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THE CONTRIBUTIONS OF THE OIL INDUSTRY
TO THE ECONOMIC DEVELOPMENT OF LIBYA

by

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SYNOPSIS

This study is concerned with the role of the foreign-owned oil industry in the development process of the Libyan economy. Its main objective is to probe the industry's catalytic effects on the national development efforts to attain socio-economic progress for the country. The study is descriptive in approach, with the emphasis placed on assembling a case history but it also makes provision for critical examination.

The investigation starts with identifying the environment in which the industry functioned, especially the social structure and the economic conditions of the pre-oil era. The factors which gave rise to the oil boom and the institutional setting of the industry are portrayed. Special attention is, however, paid to the behavioural influence of oil operations in enriching the human resources and to the direct contribution of the industry to the balance of payments, government revenue, and national income. The investigation is further extended to the place of the government oil revenue in development activities and to assessment of the results achieved.

The study reveals that oil industry interlinkages effects were very limited owing to the low stage of development in the rest of the economy. The forward linkage potentials were not utilized mainly because the oil companies limited their operations to the primary production which has been geared exclusively to exports. Domestic payments for wages, goods, and non-wage services were very small, relative to the value of output of the industry. But oil industry

payments to the government grew rapidly and accounted for the bulk of the retained value from the industry operations. Through this, it was established that the oil industry has great potentials for boosting the rest of the economy.

A scrutiny of the policy adopted for utilizing oil revenue showed that the government has employed the bulk of it in developing some of the basic infrastructure. But, because of the scarcity of factors other than capital and slackness in enforcing policies, the huge investment in public works, failed to activate agriculture and industry.

Finally, the study has shed light on the structure characteristic of the oil economy, including various aspects of its development, particularly its dangerous reliance on a single exhaustible resource, its import-orientation, and the wide gap between efforts and rewards. All these features demonstrate how inadequately the Libyan economy is "hedged" against the future, especially from a long-term point of view.

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INTRODUCTION

"In the economic life of a country and in its economic history, a most important element is the mechanism by which one thing leads to another" (1).

(Hans W. Singer)

Review of Literature

The positive contribution of direct foreign investment to the growth of international trade and the welfare of developed countries has for long been well recognised. With the emergence of the concern about the economic development of the poor countries, initially the economic thinkers, apart from the Marxists and the left wingers, contemplated the inflow of direct foreign investment as a real hope for easing these countries' problems of economic backwardness. As the literature on economic development expanded, this initial contemplation became an intensive examination. However, of the various types of direct foreign investment, none has come under such continuous scrutiny as that in extractive industries. The reasons for this special concern are clear and easily recognizable.

In the first place, foreign investment in extractive industries has accounted for more than half of all inflow of direct investment in developing countries, 40% in oil alone (2). In the second place, the bulk of foreign exchange earning in many developing countries comes from the foreign investment in extractive industries. Indeed, there are still a number of countries which, without this source of foreign

(1) Hans W. Singer, *International Development: Growth and Change*, (McGraw-Hill, New York), 1964, p.164.

(2) Earl R. Ford, J. D. Rynnell and Lenore D'Anjony, ed; *The World's Resources*, (Columbia University Press, 1971), p.238.

exchange earning, may not be more than "artificial political units that lack the resources and the legitimacy necessary for 'sovereignty' and 'political survival' (3). In the third place, the foreign investment in extractive industries has accounted for a large portion of the supply of fuel and raw materials to developed countries, where the security of this supply is vital to the modern economic and social life. This presumably attracted many scholars to examine the behaviour of foreign investors and the impact of their local operations on economic and social development.

Yet, despite the great deal of work done on the subject, when it is narrowed down to the evaluation of the role of foreign enterprises in development process of the host countries, it can hardly be said that there is a well established theory. Instead, one is usually confronted with a wide discussion, often in the form of a hot debate with deep emotion. Consequently, most of the conclusions derived from this discussion are not yet exempt from further controversy and many of them are in some ways confusing if not misleading. This state of the literature can be illustrated by quoting two great economic thinkers, representing the opposite views.

First, Harry G. Johnson, who not only firmly believes in the historical role of foreign direct investment in economic development but also criticizes the central body of economic literature as being slow to recognize this role:

"During the past twenty years or so the large multinational corporation - and primarily the international company based in the United States - has emerged as a potent agent of economic transformation and development, not only in the more laggard "developed" countries but also in the developing countries of the

(3) David Osterberg and Fouad Ajami, "The Multinational Corporation", *The Journal of Conflict Resolution*, Dec. 1971, p.460.

world. Both economic theory and economic policy have been slow in recognizing this phenomenon" (4).

The other is Hans W. Singer who was the first, outside the Marxian school and the other radical groups, to defy the authority of orthodox theorists on sound economic bases. In his 'International Development' he stated:

"If we apply the principle of opportunity costs to the development of nations, the import of capital into underdeveloped countries for the purpose of making them into providers of food and raw materials for the industrialized countries may have been not only rather ineffective in giving them the normal benefits of investment and trade but positively harmful. The tea plantations of Ceylon, the oil wells of Iran, the copper mines of Chile....may well be less productive than domestic industries in those countries which might have developed if those countries had not become as specialized as they now are in the export of food and raw materials" (5).

It is understandable that different opinions arise between the speakers for foreign investors and those for the host countries; as the former tend to inflate the benefits accruing to the local economy and the latter try to disparage these benefits by looking hard at the price tag. But it still remains unclear why respected economists and scholars are so widely divided in their views toward the role of foreign investment in the development of the host backward economy to the extent that some see it as 'the egg-laying goose', while others identify it with underdevelopment and imperialism. Undoubtedly, this deadlock is largely due to the state of literature on economic development. However, there are especially two factors which had a cumulative impact on the language of those dealing with the subject.

(4) Harry G. Johnson, "The Multi-National Corporation as an Agency of Economic Development: Some Exploratory Observations", in Barbara Ward, *Widening Gap*, *op.cit.*, p.242.

(5) Hans W. Singer, *op.cit.*, p.164.

One is that the system of extractive industries and the environment surrounding their operations in developing countries are intricately interwoven with political, economic and social elements. Yet, of the numerous studies on the subject matter, very few were interdisciplinary in approach. The other is that the literature on international direct investment in general has been considerably influenced by the prevailing ideological views, national sentiments, political manoeuvres and business interests. Indeed, the large multinational corporations well understand that financing field studies is one of the most successful public-relations exercises.

Having this in mind, one can now present briefly some of the propositions of the opposing views, starting with the school of thought that approves the role of direct investments. The proponents of this view were originally the orthodox theorists and some writers in the developed 'private enterprise' countries. But at the present time its main adherents are the economists of the World Bank. This is not surprising, because one of the main objectives of the Bank is to promote direct foreign investments. As testimony to the positive contribution of foreign investment to economic development of the host countries, some of the proponents of this school have somewhat incautiously offered the cases of Australia and North America, in which export-oriented foreign investment played an important role in the early stage of development. However, not all of them share the opinion that what worked in these areas should work in developing countries. But, all of them held that the inflow of foreign investment, in any form, is a main avenue to future development. For this argument, several propositions are offered, largely derived from the conventional trade theory.

One of these is that the inflow of foreign investment makes at the start an immediate contribution to the recipient country's balance of payments. Since this implies transfer of capital goods as well as foreign exchange, it makes a considerable addition to the host country's physical and financial capital. Of course this reasoning is based on two traditional postulates. One is that capital is the engine of economic transformation and developing countries lack it. The other is that foreign investment in developing countries supplies a substantial part of the financial needs of the enterprises it creates. However, it is generally recognized that the transfer effect is only a short-run benefit, because in the long-run the remittance of profit and capital depreciation usually outpace the inflow of capital. This can easily be demonstrated.

"From 1960 to 1968, when approximately \$1 billion of fresh capital was being transferred annually to U.S.-controlled subsidiaries in the less-developed areas, approximately \$2.5 billion was being withdrawn annually in the form of income alone. If withdrawals in the form of royalties and of overpricing of intermediate goods were added, the figure would be still large" (6).

Nevertheless, this school stresses that the outflow of profit and other forms of foreigners' payment in no way constitutes a real drain on the host country's foreign exchange resources. Simply because export-oriented foreign investments earn their income out of enlarged foreign exchange proceeds they genuinely create. In this regard, it also alleged that many export industries created by foreign investors could play an important role in the early stage of development. According to W. W. Rostow's 'Non-Communist Manifesto' these export industries:

(6) Raymond Vernon, *Sovereignty at Bay: The International spread of U.S. enterprises*, (Longman, 1971), p.172.

"Quite aside from their role in supplying foreign exchange for general capital-forration purposes, raw materials....can play the role of leading sectors in the take-off if they involve the application of modern processing techniques" (7).

Aside from these major benefits, the direct foreign investment, unlike the other forms of foreign capital inflow, in many ways contributes directly to the economic development of the host countries. One way is that, because its operation always involves managerial skills and modern techniques, it has an educational effect which can play an important role in promoting the diffusion of technological advance as well as in improving the quality of human skills. In this respect, it is argued that it can serve in two directions. Firstly, foreign enterprises, in addition to the on-the-job-training, frequently undertake training and educational programmes for their local employees. The knowledge gained by these employees constitutes a contribution to development of local skills and to the spread of what a writer termed 'software technologies' (8). This in particular becomes more important when it is transmitted to other members of the labour force. Secondly, by on-the-spot example, foreign enterprises enable the local entrepreneurial class to gain familiarity with the concepts of modern organisation. This is based on the presumption that foreign-owned enterprises do not tend to kill off local entrepreneurship but rather to promote it. Indeed, in many developing countries the local business class is still in the stage of performing a complementary role to the export-oriented foreign enterprises.

Another point made in favour of foreign investment is that its operations result in some sort of external economies. These benefits

(7) W. W. Rostow, *'The Stages of Economic Growth: a non-Communist Manifesto'* (Cambridge, 1964), p.56.

(8) Keith Pavitt, 'The multinational enterprise and the transfer of technology', in John H. Dunning, *'The Multinational Ent rprise'* (George Allen & Unwin, 1971), p.83.

are alleged to accrue by a number of means. One is that foreign investment in natural resources in many cases plays a part in improving the infrastructure of the recipient country. A commonly cited example of this is the case of the Liberian-American Swedish Mineral Company (LASMCO). LASMCO, as reported, contributed substantially to the development of Liberia's infrastructure, "errection of a 90-bed hospital, residential housing, a town center, six primary schools, a 165 mile railroad to haul iron ore from Nimba to the nearest harbour" (9).

Another means, by which the presence of foreign enterprises enhances the development of the local economy, is what Hirschman called "backward and forward linkage effects". These effects, on which great emphasis has been placed, are supposed to accrue from two directions. On the one hand, the foreign investors' local purchase of parts, intermediate goods, raw material and services will expand the demand for local output. This will presumably stimulate economic activity in the rest of the local economy (backward linkage effect). Clearly, the advocates of this argument assume that the host (developing) economy has sufficient slack in it and there is a local volume of unutilized resource, so that the backward linkage effects can be positive. On the other hand, the cheaper and more abundant inputs produced by the operation of foreign investment lead to the expansion of the local firms and the creation of new ones (forward linkage).

However, it is generally acknowledged that the foreign investment in natural resources has no very significant backward-linkage effect on the host developing economy and its forward linkage cannot be effective in an economy still in a primary stage of industrialization. Nevertheless, the members of this school carry on their argument, stressing the

(9) David B. Zenoff, *International Business Management*, (Macmillan, 1972, pp. 148-149).

indispensability of foreign investment to economic development.

For example, Professor Kaldor stated:

"Foreign investment in its various forms holds out the best hope of accelerated development to many underdeveloped countries.... Foreign enterprise may be indispensable also in imparting the know-how necessary for the efficient development of local industries. Moreover, in many countries, the production and export of valuable local minerals holds out the only hope of generating the economic surplus which is a necessary pre-condition for their internal development" (10).

In sharp contrast, almost all these typical benefits are disputed by various groups of economists and scholars, who indicate that the argument offered by the conventional economists and the defenders of multinational corporations is oversimplified and that actual experience has shown quite different results. One of these groups may be called 'the social economists'. As represented by H. Myint, G. Myrdal, D. Seer and H. W. Singer, this group did not denounce foreign investment *per se*, but they direct their criticism against just one form of this investment. This is the export-oriented investment, particularly in natural resources. In elaborating the role of this sort of foreign investment, they set forth the meaning of economic development as a fundamental socio-economic transformation. In this sense, they argue that it is not only of little or no benefit to the host backward economy but in many cases, it is also impeding its development. Singer, in his well-known paper which at the time of its publication shocked the economic circles, explained this by the fact that foreign investment has led to the specialization of underdeveloped countries on exports of raw materials to industrialized countries. This specialization, he stated, "has been unfortunate" for the following reasons:

(10) N. Kaldor, 'Taxation for Economic Development' in I. Livingstone, ed. *Economic policy for Development* (Penguin, 1971), p.318.

"It removed most of the secondary and cumulative effects of investment from the country in which the investment took place to the investing country; and (2) it diverted the underdeveloped countries into types of activity offering less scope for technical progress, internal and external economies taken by themselves, and withheld from the course of their economic history a central factor of dynamic radiation which has revolutionized society in the industrialized countries" (11).

The others in this group carry the same argument, but each of them expounds the reasons in a different manner. Professor Myint, in his writings on economic backwardness, acknowledges the role of foreign investment in creating export sectors in underdeveloped countries. But he regrets that this, instead of bringing overall economic development, was one of the main causes of backwardness. He stated:

"Backwardness in the sense of economic discontent and maladjustment does not fully emerge until the third stage of the drama when the natural resources of the backward countries have been 'developed' to a large extent, usually by foreign private enterprise, and when the backward peoples have been partly converted to the new ways of life....We then have a progressive maladjustment between wants and activities, the former outstripping the latter at each round of 'education' and contact with the outside world....Further, the backward peoples now find that they cannot successfully adapt themselves to the new economic environment shaped by outside forces and that they lag behind in the 'economic struggle' with other economically advanced groups of people who have initiated the 'opening-up' process" (12).

In explaining the existence of this ironic situation, Professor Myint stresses the lack of "spread effect" from the operations of foreign enterprises on the retarded society. He argues that, as a consequence of the absence of educational effect, "even after many decades of rapid

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- (11) Hans W. Singer, 'The Distribution of Gains between Investing and Borrowing Countries', *Papers and Proceedings of the AEA* (Supplement to American Economic Review), May 1950, p.477.
- (12) H. Myint, "An Interpretation of Economic Backwardness", *Oxford Economic Papers*, Vol. 6, June 1954, pp. 157-58.

'economic development' following the 'opening-up' process, the peoples of many backward countries still remain almost as ignorant and unused to the ways of modern economic life as they were before". He goes on to say "it is only on the side of wants that they have been modernized" (13). He lists several factors working against the backward local society. But he draws attention to what he called 'the disequalizing factors' which have been created by the foreign enterprises' reliance on importation of immigrant labour. The real damage brought in by these imported labourers, he says,

"it lies....in the fact that they have put themselves between the backward people and the outside world and have robbed the latter of the educating the stimulating effect of a direct contact" (14).

Professor Myint directs his criticism to the foreign investors also in their traditional cheap labour policy which he thinks has impeded the diffusion of modern technology and skills to backward society (15). This point, as we shall see later, is challenged by Seers.

Professor Myint extends his criticism to the host countries in their policy towards the existence of foreign-owned enterprises. He refers to two important points, though he stated them less clearly.

Firstly, the governments of the host countries have always been impelled by self-interest to place their emphasis on fiscal gains which implicitly come at the expense of long-run benefits (spread effect). Indeed, until very recently, the issue of fiscal returns was the only point of conflict between the multinational oil companies and their host governments, which neglected the other benefits. Secondly, the hostile

(13) *Ibid*, p.157.

(14) *Ibid*, p.158.

(15) H. Myint, *The Economics of the Developing Countries*, (Praeger, 1974), p.67.

environment created by national emotion against the presence of foreign-owned enterprises prevents the latter from adopting a policy of widening the local spread effects. He argues that widening educational effects require the foreign investors to undertake heavy additional investments in material and human capital. But foreign investors are naturally unwilling to undertake these investments unless they can be sure of reaping the fruits in the long run. He goes on to state:

"in the typical conditions of the newly independent countries, this sense of security and inducement to wait for the fruits of a longer-term policy is precisely what is not available to the foreign-owned enterprises" (16)

Professor G. Myrdal, whose overwhelming concern has been the problems and prospects of the third world or what he called 'the under-privileged nations', holds the same view as Myint. However, despite his argument being broader than others, his conclusions about the contribution of foreign investment in the development process are unclear. However, in discussing the impact of colonialism and international trade on the socio-economic structure of developing countries he concludes that foreign investment is harmful. In reasoning this conclusion, he contends that the backwash effects of this sort of foreign investment always outweigh its spread effects. In explaining this contention, Professor Myrdal expounds two important propositions:

Firstly, export-oriented foreign investment, especially in oil and mining, tended to form enclaves. These enclaves have been, he argues, "cut out and isolated from the surrounding economy but tied to the economy of the home country" (17). Secondly, the growth of these

(16) *Ibid*, p.67.

(17) Gunnar Myrdal, *The Development of Modern Latin America*, (University paperbacks, 1963), p.58.

enclaves exerts a strong agglomerative pull on the economic forces in the rest of the economy.

Resembling Myint's idea, Myrdal's view explains that while this pull raises the aspirations of the local community, its effect on education and productivity proceeds more slowly. Consequently these enclaves have considerable backwash effects. Unlike Myint, Myrdal attributes the lag of spread effects to what he calls 'circular causation'.

Another significant contribution to the view criticising export-oriented foreign investment is that of Professor Dudley Seers. He leads to the same conclusion of Myint and Myrdal, but for a number of reasons his argument is of special interest. Unlike the others whose treatment of foreign direct investment appears only in their general studies of underdevelopment, Seers seriously concerned himself with the subject matter. Furthermore, he bases his argument on a wide field experience extending from Latin America to East Africa. Another important reason is that many of Seers's studies are narrowed down to the cases of small developing economies with the existence of a relatively large foreign-owned extractive industry.

Professor Seers does not deny the quantitative contributions of this sort of foreign investment to the local economy. But he stresses that in analysing primary-producing economies a conventional national income and expenditure table "conceals, rather than reveals, the way in which the economy works" (18). Accordingly, he argues that the most important is the qualitative contribution. In this respect Professor Seers is highly sceptical. The main base of his scepticism is that, because of their

(18) Dudley Seers, *'An Approach to the Short-Period Analysis of Primary-Producing Economies'*, Oxford Economic Papers, 1959, p.24.

distortional effects on the local economy, the foreign-owned extractive industries are harmful to over-all economic development.

In his numerous writings, he brings up various aspects of these distortional effects. One aspect is that the expatriate community connected with the foreign enterprises tends to set new fashions in consumption habits. Because these habits stretch quickly out to the local population, they distort the pattern of consumption in favour of luxuries. He argues that since these luxuries are not made in the developing economy, imports may rise more quickly than exports. With the shift of population toward the districts where imports are customarily purchased and the increasing inequality of income distribution, the average income-elasticity of demand for imports is not likely to be less than unity (19). Thus, the propensity to import further rises to the extent that "quantities of food may be brought into the country (even poultry, eggs, fruits and vegetables which could easily be produced locally)"(20). In explaining how this alarming situation occurs so that the rest of the economy fails to provide even the simple goods, Professor Seers expounds several important factors, most of them brought about by the foreign-owned export sector.

One of these factors is that for a number of reasons the wages offered by the foreign-owned petroleum companies to their local employees tend to be so high that they get out of line with other wages. The reasons are: Labour is, in fact, only a small item in their costs, and wages are partly "paid by the government", being deductible from declarations of taxable income. Moreover, as foreign companies, they

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- (19) Dudley Seers, 'The Stages of Economic Growth of a Primary Producer in the Middle of the Twentieth Century' in Robert I. Rhodes, ed. *'Imperialism and Underdevelopment'* (Monthly Review Press, 1970), p.15.
- (20) Dudley Seers, 'The Mechanism of an Open Petroleum Economy', *Social and Economic Studies*, June 1964, p.235.

are in a politically vulnerable position. . These high wages, he argues, arouse a feeling of envy, "unions in other sectors think they should not fall further behind (a sort of "demonstration effect" amongst wage-earners). He carries on saying, "In an expanding economy, neither the government nor domestic producers are forced to offer resistance to this pressure" (21). This, besides switching the disguised unemployment into an open one (level of employment is Seers' main concern), leads to the rising costs of local production because the level of labour productivity remains low. So another aspect of distortional effects becomes operating.

Seers also brings to attention that the distortional effects become too onerous or difficult to be corrected in what he calls "an open economy", a concept which originally was introduced by the Economic Commission for Latin America. He argues that the reasons lie in the structure of this sort of economy, whose characteristics are shared by most small countries depending on export-oriented foreign investments. One reason is that the local currency is mostly overvalued; this is because it is highly backed, and is held at parity with, and fully convertible into, the currency of a major international power" (22). Consequently, the imports are cheapened and thereon the competence of domestic producers deteriorates further.

Furthermore, the traditional corrective measures are unlikely to be used in such an economy. Devaluation does not seem necessary to the authorities on balance of payments grounds, because of the booming exports and the competition in the international petroleum market is so imperfect

(21) *Ibid*, p.235.

