td>
<td>7.7</td>
<td>5.0</td>
</tr>
<tr>
<td>1969-70</td>
<td>7.9</td>
<td>5.4</td>
</tr>
<tr>
<td>1970-71</td>
<td>20.5</td>
<td>15.0</td>
</tr>
<tr>
<td>1971-72</td>
<td>37.0</td>
<td>29.0</td>
</tr>
<tr>
<td>1972-73</td>
<td>68.1</td>
<td>65.1</td>
</tr>
<tr>
<td>1973 (9 months)</td>
<td>79.7</td>
<td>67.5</td>
</tr>
<tr>
<td>1974</td>
<td>133.7</td>
<td>135.4</td>
</tr>
<tr>
<td>1975</td>
<td>129.7</td>
<td>117.6</td>
</tr>
<tr>
<td>1976</td>
<td>199.4</td>
<td>152.1</td>
</tr>
<tr>
<td>1977</td>
<td>198.4</td>
<td>184.3</td>
</tr>
</tbody>
</table>

Source: Secretariat Of Industry, Achievements In Industrial Sector p.12
3) Industrial Research Centre: It has been set up through law Nr. 25 for 1970, as a main structure for industrial and applied studies and research and for providing technical and economic services, as well as consultation for bodies working in industries and carrying out analyses, tests and geological researches in addition to exploratory work for minerals and economic materials and extraction thereof.

4) National Organisation for Industrialisation: It was established according to law Nr. 26 for 1970, and is the main structure for the execution of industrial projects. It carries out the necessary measures for establishing the projects in the form of independent departments or companies performing their work on commercial and industrial bases.

5) General Organisation For Iron And Steel Projects: It was established to law Nr. 101 for 1974. It is related to various projects of iron and steel in the country as well as other projects whether they are complementary projects or integral ones. Besides these efforts the government followed the legislative policy of promoting industry and creating a good atmosphere for its functioning and development. This legislative policy included the Foreign Capital Investment Law. The law regulating foreign capital investment in Libya was issued in 1956. According to this law it was decided to exempt foreign projects, which are considered taking part in the economic development of the Country, from custom duties, income tax and other taxes and duties.

Although Libya has enough money for investment, but still foreign capital needs encouragement to enter the country to stimulate private investment. Historically the use of foreign capital is considered essential for a rapid economic development. The capital inflow from abroad, if wisely used and guided can contribute a faster and smoother progress.
in the country. Foreign capital helps the country in various ways. One of the greatest benefit to the recipient country is the technical knowledge that the foreign investment provides during the operation of its investment projects. It can fill up the managerial and technical gap in the country. This technical assistance and the demonstrative effects that are integral features of foreign investment may spread and have beneficial results in other sectors of the economy. The rate of technological advance in a developing country is highly dependent on the rate of capital inflow. New techniques accompany the inflow of private capital, by the example they set, foreign firms promote the diffusion of technological advance in the economy. This benefit is of great importance to a developing country like Libya where the domestic entrepreneur is not capable of making innovations in the field of production. Foreign capital can make up this deficiency by initiating the advance techniques that are being demonstrated by foreign firms. In addition, foreign investment may lead to training of labour in new skills, and knowledge gained by these workers can be transmitted to other members of the labour force, or these workers might be employed latter by the local firms.

Private foreign investment may also serve as a stimulus to additional domestic investment in the recipient country. This is especially through the creation of external economies. Foreign capital adds to the domestic capital in creating the infrastructure of the country. Even if the foreign investment is in one industry only, it will encourage domestic investment in other industries by reducing the cost of production or creating demand. Profits will rise and will lead to the expansion of domestic industries. The foreign investment in any industry gives
rise to the profits in other industries which supply inputs to these industries and produce complementary products, and in industries producing goods bought by the factor owners who have a higher real incomes. Thus a whole series of domestic investment is linked to the foreign investment.

This type of foreign investment played an important part in the Libyan economic development from the very beginning. In order to encourage the participation of foreign capital in big and medium industrial projects, the policy of the present government is to allow the foreign capital to the degree which benefits the country; for example if the project is of complicated technological nature which needs close ties with the original industry or if the project's production exceeds the needs of local consumption.

Laws For Protection Of National Industries From Foreign Competition:

In order to protect industrial sector from harmful competition with similar imported goods, protection is given by the government. Among its means of protection are the imposition of licences system or raising custom duties on some imported goods which are produced locally with the same quality and quantity sufficient for local consumption. This protection law affords the country a better atmosphere to develop its industrial sector. This helps the weak industries already operating and create better circumstances for newly established industries.