(22) Dudley Seers, *op.cit.*, p.164.

that devaluation would have practically no effect on the foreign exchange earnings. The other major methods are unlikely to be effective even if they were attempted. This is largely due to the fact that in such an economy the importers, shopkeepers and those in employment are politically powerful in comparison with the weak industrialists and badly organised agricultural sector (23). In discussing the possibility of offsetting these distortional effects through utilising the considerable amount of foreign exchange gained from the exports created by foreign investors, Seers' scepticism is more clearly stated:

"The government is tempted to spend its revenues on lavish highways or housing schemes rather than in enlarging the goods-producing capacity of the country by building factories. There are a number of reasons for this. Public works yield high immediate political results, because they are normally labour-intensive and the results are visible for all to see. Moreover, the government often fears that 'going into business' will expose it to risks of failure, as well as to political pressures which it can evade by keeping to traditional types of investment" (24).

Besides the criticism of this group of economists concerning export-oriented foreign investment, there are on the far left the Marxian and radical groups. Initially, the problems of underdeveloped countries and foreign investments from developed countries were not of great concern to the founding fathers of Marxism. However, Professor Bauer noted that the Communist Manifesto paid eloquent, perhaps even extravagant, tribute to the potentiality of capitalism in promoting social and economic change in backward societies (25). In later Marxist literature on what is

(23) Dudley Seers, 'The Mechanism of an Open Petroleum...' *op.cit.* p.236.

(24) *Ibid.*, p.237.

(25) P. T. Bauer, *Dissent on Development*, (Weidenfeld and Nicolson, 1971), p.164.

popularly called 'the third world', it had been held that decolonisation is not complete without liquidation of all private capital in poor countries and termination of all foreign-owned private enterprises. Of course, this conclusion is largely based on ideological orientations, but the contemporary Marxist-economist pamphleteers commonly hammer at the following propositions:

"Instead of fostering development, the establishment of a modern export industry that is based upon capital and skilled labour from an advanced country tends to destroy the prospects for diversified growth in a less developed country. For example, mass-produced, cheap manufactured goods flood the markets of the under-developed country and destroy its traditional handicraft industries. This not only eliminates the only economic sector potentially qualified to establish domestically owned and operated manufacturing industries, but swells the pool of cheap labour available for work in the foreign-directed, primary product, export industry..... The result is that the masses of people in the less developed country benefit little or not at all by the creation of a modern export sector. Many actually suffer severely in the development process. Foreign capitalists and their governments, on the other hand, reap enormous profits. But, instead of being reinvested, most of the profits are removed in order to build additional industrial enterprises in already advanced nations" (26).

However, the late Prof. Baran, who with Professor Paul Sweezy (both are well-known exponents of Marxism-Leninism) made a significant contribution to the Marxian literature on economic development of the third world, noted that the government receipts from foreign-owned oil companies could be viewed as a considerable addition to what he called 'the economic surplus' (27). He added, "With receipts of such magnitude coming in for a considerable period of time, their prudent utilization for

(26) Robert E. Baldwin, *'Economic Development and Export Growth'* (University of California Press, 1966), pp. 4,5.

(27) Paul Baran, *'The Political Economy of Growth'* (MR Modern Reader, 1957), pp. 207, 125.

the advancement of the national economy might enable the receiving countries to make at least a start on the road of economic development". But he concluded his statement by saying:

"Let's look at the record", "How little has been actually accomplished is well known to anyone who has taken the trouble to get acquainted with the history of these and similarly situated countries. Waste, corruption, squandering of vast sums on the maintenance of sprawling bureaucracies and military establishments the sole function of which is to keep the comprador regimes in power, characterize all of the countries in question" (28).

Nevertheless, whatever the source of this controversy and wherever the truth lies, there are two points remaining worthy of mention.

Firstly, those who base their contention that devoting foreign investment to the exploitation of natural resources gives a real hope of abolishing the economic backwardness simply by manipulating the traditional economic indicators, which in any case shows a significant contribution to the conventional aggregates of the host economy, and neglecting the other aspects; they are undoubtedly reflecting the point of view of Wall Street and the other business circles. Some of these circles have come so far that they describe the oil-concession agreement as 'an economic development contract' (29).

Secondly, the criticism of this sort of investment, on the ground that foreign investors exhaust the natural resources without leaving an enduring value behind, or by viewing it as the chief instrument of 'economic imperialism' has been overdone. Indeed, the old buccaneering days when investors 'followed the flag' were over long ago,

(28) Paul A. Baran, *The Political Economy of Growth*, (Monthly Review inc. 1968), p.215.

(29) Fred A. Davies (former President of ARAMCO), Foreword to Henry Cattani's *The Evolution of Oil Concessions in the Middle East and North Africa*, (Oceana, 1967), p.vii.

though there are important cases in which giant multinational corporations can protect political regimes or engineer coups against others. But, as far as economic development of the host country is concerned, there is plenty of evidence that events pushed both the foreign investment and the host government into another and important stage. The features of this stage have not yet been fully defined, but some of them are already clear. According to Vernon, the main updating features are:

"First of all, it is beginning to be clear that enclave economies have sometimes set in motion a series of political and economic forces that operated in the end to break open the enclave. Second, there is evidence to suggest that the less-developed countries by process of threat and bargaining are rapidly learning how to improve their relative position *vis-à-vis* the foreign investor. Finally, there are indications that both the identity and the objectives of the foreign investors in the less-developed countries are changing in ways which are reducing the conflict and increasing the reciprocity of their interests with the less-developed countries" (30).

The objective and the context of this study

Broadly, the objective of this work is to investigate the role of foreign-owned export industry in the development process of a host backward economy. Its scope is, however, limited in two respects.

First, it is restricted geographically to the consideration of oil industry in Libya. Second, although the upsurge of oil has in many ways had a far-reaching influence on almost all the aspects of life in the country - cultural, economic, political and social - the concern

(30) R. Vernon, 'Foreign-Owned Enterprise in the Developing Countries', *Public Policy*, XV, 1968, p.363.

of the study is confined to economic influences. These influences are dealt with in three principal ways. The first way involves identifying and tracing the quantitative contribution of the industry to the customary economic concepts. The second way concerns the inside effects of the industry on the principal socio-economic forces. The third way involves discussing the overall quantitative and qualitative impacts on the performance of the country's economic development.

By examining the experience of Libya, it is hoped the study will render at least a modest contribution to the broad scholarly efforts testing the hypothesis that a foreign-owned and strong export sector involving the application of modern techniques can play the role of leading sector for self-sustained economic development. There are several reasons for the significance of the inquiring the case of Libya. The country's principal known natural resource was discovered and exploited by foreign investors. Until the discovery of oil, the country not only was a prototype of backward country but also was an extreme example of financial dependence on external sources.

In Libya, unlike many of the other countries receiving large scale export-oriented foreign investment, there was no large traditional sector. Probably the most important point of all is that the upsurge of a strong oil export sector came just in time when the whole world was campaigning for the economic development of the backward countries, and the relationship between the foreign investors and the host developing countries entered the stage described above. More generally, the meteoric rise of oil industry in Libya has received a large amount of publicity, but its impact on the non-oil sectors and their response to the stimulus which it provided have not yet been touched on.

Plan of the Study and Research Approach

The study is organised in seven chapters and appendices. The next Chapter (II) presents a brief sketch of some important geographical, political and social conditions of the country, particularly those surrounding the operations of the oil industry. This is done primarily for setting up the institutional stage for the study, but more important is that gaining better understanding of the role of the industry requires identifying the environment in which it functions, or, as Lord Kaldor reminded us, "A study of dynamics of economic growth leads beyond the analysis of economic factors to a study of psychological and sociological determinants of this factor" (31). Also in Chapter II, a review of the economic conditions of the pre-oil era is provided. In Chapter III, the advent of oil industry and some aspects of its institutional setting are portrayed, but special attention is paid to the behavioural influence of oil operations on employment and on enriching the human resources. Chapter IV considers the importance of the quantitative contribution of the industry to the economy. This is shown by investigating its impact on the major economic indicators; i.e. balance of payments, fiscal effects and gross national product. In this Chapter, the linkage effects are also discussed.

In the remaining four chapters, the overall impact of the oil industry on the country's economic development and the degree of dependence on oil exports are discussed. Chapter V deals with the place of oil revenues in the development planning. Chapter VI centres on the performance of the economy, particularly national income

(31) N. Kaldor, *An Expenditure Tax* (Allen and Unwin, 1955), p.180.

and the performance of the key non-oil sectors. It also considers the impact of the development activity on some aspects of capacity creation, i.e. physical infrastructure and human resources. In the final chapter (VII) the various aspects of the study are brought together with the conclusions of the work.

In the appendices the large number of less directly relevant and more descriptive computations necessitated for the study, which cannot be conveniently accommodated inside the text, are presented for reference. However, their results and the smaller tables are included in the relevant chapters.

The emphasis of the study is on assembling a case history as a means of appraising the impact of the industry. But, in some aspect where statistics are not complete enough, the study is based mainly on the official reports and the observations of the authoritative bodies. In testing the validity of the conclusions derived from the case history, the research is however based on extensive library work. This covers (1) previous studies on oil and minerals-exporting developing countries and (2) reports and statistics published by the Libyan government and the regional and international bodies.

CHAPTER II

GENERAL CHARACTERISTICS OF LIBYA AND THE PRE-OIL ECONOMIC CONDITIONS

"For Libya combines within the borders of one country virtually all the obstacles to development that can be found anywhere: geographic, economic, political, sociological, technological. If Libya can be brought to a stage of sustained growth, there is hope for every country in the world" (1).

This chapter sketches the general features of the country and interprets them according to the appropriateness of the available natural and human resources, with special reference to those created by the advent of the oil industry.

In particular, the chapter examines some of the constraints to effective utilisation of the capital supplied by oil industry. These could be classified under the following sections: (a) geographical features including natural resources related to the country's economic development potentials; (b) the socio-cultural structure which highlights the factors conditioning the behaviour of the agents comprising the economic development mechanisms; and (c) the socio-economic conditions including the political fabric of the country and its recent developments. This will shed light on the capacity of the country to meet the challenge of a new economic environment and the potentials of developing skills which can apply the available resources for promoting the general prosperity of the country and building sound bases for sustained economic development. In the last

(1) Benjamin Higgins, *Economic Development* (W. W. Norton & Company, 1959) p.37.

section (d) the economic conditions in the pre-oil situation are briefly reviewed. Hopefully, this section will form the economic foundation of the subsequent investigations and provide a better understanding of state of the economy in which the influence of the oil industry is examined.

A. GEOGRAPHICAL AND AGRICULTURAL ENVIRONMENT

Physical Features

Originally, the name Libya was given by the Greeks to the coastal and desert country stretching westward from Egypt. The country is roughly rectangular in shape, with a triangular extension south-east to within 19° of the equator. It covers an area of almost 700,000 square miles, nearly six times the size of the British Isles. It is situated on the northern coast of Africa and is bordered by Egypt and Sudan in the east, meridian frontiers separate it from Chad and Niger in the south, to the west it is bordered by Algeria and Tunisia. To the north, the country faces the Mediterranean for 1,800 kilometres where the shallow Gulf of Sirte penetrates deep into the continent and thereby enables the desert to come right down to the sea for almost 650 km. The coast is flat, shallow and dune-fringed in the west, in the east it is generally steep and rocky. So, good harbours are very few. The country having an impressive size, it is quite normal that its climate and physical aspects are varied. Broadly, it is divided into three geographical zones: the coastal plains, the coastal heights and the desert (Sahara).

The coastal plains: These are narrow coastal fringes and are subdivided into two parts: the north-western plain and the plain between the eastern end of the Gulf of Sirte and the Al-Jebel Alakhder (the green mountain). The first contains about 65 percent of the population and has within it the largest city, Tripoli. More than 75 percent of the economic activities, other than those connected with oil, are concentrated in this plain. Furthermore, almost all the traditional-agricultural exports of Libya come from this area. However, agricultural development in this plain is constrained not only by the shortage of water, which is a crucial problem for the whole of Libya, but also by the quality and structure of the soil. The resistance of the soil to wind erosion is very weak because of the lack of humus.

The second part of the coastal plain is quite narrow, containing about 20 percent of the population, mostly living in the city of Benghazi, the second largest city in Libya. Most of the area of this plain is unutilized or under-utilized; a partial reason is the tribal ownership system which dominates the eastern region of Libya. The communal rights associated with this land system prevent individual from reclaiming a piece of tribal land and acquiring it permanently. This part of the coastal plain enjoys more favourable features in its soil structure than the other part. It has a higher clay content and more humus than that of the north-western plain; but it is more vulnerable to the scorching wind coming from the desert than any coastal area in the country.

Both parts of the coastal plain enjoy the Mediterranean climate which normally involves warm, wet winters and long, hot dry summers. Unfortunately, the problems of agricultural expansion in this important zone are complicated by the variation in wind direction and inadequacy and uncertainty of the rainfall.

The coastal heights: Libya has two highlands on the coast which are important though they are only 800 metres in height and small in extent. They are the Jebal Akhdar - the Green Mountain - already mentioned in north-eastern Libya, and the Jebal Nafusah in north-western Libya. It is in these heights that Libyan hopes for agricultural development lie, particularly in the Green Mountain where most of the area is under-utilized. Both areas are identical in height, in extent, and - apart from the quantity of rainfall - in climate, but their physiographic features are different.

The Green Mountain is much closer to the shore, as already indicated, than is the Jebal Nafusah. Most of the area of the Green Mountain consists of complicated dissections and isolated hills, thus the area has the weakest defence against soil erosion of any part of the country. Yet, the area of the Green Mountain enjoys an average annual rainfall of 600 mm. which is more than that of any part of Libya. The dissections and hills in the Green Mountain are almost all covered with juniper, pine and green vegetation from which the name of Jebal Akhdar - Green Mountain - is derived.

The second coastal height, the Nafusah range, consists of a series of plateaux ranging in height from 200 metres to 800 metres and has less dissections than the Green Mountain, and receives less rainfall. Gharian on Jebal Nafusah received a total rainfall of 352 mm. for the year 1968, while Shahat (Cyrene) in the Green Mountain received a total of 634 mm. in that year. A little more will be said about the rainfall when the question of water resources is touched upon.

The climate of the coastal heights is little different from that of the rest of the coast. But, because of their altitude above

sea level, minimum temperature may fall below freezing point, and snow occasionally occurs. Average temperature may be as much as 5°C lower than the shore in the summer and 2°C cooler in the winter.

The desert: Apart from scattered groups of small oases where artesian water exists and from the oil fields, the desert comprises the whole interior of Libya and comes right down to the sea along the Gulf of Sirte. This vast part of the Sahara represents almost 90 per cent of the whole area of Libya. Topographically, the desert area is a combination of monotonous plains, arid mountains and sands. Great complexes of sand, dunes and gravel form almost impassable seas of sand; one is along the southern half of the Egyptian frontier and two others are in the south-west. The desert climate is characterized by variation of temperature and by being almost rainless. The temperature ranges seasonally from a mean summer level of more than 30 C to a mean minimum winter of -5°C. The diurnal range may reach a difference of 38°C, i.e. the summer daily temperature may exceed 50 C and in the night fall to below 12°C. Almost all the desert area has no rain for periods of 15 to 20 years. Another characteristic of the desert climate is the frequency of high wind velocities. The hot wind 'Ghibli' finds full freedom in the desert and forms sandstorms which in turn go to the coast sweeping whirls of sand and clouds of dust, doing considerable damage to crops. It should be borne in mind, however, that the vast barren Libyan Sahara, once regarded as wastelands, now yields the sensational petroleum resources which have generated the dramatic change in the contemporary economic standing of Libya.

The population density in the desert is very low. The permanent inhabitants are confined to several groups of oases, where the existence of shallow water-tables makes cultivation possible. At these oases the settled people grow dates and wheat, barley and vegetables for their own use or for sale to passing nomads and recently to the oil companies. Until recently some of the oases were threatened with extinction because the water supplies were showing signs of drying up. Fortunately, over the last few years the discovery of substantial amounts of subterranean water nearby some of these oases has brought a new lease of life to them. But the transportation problem adds an element of complication to the exploitation of the water resources as well as to the development of the oases. This leaves the country with two alternatives, either to invest substantial amounts on transportation or to surrender these oases to the sand. At present, the government is paying special attention to the conditions in the oases. Ambitious development programmes are being launched to expand agriculture and to modernise the cultivation as well as the way of life in the oases. It is too early to appraise the results of these programmes, however some agricultural experts are confident that some of the oases might well become a notable source of food in the near future.

Water Resources

The shortage of water in Libya is the most significant single factor imposing a basic limitation on agricultural expansion and construction on industrial development. In the words of one of the world authorities on the Libyan hydrology:

"The development of the water resources of Libya is the basis for all activities The importance of water has been expressed in the agricultural development of the country to the extent that, without additional sources of water and more efficient use of water, agricultural development will not take place and, in some coastal areas, agriculture will cease to exist" (2).

Without discussing here all the implications of the scarcity of water for economic development in Libya, it is proper to give a brief account of the present water sources. According to existing information, Libya has neither a complex of underground rivers nor perennial above-ground rivers and the only sources of water are rainfall and underground sources.

Rainfall: While the chief feature of Libya is aridity, the coastal zones, because of the influence of the Mediterranean, receive a reasonable annual rainfall. In the vicinity of Tripoli the mean annual rainfall over 78 years was 371.3 mm. (3). But the rainfall is not steady beyond 100 miles from Tripoli. On the eastern coast the annual average may reach as high as 600 mm. in the vicinity of Shabwa on the Jebel Akhdar but it drops below 100 mm. near the eastern border. Beyond 100 miles from the coast, a substantial rainfall is very rare. But when a sudden rainfall occurs, the gullies fill up and some of them empty a substantial amount of water into the sea. Furthermore the sudden flood of gullies (wadi) usually cause a considerable damage to the transportation network and sometimes make a sharp blow on a settlements which might be around.

(2) The I.B.R.D., *the Economic Development of Libya* (The John Hopkins Press, 1960), p.100.

(3) *Ibid*, p.101.

Although the average annual rainfall in some coastal places is more than the minimum annual of 200 mm. required for the cereal crops grown by the farmers, its irregularity often results in total crop failure. The total rainfall may occur within a few days, and a full drought in the rest of the session. This unpredictability complicates the problem of utilizing the water resources in the country. It was estimated that less than a fifth of the total rainfall is available for use by plants and the other four fifths or more is lost through evaporation, or runoff and deep percolation into bedrock aquifers (4).

Underground water: Because of the unpredictability of the rainfall and the absence of perennial fresh-surface water, irrigation from underground water is the primary source for agriculture in Libya. Furthermore, almost all the water used for domestic and industrial purposes is obtained from underground.

The water tables vary in depth according to altitude. In the coastal plains and in the oases the water usually exists at a depth between 5 to 50 metres and in several places it flows out as springs at the surface. On the heights water occasionally occurs at depths of less than 100 metres and in a few places there are flowing springs on the edges of several hills but the quantity of water is not substantial.

Most of the hydrological studies indicate that there is a relatively abundant underground water in Libya but unfortunately in most parts of the country it is of poor quality. This is because the

(4) Libyan-London Universities Joint Research Project on:
Agricultural and Economic Development of Libya. 1970. Vol. 1, p.34.

introduction of seawater into aquifers and other mineral-detrimental influences lead to salinization or at least brackishness of underground water, particularly the lower water tables. Accordingly, a high proportion of the underground water is unusable for both agricultural and domestic purposes but it may be usable for a few industrial projects.

In several places where the fresh underground water exists, over-exploitation in recent years has led to a rapid lowering of the static water level. For example, in the vicinity of Tripoli where the fresh water exists, the average rate of its lowering for the period 1958-62 was about 0.25 metres per annum, but for the year 1961-2 alone a rate of 0.7 metres was recorded (5). In other places, the underground fresh water has not only been lowering, but also a brackish water emerged and in a few cases the water has been salt.

The most interesting, in the matter of water resources in L b a, is the recent discovery of a huge body of subterranean water at the oasis of Kufrah, 900 kilometres south of the eastern coast, by the Occident Petroleum Corporation, in the course of exploration for oil. Yet there are no detailed studies about the quantity and quality of this discovered water, though Business Week has stated that:

"The underground lake is several hundred square miles in area and at least 2,500 ft. deep. In some places, it lies only 300 ft. below ground level. It is probably the biggest body of fresh water in the entire Sahara" (6).

(5) *Ibid*, p.43.

(6) Business Week, *Libya adds water to its Riches* (Feb. 22, 1969).

In the words of Leo Anderson, Occidental's director of 'agribusiness', "there's as much water at Kufrah as there is in the River Nile flowing for the next 200 years" (7). However, the sandy soil as well as the problem of transportation will limit the potentiality of utilizing this water.

The Structure of Land Holding

Because of the influence of the social, historical and environmental conditions, a complicated system of land tenure and usage exists in the country. However, the following four types of land holding can be identified:

(1) Private property. This is usually acquired through inheritance and purchase. Such land is more developed, because the improvements made by the holder remain his own property. Unfortunately, not all the cultivable land is under private ownership. Furthermore, this type of holding is characterized by the unnecessary subdivision fostered by the Islamic law of succession.

(2) Tribal ownership. Under this system of holding, which is backed by traditions rather than recorded titles, different members of the tribe or clan are free to use all the possessions of their group. Since the right of an individual to the fruits of any improvements he may make is not recognized by the others, each has an incentive to take what he can out of the land without putting anything back. In the words of Professor Fisher of Durham, one can see how agriculture is handicapped by the prevalence of this system:

(7) Quoted by Business Week, *Ibid*, p.168.

"Cultivators are unwilling to grow anything but crops that offer the quickest return; rotation to conserve soil fertility is rarely practised; and fruit trees, which need many years to mature, are never planted on holdings that will be re-allocated to a neighbour at the end of a few months" (8).

Unfortunately, this system prevails over so much of the cultivable lands, particularly in the eastern part of the country, that it has for a long time been the most outstanding retarder of agricultural development. The IBRD mission in 1959 observed that:

"The tribal lands in Libya manifest all the weaknesses inherent in communal ownership. Large tracts in zones of high rainfall, which are well suited to the cultivation of crops, are used instead for grazing and have often been overgrazed to the point where the most palatable grasses have been replaced by unpalatable shrubs or bare ground" (9).

(3) Public property. Until recently public lands were confined to urban centres and the desert area. With confiscation of the property of the Italian settlers in 1970, very important prosperous farms became governmental property and consequently several public corporations were set up to run them.

(4) Dedicated property (Waqf). This represents those lands dedicated to mosques and other Islamic institutions. Once the original holder devotes the plot for sacred uses, it becomes the property of the named mosque or institute. The revenue obtained from the land is usually spent on maintaining mosques and supporting those who serve them. However, because of the many religious restrictions on using Waqf lands they are neglected.

(8) W. B. Fisher, *The Middle East*, (Methuen's Advanced Geography, 1971) pp.199.

(9) IBRD's Report, *op.cit.*, pp.130-131.

Pattern of land use and types of farming

Although Libya is huge in area, comprising 1.76 million square kilometres, the total land usable for any form of agriculture is only 3.868 million hectares. Moreover, because of the scarcity of water, the total land under permanent crop is only 134,000 hectares, just 3.5% of the total agricultural land (10). Accordingly, land used agriculturally falls into two broad categories: settled farming where ground water exists or a sufficient rainfall; and animal husbandry and shifting cultivation in the semi-desert and parts of the coastal uplands. The first category may be classified into two groups: irrigated and semi-irrigated farms; and non-irrigated (dry) farms. However, the demarcation between these groups is not absolute.

Another important distinction in settled farming is between two types of organization: traditional or Arab farming and modern farming. The former was until recently the predominant system, but with the introduction of the modern type it lost its lead in terms of agricultural production despite its importance in area. In this type modern mechanization is not widely practiced. But, as one may understand, this is not due to the small capital resources or the primitive stage of technical knowledge; it is rather because of the small size of the holding which renders modern methods inapplicable. The second type consists of the former Italian concessions and the colonial settlements. Modern methods of production are widely used and often capital-intensive techniques are practised in this kind of farming.

(10) Ministry of Planning and Development, *Agriculture in Libya. A plan for its development*, (Govt. Printing Press, Tripoli, 1966), pp.41.

Vegetation and Agricultural Crops:

(1) Cereals are the staple diet of the population. Barley is the most important of all cereals. Owing to its resistance to drought, it is the best suited to the climate. Accordingly it is planted widely in the non-irrigated farms. Wheat, millet, and maize are also planted but their combined share in the total area devoted to cereals is usually less than 25% and the remainder is under barley (11). Although it was estimated that between 30% to 50% of the total agricultural land is devoted to cereals, Libya has for a long time been net importer of cereals. In recent years, on the average two thirds of the total wheat consumed in the country has been imported.

(2) Fruits and vegetables. Because of the country's location, most of the fruit trees and vegetables of the Mediterranean zone are planted but, due to lack of water and the poor quality of the soil, the yield is very low, and probably the lowest in that zone. Olives, dates, citrus, apples, pears, figs, peaches, apricots, grapes and almonds are all planted in Libya. The most important crops from these are olive oil, dates and citrus fruits. Date palms occupied more land than all other fruit trees because dates were an important item in the indigenous diet and because of their resistance to drought conditions. Nevertheless as a result of the rise in the standard of living, dates are no longer important in human diet but are used as animal feed and for distilling alcohol. Olives and olive oil are now the first in value among the

(11) *Ibid*, p.88, Table 40.

tree crops because this tree is tolerant of aridity and its products easily stored. Yet, olive oil being an important source of fat in the Libyan diet, the country is a net importer of olives and olive oil.

Plantation of citrus trees is confined to irrigated farms and citrus fruits were an important item in the list of agricultural exports. At present, the rise of local demand leaves very little for export. Vines were widely planted by the Italian settlers but, because of the government ban on the production and consumption of alcohol, the crops are consumed as fresh grapes and sweet juice.

Tomatoes, onions, potatoes, carrots and peppers are notably cultivated. Following on the growth of cheap motor transport and the rise of local demand for fresh vegetables, the area devoted to market-gardening has been widely increased. With the exception of tomatoes, almost all the vegetable crops are consumed fresh.

(3) Commercial crops. Groundnuts and tobacco are significantly planted. The former has been recently developed and is now the largest item in Libya's agricultural exports. But the scarcity of water limits the expansion of its cultivation. Tobacco is successfully planted on the western heights. All the production is processed by a state corporation which monopolizes and monopsonizes the tobacco industry. Esparto grass was an important commercial crop, collected and exported because of its good quality for the manufacturing of high-grade paper and bank-notes. In 1954 the value of esparto exports was LD. 610,237. Unfortunately the intensive plucking of esparto grass resulted in devastating the land and eroding the soil. Consequently, the government recently prohibited gathering it.

(4) Pastoralism and Animal Husbandry. Libya has been known as a pastoral country since the days of Herodotus who stated "Libya abounding in fleeces". The meagre rainfall and vegetation in the country only support pastoralism. Until recently this activity had been carried out by over a third of the population. As is shown in Table 11.4, in 1962 53% of total agricultural and fishery production was attributed to animal husbandry. The nomadic and semi-nomadic communities still rely on livestock as a source of income, food, raw materials for tents and some household utensils. Until recently, some camels, donkeys, cattle and horses were an important source of power and means of transport.

The geographical conditions such as vegetation and availability of water have greatly influenced the pattern of livestock. Sheep and goats are the most numerous, and are evenly balanced in numbers. Their total number was estimated in 1969 at 3 million. Sheep are of the fat-tailed Barbary type which is well adapted to the climatic conditions. Goats are bred widely on the coastal heights and in the semi-desert area because of their resistance to drought conditions. The goat usually provides more milk than the ewe therefore it is regarded as the poor family's cow. Cattle were used as a source of power. But recently high-yield milk-cows were introduced for providing milk and beef. The total number of cattle was estimated at 100,000 in 1965. Camels were regarded as packing animals, but no longer serve this function. At the present time the camel is only important in providing meat for the populace. Horses and donkeys were the most numerous working animals but the introduction of mechanisation lessened their economic significance.

Poultry breeding is under-developed in traditional farming. It was estimated that the average number of poultry per holding was 2.9 in 1963 (12). In recent years, several poultry enterprises appeared, using modern methods of poultry production.

(5) Forestry: In the not too remote past, scattered patches of temperate forests existed on the edge of the desert. But these forests, much of which consisted of low scrub and bushes, have been continuously reduced. Reduction has been attributed to the climate changes, bush fallowing, charcoal burners and to the incursions of nomadic flocks anxious for fodder during the summer droughts. The Italians cleared most of the remnants for the purpose of expanding their agricultural settlements in Libya, but they also launched new afforestation programme based on replacing the slow-growing indigenous species with fast-growing exotic ones. Although the plantation of some exotic species was thought to have caused the exhaustion of the soils, the planted trees are now the main source of firewood and charcoal. But the ruthless cutting and mishandling had resulted in diminution of the forests. As indicated in Table 1, below, the contribution of the forestry products to the GDP is insignificant, amounting to just LD. 0 4 million in 1969. At the present time the public as well as the government are realizing that forests are valuable not merely for their commercial products but also for the protection of their water supply and soils, as well as their influence on climate conditions. This realization is reflected in the afforestation programmes launched by the government.

(12) *Opid.*, pp.187.

Table 1

GDP of agriculture, forestry and fishery for selected years.



Sources: a. IBRD. *op.cit.*, p.374.
b. National Accounts Section, *op.cit.*, Table 16.

Fishing

Libya has a seaboard of 1,800 km. length which stimulates the fishing industry. During the Italian occupation, a number of government-sponsored enterprises were created to develop this industry. However, fisheries remained as one of the least developed economic pursuits of the country, and its contribution to the national economy is still negligible. As shown in Table 1, the value added by fishing was only LD. 740 thousand in 1969, or about 0.07% of GDP. Two reasons can be suggested for the meagre quantities of fish produced. First, the Libyan side of the Mediterranean is poor in fish because it lacks the nutriment for the fish themselves though it contains an important area for sponges. Also, the coastline does not induce seafaring on

a small scale because it is straight and harbourless. Second, eating fish is not popular in Libya and so the people who practise fishing do not regard it as their dominant activity. In view of the low standard of agricultural production and protein consumption, this unfortunate situation is worthy of the closest attention. In its endeavour to develop fishing, the government is providing storage and transport facilities as well as subsidizing the private enterprises in procuring the efficient methods for a large-scale production.

Minerals

The mineral resources of Libya are not fully assessed and a large scale survey was conducted. The exception is by the oil companies which are instructed to report to the government the existence of any mineral deposits they may find during their oil exploratory operations (13). However, the available information indicates that the country is not heavily endowed with minerals (other than petroleum). The minerals which are known to occur are in small sizes of individual deposits. This fact coupled with difficulty of access has greatly restricted their exploitation. Nevertheless, the government are planning to exploit the mineral deposits reported to exist. These are iron ore, potash, gypsum and chalk.

Iron ore was discovered long ago in the south-west 'Fezzan' and in 1962 a Swiss firm, Alfresco, was granted a 60-year lease for exploration and exploitation rights to iron ore. Apparently it found it unprofitable and therefore abandoned the lease. There are at least two handicaps to commercial exploitation of the ore. First, it was

(13) Abdul Amir Q. Kubbah. *Libya: Its Oil Industry and Economic System* (Ribhani Press - Beirut), 1964, p.21.

discovered that the ferrous content of the ore is low, averaging about 45 percent. (14). Second, the location of the deposits is far from the coast. Therefore the transportation costs would be very high. However, the availability of natural gas in that area may make it profitable to smelt the ore at the mine site. In 1971 the government, realising this, concluded an agreement with a French Consortium to carry out studies.

Large deposits of potash salts were discovered in the desert close to the Gulf of Sirte. With the abundance of natural gas, these deposits provide the basis for fertilizers and chemical industries. Besides potash salts there is also sea salt, the exploitation of which is still confined to salting food. Gypsum, chalk and limestone are quarried to supply the construction industry, in which demand has been rapidly growing. Other minerals which exist in small quantities are borates, natron, lignite and phosphates.

B. SOCIOCULTURAL STRUCTURE

Until the genesis of the modern state in 1951, the history of Libya is one of intermittent domination by Greeks, Phoenicians, Romans, Vandals, Byzantines, Arabs, Spaniards, Turks and Italians. As early as 700 B.C. the Greeks invaded the eastern coast and built several cities, among them Cyrene, ruins of which stand today as a

(14) Stanford Research Institute, *Libya: Area Handbook for 1969* (U.S. Government Printing Office Washington D.C.) p.210.

monument of the Greek colonisation. The Phoenicians, simultaneously, took over the western coast where they established several commercial centres. With the Roman victory in the Punic Wars, the country was incorporated into the Roman empire. After the fall of the Roman empire in the fifth century and until the arrival of Arab Muslims in 643 A.D., Libya was subject to the invasions of Vandals and Byzantines successively. In the course of the decay of the Arab empire during the confused medieval period, the country was subject to a series of crusades waged by Spain. In the middle of the sixteenth century the people of Libya requested the Turks to help them, and subsequently the country acknowledged an Othman suzerainty. The Turks remained dominating the country for some 360 years until the Italians forced them out in 1912. The latter were strongly resisted by the local people who carried on a full-scale guerrilla war for 20 years before Fascist Italy could extinguish it by bloody and barbarous campaigning in 1932. From then Libya became an Italian colony until 1942 when Montgomery's troops forced the Italians out, shortly after the great battle of El-Alamein.

Undoubtedly, the sociocultural conditions were greatly influenced by this past of successive domination by foreign powers, as well as by the geographical features of the country. However, no one of the above invaders had a more lasting effect than the Arab Moslems. The hinterland of their invasions was the Arabian Peninsula and the town of Mecca where Islam was first preached by the Prophet Mohammed. Their coming resulting in total submersion of the old society and Arabization of the country and alteration of the ethnic, religious and cultural composition of the population.

Ethnology

The dominant ethnic composition of the population is an admixture of Arabs and Berbers, the stock of the original inhabitants. There exist also small ethnic minority groups. These include Caucasians and a Negro admixture. The latter reflects slave-trading caravans passing through Libya to the Mediterranean littoral. However, the present population presents a remarkable physical and cultural homogeneity. Characteristically, the people are of the Mediterranean type, of medium stature and averaging about 5'5" in height.

Arabic is the native tongue of the entire indigenous population, with the exception of the few remaining enclaves where the Tamahec dialect of the Berber language predominates, notably among the Tuareg tribes in southwest Libya. English is taught in all schools above the primary level, and French in the second schools. Italian was perpetuated by the numerous Italians living in the country until 1970 and is still widely understood in Tripoli. However, knowledge and speaking of foreign languages are still limited and after the revolution of 1969 only Arabic scripts are allowed even in the passports and airports.

Shortly after the arrival of the Arab Muslims in the seventh century, most of the peoples within the country were converted to Islam and remained almost exclusively Muslim in religion. They profess the basic teachings of Islam, called the Five Pillars of Islam. These in order of rank are: declare the oneness of God; prayer five times a day, fasting from dawn to dusk during the lunar month of Ramadan, almsgiving, and pilgrimage to Mecca at least once in a lifetime. The people also acknowledge the prohibitions of Islam, such as those against adultery, gambling, usury, and the consumption of carrion, blood, pork, alcohol, and larceny. Following the revolution of 1969

and the religious fervour of the new regime to base its radical changes on a juristic infrastructure of Islamic teachings, most of the prohibitions as well as some of the Islamic injunctions have been enforced by law, and wrongdoers are punished according to the Islamic law. Drunken men, selleers of alcoholic beverages and gamblers face imprisonment. The adulterer risks being stoned to death. The thief risks the cutting off of one of his hands.

Family Structure and Relations: The family in Libya is the fundamental and essential repository of every individual's personal identity. This influences all social relations in the country. The importance of these principles are clearly expressed in the Constitution which provides that the family is the basis of the society and is entitled to the protection of the state. The Constitution also stipulates that the state should protect and encourage marriage and provide, as far as possible, an appropriate standard of living for every family.

Marriage is almost universal in Libya, and celibacy is abnormal. Until recently, early matrimony and fecundity have been emphasized rather than criticized. Marriage is a simple contract which takes effect just after the acknowledgement of the intended union is declared by the two parties (usually through their agents) in the presence of at least two male witnesses though the wedding may not take place at once. But the arrangement of the marriage is complicated and its heavy costs bear hard on the groom who should also make a bridal payment. This payment is determined by the social standing of the girl's family. In general it is a substantial amount made in one lump sum, which is not easy for a young man depending solely on wages or a salary. From

the socioeconomic standpoint, the soaring cost of marriage is one of the crucial problems. The government tried to ease it and issued an administrative decree lowering the bridal payment (dowry). But few responded.

As in most Muslim societies, a great emphasis is placed upon premarital chastity of the bride whose virginity is a necessary condition for the validity of the marriage. Polygamy is legal and a man may have as many as four wives simultaneously. But monogamy is regarded as the best form of family life, and most unions are monogamous. Divorce is legally allowed. It is just to dissolve the marriage contract. But, while the husband has an unqualified right to divorce his wife at any time, the wife can secure a divorce only through the good offices of the judge, who can grant her divorce only if she proves the failure of the husband to maintain conjugal relations.

Activities within the home are generally under the authority of the wife, but a patriarchal relationship dominates with the husband making all major decisions. His approval is sought - if only tacitly - for the wife to visit the home of friends that live far away. Responsibility for the support of the children and their mother falls upon the father alone, or, in his incapacity, upon his closest kinsmen whose failure to help is regarded as morally reprehensible. The mother is in no way obliged to assist the husband financially in supporting their children and herself, even if she is wealthy. In the Islamic law, marriage is not a financial partnership. The Libyan gentleman is not expected to rely on his wife's financial support or even to show interest in his wife's wealth. This explains why the employment of women is socially discouraged and why most of the employed girls discontinue their employment after marriage.

There have, however, been recent changes and some educated wives share with their husbands the responsibility of the family support. But when the question comes before the court, the traditional rules are strictly applied. In a case of divorce, the wife is entitled only to her deferred dowry and the nuptials regardless of the wealth she might assist her husband to accumulate. In the event of his death, she receives one-fourth of her deceased husband's estate if there are no children; otherwise she receives only one-eighth.

The Libyan family is of an extended type. Usually three generations are represented in a single household; it is common for married sons to continue living with their parents and vice versa. In practice family obligations take precedence over all others. A member of the family is expected to aid and assist his paternal kinsmen and kinswomen and, in turn, he may call upon kinsmen in time of need. The wife keeps her maiden name. Family succession proceeds along the line of descent of male members, except among the Tuareg tribes. Traditionally, it is taken for granted that the individual, in business and government alike, will use his position to benefit his kin groups.

Such are the bases of the Libyan family. But with the passage of time and social influence of the oil wealth, the forces of modernization are gradually breaking them down. The modern concepts of individual independence and marital privacy are now regarded as attractive alternatives to communal living. The rising per capita income has enabled the young married couples to live in separate homes. Most of the young men are retaining the larger portion of their income for themselves and their immediate kin rather than turning it over to their extended families. The tight hold of the husband over his wife has been somewhat loosened. She influences her husband to limit his contacts with

his blood relatives. The social circle of the couples is widened beyond the kin lineages.

Social Values and Ethos: The influences of Islamic religion, tribalism and the climate are strikingly reflected in the social values around which the individual is to some extent bound to structure his life. Despite the invasion of Western secularism, Islamic faith is still the strongest bond of social cohesion in the country. God figures large in the social attitudes. The ideal person is one who follows the precepts of Islam and leads a pious life. It is still believed that there are men who are elect of God and endowed with spiritual power *barakah*. Contact with such men is sought in the hope that good fortune can be obtained.

The omnipotence of God is the foundation of thinking. Phrases such as; 'if God wills, and God willed it so' are widely used. Personal effort is, however, recommended and the individual is encouraged to change his physical and social environment within the fate decreed by God. Unfortunately, the rigid interpretation of the omnipotence of God and the exaggeration of the role of spiritual power have reinforced the sense of dependence on forces beyond human control, and this tends to frustrate initiative and reform. At the present time, some of these beliefs are attacked by the government, particularly those connected with the magic, the veneration of holy men and holy places. Generosity and hospitality are important principles and in rural areas are still lavished in a way which would be unthinkable in any advanced society. Neighbourly cooperation is one of the social obligations. In times of joy, the neighbour joins in the festivities; similarly, in times of hardship he offers his sympathy and help.

Education and intellectual endeavours are valued when they are associated with religious scholarship and sacred writings. Traditionally, arts and secular education are undervalued. But with its recent association with economic and political success, the value of secular education is now recognized by the majority of the people. However, people still do not have a great enthusiasm for acquiring technical skills. This is due to the fact that the social status of physical labour is low and in the social standing efficiency and industriousness do not count as much as family lineage and other non-technical criteria. Besides, most people prefer leisure to the acquisition of material things.

Outward respect is shown the older men who are also entitled to obedience from the young in their own family. Women are still, in the traditional view, subordinate to men. The ideal woman stays at home and does not expose herself to the view of men outside the family. The seclusion of women, *pardah*, is still maintained in Libya, perhaps more strictly than most other Moslem countries. The main factor behind the seclusion of women in Libya is the high value placed on chastity and marital fidelity of the woman. This principle is also laid down by Islam.

C. THE SOCIOECONOMIC CONDITIONS

The Political Developments

After the liberation of the country by Montgomery's troops in 1943, the Libyans found themselves under military administration of the British in the North and the French in the South. But this was f r

a short period. When the status of the former Italian Colonies came up for consideration, the task of deciding the future of Libya was given to the Big Four, who later reached deadlock. The French suggested that the country should be carved up between them, the British and the Italians. The Russians insisted on having their say in the affairs of the country. The Americans favoured handing it over to the UN trusteeship for a decade. The British, who were not enthusiastic over the possibility of Italian return, were eager to share it with the French but they supported the American idea. As compromise was not possible, the question was referred to the United Nations which decided in 1949 that Libya should be independent by 1951.

During the transitional period (between 1949 and 51), a relatively advanced and democratic constitution was made for the country, but its essentials were never fully respected. The British, who were firmly *in situ* and looking for alternative Middle East bases in the event of the evacuation of the Suez Canal Zone, managed installing in the country their friends, notably the former King Idris. Shortly after declaration of independence on December 1951, the former King and his clique banned all the political parties and assured Britain as well as the U.S.A. full freedom to use several places in the country as military bases. Until the revolution of 1969, the political power in the country was concentrated in the hands of the King who despite the constitutional constraints tried to combine in his person all the various elements of political institutions. As growing oil wealth and the impact of the outside world made the business of the government more complicated, the monarchial regime failed to cope with the problems of today's economic and social changes. Also its continuous reliance on a number of fickle and corruptible leaders, who indulged in conspicuous and wasteful spending, brought in a widespread discontent.