The economic policy of Libya is not to restrict free enterprise, the government is to help the private sector to reach the country's goal of
diversifying the economy. In view of this policy the government has provided several incentives to the private sector. At present stage without government's intervention, private sector will find it more difficult to deal with industrialisation of the country.

Government's Investment In Social And Capital Overhead:

The Libyan government tried to increase the country's capital formation by investing more amount of money in the economy. In the development budgets of the two Plans a considerable investment is made in different sectors of the economy as it is reflected in table number 3 on the following page.

From the table it is clear that in the First Three Year Plan (1973-75) large investments were made in housing, agriculture, transport, and communication, and educational services. The proportional distribution of these sectors were 19.6, 14.4, 12.5 and 8.4 respectively. In the second Five Year Plan the largest amount was allocated to the processing industries. Out of the total investment about 19.2 per cent was allocated to these industries.

One of the main feature of investment programmes implemented during the period 1965-79 is the significant change from the oil extracting activities to the non-petroleum economic activities. The poverty of the country in the accumulation of overhead capital left it with a need to invest in the formation of social overhead capital simultaneously with its investment in other economic development activities. The lack of overhead capital is an indication of poverty and of the fact that government before 1969 had neglected the economic development of the country.
### Table 3

**Government's Investment In Development Budget of the Two Plans**

<table>
<thead>
<tr>
<th>Economic Activity</th>
<th>1973-75</th>
<th></th>
<th>1976-80</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total Allocation</td>
<td>%</td>
<td>Total Allocation</td>
<td>%</td>
</tr>
<tr>
<td>Agri, forestry &amp; fishing</td>
<td>311.3</td>
<td>14.4</td>
<td>939.1</td>
<td>12.0</td>
</tr>
<tr>
<td>Petroleum &amp; natural gas &amp; Mining</td>
<td>195.4</td>
<td>9.0</td>
<td>195.5</td>
<td>2.5</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>5.3</td>
<td>0.2</td>
<td>19.0</td>
<td>0.2</td>
</tr>
<tr>
<td>Electricity &amp; water</td>
<td>226.7</td>
<td>10.4</td>
<td>1506.7</td>
<td>19.2</td>
</tr>
<tr>
<td>Construction</td>
<td>254.6</td>
<td>11.7</td>
<td>706.7</td>
<td>9.0</td>
</tr>
<tr>
<td>Wholesale &amp; retail trade</td>
<td>18.0</td>
<td>0.8</td>
<td>72.0</td>
<td>0.9</td>
</tr>
<tr>
<td>Transport, storage &amp; communication</td>
<td>7.5</td>
<td>0.3</td>
<td>47.5</td>
<td>0.6</td>
</tr>
<tr>
<td>Banking &amp; insurance</td>
<td>270.0</td>
<td>12.5</td>
<td>1477.8</td>
<td>18.9</td>
</tr>
<tr>
<td>Housing</td>
<td>1.0</td>
<td>0.0</td>
<td>5.0</td>
<td>0.1</td>
</tr>
<tr>
<td>Public Services</td>
<td>425.3</td>
<td>19.6</td>
<td>1194.3</td>
<td>15.2</td>
</tr>
<tr>
<td>Educational services</td>
<td>165.9</td>
<td>7.7</td>
<td>759.1</td>
<td>9.7</td>
</tr>
<tr>
<td>Health services</td>
<td>181.9</td>
<td>8.4</td>
<td>462.5</td>
<td>5.9</td>
</tr>
<tr>
<td>Other services</td>
<td>90.6</td>
<td>4.2</td>
<td>148.6</td>
<td>1.9</td>
</tr>
<tr>
<td>Reserves</td>
<td>10.5</td>
<td>0.5</td>
<td>25.5</td>
<td>0.3</td>
</tr>
<tr>
<td>Total</td>
<td>2170.0</td>
<td>100</td>
<td>7840.0</td>
<td>100</td>
</tr>
</tbody>
</table>

The growth in the development budget helps the country to enrich capital accumulation and contributed to the development of the country. So far we have given an account of the government physical investment. Now we will give an account of the government's investment in social and capital overhead. Education, transportation and communication system will be studied as examples of such investments.