In 1967, this discontent took the form of a stirring of revolutionary sentiments, which if allowed to swell would surely have destroyed the regime two years earlier. In September 1969, a number of junior army officers revolted against the regime and took over the power in the country, which was at once proclaimed a republic. The Libyan Arab Republic's supreme authority in the new republic was assumed by twelve young officers who form the present Revolutionary Command Council. The policy of the revolutionary regime is directed according to the principle of the revolution. These in order are; freedom, socialism and Arab unity. During the initial period of the new regime, the government concentrated its efforts on rooting out the corruption that was rife under the monarchical regime and on ousting the British and Americans from military bases on Libyan soil.

In the area of economic development and socialism, the revolutionary regime's policy, as laid down in the principles of the Provisional Constitution (PC) of December 1969, aims at:- achieving socialism, the application of which should be based on the Islamic and Arab traditions and its human values; attaining increased production and equitable distribution; releasing the national economy from foreign entanglement influence, and transmuting it into a productive national economy. As a supplementation to these principles, the government's recent activities have been coloured by declaration of ambitious schemes designed to make up for lost time and to equip the country for the second half of the twentieth century. But there are many brakes on completion of these schemes which look impressive on paper. Besides the lack of skilled and unskilled labour and other socioeconomic problems, the poor

quality of planning and indecisive bureaucracy proved to be one of the solid brakes on the country's striving for development.

In 1973, the regime made a serious attempt to break out from these constraints and launched what is ~~so~~ called the revolutionary programme. This programme entailed the suspension of some of the existing laws, trimming the bureaucracy and launching a cultural revolution. The main instruments of these programmes have been the Popular Committees, whose members were elected from all levels of society and empowered to run government machinery with the authority to dismiss officials up to the rank of local governor or head of public corporation. It is too early to evaluate the activities of the Popular Committees, but some reports refer to countless mistakes made by some of their members.

On foreign affairs, Libya established a prominent role in Arab affairs especially on the Palestine issue and the government relations with non-Arab countries is determined by the Arab cause. For example, the nationalization of BP's assets in 1971 was as a retribution for Britain's collusion in the loss of tiny islands in the Gulf to Iran. Another important principle of the government external policy is the Arab unity. The leaders of the revolution wear a mantle of luminous sincerity towards this principle, and they were the guiding spirit of the establishment of the Federation of Arab Republics (FAR) comprising Egypt, Libya and Syria. Col. Quaddafi was the architect of the 1972 plan for the fusion of Egypt and Libya into a single state by September 1973. After the failure of this plan to materialise, he reached agreement with President Bourguiba of Tunisia on a merger of Libya with Tunisia into a single state proposed to the 'Islamic Arab Republic' (IAR). Unfortunately, most of the Libyan attempts for Arab

unity were torpedoed and it seems that the slogan of Arab unity is still to continue to be no more than an ephemeral phenomenon. Nevertheless, despite its small population and backwardness, Libya in those days enjoyed considerable prestige not only in the Arab World but also within the African Continent. This was partly owing to its oil wealth, but it also owed something to the outstanding personality of Col. Quaddafi.

Population

There was no reliable count of the population until 1954 when the first census was undertaken. At that time the population of Libya was just under 1.1 million, of whom 74% were classified as settled, 26% as nomads or semi-nomads. The following census in 1964 showed that the total population was 1.6 million, consisting of 1,515,501 citizens and 48,868 aliens. This represents an increase of half a million over the result of the 1954's census or an average annual compound rate of growth of 3.65%. However, in spite of this explosive population growth Libya remains one of the under-populated countries.

Besides the high fertility which is the result of the early and universal marriage with emphasis on quickly having children, there are three explanations for the high rate of population growth in Libya. First, it was thought that the census of 1954, which was used as a base, was an undercount because the registration procedures were deficient as well as the people were not accustomed to taking part in a census (15). Second, during the period between the two censuses most of the Libyans who had left the country during the Italian invasion returned home. Thirdly, and most important, the improvement of health

(15) Ministry of Planning and Development, *Statistical Paper No. 7*, Memog. 25 May 1965 Tripolo, p.8.

conditions resulted in a dramatic fall of the infant mortality rate. This was a high fertility rate led to a rise in the natural rate of increase.

For planning purposes, the authorities have recently assumed that the Libyan population is growing at a linear rate of 3.6% a year (16). On this basis, one can project that the total number of people in 1974 would be around 2.4 million and the country will start the beginning of the next century with a population of 5 million. However, it is quite possible that the spread of education and economic development may combinedly move Libya before the end of this century into the third stage of the population cycle where both birth and death rates are low and therefore the rate of natural increase will decline.

Health Conditions

Libya is in general a healthy land. The climate of the coastal belt, where almost all the population is concentrated, is healthy and bracing; plenty of sunshine and mild temperature. Aridity inhibits the spread of malaria, which characterizes many of the Mediterranean lands. However the malnutrition in the past and the poor sanitation have resulted in the existence of three chronic diseases which often incapacitate individuals for productive employment over prolonged periods. These diseases are: tuberculosis, eye infection - chiefly trachoma - gastro-enteritis and tetanus.

Tuberculosis is the most debilitating disease; it incapacitates individuals for productive employment over prolonged periods. Its incidence, which has been known in Libya for a long time, is connected

(16) *Ibid*, p.1.

with lack of food and poor housing conditions, especially in the slums. In 1953, when a mass BCG vaccination campaign was conducted to protect the population, the rate of infection was reported to be as high as about 50 percent within the age group of 15-18 years, and about 1,100 new cases of pulmonary tuberculosis were said to have occurred each year (17). Certainly, the recent improvement in the standard of living and the health services have lessened the annual incidence. But in terms of the accumulated cases, Libya still ranks high within the Mediterranean region, and the prevalence of the disease is a major health problem. According to a recent X-ray examination conducted by a W.H.O. medical team, about 5.8 percent of the age group of 15-19 years were having shadows indicating active tuberculosis (18). In 1972, it was reported that, "Even if the lowest estimate of the bacillary excretors is taken into consideration, there could have been no less than about 13,500 cases at the start of the tuberculosis control programme in 1969 (positive on direct microscopy). Culture examinations would probably have added another 5,000 to 6,000 infectious cases" (19).

Eye infection (trachoma) is still a debilitating disease scouring the population, and its prevalence is said to affect 75 percent of the population (20). Until recently, some incidence of trachome resulted in partial loss of sight and total blindness. At the present time, it is estimated that about 2 percent of the group of over 40 year of age are blind. The main causes of the disease are the meteorological

(17) W.H.O.'s Regional Office for the Eastern Mediterranean, *Assignment Report Tuberculosis Control in Libya* (Tripoli, June 1972) p.3 (unpublished).

(18) *Ibid*, p.4.

(19) *Ibid*, p.5.

(20) W.H.O.'s R.O.F.E.M., *Planning of Health Services Kingdom of Libya* (Alexandria, April 1967) p.131.

conditions especially the south winds which take the form of sand storms (ghiblis). Also, the poor environmental sanitation contributes to its widespread prevalence. Gastro-enteritis and tetanus were attributed to the lack of sanitation systems. Until recently, a potable water supply and sewage systems were confined to the big cities, and the people in rural areas obtained their needs of water from wells, the water of which is not suitable for drinking without chemical treatment. This is regarded as the main cause of the incidence of gastro-enteritis and tetanus as well as the spread of the other infectious diseases (21).

In addition to those diseases, the population were exposed to explosion of mines sown across the country. It was estimated that during the last World War the belligerents had laid about 4 million mines between Alamein in Egypt and Mareth in Tunisia; in 1957 three million were still untouched and ready to be stepped on or driven over (22). A considerable number of the population was killed or disabled by the explosion of these mines. Probably the total number of disabled, including the blind, is one of the outstanding social problems in Libya.

Urbanization

On the eve of independence, no more than 23% of the population were living in towns (23). At the present time, though accurate statistics are lacking, no less than 40% of the population lives in towns of more than 10,000 people. An important feature of the urbanization in Libya is that about 75% of the total people living in urban centres are concentrated in only two towns: Tripoli and Benghazi.

(21) The Times, 28.1.1974.

(22) John Wright, *op.cit.*, p.246.

(23) UN. *A General Economic Appraisal of Libya*, prepared by John Lindberg, New York, 1952, p.6.

There are a number of reasons for this urban concentration and the rise of the percentage of urbanization. First, the change in political status resulted in the inevitable concentration of the administrative institutions and personnel in both Tripoli and Benghazi. (According to the constitution of the morarchical regime, Tripoli and Benghazi were declared as joint capitals of the kingdom.) Second, a large number of Libyans who fled from the country during the Italian occupation returned home and mostly settled in the two large towns. Third, the expansion of wage economy in towns attracted the landless labourers to move to the urban centres. Fourth, the upsurge of the oil industry at the end of the 1950s was accompanied by an influx of large numbers of foreign participants. Fifth, due to the neglect of the rural areas, almost all the educated young men and a high percentage of the young people moved toward Tripoli and Benghazi, not only to seek jobs but to enjoy the modern amenities of life, which were until recently confined to those two cities.

The most outstanding problem derived from the excessive growth of urbanization is the acute shortage of housing. One feature of this problem has for a long time been the large shanty towns on the outskirts of Tripoli and Benghazi. Another feature was the rapid increase in residential rentals. In 1972 rents paid for a moderate flat in Tripoli or Benghazi became some of the highest in the world. While the problem is most desperately urgent in the urban centres, it should however be noted that the housing situation in the rural areas is even worse.

D. THE PRE-OIL ECONOMIC CONDITIONS

As one can infer from Higgins's statement quoted at the start of this chapter, the economic situation before the discovery of oil was extremely bad and its improvement was faced by numerous fissiparous tendencies. On the eve of independence, a United Nations team estimated the total national income for Libya to be somewhat below LD. 15 million (24). Assuming a total population of one million, the per capita income was less than LD. 15, or less than \$42 at current parity. A high percentage of the country's income was received by the 50,000 Italian settlers and several thousands of other aliens. These results, even allowing a reasonably wide margin of error, confirmed the extreme poverty of the country at that time. Living standard of the population approached barest subsistence level and was distinctly below those of neighbouring countries. For instance, dates and a little millet formed the only food for several weeks in the rural areas of Libya. Under such circumstances, there was no wonder why many questioned what Libya should do with freedom and independence.

Nevertheless, with independence two important assets were uncovered. One was the country's strategic location. The 1,800 kilometres of coastline made the country a natural base for the command of the entire Mediterranean, over which the world powers were squabbling. The other was an external asset. This was that the United Nations, through which Libya won its independence, had accepted a clear responsibility for assisting Libya to achieve a higher standard of living.

(24) UN, *A General Economic Appraisal of Libya*, Prepared by John Lindberg, 1953, pp.32.

The first asset was rented to Britain and the U.S. as a site of military and air bases. But this was unpopular and widely criticized on the ground that the government could ensure substantial amounts of foreign aid without surrendering parts of the country to the foreign military occupation. It was the second asset of which Libya made full use.

Development Programming

The initiation of preparing programmes to improve the economic situation and to haul the country out of the mire of poverty began in 1950, a year before declaration of independence. Following the UN resolution 398, which recommended preparing a complete plan for developing the country, a UN team of experts led by Professor Benjamin Higgins came to Libya to formulate the country's development policy. Just after the declaration of independence on Christmas Eve in 1951, the Higgins team submitted to the government of independent Libya a report entitled, 'the Economic and Social Development of Libya'. The report contained an analysis of the country's development conditions and a long-term development strategy comprising three phases.

In the first phase special emphasis was placed on the urgently needed training, education and health improvements along with some reconstruction of war damage. In this phase, there was no proposal for new industries or any sort of new infrastructure. Phase 2 called for increased attention to education and training; increase in agricultural production by all possible means; absorption of manpower in public utility projects; increase in imports; increase in the share of capital formation in national income from 5 to 15 percent (none of which was to come from national savings) and encouraging light industries.

In the third phase it was envisaged that the country would reach a stage of self-sustained economic development. So that the main objectives of this phase were the achievement of balanced trade, balanced budgets and independence of foreign financial and technical assistance.

In both the first and the second phase capital and technical assistance were vital. However, in this regard, the Higgins team made two observations, which, despite their importance were not taken into consideration. The first was "Foreign governments providing funds for Libyan economic development.... are responsible for these funds to their own legislature. Naturally, they will wish to have some voice in deciding how these funds are spent" (25). The second was "Foreign assistance is necessary at present, but only the Libyan people themselves can carry out the plan and thereby ultimately raise their level of economic and social welfare (26).

As a beginning for planning activity, the team also put in the hand of the Libyan authorities a workable blueprint for a six year plan covering the first phase. The plan was suggested to be for the period 1952/53 - 1957/58 with targeted expenditure of LD. 2.3 million in the first year and an annual average of LD. 2.8 million for the following five years (27). In 1952, after the foreign financial aid was assured, the recommendations were adopted. In the same year, three development agencies were created to carry out or to coordinate planning activity. The first of these was the Libyan Public Development and Stabilization Agency (LPDSA). This agency was designed to carry out

(25) UN. *The Economic and Social Development of Libya*, 1953, p. 4.

(26) *Ibid*, p. 8.

(27) IBRD. *The Economic Development of Libya*; The John Hopkins Press, 1960, p.49.

programmes for the use of the funds for economic development received from Britain, with minor contributions from other countries. The second was the Libyan Finance Corporation (LFC), the major purpose of which was to encourage private undertakings in agriculture by providing them with loans and other credit facilities. The operation of this institution was handicapped by the shortage of funds made available as its capital. In 1958, it was finally liquidated. The third was the Economic Planning Committee (EPC). The EPC was an advisory body directed to report on all matters related to development activities, and in 1956 it was replaced by the Development Board (DB).

In 1955, the United States increased its financial contribution to development programming in Libya after it was granted the right to maintain military bases in the country. But the Americans insisted on directing the use of their funds. Accordingly an American development agency came on the scene, called 'the Libyan-American Reconstruction Commission (LARC)'. With the coming of the LARC and the vision of American money, it was felt that the Higgins plan had become outdated and was to be abandoned. Meanwhile, LARC prepared a five-year development programme for the period 1956/57 - 1960/61 with a total expenditure estimated at LD. 3 million, most of which was to be provided by the U.S. The LARC's Plan, unlike that of Higgins, included a number of infra-structural projects. But the plan was never implemented.

From 1957 till 1962, some development projects chosen on *ad hoc* basis were carried out by the LARC's operating agency, Libyan-American Joint Services (LAJS), and the government of Libya. But during this period, most of the development efforts were concentrated on the building of the new capital, Beida, on the Green Mountain.

Also, during this period, the development machinery was reorganized. At the suggestion of the World Bank's mission, in 1960 all the Foreign development agencies were dissolved and all their assets and liabilities were transferred to DB, which was strengthened and made responsible for all matters pertaining to development planning in the country. However, though this reorganization did symbolise the transition from the phase of foreign planning for Libyans to the phase of planning by and for Libyans themselves, the development activity remained for two years under the influence of the Foreign development agencies because the DB inherited all their personnel, many past decisions and the projects undertaken by them.

Evolution of pre-oil development activity

In terms of expenditure, the amounts specified for development totalled LD. 50 million during the ten years 1952/53 - 1962/63. This, in addition to unspecified amounts spent for development by the provincial governments and municipalities, was significantly large, on the scale of the Libyan economy. As indicated in Table 2 below, more than 90 percent of development allocations was spent by the development agencies, including the DB. Also, the table shows that there was tremendous growth in the annual spending for development, except 1959/60. The exception of this year was due to the ending of the British contribution and the diversion of some development forces to the general budget.

There was no firm assessment of the impact of development expenditure on the standard of living, but the development in national income may provide a useful measure of its effectiveness. During the ten years there was a rapid increase in Libya's gross domestic product (GDP)

Table 2

Development Expenditure during 1952/53 to 1962/63



Source: The Development of Public Finance in Libya (1944-1963)
Bank of Libya. August 1965.

(d) By the Development Board.

at current prices. As reported by World Bank's mission GDP at factor cost stood at LD. 52.2 million in 1958, and it was estimated to reach a figure of about LD. 110 million in 1961. This is a spectacular change as compared to the estimated figure of 1950, but it should be borne in mind that this increase in GDP was largely accounted for by "extraneous forces" such as oil exploration and the expenditure by foreign troops stationed in the country. Also, it was reported that the impressive

behaviour of this aggregate was not fully reflected in the living standard of the Libyan people. There were two reasons for this. First, the figures of GDP were inflated by the upward movement of the price level which was estimated at an annual average of 12 to 15 percent. Second, the additional income was unevenly distributed, and according to the World Bank's mission only a small part of it had reached the man in the countryside (28).

Nevertheless there were remarkable indications of general improvement in living standards. The per capita consumption had on average risen by more than 50 percent during the 1950s (29). There had been a marked shift away from staple commodities to more expensive ones. The education and health services were considerably expanded; but these services were not easily in the reach of the families of tillers and shepherds, mainly because the building of schools and health centres was almost entirely confined to urban areas. In addition, some of the war-time damage had been repaired and some social capital projects were accomplished. Among the notable projects accomplishment of a broadcasting system, the foundation of the Libyan University, the construction of about 100 schools, and the improvement and expansion of the hospitals existing since the Italian occupation. In the field of transportation, the major achievements were the maintenance and improvement of the 1,882 km. coastal road which links all the coastal cities and the construction of a 620 km. road linking Sebha, the administrative centre of the Fezzan area (south-west) with the coast.

(28) *Ibid*, pp. 37,38.

(29) *Ibid*, p.38.

In agriculture, apart from a wide range of small projects, the notable schemes were the setting up of the National Agricultural Bank and the settlement of 120 families in newly irrigated land. However, the impact of these schemes was insignificant on the performance of the agricultural sector. As shown in Table 3 below, only about one-quarter of the total GDP in 1958 was derived from agriculture, on which over half the population were dependent for their living. The reason for this poor performance of agriculture was reported to be that the benefits of development schemes was almost entirely confined to a few farms run mainly by non-Libyans (30). This means that the efforts to improve the living conditions of peasants and pastoralists have met with little apparent success.

Table 3

Industrial Origin of Gross Domestic Product at Factor Cost in 1958

Economic Activity		LD. millions	Percent
1.	Agriculture, forestry and fishing	13.6	26.1
2.	Petroleum prospecting and quarrying	3.6	6.9
3.	Manufacturing and repairing	6.0	11.5
4.	Construction	1.8	3.4
5.	Electricity and gas	0.8	1.5
6.	Transportation, storage and communication	2.9	5.6
7.	Wholesale and retail trade	7.3	14.0
8.	Banking, insurance, ownership of dwellings, other services	9.5	18.2
9.	Public administration and defense	6.7	12.8
Gross domestic product at factor cost		52.2	100.0

Source: IBRD Report, *op.cit.*, p.371.

(30) *Ibid*, p.35.

In industry, the picture was quite different. Although the economic conditions in the early 1950s were not regarded ~~as~~ in favour of industrialization and the government was advised to avoid wasting the scanty financial resources in industrial programmes, the performance of private initiative in the industrial sector was considerably good. As shown in Table 4 below, the share of industry in GDP ~~in~~ 1958, was 11.5%. According to the official report, industry expanded by something like 50% during the period 1952-1958.

Table 4

Sources of the Value Added in Industrial Sector, 1958



Illustration removed for copyright restrictions

Source: IBRD Report, *op.cit.*, pp. 373,376.

This increase, which was in response to the rise in general demand, was attributed to the expansion of the existing factories, which were almost all managed by foreigners, rather than through the establishment of new undertakings. As indicated in Table 4, industry was still confined

to producing light consumption goods for local demand and service trades such as repairing of vehicles and appliances. Moreover, it can be inferred from Table 4 that industry in Libya was in 1959 still in a primitive stage even though its contribution to GDP was almost half of the output contributed by the agricultural sector.

Despite these apparent improvements in the economic conditions of the country, the overall results were not considered as being satisfactory compared with the relatively large amount of money spent. The way development activity was handled aroused a great deal of local criticism, mostly directed against the foreign development agencies; which in the eyes of the public, were pursuing the interests of their own countries. Regardless of the validity of this public judgment, two general observations about the work of development agencies must be made. First, the existence of so many developing agencies and the poor co-ordination between their work had led to misuse of resources. It was reported that only a comparatively small proportion of the amounts specified as investment was directed into productive channels (31).

Even more, the invested proportion was not directed to the more needed projects such as training and agriculture. Instead, it was spent on projects which were either showy schemes (as the two stations of the broadcasting system) or were chosen on political ground. Second, they made no attempt to encourage local activities. They conducted their work virtually in a vacuum, without a local participation which is a vital ingredient of any successful programme of economic development. So most of the projects were chosen on the basis of what was felt Libyans ought to prefer rather than any expressed Libyan preference.

(31) *Ibid*, p.55.

However, though it was said to be true that some of the agencies gave special preferences for their own nationals in the award of contracts instead of opening them to competitive international bidding, it is unfair to put all the responsibility on them and thereby leave the foreigners to get the blame. The peculiarity of Libya's political conditions and the weakness of the administrative structure contributed substantially to the failure of development programmes. The then prevailing federal system, with conflicts between each of the three provinces and the Federal government, added further complexities to the problem of backwardness. The tribal leaders who were promoted by the former King Idris to form the ruling oligarchy were mainly interested for their own power, prestige and enrichment. In such circumstances, there was no wonder why it was reported that the projects which had come in for the severest criticism were those initiated at the special request of the government. For example, the programme for constructing a new capital was financed out of development funds, and was launched at the order of the King.

The External Sector

The figures relating to Libya's foreign trade and the other external transactions are given in Tables 1 and 2 in the statistical appendix. From these tables, the following observations may be drawn. Until 1962, which was the first full year of oil shipments, the most striking feature of the external sector was a large and chronic deficit in the balance of merchandise trade. During the Italian occupation, reportedly the value of exports had never exceeded 10 per cent of the value of imports; and the deficit was covered by metropolitan-government subsidies and the private investments which were pouring into

the country from Italy. After the war the British military authorities, who were running the main parts of Libya, tried to reduce the deficit by reducing imports and promoting exports. Exports, which were composed of scrap metal collected from the debris of war in the desert and of modest quantities of barley and dates, did double during the period between 1946-1950; but not sufficiently to eliminate the heavy preponderance of imports in the merchandise account. The consequent deficit was financed partly by budgetary grants in aid from Britain and partly by running down such small reserves of foreign exchange as the country had been able to accumulate during the war.

In the first three years after independence (1952-54) Libya's foreign trade at current prices remained static at about the 1951 level. This was probably due to the period having been one of consolidation in the life of the new state, but the following explanations must be adduced. On the side of exports, the supplies of scrap metal had become almost exhausted and following the collapse of the Korean War boom the price of esparto grass declined sharply; from L. 40 a ton in 1952 to L. 13 in 1956. On the side of imports, the country's capacity to import was severely constrained, in the first place by supply and market conditions and in the second place, the British did not increase the financial aid to Libya until 1954 when the Libyan authorities granted them the right to maintain military bases in the Libyan territory in return for an annual payment of L. 3.75 million.

From 1955 on imports showed a continuous rise, reaching LD. 40 million in 1960, even after excluding goods imported directly by the oil companies. Whereas during the same period the earnings from exports and

re-exports fluctuated around a mean of about LD. 4 million a year. Thus in 1960 earnings financed only about 10 percent of the import bill. Until 1963 when the exports of crude oil reversed this unfavourable trend, the country's large trade deficit in addition to some invisible payments abroad were met from foreign aid, rents of military bases and from other invisible receipts in the form of the expenditure of foreigners in the country. These latter were chiefly oil companies prospecting in the Libyan desert and both the American and British troops stationed in Libya. Total receipts of foreign exchange from all these sources exceeded the deficits in both visible and invisible transactions, therefore the balance of payment recorded a surplus, a feature interestingly maintained ever since independence.

Prima facie, it would appear from the record of foreign trade figures that the Libyan's standard of living was higher than their country's economic strength would warrant. At this point, unfortunately the import figures were rather deceptive. For almost all the imports were absorbed by the foreign sector: before the war, the Italian community, after the war, the foreign troops and their dependents as well as the remaining Italian settlers. Also, during the first decade of independence the tremendous increase in imports was not associated with the country's well-being as a whole. This was clearly mentioned in the 1959 report of the World Bank mission to Libya:

'A sizeable but indeterminate proportion of Libya's imports is consumed by the 'foreign sector', i.e. by foreign governments and oil companies and their non-Libyan employees. It can thus be said that these governments and companies have helped to create the "gap" in the balance of payments as well as to fill it" (32).

(32) *Ibid.*

Undoubtedly, the above statement ascertains two important conclusions reached by the Mission. One was that the sizeable amounts of funds spent and the efforts made to promote the general prosperity in the country fell a long way short of realizing this objective. The other was that on the eve of the advent of the oil industry the state of the economy was still an example of what the economists used to call a "dual economy". On the one hand, the majority of the population were tilling the land or grazing their livestock on the fringes of the desert, largely consuming what they produced and supplying most of their own needs. On the other hand, there was a small but rapidly growing modern sector, largely dominated by foreigners, some of whom were permanent residents like the 40,000 Italians centred in the main cities, others were living there on a more temporary basis, i.e. foreign troops and their dependents, technical assistance personnel working under the United Nations and the American aid programmes, and the foreign employees of oil companies which were undertaking large-scale exploring operations in the country. These people enjoyed a much higher standard of living than the average Libyan, and a sizeable part of the economy was geared to serve their needs.

Before leaving this issue, an important caution remains to be presented. The traditional sector was very weak; the underemployment on the land was reportedly much higher than one might imagine. With almost every month bringing news of further discoveries of oil and the great publicity about the new-found fortune of the subsoil wealth, the situation of the traditional sector became rather more shaky. Increasingly, men from the countryside were drifting to the towns. Tillers and shepherds who smelt oil swarmed around oil fields. Indeed all the signs of the revolution of rising expectations were already emerging. Later chapters will examine how far the expectations have been realised.

CHAPTER III

THE INSTITUTIONAL BACKGROUND OF OIL INDUSTRY AND ITS QUALITATIVE IMPACTS

And who shall collect
fruit from the desert? (1)

As indicated at the beginning, the scope of this study is mainly the implications of the oil industry for economic development of the country. However, to set the stage initially, this chapter is devoted to portraying the institutional framework of the industry and examining its qualitative impacts on the factors linked directly with its operations.

OIL INDUSTRY: INSTITUTIONAL BACKGROUND

Details on the historical perspective of Libya's dramatic development as one of the world's leading oil producers and exporters are given in the Appendix to this study. Here the main concern is to review the organisational development and its implications. However, some basic descriptive facts must first be emphasised.

Drilling operations started in the mid-1950s and the first signs of oil appeared early in 1958. Some eighteen months later the first oil field was discovered and first producing well announced an initial flow of 17,500 barrels a day (b/d); this confirmed that under the Libyan desert there were sizeable accumulations of hydrocarbons. Since then the exploration for oil and the development of the discovered fields has continued. In September 1961 Libyan oil, which is still almost totally

(1) Synesius, in Letter V, as quoted by Anthony Thwaite, *The Stones of Emptiness* (London: Oxford University Press, 1967) p.44.

exported in the form of crude, entered the world export market with average daily exports of 40,000 barrels. Less than a decade later, Libya ranked as the world's third exporting and sixth producing nation. Oil production and exports reached a peak of about 3.3 million b/d in 1970, when the situation was reversed by the government conservation policy which resulted in a drop of production to just over 2.2 million b/d in 1973.

It is to be noted that this is a relatively high rate of production, in relation to the proven reserves of oil in Libya, which are comparatively not so great as those of the other main producing countries. Apparently Libya's proven reserves, at just over 35 billion barrels in 1972, are not much more than one-fifth of those in Saudi Arabia or less than half those of either Kuwait or Iran.

The development of the oil industry in Libya broke all precedents in speed of growth. In view of the oil glut at that time, the search for Libyan oil and its rapid development could not be explained in terms of the expected profitability alone. Indeed, at this point, some scholars found it difficult to justify the rush of oil companies to the Libyan desert.

"From the industry viewpoint, using expected profitability as the relevant decision parameter, it is not obvious that the search for Libyan oil can be justified. Middle East reserves were enormous and easily expandable. The cost of Middle East oil was exceptionally low and, on the whole, the oil was well located. The alternative use of investment funds in the Middle East would have clearly yielded a significantly higher rate of expected return than in Libya" (2).

(2) George Heitmann, *Libya and International Oil Politics*, *Proceedings of Council of Economics* (Annual meeting, Washington, D.C. Feb. 1969), p.24.

So the growth of the industry in Libya is to be explained in other terms. There is a combination of factors which coalesced to bring about this oil miracle.

Causes of the rapid development of oil in Libya

The geopolitical setting. The political situation in the Middle East has been dangerously explosive, and the disruption of the region's oil flow had already been vividly demonstrated shortly after the outbreak of the Suez crises. On the other hand, although Libya is truly an Arab country and thus susceptible to tensions associated with the Israeli presence, it was in the eyes of the oilmen eminently safe, at least by Middle East standards. It was conservatively governed by a pro-Western monarchy. Of course this assumption proved unfounded and short-sighted in the aftermath of the Arab-Israeli war in 1967 and the outbreak of the revolution two years later. But it was enough to stimulate oil companies to accelerate their exploration programmes in Libya in order to achieve a greater security of supply through a geographical diversification of sources. Further, Libya is conveniently located to supply the Western European market. The round trip by tanker from the Libyan coast to the mouths of the South European pipelines is in the range of 1,500 to 2,000 nautical miles as against a range of 9,000 to 10,000 miles from Kuwait via the Suez Canal. This factor became more important after the closure of Suez, and it will remain even when the canal is reopened, because of the recent trend of using larger tankers which could not be accommodated through the Canal.

Multiplicity of concessionaires. Libya benefitted indirectly from some development occurring during the 1950s within the organisational

framework of the international oil industry, in particular the conflict between the international majors* and the newcomers or independents*. The former were often operating in consortia and held long term concession rights over vast tracts of the most promising Middle East acreage. The latter (the independents) locked out of the world's richest oil property, turned to Libya more out of necessity than from preference. So when the Libyan government invited the oil interests to bid for concessions, numerous applicants appeared; and by 1970 there were in the country as many as thirty-seven foreign-owned oil companies, of which seventeen were actually producing and exporting oil. According to Professor M. Adelman, this multiplicity of concessionaires was the most effective factor behind the Libyan success story, he stated:

"Today, a single lease covering the whole country is unthinkable. Libya, the greatest of the new countries, had welcomed 28 concessionaires by 1968, breaking all precedent in speed of growth. The lesson has not been lost on other countries: the more the exploring companies, the faster the development" (3).

Environmental factors. When the first samples of Libyan oil were tested in 1958, it was ascertained that the quality of the crude oil would be good. It is high in specific gravity and remarkably free from sulphur by the standards of crude oils in other parts of the world.

* The terms international majors and independents are commonly employed as follows in the industry. The first term is used, "to designate those seven or eight fully integrated and long established oil companies that have dominated the international market for petroleum, viz., Standard Oil (New Jersey), Royal Dutch Shell, Gulf, Texaco, Standard Oil of California, British Petroleum, Socony Mobil, and Cie. Francaise des Pétroles. The "majors" are to be distinguished from the so-called "independents". The term "independents", although something of a misnomer, refers to any oil company other than those listed above as "majors". Typically such companies are relatively new to the international field and do not have fully integrated facilities abroad. Many of the independents are, however, multi-million dollar corporations with fully integrated domestic operations e.g., in the United States" (George Heitmann, *op.cit.*, p.24).

(3) M. A. Adelman, *The World Petroleum Market* (The Johns Hopkins University Press, 1973), p.200.

As sulphur in fuel tends to corrode engines and releases smog-producing chemical smoke and this is associated with the contamination of the atmosphere (air pollution), Libyan crude gained a tremendous sales advantage, particularly when some municipalities in the United States began to enforce low-sulphur requirements. With the growing worry about pollution, Libyan crude has become more demanded not only in European markets but also in other countries where anti-pollution restrictions are enforced.

Favourable taxation terms. Besides the above factors, the concessionary terms as embodied in the original petroleum legislation were designed to attract as much foreign investment in oilfields as possible. As will be explored in the next section, fiscal terms were generous to the oil companies; and the relinquishment requirements obliged the concession-holders to accelerate exploration.

Conditions of oil concessions in the pre-Revolution era

As in any other oil exporting country in the developing world, the pioneering work of oil discovery in Libya was due to foreign oil-"buccaneers". The subsequent development of the industry to its vast size was entirely undertaken by the affiliates of some multi-national companies. Until recently, all the companies operating in the Libyan oil industry entered the country on the basis of concessionary agreements. The principles of such agreements were provided by the original petroleum legislation which was issued in 1955 specially to encompass the operations of all foreign oil companies operating in the country.

When the law was drafted, foreign investment was badly needed and the government was eager to see the country's subsoil wealth explored and developed as soon as possible. But it was learnt from previous experience in the Middle East that this objective could not be reached if any oil deposits in the country had come under the domination of a single company or a consortium. Accordingly, the law ensured that no such domination of the country's oil potentials by the oil hunters was possible. In allocating concessions, it followed a very simple procedure, "first applied, first served". This enabled a number of American oil companies which had no experience in international oil politics outside the U.S. to gain a foothold. To ensure its goodwill, the government invited a number of oil companies to assist in drafting the law and thereby the terms of the concessions, which were largely drawn from the experience of the major oil-exporting countries, particularly Iraq.

Consequently, the terms of the Libyan concessions as embodied in the original petroleum law reflected the aims of those who shaped the law; and they assimilated the standard characteristics of the older Middle East concessions. The latter, as described by a United Nations report, "give the foreign companies a freedom of action which substantially insulates them from the economy of the Middle East countries" (4).

As provided by law the concessionaires were granted several rights and privileges. One right was of course to drill, produce, transport, process, export and dispose of petroleum products found in the Libyan subsoil as well as to instal within the concession area necessary

(4) United Nations 'Review of Economic Conditions in the Middle East, E/1910 (New York) 1951, p.25.

facilities for these operations. Another right was to import free of duty capital goods or intermediate products used in the petroleum operations and supplies connected therewith. The concessionaires were exempted from the obligation to surrender the foreign exchange derived from their exports of oil products to the government foreign exchange pool. Another important privilege was that disputes between the government and the companies were to be settled through arbitration and the International Court of Justice rather than the local courts.

On the other hand, the law imposed on the concessionaires certain obligations. Among these were to pay the government fees and service rent and, when oil is produced in a commercial quantity, royalties and surtax in lieu of all other forms of taxes and fiscal duties. However, the concession terms under the original law of 1955 differed in some significant respects from the standard concessions then prevailing in the major oil-exporting countries.

First, although the fiscal provisions were based on the 50-50 profit sharing formula which was introduced by Venezuela in 1948 and brought to the Middle East in the early 1950s, they were generally more favourable to the Libyan concessionaires. In granting the concessions there was no stipulated payment of bonus for goodwill by the concessionaire. The fee for each concession was a flat LD. 500. The surface rent was inconsequential. A royalty of 12½% was calculated at the realized price as distinct from the posted price. All fees, rents, royalties and any other forms of payments were treated as a partial payment of the 50% profit tax. Furthermore, in computing the taxable income the original petroleum law provided for unusually varied deductions;

amortization of capital expenditure on physical assets, at any rate up to 20 percent per annum, a depletion allowance equal to 25 percent of the gross income from sales of petroleum, or in lieu, amortizations of capital expenditure on other than physical assets at the rate of 20 percent per annum. These liberal fiscal provisions, as described by George Stocking, were among the factors that initiated the quick development of the oil industry in Libya.

"Both the cost and price provisions of the concessions were attractive to all potential producers, but the price provisions were particularly attractive to independent companies anxious to obtain a foothold or a larger share in a rapidly expanding foreign market and realizing that to do so they might be compelled to sell their oil below the customary posted prices" (5).

Second, although the concession terms followed the general pattern prevailing in the traditional oil-producing countries in the Middle East in extending the duration of the concession for a long period reaching 60 years, they differed in stipulating that the concession holder should surrender 75 percent of the original size of the holding within five years from the date of its being granted, and make further relinquishments thereafter. As indicated earlier, this system benefitted the country in two ways. In the first place it exerted pressure on the concessionaire to explore and develop his holding quickly. In the second place, the territories handed back could be offered for new bidding.

However, following the announcement of the concession terms it was concluded in international petroleum industry circles that the provisions under the petroleum law of 1955 were so generous to the companies that the government should come under pressure to amend them. As Mrs. Penrose

(5) George W. Stocking *'Middle East Oil'* (Allen Lane, the Penguin Press), 1970, p.374.

put it, "the fact that the concession terms in Libya were in many ways less favourable to the government than were those obtained by governments elsewhere in the Middle East gave rise to a great deal of local criticism" (6).

Consequently, the government insisted on better terms in the concessionary agreements concluded after 1957. In 1961, after it became certain that the Libyan subsoil contains very large quantities of oil, the original petroleum law was revised and some of the above generous provisions were removed or reduced. But the 1961 amendment did not touch the freedom of the oil companies in pricing Libyan crude, on the basis of which royalties and profit tax are calculated. As a number of relatively small American companies - Continental, Marathon and Amerada - brought their Libyan crude oil into the world market in 1962 they made full use of the pricing provisions. To establish quickly a share of the growing European market, these companies launched a price-slashing campaign against the existing majors which had until then been preempting the European market. This, as stated by an expert in oil politics, "created a situation of some disturbing anomalies".

"In 1964 Esso International sold most of its oil to affiliates at a posted price of \$2.21 - \$2.22 a barrel and paid taxes to the government averaging about 90 cents a barrel on an average realized price of about \$2.16. In contrast, the Oasis group sold its oil at an average price of \$1.55 (a discount of 67 cents a barrel) and paid to the government an average of less than 30 cents a barrel - only slightly more than bare royalty and rental charges (7).

(6) Edith T. Penrose and P. R. Odell *'The Large International Firm in Developing Countries'*, George Allen and Unwin, 1968, pp. 203-4.

(7) Stocking, *op.cit.*, p.375.

Ironically, despite the fact that the Oasis group accounted for about half of Libya's crude oil exports, so that their marketing behaviour deprived the country of substantial revenues, the initial attempt at 'rocking the boat' was made by the major oil companies rather than by the Libyan government. In the mid-1960s, the major oil companies approached OPEC (Organization of Petroleum Exporting Countries) saying that among the factors undermining the whole international price structure of crude oil was the way Libyan crude was sold by the independent oil companies, and argued that this was because Libya was taxing its oil producers more leniently than the other major oil exporting countries.

In consequence of heavy pressure from OPEC, of which Libya has become a member in 1962, a significant amendment to the petroleum law was introduced late in 1965. This amendment was designed to bring the fiscal provisions for oil into line with those of other OPEC members. Thus its main provision were: (a) Royalties were to be expensed, in other words a royalty was to be treated as a cost item for the purpose of calculating the taxable profit instead of the previous provision for regarding it as a partial payment on account of the government's 50 percent share of the company profit. (b) The tax base was changed from the actual sales realization to a posted price agreed by the government, thereby resolving the problem of the large discounts which the independent companies were previously practising. According to an official publication, the application of this amendment brought into the public treasury an estimated LD. 58 million for the year 1965 alone (8).

(8) Ministry of Petroleum '*Libyan Oil 1954-1967*', Tripoli 1968, p.38.

Yet the amendment of 1965 was not easily implemented. According to the original terms of the concessionary agreements, any revision in the petroleum legislation is not enforceable without the consent of the concession holder. As expected, the major companies, that had affiliates in Libya soon agreed to bring concessions into line with the revised law. But the independent companies responded unfavourably and their "compradores" - according to rumour, the Minister of Petroleum himself was among them - lobbied widely for their exemption from the provision which prevented them from continuing selling their crude oil at discounted prices. Their representatives pointed out that there was

"a conflict of interest between the independents and majors.... they suggested that this would not be displeasing to the majors, who would welcome an opportunity to buy them out at bargain prices. And they argued that once the independents disappeared from the Libyan scene, the majors would have a cost incentive to increase Persian Gulf output at Libyan expense. Libya's gain in income from expensing royalties and increasing its tax revenues would be a "short-run gain but a long-run loss" (9).

Whatever the validity of their arguments, the independents failed to convince the government and the debate became heated. Supported by OPEC and of course the majors, the government introduced legislation in the Parliament empowering it to take measures to ensure compliance with the new amendment. This was unanimously passed in the last week of 1965. By January 1966, all the Libyan concessionaires declared their compliance. This was hailed by many people as a great victory for the national government. Although it was true that the

(9) Stocking, *op.cit.*, pp. 377-378.

country gained considerable fiscal benefits, the issue in itself was just a game in the business of oil.

Until the fall of the pro-Western monarchical regime in 1969, the above conditions remained practically unchanged. However, the situation created psychological tensions, as the Libyans remained spectators while the foreign-owned oil companies developed their country's natural resources and behaved as states within a state. This led to the rise of vocal nationalistic groups who pressed the government to acquire a significant stake in the industry by developing national oil companies. In 1966, the government established the "Libyan General Petroleum Corporation" (LIPCO). The purposes of LIPCO were very wide, ranging from exploring, producing and marketing all the hydrocarbon products to working out and executing plans to train Libyan citizens to assume technical and administrative positions in the oil industry. Aside from reaching agreement with French companies on a joint venture, until 1970 LIPCO remained a mere administrative body carrying out studies concerning the creation of a petrochemical industry and failed even to undertake the internal marketing of petroleum products.

National oil objectives after the Revolution

It was indicated in Chapter II that one of the economic principles of the Revolution is "releasing the national economy from foreign entanglement". So it was not surprising that immediately after the outbreak of the Revolution the new leaders made it clear that they would centre their efforts on achieving the national objectives regarding the oil resources. These objectives were, *inter alia*, extracting the maximum in benefits from the oil concessionaires; conserving the oil resources by cutting down the level of production, on the assumption the economy could not efficiently utilize new infusion of capital beyond certain quantitative levels, so that the remaining productive capacity

of oil fields will be saved for the future; and gaining public control over the industry through acquiring a significant stake in the equities of the operating companies.

Early in 1970, the government oil policy was centred on achieving the first two objectives. A special committee was set up to negotiate an upward revision of the prices of Libyan crude oil in proportion to its economic advantages. As indicated earlier, these advantages were its characteristic of being almost free from sulphur, and its ideal location to supply Western Europe at a relatively short haul. At the same time, the government starting carrying out plans to protect the oil fields from premature exhaustion. It ordered an immediate cutdown in production, the level of which had previously been left to individual companies to determine. For about seven months, the oil companies staunchly resisted the Libyan demands on the ground that Libyan objectives, taken together, would contain a far-reaching challenge to the legitimacy of the international oil system as a whole. Indeed, as one commentator noted, the negotiators for the companies believed that the winning cards were in their possession:

"It was a question of facing Libyan demands by a united front, and when it came to the crunch, it would be Libya that would suffer most. The oil companies had their alternative sources of supply...with which they could keep their customers supplied. Even if the Libyan fields came to a complete halt, none of them would lose a cent in the sales or profit. Whereas Gaddafi would lose his oil revenues just at the moment when he needed them to replace the millions which the ministers he had usurped had smuggled out of the country" (10).