Education:

In modern world, education is the cornerstone of any economic country's social and development. One of the most serious obstacles standing in the way of Libya's industrial development is the lack of skilled and experienced labour in the industrial field. The government tried to solve this problem by developing its human resources which would help to develop its people's ability as productive agents. Developing the human resources is as important as developing material resources. Therefore "education for all" practiced by the Libyan government from the very start is one of the principles of educational policy in the country. The present educational policy constitutes the following:

— Education is a right for every citizen free of charge.
— Primary and preparatory education is compulsory.
— Educational services are made available to villages and to remote areas through mobile class rooms.
— Linking the educational system with the occupational structure to meet the requirements of the economic and social development.
— Enlargement of the university education as well as increasing mission sent abroad for higher studies.
— Eradication of illiteracy by 1980.
To achieve all these objectives LD 220 million were allocated for education in 1973-75. And in the next Five Year Plan a sum of LD 462 million was allocated to this sector. Since 1969 great achievements have taken place in the country in this field. The fast growth in human capital investment is taking place due to the fact that it serves as a background for the country's general development. The productivity of the physical capital depends on the quality of human capital. Because human beings are responsible for the accumulation of capital, exploitation of natural resources, building social, economic and political organisations and for carrying forward the national development.

We have seen that Libya aims towards highly technological means of industrialisation, hence it needs the preparation. Fortunately the huge oil revenues enabled it to invest widely in every field. The government has realised that there would be no progress till illiteracy prevails among its people. Many efforts are being made by the government to eradicate illiteracy. The Ministry of education has developed an adult education system.

The country has developed its educational system in a relatively small period of time. The local enrolments of male and female students at the various educational levels has already reached 0.75 million in a society not exceeding 2.5 million people i.e at the rate of about 30 per cent of the population. The number of students at the level of primary education in 1969-70 was 310,846. By 1976-77 the figure jumped to 561,099. The percentage increase in total number was 80.5 per cent. The number of teachers also increased from 11,122 in 1969-70 to 26,046 in 1976-77. It was an increase of 134.2 per cent.
Besides primary, preparatory, and secondary education the government pays particularly great attention to the development of university education in order to go abreast of scientific and technological progress and to provide the economic and social development plans with the highly qualified professional and semi-professional manpower required. The number of students enrolled at the university in 1969-70 was 4138 which rose to 16187 in 1976-77.

Investment in Technical Education: The country's most needed investment in human beings is in technical education in order to develop its ability to follow the goal of industrialisation. The country suffers from a great shortage of skilled manpower for its industrial projects. The government tries to solve this problem by training its people in the needed field through organisations and institutions for mobilising human efforts and by developing incentives both through wage increase and by the assignment of trained labour to the proper jobs. The number of students in the technical education was 1457 in 1969, it increases to 4476 in 1976-77, an increase of 207.2 per cent. There are three higher technological institutes, the Institute of Technology at Brak, Electricity Institute at Hon and Electronic Institute at Beniwalid. The country is in the process of developing its technical ability and skill in the field of industry, agriculture and commerce. Industrial education occupies the important place.

Industrial Education: The specialised education through institutes means preparing, and qualifying technical skills which can run the industrial projects. The tables (4 and 5) on the following page shows the increase in the number of students in the industrial education.
### TABLE 4

**Development Of Industrial Education**

<table>
<thead>
<tr>
<th>School Year</th>
<th>No of students</th>
<th>No of students</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Preparatory</td>
<td>Secondary</td>
</tr>
<tr>
<td>1968-69</td>
<td>295</td>
<td>25</td>
</tr>
<tr>
<td>1969-70</td>
<td>372</td>
<td>51</td>
</tr>
<tr>
<td>1970-71</td>
<td>470</td>
<td>76</td>
</tr>
<tr>
<td>1971-72</td>
<td>343</td>
<td>106</td>
</tr>
<tr>
<td>1972-73</td>
<td>261</td>
<td>147</td>
</tr>
<tr>
<td>1973-74</td>
<td>364</td>
<td>212</td>
</tr>
<tr>
<td>1974-75</td>
<td>74</td>
<td>255</td>
</tr>
<tr>
<td>1975-76</td>
<td>-</td>
<td>370</td>
</tr>
<tr>
<td>1976-77</td>
<td>-</td>
<td>1009</td>
</tr>
<tr>
<td>1977-78</td>
<td>-</td>
<td>1595</td>
</tr>
</tbody>
</table>

**Source:** Secretariat Of Planning, Social And Economic Achievements, May 1978, pp. 33,34.

### TABLE 5

**Development In Number Of Graduates**

<table>
<thead>
<tr>
<th>School Year</th>
<th>No of students</th>
<th>No of students</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Preparatory</td>
<td>Secondary</td>
</tr>
<tr>
<td>1972-73</td>
<td>76</td>
<td>17</td>
</tr>
<tr>
<td>1973-74</td>
<td>274</td>
<td>40</td>
</tr>
<tr>
<td>1974-75</td>
<td>68</td>
<td>37</td>
</tr>
<tr>
<td>1975-76</td>
<td>-</td>
<td>34</td>
</tr>
<tr>
<td>1976-77</td>
<td>-</td>
<td>65</td>
</tr>
</tbody>
</table>
The increase in number of technical schools and students is to answer the country's need for skilled workers. A clear picture of the efforts made by the revolutionary government can be seen through the growth in amounts invested in the industrial education shown in following table number 6.