In the circumstances, Col. Gaddafi, who as a determined military leader could not tolerate failure to make satisfactory headway, presented the Libyan reply by stating, "We have lived 5,000 years without oil money;

(10) Leonard Mosley, *Power Play* (Weidenfeld and Nicolson, 1973), p.282.

we can do it again" (11). Of course, this retort was as much a bargaining counter as a real intention. In fact, the Libyan leaders made full use of the experience of the other radical regimes who were defeated in their clashes with the oil companies. The Libyans ironed out many faults of those other regimes. In Libya, the government refrained from any general nationalization measures, except the takeover of the internal marketing network in 1970 and of BP's assets in 1971. The latter was for political reasons, as a retaliation for the British government's failure to prevent the Iranian takeover of the three Gulf islands of Abu Musa and the two Tumbs. But the leaders continued campaigning that they would never deviate from the above objectives. In this respect Col. Gaddafi made it clear in a speech delivered early in 1971:

"We shall achieve victory because we are facing the oil companies with a new logic which is unusual to the oil companies and colonialist states. When we tell the states which patronize the oil companies that their interests are at stake they know that the Revolution is actually capable to threaten these interests" (12).

In carrying out their threats, the Libyan leaders worked out first a plan designed to divide the united oil companies into warring factions. They ordered a speed-up of the conservation measures. These are legitimate and the government is empowered to reinforce them, but they were applied more on the companies which were heavily dependent on Libyan oil; particularly the "independents" and specifically the Occidental Company whose production was cut by 360,000 b/d in August 1970 from a high of 797,000 b/d three months earlier. This company was selected for three

(11) Ministry of Information, *1st of Sept. Revolution*, Tripoli 1971, p.42.

(12) *Ibid.*, p.43.

reasons. First, it was the most vulnerable to the effects of low production. It was deriving close to one-third of its earnings from its Libyan venture. Further, unlike the majors, it had no alternative sources of supply and therefore it could not endure a drastic cut in its oil production - given its contractual commitments to buyers - without suffering heavy losses. Second, most of the crude oil sales contracts made by the companies contained provisions enabling the company to shift any increase in taxes by the government totally or substantially on to the buyers. Consequently, it could recoup its extra tax payments to the host government. Third, the company was politically unpopular because it had special ties with the former regime and obtained its promising concessions through a series of dealings, involving large-scale corruption; as was revealed later in the Federal District Court of New York in connection with a suit against the company by Allen and Co. (13).

In the event, the Libyan plan worked successfully. Occidental was the first to yield to Libyan demands of rising posted prices of crude oil. The other "independents" soon followed, and the "majors", which had long balked at conceding Libya's demands for fear of setting a precedent for other countries, had finally followed the way of the "independents". Although this settlement resulted in increase of the government take by an average of only 27 cents a barrel in 1970, which was just consistent with the quality advantage of Libyan crude, the Libyans' ultimate success was watershed for all oil exporting countries. It led to worldwide rises in producer-company assessment the result of which was a continuing rise in the host governments' oil revenue through a series of price-tax increases.

(13) Wall Street Journal, 8 February 1972. Also quoted by Leonard Mosley, *op.cit.*, p.266.

Of course the achievement of the country's basic objectives was in the first place due to the determination and skills of its leaders. But there were in 1970 some circumstances which strengthened the bargaining position of the Libyan negotiators and favoured Libya's assumption of the role of leadership in the assault. These circumstances, as summarised by an oil expert, were:

"Libya's hand was strengthened because it was the leading oil supplier to Western Europe, filling close to 25 percent of that area's oil requirements. In addition, Libya possessed official reserves that would finance two years' requirements of imported necessities. Western Europe, on the other hand, had only a two-month supply of oil stocks" (14).

In 1972, after the demands for higher fiscal returns came to fruition and the level of production was brought under public control, the government sought a direct acquisition of at least 51 percent of all oil-producing operations. At the beginning all the companies resisted this demand. In 1973, most of them agreed to a government participation of 20 percent in the assets of the operating affiliates within the borders of the country. But this offer was not satisfactory to the government.

By the summer of 1973, a number of laws had been issued providing for acquisition by the State of 51 percent of the assets and profits of all foreign producing companies in the country. Therefore, almost all the national objectives regarding the oil industry were realized. But this does not mean that the oil industry was proportionately Libyanised. Because of the shortage of qualified personnel and technicians, the industry is still and will remain dependent on foreigners, even though more than half of its equity is owned by the government.

(14) Zuhary Mikdashi, *The Community of Oil-exporting Countries* (George Allen & Unwin Ltd. 1972), p.146.

The following section will provide a perspective of the qualitative effects in terms of the upgrading of labour, managerial and organisational skills.

THE EFFECT OF THE INDUSTRY ON THE ENRICHMENT OF HUMAN RESOURCES

The role of foreign investment in diffusing modern technology and skills in the less-developed countries has become the *idée maitresse* of those concerned with economic development, since they shifted their early emphasis from capital accumulation and investment as the engines of economic progress to the quality of the human resource input.

In this respect, Professor Myint states:

"Fundamentally, the importance of trying to retain foreign enterprises in developing countries is not only the capital they may bring in but also the technical skills and knowledge they have built up for long periods in the past in the context of the local condition. Skills and knowledge, available in a well-articulated form and fitted into a going economic concern, are less easily replaceable than capital funds which may be obtained from other sources" (15).

It is hardly possible to overrate the value of foreign investments in providing a 'highway-of learning' over which new impulses and modern technologies might come in to revolutionise the host economy and to open all-round opportunity for development. But the main questions in the present context are as follows. First, to what level does the foreign-owned oil industry operating in a typically under-developed economy provide what Scitovsky called 'technological externalities'; i.e. creation of skills, transmission of know-how, spill-over of managerial abilities into the rest of economy? Second, to what extent does the presence of the industry result in changes in moods leading to a higher creativity?

(15) Hlya Myint, 'the Economics of the Developing Countries', Praeger, 1965, p.67.

Certainly, the answers to these questions depend on the degree of the industry's intercourse with the rest of the economy. This is determined by the interaction of many and variant factors; which can however be grouped in two sets. One set (a) is endogenous, or belongs to the local environment; it consists of the level of cognition possessed by the host society, the hospitality of the environment to the incorporation of modern business thought and the proclivities of the local culture. The other set (b) is exogenous, relating to the behaviour of the industry, especially its capacity to provide employment for indigenous labour, its desire to offer training opportunities, its propensity to communicate with the local enterprises, and the technological nature of its operations. Some aspects of the first set (a) have been already sketched in Chapter II. In the second set (b) the most relevant aspects are employment and training.

(A) Employment

Conceptually, the industry's contribution to the employment of indigenous labour represents two distinct but not inseparable gains, quantitative and qualitative. The quantitative gains are the increase in the number of nationals employed, the rate of compensation paid, and the extent of fringe benefits provided. These are true gains, if there exists, prior to the investment, a high incidence of unemployment or underemployment, the reduction of which is regarded as an objective in its own right. In Libya, this assumption is not tenable throughout the entire oil period. It has recently been alleged that the tendency of labour to queue for jobs at the oil companies had deprived the rest of the economy of a supply of labour. The other quantitative gains, similarly, were not without opportunity costs to the Libyan economy.

The qualitative gains consist of the upgrading of local skills through training and on-the-job exposure to modern techniques and - more subtle but not less important - changes in habits of thought and action, from those characteristic of undisciplined labour in pre-industrial society to those typically required in the industrial environment created by the oil industry.

The distinction is classificatory and conceptual; both types of gains - quantitative and qualitative - are closely linked. Progress in either one is both natural consequence and cause of progress in the other. It may therefore be justified to take the more readily measurable quantitative gains as reflecting and measuring also the qualitative ones. When the employment of the oil industry is discussed, two general propositions frequently come to the fore. One is that the industry cannot have any great effect numerically on the labour force; therefore its impact on the creation of industrial skills is bound to be very low. The other is that the number of workers in the industry tends to decline over time, once the large initial investment has been made. The most commonly cited reasons for both propositions are as follows. (i) the industry is highly capital intensive in structure and therefore has a low aggregate labour coefficient; in which the skilled cadres component is comparatively large. (ii) It is characterised by significant economies of scale. In less-developed countries, these propositions are assumed to be especially strong- and many other, less indisputable, reasons are added.

One of these other reasons is that most of the host countries have little or no tradition in industrial skills, apart from those acquired in the handicraft industry; consequently the number of highly trained technicians required by the oil industry, though limited, is not readily found in sufficient quantity and quality in these countries.

In such circumstances, the industry has to import foreign recruits to run the majority of the operations related to oil exploration and production. On the face of it, this line of reasoning looks plausible; but its weakness is revealed in practice: as reported by OPEC, "only the slightest effort to improve the local situation has ever been exercised on the part of the oil companies" (16).

In explaining this phenomenon, some observers place special emphasis first on the difficulties of training the native labourers who, as they point out, are possessed of neither the mental attitude necessary for an easy transition to a machine economy, nor of the technical knowledge of use machines efficiently. They attribute this mainly to two insoluble problems: (a) the indigenous workers are used to paternalism, and (b) there is a general incompetence. This explanation, which implicitly rests on a "chicken and egg" argument, is not fully satisfactory.

There are some economists who argue that the oil companies are frequently unwilling or reluctant to prepare and develop the national skills because generally the interest of multinational companies lies in maintaining a *status quo* in which the participation of the native labour is minimized. Two decades ago, Ragnar Nurkse noted to the possibility that foreign investors might not be "eager to impart technical and managerial knowledge to the local population" (17). He indicated that this was due to a considerable extent to a suspicion that the trained labour would then leave, to take up other employment (18). Nurul Islam

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- (16) OPEC '*Nationalization of Employment in Oil Companies in the Middle East*', (Vienna, June 1970), p.5. (Mimeo.)
 - (17) Ragnar Nurkse, *Problems of Capital Formation in Underdeveloped Countries*, (Oxford, Basil Blackwell, 1953), p.88.
 - (18) Wendell C. Gordon, *The Political Economy of Latin America*, (Columbia University Press, 1965), pp. 174-5.

noted "the desire of the foreign enterprise to restrict the important key posts and important technical jobs to its own countrymen, in whose integrity and efficiency it has greater confidence than in the case of the local people (19).

Secondly, it is frequently said that the oil industry, as a foreign-owned export-oriented industry, unnecessarily adheres to capital intensive technology which is developed in and imported from highly industrialized countries. The industry represents this as inevitable because of the rigidity of input-coefficients. This argument is however controverted by the critics of the behaviour of foreign investments in developing countries. Some of these point to cases in which engineers have deliberately designed plants for use in developing countries in such a way as to avoid having to rely on the local labour. Paul Streeten, a leading critic of foreign investments, rationalises the reluctance of multinational corporations (MNC) to use native labour by observing, "the MNC will use not only the capital-intensive... but it will also employ labour-saving management techniques and practices. Its interests lie in minimising industrial relations with a foreign labour force, which may be unskilled, underfed, unhealthy, unreliable, undisciplined and perhaps hostile, and dealings with which may give rise to political difficulties" (20).

Thirdly, until perhaps the 1960s, the question of employment was neglected by the host government. This was due in the first place to the governments' lack of knowledge and experience of how to realize employment gains. In the second place, most of the governments concerned were preoccupied with the potential fiscal return; so that they were anxious

(19) Nurul Islam, *Foreign Capital and Economic Development, Japan, India and Canada* (Charles E. Tuttle Co. Tokyo, 1960), p.160.

(20) Paul Streeten, *The Frontiers of Development Studies*, (Macmillan, 1972), p.234.

to accept any offer which could add something to their treasuries. Consequently the oil companies were able to insert clauses in the concession agreements permitting them to bring foreign recruits, at their own discretion, in order to operate the oil activities. Stimulated by the efficiency and relative reliability of expatriate labour, and being perhaps reluctant to use local labour, the oil companies depended on foreign recruits for managing almost all the oil operations. In some cases this even extended to minor functions such as those of drivers, gardeners, kitchen helpers, etc.

Following this exposition of the general propositions and some of their bases, it is possible to examine the Libyan case as a test of this reasoning. When the main concessionary agreements were made in the late 1950s, Libya was in a position to benefit from the experience of the older oil producers in the Middle East, in some of which the nationalization of employment had already emerged as one of the highly debatable questions. But the Libyan government was at that time eager to see the country's petroleum resources explored, so it was ready to accept any offer which might add a few thousand pounds to the then empty treasury. In consequence, the oil companies were in a favourable bargaining position. In the matter of employment they insisted that the Libyan oil legislation should copy the antiquated terms of the older Middle Eastern agreements.

Thus the oil companies, by law, secured two exceptional rights. One was the right to bring in foreign recruits of any nationality, as they themselves deemed suitable, even though a high rate of unemployment was - in the initial period - one of the country's chief problems. The other was their right to arrange their own labour shifts and conditions. The only long-run protection to the native labour was that the Petroleum Law

contained a provision (Clause 18) that the minimum number of Libyans employed by the concessionaire after ten years from the commencement of operations was to reach at least 75% of the total number of persons employed by the concessionaire in the country. But the implementation of this provision was conditional even after the ten-year term. As provided in the same clause (18), it was conditional on the availability of adequate skills and abilities within the Libyan labour force; and the assessment of this condition was left entirely to the companies' judgement. In the event, the industry brought in sizeable contingents of expatriates. This, when native labour was queueing for jobs in the companies, created dissatisfaction and tension within the country.

Nevertheless, as it became clear that the country had good oil potentials, the major concessionaires began early to work for greater employment of Libyan subjects, even without government pressure. Consequently, in the early years of the establishment of the industry the percentage of Libyan employees nearly reached the legislated ratio of 75 percent of the total work force even before the companies were legally bound to reach this ratio. However, as shown in Table 1 below, the share of local labour in the industry's labour force tended to decline after 1965; it constituted about 66.5 percent in 1970 though in 1964 it had reached 76 percent of the total number of employees.

Yet, as the table indicates, the proportion of local employees improved in 1971; it constituted 72.5 percent of the absolute number of the industry's labour force, compared with 66.5 percent at the end of the preceding year. This improvement was due to the government's policy of exerting pressure on the oil companies to pay special attention to Libyans by granting them priority in employment and libyanizing the leading posts as readily as feasible.

Table 1

EMPLOYMENT BY THE OIL CONCESSIONAIRES AND SHARE OF LOCALS



- Sources: (a) Ministry of Petroleum (Libya, Tripoli) Petroleum Development in Libya, 1965 Edition, 1968 Edition and 1973 Edition.
- (b) Bank of Libya, Annual Reports.

Table 1 also displays three distinct features of the employment structure of the industry. First, for the years prior to 1965, the ratio of local labour was relatively high, reaching 78 percent in 1958. Second, the total work force of the industry increased steadily until 1964; but, though still gathering momentum during that year, it fell sharply till 1968, when it showed a slight recovery. Specifically, the gross employment has fallen in 1970 by roughly 50 percent of the level in 1964, while the total production of crude oil quadrupled that of 1964, increasing from 314 million barrels to 1,225 million barrels in 1970. Third, in absolute numbers, the direct employment by the industry

is very small. It accounts for a small fraction of the total labour force in the country, perhaps no more than 1½% of the estimated 400,000 workers in Libya during 1970. The explanation of these three phenomena can be found partly in the process of the development of the industry and partly in fluctuations in the labour situation in Libya.

Generally, the development of the oil industry passes through several stages - though the companies comprising the industry in Libya did not go through these stages uniformly. As far as the conditions affecting employment are concerned, three stages could, however be distinguished.

(i) The initial stage. In this stage, which lasted roughly until 1960, the industry's operations centred on launching intensive geophysical programmes; as the petroleum possibilities were prospected, the operations were extended to wildcat drilling and sinking numerous stratigraphic holes. At this stage, the work force of the industry comprised a number of alien geologists and administrators plus a large group of local scouts, i.e. drivers; bearers and helpers. During this stage the industry had a high propensity to use local unskilled manpower though the introduction of unskilled foreign recruits was not barred, if the companies had desired to do so. Consequently, as shown in Table 1, the ratio of local labour was large, but the instability of employment was reportedly high.

There were various economic motives for the oil companies' inclination to use local unskilled labour rather than to bring in more efficient aliens. Since in this exploration stage most of the companies comprising the industry were not yet certain of finding oil

in commercial quantities that would justify their long-run presence, they could not afford to have a permanent work force, except for the group planning the operations. Accordingly, bringing in foreign labour to work for a short period in remote areas and in a difficult climate would be costly; those labourers would require a high compensation for severing ties with their home environment, whatever their period of absence from home.

Although labour costs in general represent a small fraction of the oil industry's expenditure, when the industry is in the exploration stage, in which the element of gambling is high, the labour costs are relatively considerable; therefore the local management of the companies is bound to minimize these costs. So the use of local unskilled labour is economically motivated; particularly where the functions (drivers, bearers and helpers) require little adaptation beyond the need to bridge the language barrier. This was also prompted by the labour situation in the country during this stage. Unskilled labour was in unlimited supply. Wage rates in the rest of the economy were very low compared to those offered by the oil industry. It was recruiting unskilled labour at rates varying between LD. 0.250 and LD. 0.400 per day (21) (LD. 1 was then equal to £1 Sterling). These rates compared with LD. 0.140 to LD. 0.180 prevailing in the rest of the economy. Yet the wage of an unskilled labourer with the industry was less than a tenth of that offered to a foreign typist in the company office. In addition to this, trade unionism was very weak, practically non-existent. This meant that dismissal of redundant labour would not cause industrial action which might undermine the position of the companies. In the event, these

(21) Libyan University and London University, *A Joint Research on Agriculture and Economic Development of Libya* (Benghazi, 1970), Vol. 1, p.166.

considerations affected the share of local labour in the industry operations in two ways: on the one hand, the proportion of local labour in the absolute number of the industry employment was relatively high, on the other hand, in terms of employment and compensation the share of the natives was ruefully low.

(ii) The second stage. In this, which began roughly in 1960 and lasted until 1965, the successive strikes of oil ascertained that the country was floating on oil. Of course, this fundamentally changed the arithmetical outlook of the industry. The emphasis of the operations was extended from widespread exploration to drilling and development of the discovered oil fields. A heavy investment was added, for installation of facilities for production and export of crude oil. In this stage, the expansion of the permanent work force with higher average qualifications was required, but a quantity of unskilled labour was still needed for minor 'pick and shovel' jobs. Also, at this stage, considerations of the efficiency, morality and loyalty of the labour force were far more important than the costs of employment. In the local labour situation, there was a severe shortage of skills and semi-skills. This shortage was aggravated by the government compulsion on almost all university and technical school graduates to join the expanding government bureaucracy.

On these backgrounds, the industry relied heavily on foreign recruits for running the local operations; consequently the expatriates employed by the industry not only increased in numbers from 1,800 in 1959 to 3,100 in 1964 but accounted for the bulk of the *permanent* labour force though their proportion in the absolute number of the *total* work force remained around the level of the first stage. In fact, the foreign recruits were the key personnel - the engineers, administrators, managers,

accountants, foremen, surveyors, supervisors, chief clerks, typists, skilled and semi-skilled labourers. Moreover, the companies provided them with all the power to hire or fire employees and to set wage rates and conditions of employment for domestically hired labour. However, despite the industry's inclination to rely on foreign recruits and its declining need for the local unskilled labour, for two reasons, the number of local recruits rose during this stage and their proportion in the total employment remained basically unchanged.

Firstly, the major oil concessionaires retained most of their local workers even though it was unofficially reported that as much as one-third of these workers were said to be superfluous (22). Part of the explanation for this policy can be the adverse political repercussions that might have resulted from layoffs of native workers; particularly in a situation in which the presence of sizeable groups of expatriates, combined with the phenomenon of local labour queuing unsuccessfully for jobs at the oil companies, had already created social dissatisfaction and some sort of political tension. Another significant factor was that the average annual pay for native workers was relatively very low; in 1964 it was as low as one-seventh of that of the average for all foreign staff (23). Moreover, because all the wages and salaries were 100% deductible against corporation tax, only half of the financial burden of the supernumeraries was borne by the companies, unless their operation did not result in taxable income, and consequently the other half was borne by the government treasury.

Secondly, the percentage of Libyans remaining relatively high was due to the fact that during this stage the contract service firms,

(22) Sam H. Schurr and et. al. *Middle Eastern Oil and Western World*, (Elsevier, New York, 1971) p.104.

(23) Technical Planning Body, *Statistical Abstract* (Tripoli, Libya, 1969), p.204.

which were brought into the country by the oil concessionaires to undertake the execution of certain projects, had a high propensity to use unskilled local labour. In 1964, for example, local labour accounted for 79 percent of the total work force of these firms, while in the concession holders the percentage was just 67 percent (24). It is not difficult to explain why the contract firms employed a larger percentage of indigenous workers. The nature of the work of these firms, which were mainly in the fields of construction and installation of production facilities, required a larger number of 'pick-and-shovel' jobs that could be filled by the local peons. There were also other factors. The presence of these firms was usually for a short period because they were tied to completion of the contracted project, so they were not in a position to have a permanent work force. Since bringing foreign recruits for a short period would be impractical, these firms were bound to use local labour as far as possible. At this stage, then, the service contract firms were economically motivated to use local labour, while political factors restrained the concessionaires from laying off unwanted local unskilled employees. These two considerations explain why the proportion of local labour in the total industry remained unchanged.

(iii) The third stage. This lasted from 1965 to 1970, and during its considerable changes occurred in the industry, but without altering its most basic characteristics. As indicated in the appended text, both exploration and drilling activities slowed down, particularly in the early years of the third stage. The local operations were mainly devoted to the utilization and maintenance of the facilities already in place. The

(24) *Ibid*, p.203.

concessionaires, who had already uncovered and developed oilfields, became rather more institutionalized, their employment became more stable as well as comprising a larger proportion of persons with high qualifications. Meanwhile, the activities of the service-contract firms were cut down or became intermittent, consequently the staffs and workforce engaged in these functions were disbanded or reduced. While these were labour-saving changes, the industry had not carried out any refining operations which normally involve more employment of labour, it takes roughly 3.5 times as many man-days to produce a ton of refined products as a ton of crude oil (25). Hence, the industry by limiting its local operations to the exports of crude oil had deprived the country of an ample source of employment. This situation was unlike those of other oil exporting countries, a considerable proportion of whose oil has been exported in the form of refined products, so that the labour force engaged in the oil industry has been relatively large (or of high grade?).

Besides, the pressure on the industry to hire, or at least to retain the already unwanted unskilled labour, was eased by the developments in the local labour situation due to the rapidly rising government oil revenue. In the first place the accrual of oil revenue enabled the government to expand investments in the area of public works. This sort of investment being normally labour-intensive, its immediate result was the creation of a considerable number of jobs. In the second place, the government direct employment during this period tended to expand very

(25) Issawi, Charles & Yeganeh Mohammed, *The Economics of Middle Eastern Oil*, (Fredrich A. Praeger, N.Y. 1962), p.238.

greatly. All these, coupled with a dramatic expansion in public investments, reversed the behaviour of wage rates within the country. According to the results of an inter-firm survey conducted during the course of the London-Libya Universities Project and recently used by R. Mabro of Oxford University, in 1967 the average wage rate for unskilled men in the oil industry not only lagged behind that offered by the construction industry but, as can be seen from Table 2 below, it was the lowest among the main sectors surveyed, including agriculture.

Table 2

AVERAGE WAGE-RATES IN THE MAIN SECTORS (1968) FOR UNSKILLED MEN



Source: R. Mabro, Labour Supplies and Labour Stability
(*'A Case Study of the Oil Industry in Libya'*,
Bulletin of Oxford University Institute of
Economic and Statistics, Vol. 32, No. 4,
Nov. 1970, p.322 Table 2.

In all, from the third stage on, employment as well as the share of local labour in the oil industry, has been reduced. Even adding about 4,500 workers employed by firms that supply services to the oil companies to the numbers shown in Table 1, the direct contribution of the industry to employment in recent years has been, even quantitatively, negligible; it constituted just over 2 percent of the total labour force in 1970. This is in a sharp contrast to its

63.9 percent contribution to GDP during the same year.

Skills of native labourers

Accurate data on the distribution on native skills in the industry's operations are not available, and the information that can be obtained from the figures published should not be regarded as free from error or defect. The problem becomes even more complex by the indiscriminate use of the word 'skilled', which for many people in developing countries is still to a greater or lesser extent a misnomer though academically it is plainly defined.

Nevertheless, one can deduce from the available figures what is needed to picture the situation. According to the official sources, the number of skilled local labourers employed by the oil industry has increased steadily during recent years, while the number of unskilled has declined. In 1968, the Bank of Libya reported, "the number of skilled reached 1,725 or about 48.7 percent of the total number of Libyan employees" (26).

While there are many reasons to believe that the proportion of skilled workers has improved, some evidence suggests that the reported figures are inflated. One indication is provided by the results of the academic survey in 1969, quoted above. As it was inferred from this survey, "The ratio of skilled to unskilled labour is alarmingly low" (27). Later on, Mr. Mabro, who took part in that survey, threw some light on this issue by providing a case study of native employment by one of the major companies. His analysis of the skill composition of the weekly-paid local labourers, revealed that skilled workers only represent one third

(26) Bank of Libya, *'Twelfth Annual Report for 1967/68'* (Tripoli, 1968), p.91.

(27) London - Libya Universities Joint Project, cit, (Benghazi, 1969), p.168 (Mimeo.)

of this group (28). As shown in Table 3, the other two thirds are mainly engaged in services in which the skill content is low.

Table 3

SKILL COMPOSITION OF NATIVE WORKERS IN A MAJOR COMPANY



Sources: R. Mabro, *op.cit.*, p.329, Table 5.

Compensation of native employees

Data supplied by the Bank of Libya about the industry's labour costs are confined to reporting the total wages and salaries paid by the concessionaires, and the only detail provided by the Bank is the distinction between the totals paid local and abroad. No information about the distribution of the total bill between the local and expatriate employees was ever made available. Though the Bank reported in 1970 that the share of local employees in the industry's total wages and salaries payments constituted only a small fraction (29). It is not possible to

(28) R. Mabro, *op.cit.*, p.239.

(29) Bank of Libya, 'Fourteenth Annual Report', 1969/70, p.154.

demonstrate precisely how low was the local share of the industry's total spending on labour but the available evidence suggests that it could not have exceeded 25-30 percent.

One of the known proportions is that the share of the payments made abroad constituted, during all the years for which data are available, more than half of the industry's total labour cost. As shown in Table 4, it accounted in 1969 for about two thirds of the total. Since this sort of payment represents exclusively the part of the foreign recruit's partial salaries and wages which is normally transferred to the employee's external account (transferable abroad), the magnitude of this payment clearly supports the suggestion. Even more; the expatriate employees still share in the local payments by an amount of over 10 percent of the foreign payments, because the foreign exchange regulations in Libya stipulate that at least 10 percent of the foreign employee's salary or wage should be paid locally. The low share of local labour in the industry's total outlay on labour is only to be expected. On the one hand, as indicated earlier, about two thirds of the native employees are unskilled, and this category is poorly paid. On the other hand, the gap between the average annual pay of persons in unskilled categories and those in skilled grades to which most foreign employees belong was very wide. As shown in Table 5,

Table 4

OIL COMPANIES' EXPENDITURE ON LABOUR, LOCALLY AND ABROAD, 1965-1970

(LD. Millions)



Table 5
AVERAGE ANNUAL PAY OF PERSONS EMPLOYED IN THE OIL INDUSTRY, DURING
1964 BY OCCUPATIONAL DIVISION; in LD.



Aston University

Illustration removed for copyright restrictions

Sources: Census & Statistical Department, '*Statistical Abstract*',
(Tripoli, 1969), p.203, Table 9.

the average annual pay of those occupying professional and technical posts (even neglecting their subsidized housing and other facilities) was in 1964 about nine times that of service workers and six times that of clerical employees in the oil concessionaires.

As indicated in the table, in the service contract firms, the gap is however narrower, mainly because such firms had been involved in construction works in which great physical efforts are required, consequently they have to pay relatively high wages to attract local unskilled labour.

Moreover, the foregoing takes only money wages; the unskilled workers with the oil concessionaires gain other benefits which are not recorded in Table 5. These benefits, usually provided by most of the oil concessionaires include subsidized meals in company cafeterias, assuring the workers one or two high-calorie hot meals a day, good medical services and opportunities to purchase food and clothing at subsidized prices.

The industry's limited qualitative effects on the local labour

In an economy such as that of Libya where the scarcity of manpower is one of the crucial problems, the focus had to be on the role of the industry in upgrading the labour force rather than in creating employment as such. In this connection, the above discussion showed that the oil operations have a weak relation with the local labour. For this reason alone, the qualitative effects are bound to be negligible, if not negative. One can add three factors that limit the role of the industry in the industrial acculturation, even for the small labour which it employs.

(i) Turnover. Undoubtedly, labour turnover (or dropout) has ill-effects on the workers' ability to gain experience as well as on their discipline. With a high rate of turnover among the local labour, a correspondingly high proportion of them are bound to remain in low grade of skill.

According to R. Mabro, the annual rate of turnover (or the ratio of termination of services divided by the average numbers employed within a year) among the category of weekly paid workers was 78 percent for 1965, 71 percent for 1966 and 76 percent for 1967 (30). There are various reasons for this high rate. First the remoteness of the oil fields from the main population centres, the unfavourable climate of the desert and the intermittent nature of employment with the oil companies, particularly the service contract firms, meant that most of the industry's employees were separated from their families. Under such arduous circumstances, workers usually centred their outlook on the possibilities of alternative employment in or near their home areas, and terminated their employment in the oil camps as soon as they secured this. Consequently, most of the local workers were mentally living in two worlds; they were transient inhabitants of the oil camps in which the modern industrial discipline dominated, while maintaining roots in the rural and tribal areas where their families live.

Second, the unskilled workers were frequently not anxious to work for more than a few months, when there was little or nothing to do in their villages or tribes. With the weakness of the traditional sector, however, this phenomenon began to disappear recently. Third, until 1969, most of the service contract firms were recruiting unskilled workers through middlemen (or labour-traders as they were called) who in many cases retained supervision over these workers. Since in most cases the middlemen did not follow the usual screening processes of the oil industry in recruiting its employees, a large proportion of those workers were discharged or replaced by the companies on the ground they were unable to perform their tasks. This quick replacement was usually

(30) R. Mabro, *op.cit.*, p.325.

encouraged by the middlemen because it ensured them more recruits and thereby more fees or a higher commission. Fortunately, the practice of middlemen was outlawed shortly after the 1969 revolution.

(ii) Language barrier. Apart from their communications with the government and the official agencies, the oil companies did not use the native language (Arabic); and within each company the medium of communication has been almost entirely confined to the foreign language. Since few Libyans speak any foreign language and fewer foreign employees speak Arabic, the problem of learning and gaining experience becomes complicated. Another serious result of this was that the industry's employees were divided into two distinct communities. One consisted of expatriates who were living in rather exclusive foreign colonies. These enclave communities abounded with stories about the natives' inability to deal with what appeared to be simple elements of technology, or 'crystal clear' directions. The other group consisted of local employees, most of them clerks and workers, resenting the existence of foreign employees and regarding it as an obstacle to their promotion to well-paid jobs. John Stuart Mill, noting the human improvement and diffusion of knowledge, stressed over a century ago the value "of placing human beings in contact with persons dissimilar to themselves, and with modes of thought and action unlike those with which they are familiar.... Such communication has always been....one of the primary sources of progress" (31). But the conditions described above in the oil camps do not really represent the required 'contact', let alone the sort of communication of which Mill spoke.

(31) John Stuart Mill, *Principles of Political Economy*, (New impression of sixth edition, Longmans, 1904), p.352.

(iii) The rudimentary tasks of local employees: As shown earlier in Table 3, more than a third of the local employees were engaged in rudimentary operations. For example, it is difficult to expect labourers working as guards, messengers and houseboys to gain industrial skills whatever the length of their employment. The clerks whose main function is handling the companies' correspondence with official agencies, rather than practising modern industrial administration, are in a similar position. It is impossible to accuse the companies of deliberately keeping national employees at lower levels; the main reasons are the backward characteristics of local labour. As indicated in Chapter 1, people in Libya generally do not have great enthusiasm for acquiring technical or vocational skills. Moreover, a large proportion of local employees were illiterate.

Training

In the preceding sections, we have seen that because the local labour was poor and undisciplined owing to the ills of underdevelopment, the industry effects of employment were negligible in both those respects. In this section, we deal with the rôle of the industry in developing its indigenous labour into a highly-trained, well-paid, self-assured industrial work force representing a broad range of skills and levels of experience. Fortunately, the necessity of training local people has been recognized by both the government and the oil concessionaires from the beginning. The Petroleum Law of 1955 stipulated that as from the date of commencement of regular oil exports the concessionaire should make certain annual payments of not less than LD. 2,500 and not more than LD. 5,000 to be applied towards giving Libyan subjects technical training in the petroleum industry.

In 1961, the law was amended in such a way that the government in granting concessions would give special attention to the applicants who would be willing to offer other benefits above those stipulated by the law. Accordingly, most of the concessionary agreement concluded from 1962 onwards embodied formal obligations that the new concessionaires should develop training schemes for their local employees, including scholarships abroad.

In addition to this, the oldest companies in the country were under increasing pressure to establish a long-range programme for Libyan career development, even though their legal commitment was limited in this respect to providing no more than LD. 5,000 a year; this amount was hardly enough to hire two teachers, let alone financing a training centre.

The main sources of this pressure were: (i) The oldest companies sensed that their position was undermined by the several advantages promised to Libyans by the newcomers, who were eager to prove their position in the country's oil potentials at the expense of the older ones. (ii) The government, echoing the public resentment of the companies' employment of far higher proportions of costly expatriates, insisted that the companies producing oil should advance indigenous employees by providing engineering and professional education to eligible candidates. (iii) The oldest companies themselves, having become major oil producers in Libya, realised that it would not be possible to continue their heavy reliance on foreign labour for ever and were therefore anxious to increase the efficiency of their local labourers, artisans and white-collar employees. Besides these factors, the companies' outlay on training is 100 percent deductible against taxable income.

Consequently, the earliest training programmes were introduced by the oldest producers, notably Standard Oil Company (New Jersey) which in 1962 took the first step in this direction by inaugurating what it called a 'Job Progress Step Programme'. Later most of the companies engaged in oil production instituted comprehensive training programmes.

In the country's two main cities, Tripoli and Benghazi, the companies established several schools and centres for teaching the English language and offering elementary training in administrative, financial, technical and vocational subjects. In the oil fields and at oil terminals, they have also set up different type of centres to train their employees in technical matters related to the oil production and oil terminal activities. Some of these centres, which are administered by foreign specialists in the oil industry, have been equipped with the most up-to-date educational facilities and follow modern training programmes. In addition to this and the companies' own in-house programme, some of the trainees who fulfil specific requirements are sent abroad on short and long term educational missions. More recently, some companies established a scholarship programme, wherein a number of scholarships abroad are continuously maintained for the Libyan students who did not necessarily have an official connection with the company or a commitment to join it after graduation.

The available data on the total training costs as well as on the total number of trainees is scanty, particularly for the years prior to 1968. For the recent years up to 1971, however, figures were provided on the numbers that benefitted from the industry training programmes. Table 6 below summarises these figures.

Table 6

THE INDUSTRY TRAINEES FOR THE YEARS 1968-1971



Sources: Ministry of Petroleum '*Nafft Ellieby*' (in Arabic),
Tripoli, 1963, pp. 150-153.

As the above figures suggest, the oil companies have been making an apparent contribution to the development of skills. This is, of course, in comparison to their limited effect on employment. In terms of a real acquisition of skills by the trainees, the figures should be treated with caution. According to the government pronouncements, the efforts of the oil companies in the field of training have been very limited in scope and quality. Some officials in the Ministry of Petroleum went even further to indicate that the figures are inflated because the oil companies tend to exaggerate their achievements in preparing and developing national experience in the oil industry. Certainly, this allegation reflects the severity and durability of the conflict between the revolutionary government and the foreign-owned oil companies, but it is not without foundation.

Despite the governments' constant pressure, the oil companies are still refusing not only to speed the Libyanization of employment but also to replace some of their expatriate employees by locals on the ground that the Libyans are as yet unfit to take over the responsibilities. Undoubtedly, this contrasts with the companies' claim that they are training about 1,000 native employees a year.

Yet this alleged grievance is no ground for refusing to acknowledge the realities. Most of the sophisticated oil specialists inside the government bureaucracies had at one time been employed by the oil companies, and there is no doubt that they gained their initial knowledge and experience during their work with the companies. This group of specialists, who joined the revolutionary government, are now carrying out the country's oil policy with notable success. As one author recently wrote: "Libyans argued from reports prepared by economic and marketing executives....to assess the actual realized price of Arab oil. The oil companies were therefore no longer arguing against ill-informed amateurs who could be bribed, threatened or coerced, but against militant nationalists who knew the oil industry from the inside, using information from fully professional surveys" (32).

From the above observation, it seems that the industry did impart technical and managerial knowledge to its local administrative employees in the upper category. Unfortunately, these were few in numbers, and the industry failed to create a native skilled workforce. Its failure is clearly demonstrated by the companies' continued dependence on foreign recruits, who still constitute 30 percent of the

(32) Louis Turner *'Invisible Empires: Multinational companies and the modern world'* (Hamish Hamilton, London, 1970), p.150.

total industry workforce and occupy most of the skilled posts. This percentage is very high in comparison with that in other major oil exporting countries. For example, in Iran and Iraq the expatriate employees represented about 1 percent of the total oil industry employment during the 1960s and in Kuwait and Saudi Arabia, they constituted about 10 percent (33). It may be true that the cases of these countries are not precise comparisons, in that the industry was established there earlier than in Libya, so that in the course of time the local workforce has gradually acquired experience in oil operations. But the wide difference in dependence on expatriates and the absence of even gradual replacement of foreign by locals in Libya still indicate that the foreign oil companies were slow in training Libyans, or their training programmes were not utilized effectively.

However, it is unfair to put the blame on the oil companies alone and to ignore the effect of local conditions in this respect. Machine-consciousness, the skills of a middle mass of mechanics and technicians cannot be acquired merely by setting up modern apprentice training schemes. In order to be effective, training programmes should be based on the existence of a competent educational system in an environment hospitable to the incorporation of modern technology. These two requisites hardly existed in Libya. As indicated in Chapter II, the society has not yet crossed the threshold of industrialization, therefore the local workers with the oil industry had no industrial background. A considerable proportion of them were also illiterate, and influenced by the traditional fatalism which inevitably led them to

(33) Sam H. Schurr and Paul T. Homan, *op.cit.*, p.105.

a disregard for punctuality. The rest, having some education while they were young are less attached to the values of traditional societies and eager to improve themselves by possessing a better endowment of skill, but their capacity to acquire industrial skills and know-how is severely limited by two factors. In the first place, the schooling system in which they were educated was not practical; it tended to make education bookish. In the second place, they discontinued their education in the early stages, few of them went beyond the preparatory level. Consequently apprenticeship schemes had to start by offering courses on basic science as well in teaching English, in which the oil business is conducted. The logical conclusion from this, is that training local workers was a gigantic task and could not be performed by the oil companies without government help in planning and coordinating the formal education system. These prerequisites were never fulfilled in Libya, and their absence probably explains why the process of development of indigenous staff has been very slow.

Fortunately, the revolutionary government recognized the need for quick action in the field of training. Two government-sponsored training centres were set up in 1970. In the following year, a petroleum college was established to supplement the vocational centres. Many students have been sent abroad on government scholarships to complete their academic studies in petroleum engineering and related fields. The government agencies, notably the Libyan National Oil Corporation, are sending their ambitious employees abroad to advance their experience in the various aspects of oil industry, including refining and petro-chemicals. It is too early to appraise the effectiveness of these intensive programmes which are aimed to speed up the Libyanisation of the oil industry; an aim that the country as a whole is eager to achieve.

CHAPTER IV

THE QUANTITATIVE CONTRIBUTION OF OIL INDUSTRY

When the political decision was taken to create a unified and independent Libya, many had thought that the country would not be able to support itself financially.....A United Nations technical assistance programme of an unusually large magnitude was provided for many years until the discovery of oil freed the country from dependence on external sources for economic assistance (1).

U. Thant

In the preceding chapter it was shown how Libya within a decade had become one of the world's leading producing and exporting oil countries. It is appropriate now to focus the attention on how important the oil industry is to the country in which it functions. In particular, what does it represent in terms of foreign exchange earning, government income and the performance of national aggregates? The task of this chapter is to deal with these questions.

BALANCE OF PAYMENTS EFFECTS

As it is foreign-owned, self-financed and export-oriented, logically the most visible signs of the impacts of the oil industry are on the external transactions. The first and immediate impact of its local operations that comes to mind is on the merchandise account.

(1) Foreword to Adrian Pelt, *Libyan Independence and the United Nations*, Yale University Press, 1970, p.xiii.

The imports by the oil companies had accounted for a considerable part of the total annual imports to the country since 1957, until 1970 when the exploration activity slowed down. More important, however, is the place of oil exports on the credit side of the merchandise account.

Within two years from their start in the fourth quarter of 1961, crude oil exports changed the balance of trade from a permanent deficit to a large and rapidly increasing surplus, reaching LD. 646.869 million in 1970, even though the imports were simultaneously growing at a high rate - 300 percent between 1960 and 1969. The share of oil exports in the total exports rose from 94.3 percent in 1962 to 99.9 percent in 1970. Thus, the Libyan economy has become literally a mono-export one. This situation is due to two factors. In the first place, crude oil exports were increasing dramatically since their start in 1961 and until the government-decreed cutback in 1970. They rose in volume from 66 million barrels in 1962 to 1,212 million in 1970 and in value they rose from LD. 47 million to 841 respectively. In the second place, exports other than oil continued their downward trend, declining from LD. 3.1 million in 1960 to just over 0.5 million in 1970. This was mainly because of the large increase in consumption and the stagnation of the agricultural sector which had been the main source of traditional exports. However, these large and impressive figures do not show the real flow of final resources into the national economy; the matter requires further scrutiny.

Firstly, the imports of equipment and supplies by the oil companies is self-financed in terms of foreign exchange, so are not paid for by the Libyan economy and do not really enter into its balance of payments, though they are officially recorded on the debit side of the account.

Secondly, the published value of oil exports does not reflect their real value. This is because their published value is in terms of the "posted" price per unit multiplied by the tonnage of oil. The posted prices, fixed by agreements (between the producing companies and the government) are of little relevance to the real value of crude oil. They are merely accounting devices for the purpose of calculating the companies' tax liabilities and some of their other financial dues to the Government. Since the posted prices' levels are usually determined by oil-political considerations rather than by the market mechanism, there is likely to be a significant discrepancy between the published value and the market valuation. The extent of this discrepancy is very difficult to ascertain; even specialists fail to produce reliable figures. This is chiefly because there is not a clear real-world market for crude oil.