**TABLE 6**

<table>
<thead>
<tr>
<th>Year</th>
<th>Allocated Funds</th>
<th>Expended Funds</th>
<th>Percentage Of Expenditure</th>
</tr>
</thead>
<tbody>
<tr>
<td>1973</td>
<td>1,435,000</td>
<td>732,272</td>
<td>51</td>
</tr>
<tr>
<td>1974</td>
<td>1,987,000</td>
<td>1,479,930</td>
<td>74.5</td>
</tr>
<tr>
<td>1975</td>
<td>2,450,000</td>
<td>1,526,614</td>
<td>62.3</td>
</tr>
<tr>
<td>1976</td>
<td>2,390,000</td>
<td>1,846,028</td>
<td>77.2</td>
</tr>
<tr>
<td>1977</td>
<td>5,325,000</td>
<td>4,696,000</td>
<td>88.2</td>
</tr>
</tbody>
</table>

Source: Same as to the preceding table.

**Health:**

The investment in human capital is not limited to education in Libya. Investment in human health is also a vital issue in the country's needed development. During the period 1970-76 the number of health centres increased from 12 to 78, an increase of 550 per cent. This represent the optimum rate for health services in future.

**Transport And Communication System:**

The Libyan economy is endeavoured to promote transport and communication system because it constitutes the bridge over which it can cross to the road of development and can lay the foundations for its industrial
sector. Development in industry or in any other field can not be pushed ahead fast without an efficient system of transport. Therefore the revolutionary government undertook the construction of an integrated road network as well as the provisions for other means of transport and communication to cover all parts of the country. Following are the main important achievements made in the transportation and communication system after the revolution.

Roads: The length of roads network in 1970 was 5800 kilometers, in 1977 another 3000 kilometers were added. Some 40 projects of road construction are under way.

Sea Ports: Previously, there were only two dependable sea ports in the country, one in Tripoli and the Other in Benghazi. They are inadequate and therefore, the government established the ministry of Maritime Transport and General Organisation For Sea Ports and light houses to develop the existing sea ports and to construct the new ones in order to absorb the huge imports required by the development plans.

Air Transportation: Achievements in the field of civil aviation in the country included the completion of an airport at Sebha and other parts of the country. The number of aeroplanes was increased from 2 in 1970 to 14 modern aircrafts in 1977, including 6 Boeing and 8 Fokker aeroplanes.

Post And Telecommunication: Great importance have been attached to post and telegraph services after the revolution. Many telephone exchanges have been expanded in Tajura, Andalus area in Tripoli and a international telephone exchange is also established in Tripoli. The number of telephone sets have also increased from 15000 in 1970 to 100,000 in 1977.
Libyan industrial development is still in its initial stage. The modern and traditional manufacturing sector excluding oil industry, still make a very little contribution to the national income of the country. The contribution of the industrial sector to GDP decline from 4 per cent to 2 per cent during 1970-75. This is due to the increased contribution of the petroleum industry which increased from 39 per cent in 1963 to about 60 per cent in 1975.

At present Libyan manufacturing sector mainly consists of processing by small firms of local products such as food, tobacco, building material, wood, paper, textile and soap etc. The output of these manufacturing establishments producing these goods has considerably increased during the 1970's. An interesting feature of the development of the manufacturing sector during 1970's is the gradual but noticeable growth in the importance of intermediate products industries, mainly producing chemicals and construction goods, the gross value of output in the cement and cement products industry, which produces cement. The production of cement tiles and blocks increased by 881 per cent and the labour employed in this industry increased by 200 per cent in 1970's. The contribution of these two industries to the gross value of output of large establishments increased from 19 per cent to 26 per cent during the 1970's.

Although sizeable financial allocations are made to industrial sector, but all was in recent years and has done little to modify the basically immature structure of the economy. But we can say that the country is on its way to industrialisation. Many new industries are now being established by the General Public Organisation for Industrialisation. The current development plan (1981-85) provides for an investment of
LD 4 billion in the industrial sector. Considerable development is taking place in the construction industry notably in cement, chemicals, aluminium and iron and steel. However the most important constraint to the development of industrial sector in Libya is the lack of skilled manpower to carry out the complex establishments, which the government is trying to remove by investing more and more in human capital. The Libyan industrial policy consists of liberating the national economy from dependency on foreign inputs, and achieve a balanced economic growth by creating an efficient public sector to carry out major industrial projects.