Nevertheless, Professors Schurr and the late Paul T. Homan indicated in their recent studies that posted prices exceed the actual market prices by a range of 15 to 30 percent (2). Accordingly, the published value of Libyan crude oil shipments was inflated by at least 15 percent in 1969.

Thirdly, under the concessionary agreements, the foreign-owned oil companies have been exempted from the obligation of surrendering the foreign exchange proceeds of both their exports and the other external transactions. Thus, the oil companies retain abroad the foreign exchange earnings emanating from their local operations, and surrender to the monetary authorities in the country only such portion of these earnings as is needed to meet their local operating expenses and tax-payments.

(2) Sam H. Schurr and Paul T. Homan, *'Middle Eastern Oil and the Western World'* (Elsevier, 1971), p.98.

However, following the IMF's normal rules, the tabulators of Libya's balance of payments treat foreign-owned oil companies as residents. This resulted in the appearance of ambiguous figures for some items, so that using them in calculating the real impact of the industry on the balance of payments may result in misleading conclusions. For example, in the official statement of the country's balance of payments for 1970, on the debit side there was recorded an amount of LD. 264.239 million as a direct foreign investment by the oil industry. At first sight, this entry indicates an increase in Libya's foreign long-term assets, but virtually all of it covers depreciation and the other amortization charges by the foreign-owned oil companies.

Fourthly, as far as the balance of payments is concerned, the industry contributes in two other ways in addition to the exports. One is that the local operations of the companies involve an inflow of foreign exchange even before the start of oil exports. The other is that a portion of the industry's local sales of oil products represents a foreign exchange saving; because the oil products, if they had not been provided by the industry, would have had to be imported.

Taking these considerations into account, it is clear that both the impact of the industry on the merchandise account and its external transactions as reported in the official balance of payments statement, do not represent the real amounts of foreign exchange that the oil industry brings into the country. So the economists dealing with the subject draw attention to the "retained value" from the industry's external operations rather than to its gross contribution to the traditional items of the balance of payments account.

There are two alternative methods of measuring the "retained value". One involves summing all the results of the industry's foreign transactions: this means calculating the export proceeds and all foreign exchange inflow emanating from the industry's operation, and subtracting all capital outflow arising from its operations such as imports of goods and services, net factor income payment abroad, etc. In using this method, which is followed by the Central Bank of Libya, the foreign-owned oil companies are regarded as local residents. The other method is, on the contrary, based on the assumption that the companies are foreign residents; and accordingly the retained value of the foreign exchange emanating from the industry operations is the sum of the payments by the companies to the government plus any other payments involving the purchases and use of Libyan currency.

Aside from statistical discrepancies, the results of both methods are, in the accounting sense, equivalent. Because the first method deals with the international financial flow, it forms a "shapely" balance sheet which provides a better understanding of the industry's impact on the balance of payments. But this method is used only for the years after 1964, because of the absence of accurate data for the period up to that year. In Table 1, the retained value, as calculated by the second method, is summarized for the period from 1957 to 1970. Table 2 provides a balance for the period from 1965 to 1970 on the basis of using the first method.

As shown in Table I below, the oil industry had been contributing to the foreign exchange earnings of the country even before the start of crude oil exports in the fourth quarter of 1961. In 1957, which was the first year of oil exploration, the foreign exchange inflow from the industry amounted to LD. 4.34 million, and in 1960 this rose to

LD. 21.3 million. The latter amount was seven times the total foreign exchange receipts from the traditional exports, which were just over LD. 3 million in 1960. Because the tax-payments were, up to 1961, very small, the bulk of foreign exchange surrendered by the companies in return for local currency was for the purpose of financing their local expenditure. Although, in the absence of data, the forms of this expenditure could not be segregated, they were mainly in wages and salaries for local personnel, housing, lease of lands and payments to local contractors engaged in drilling operations.

As shown in Tables 1 and 2 on the next pages, the foreign exchange earnings from the industry have been increasing with remarkable rapidity since the start of crude oil exports in 1961. These earnings rose from LD. 27.5 million in 1961 to LD. 572.7 million in 1970. The bulk of these amounts was in the form of payments to the government, whose share in the retained value from the industry's operations increased from less than 8 percent in 1961 to about 85 percent in 1970. The rapid increase in the share of the payments to the government is primarily due to the steady increase in the oil production and exports, and the rise in the per-barrel tax-payments. But it is also worthy of note that the level of local expenditure had remained stationary for six years from 1962 to 1968 despite the dramatic increase in the oil production and exports during that period. There are two reasons for the stagnation of the local expenditure and the decline of its ratio in the retained value. In the first place, as indicated in the preceding chapter, there was a slowdown in the exploration activity during the period.

In the second place, the lack of local expenditure for exploration purposes could not offset by the rise in the level of

Table 1

THE RETAINED VALUE OF FOREIGN EXCHANGE EMANATING FROM OIL OPERATIONS

(In millions of Libyan Dinars)

At current prices



- (A) Including the net change in liabilities to Government. This is normally settled in the following year.

- Sources: (i) Bank of Libya, '*Economic Bulletin*' (Various issues); The Statistical Supplement, July 1967, p.27, and the Annual Reports of the Board of Directors and '*Balance of Payments of Libyan Arab Republic*'.
- (ii) International Monetary Fund; *Balance of Payments Yearbook*, Vol. 22, June 1971; and '*Libyan Arab Republic - Recent Economic Development*', June 28, 1972, p.40, Table 20.
- (iii) Ministry of Planning, *Statistical Paper No. 15*, Prepared by Arthus Auble, 1965, p.6, Table 4 (Mimeo.).

Table 2

BALANCE SHEET OF THE OIL INDUSTRY'S EXTERNAL TRANSACTIONS

(In millions of Libyan Dinars) At current prices



Illustration removed for copyright restrictions

Sources: the same as Table 1.

production, because the oil industry is generally characterized by the existence of economies of scale which permit expansion of output without a proportionate increase in the inputs employed. However, during the last three years of the 1960s the local expenditure recorded a remarkable increase; it rose from LD. 40.4 million in 1967 to LD. 90.9 million in 1969. This rise is due to two factors. One is the commencement of exploration activity by the new concessionaires who came in after 1967. The other is that the existing producing companies also resumed their drilling activity to increase their productive capacity to cope with the rising demand for Libyan crude oil after the closure of the Suez Canal in 1967.

In all the cases, although all the amounts recorded as local expenses represent a surrender of foreign exchange to local monetary authorities, not all of them are real balance of payments gains. The reason is clear. As illustrated in Table 3, around 90 percent of the annual local spending by the oil companies is composed of payments for the purchases of goods and transport services, and only 10 percent is in the form of salaries and wages. Undoubtedly, in a backward economy such as that of Libya, these goods and services are of a high import content, therefore a significant portion of the foreign exchange earned from the industry's local spending is paid for by the indirect imports by the industry itself. Computing these indirect imports with a reasonable degree of accuracy requires a long series of calculations; which, in the absence of input-output data is not possible.

However, drawing on the experience of other economies similar to that of Libya, an average of 40 percent of the industry's total local expenditure excluding the wages and salaries payment is (presumed to be) indirect imports by the industry. Of course wages and salaries payments also have repercussions on the country's imports bill. But these are

Table 3

LOCAL EXPENSES OF OIL COMPANIES HOLDING CONCESSIONS

(In millions of LDs., at current prices)



Sources: Bank of Libya 'Economic Bulletin', Vol. X, No. 3, Table 32, and Vol. XI, No. 4, Table 33.

incorporated in the repercussions on the whole economy. So these payments are all considered as a balance of payments benefit after subtracting the part transferred by the expatriate personnel. Consequently 36 percent of the gross local spending (the initial assumption is 40 percent of 90 percent of the total) has to be deducted.

The above discussion was centred on the visible contribution of the industry to the balance of payments, and the contribution to foreign exchange savings was not yet taken into account. As indicated earlier, until 1967 when a small refinery was set up to meet a part of the local demand for petroleum products, all petroleum products consumed

in the country were imported and their import bill was incorporated in the country's general imports. With the setting up of this refinery, the capacity of which meets only a third of the local demand, the value of the crude oil supplied by it (the refinery) has to be regarded as a foreign exchange saving and therefore a balance of payments benefit. This is relatively insignificant; it amounted to LD. 1.5 million in 1967 and 2 million in 1970.

Having all these considerations in mind, we can summarize the balance of payments benefits (Bpb) in the following:

$$\text{Bpb} = L - nL + T + S \dots\dots\dots (1)$$

where L stands for gross local expenditure, n for the share of indirect imports by the industry in L, T for the government revenues and S for the domestic sales which are regarded as a foreign exchange saving. The values of all of these are presented in Table 4 for the period from 1957 to 1970. Note that the nL figure is based on an assumed - but reasonable - assumption about the ratio.

It is evident from Table 4 that, even after making the proper allowances to the amounts retained or disbursed abroad by the foreign owned-oil companies, the foreign-exchange receipts from the industry have been tremendously increasing since the inception of the industry in 1957. As compared with other foreign exchange receipts, the contribution of the industry has not only constituted the mainstay of the country's balance of payments but also it has been the basis of its surplus, which rose from LD. 2 million in 1961 to nearly LD. 250 million in 1970.

As shown in Table 5, the share of oil receipts in the country's total foreign-exchange earnings has been increased from 14 percent in 1957 to 91 percent in 1970. Furthermore, if one takes into account that the amount of LD. 35.6 million recorded in 1970 as an investment income

Table 4

BALANCE OF PAYMENTS BENEFITS FROM OIL INDUSTRY

(In millions of LD. at current prices)



Aston University

Illustration removed for copyright restrictions

Sources: L and T are derived from Tables 1 and 2, and S from:
National Accounts of the L.A.R. released by the
Ministry of Planning, October 1972, Table 23.

was brought about by the investment of the accumulated foreign exchange reserve from the oil receipts, the share of industry will have had been 97 percent for 1970.

It appears also from Table 5 that when oil earnings are excluded, the rest of the current transactions would face, instead of an increasing surplus, a large deficit reaching LD. 270.2 million in 1970.

Table 5

OIL RECEIPTS COMPARED WITH OTHER SOURCES AND OUTLAYS OF FOREIGN EXCHANGE

(In millions of LDs. at current prices: selected years)



Illustration removed for copyright restrictions

Sources: The figures of the table are compiled from the sources mentioned in Table 1.

This situation, which obviously indicates how Libya is really dependent on the oil industry as a source of foreign exchange, is due to several factors. One is of course the rapid increase of general imports which increased from LD. 39 million in 1960 to LD. 250.1 million in 1970, an increase of 430 percent during a decade. Another factor is the fall in the non-oil exports, foreign exchange proceeds of which were in 1970 only just LD. 0.7 million. The last figure is hardly enough to pay for Libya's imports for a single day. There is also the emergence of items of foreign-exchange outlay such as the Arab aid and the rise in the government expenditure abroad.

Nevertheless, the dramatic increase in the oil receipts has covered or offset all of these and enabled the country to raise its gross external reserve from \$87 million at the end of 1960 to \$2.7 billion by December 1971. The last figure is enough for financing four years' requirements of imported necessities.

THE FISCAL CONTRIBUTIONS

As indicated in Chapter II, until the oil boom, the fiscal situation of Libya was not easy. Because of the paucity of financial resources, the budget was in permanent deficit, increasing from 31 percent in the financial year 1952/53 to 45 percent in 1962/63. This deficit resulted in the country's heavy dependence on external sources for the bare financial requirements. The main external sources during that period were foreign aid and the contractual payments made by Britain and the United States in respect of military bases leased by these countries.

A few years after the start of crude oil exports, the situation was completely changed. Even with the termination of foreign aid in 1965 and a substantial rise in ordinary and developing expenditure, the overall deficit in the budget was turned into surplus. Apart from 1967 when a small deficit occurred, the budget has been in a steady surplus since 1965. In 1967, Libya became a donor country and since then has offered to several Arab and African countries an annual sum larger than she had received from all sources in any single year.

These changes were essentially due to the spectacular growth in oil revenues. As illustrated by the data in Table 1 on page 121 the payments to the government leapt from about LD. 5 million in 1962, the first full year of oil exports, to LD. 484.3 million in 1970 and since 1965 they have constituted the bulk of the total retained value from the oil industry's operations. The miraculous growth is primarily the result of the rise in both the level and the value of oil exports, coupled with continuous improvements in terms of payments to the government. In order to consider how the government could manage to raise its revenues from oil, it is helpful to present in perspective a short review of the main conditions which have generally shaped the tax structure of the oil industry.

Broadly speaking, up to the early 1950s it was widely taken for granted that the share of the oil-producing underdeveloped countries in the revenues from foreign-owned oil industry was unfairly low. Until then, the payments by the foreign oil companies to the host governments were practically confined to fixed royalty and insignificant amounts of dead-rents and other fees or bonuses; but generally the industry was exempted from all forms of other taxes and import duties. Royalty, which had been the outstanding financial trait of the oil-concession agreements, accounted for the bulk of the host

governments' oil receipts. In the Middle East, it was generally fixed at four shillings (gold) and with the changes in the gold value of currencies, it was adjusted in terms of dollars or pounds. However, under some concessions the host governments were entitled, in addition to royalties, to a sum based on the dividends paid by the companies to their shareholders or linked to their earnings from the crude oil production. But in general the government's total income per unit of production was low, it ranged between US 5 ¢ to 25 ¢ per barrel (3). Aside from a few cases almost all bonuses and the other ancillary payments were modest.

At the mid-century this uniform pattern was however broken by a succession of important and radical changes which had been maturing since the late 1940s when they were initiated by Perez Alfonzo, the then Venezuelan Minister of Mines and Hydrocarbons. A few years later, these changes were brought to the Middle East and Sheikh Abdullah Tariki of Saudi Arabia, who was regarded as a radical by Middle East standards, was able to persuade some of the oil countries in the region to revise their traditional policies toward the oil companies. Certainly the factors underlying the radical trend and the relative success of Sheikh Tariki are numerous: the increase in world demand for oil products; the dependence of Western Europe and Japan on Middle East Oil; the discovery of fabulous oil reserves in the area; the nationalization of the industry in Iran; and of course the great publicity about all these and the importance of oil. Indeed, oil has freely been called black gold, the ammunition of economic progress and the 'blood of modern civilization'.

(3) Charles Issawi and Mohammed Yeganeh, *The Economics of Middle Eastern Oil*, (Faber and Faber, London, 1962), pp. 130, 131.

Yet, the vast majority of the peoples in the oil countries remained desperately poor and backward despite the existence of an oil industry for decades. In such circumstances the host governments had to insist on better terms than those prevailing, so that the industry could be viewed as contributing to the development of the local economy. Accordingly the host governments initiated a number of important changes aimed to safeguard the national interests.

Although achieving this objective required several alterations in the institutional environment within which the industry could contribute significantly to the local economy, the governments intensified their efforts on the fiscal contributions. In 1948, Venezuela instituted a practice of 50-50 profit-sharing with foreign oil companies. In 1950, the Middle Eastern oil countries followed the same example and since then plans to increase the government income in one form or another have been afoot almost continuously. In this respect, the host governments have been quite successful. Their income per barrel has more than quadrupled, their share in the industry's profit increased from 50 percent in 1950 to more than 72 percent in 1972. Not all of these fiscal gains came peacefully. In many cases the governments' demands led to prolonged friction with the companies.

There are a number of reasons why imposing the highest possible level of taxation on the profits from crude oil production has drawn the governments' foremost and persistent attention.

Firstly, such taxation has certain advantages. Politically, it has a great appeal and is regarded as an ingredient necessary to obtain public acceptance of the existence of foreign-owned oil companies, which have been regarded by large sections of the people as an outstanding example of the continuity of imperialism. To an economic-development-minded and far-sighted government, increasing revenues offer

possibilities for directing investment along lines regarded as most important for economic and social progress in the host country. To personalistic dictatorial regimes ruling some of the oil countries, a rise of oil monies enables these regimes to widen their squandering on their own luxury living, to expand their political gamblings, and of course to enlarge their foreign bank accounts.

Secondly, it has been universally believed that the oil industry in the major oil exporting countries generates an unusually high surplus from its crude oil operations. The sources and justification of this surplus, which in some cases was said to be fabulous, have been subject to a great deal of controversy. On the one side the oil companies' spokesmen usually justify the existence of the extraordinary surplus from their operations in terms of the high risk involved in the crude oil operations and of the supply scarcities of the technical and managerial skills possessed by the companies. Accordingly, the surplus generated by the industry is in the Marshallian concept a combination of quasi-rent and the rent of natural ability. On the other side, the host governments assert that the surplus occurs because of the scarcities of oil resources. That is analogous to the Marshallian 'pure rent' which is "defined as the return to a factor that could not, even in the long run, be increased in supply" (4). Besides these two major points of view, there is also that of the consuming countries which insist that the exceptionally high returns from the industry operations arise mainly because of the imperfections in the market of both factors of production and petroleum products.

(4) Raymond F. Mikesell *et al*, *Foreign Investment in the Petroleum and Mineral Industries* (The John Hopkins Press, Baltimore, 1971), pp. 33-34.

Wherever the truth lies, up to the early 1960s the bulk of this surplus was absorbed by the oil producing companies. This caused the host governments to feel themselves deprived. Even more, they began to feel doubly cheated when they realized the two following facts. One is that since almost all the dividends paid out of this surplus are received by foreign stockholders and given the tax laws of the home countries, the host governments are in no way able to increase their share in the industry earnings. The other is that the foreign-owned oil companies, instead of reinvesting the bulk of their vast surplus in the source countries, transferred them abroad to finance their exploration activities outside the countries of origin or developing sources of energy other than oil. Since both sorts of activities are against the self-interest of the oil-dependent countries, they reasonably created some resentment in the governments of these countries. This resentment explains why the host governments frequently proclaim their intention to obtain everything above the minimum profit needed to sustain development work and production.

Thirdly, the fact that oil is a depletable resource and the quantities available are limited indicate that once produced it cannot be physically replaced. This has already been experienced by several countries, notably Austria and Romania. Accordingly, to safeguard their economic future the oil countries are bound to maximize the economic returns from crude oil production. But, as explained later, the foreign ownership of a capital-intensive industry such as oil, in backward economies such as those of most major oil exporting countries, severely limits the share of earnings accruing to the local factors of production; therefore the development of an oil industry would not directly induce

development in non-oil sectors. In addition, the existence of the industry has generated some sort of diseconomies to the host countries. The destruction of the countryside, the pollution of great bodies of water and the unnecessary waste of unrenovable natural resources are outstanding examples of the industry's bad effects on the host countries. Therefore, in order to counterbalance the loss of non-renewable oil resources and the ill effects of the industry on the national economy, the oil countries, as stressed by one of their spokesmen, "must obtain a reasonable fiscal participation through the level and structure of taxes" (5).

Fourthly, the foreign-owned oil producing companies, which had realised that any resistance to all demands of the host government would jeopardize their situation, were willing to concede only in fiscal matters. This is largely attributable to the fact that the companies' payments to the host government in the form of income tax actually represent little extra cost to the companies, particularly the Americans. This is due to the United States' favourable tax treatment granted to the oil companies; for example, they are given depletion allowances regardless of where the activity takes place, and the right to credit all sorts of income tax paid abroad against income tax liabilities at home. According to Mrs. Penrose, as a result of this process together with the overpricing of crude oil, the rise in the payments to the host government brings even further advantages to the companies.

(5) Alirio A. Parra, 'Oil and Iron Ore Taxation for Economic Development: the Venezuelan Case', in Zuhayr M. Mikdashi, Sherrill Cleland and Ian Seymour, ed. *'Continuity and Change in the World Oil Industry:'* (MERPC, Beirut; 1970), p.120.

"After the 50-50 profit-sharing agreements the revenues of the producing countries soared. With this one device the Companies achieved two important objectives: the cheapest method of generating investment funds because tax subsidy in the depletion allowance and the offset against their domestic taxes (for the US companies), and a way of paying handsomely for the goodwill of the crude-producing countries almost entirely at the expense of their governments' treasuries" (6).

Fifthly, the world demand for crude oil at source is highly price-inelastic therefore changes in supply prices do not significantly affect the overall volume of exports from the source countries as a whole. The price-inelasticity of crude oil is mainly due to the several changes occurred in the energy situation during the last two decades. Briefly, these changes were: increasing income in the rapidly recovering industrial countries (some of the oil products are highly income elastic); technological changes favouring oil on the other competing energy sources and increasing the use of oil as a chemical feedstock; and rising concern in the industrial world with atmospheric pollution. Besides these, the price of crude oil represents a small portion of the product price, which is almost ten times as high to the ultimate consumer, so that changes in the crude prices have very little effect on the final products' prices. All these, coupled with the relative success of OPEC (Organization of Petroleum Exporting Countries) in coordinating the production and export policies of its members, attracted the host governments to increase the level of oil taxation without fearing any inverse repercussion on the volume of crude oil exports.

Having briefly exposed some of the modifying influences responsible for bringing about some structural changes in the host

(6) Edith Penrose, *The Large International Firm in Developing Countries: The International Petroleum Industry* (London: Allen and Unwin, 1968), p.193.

governments' taxation policy *vis-à-vis* the foreign-owned oil industry, we can now turn to a brief analysis of the system of oil taxation applying in Libya. When Libya enacted the original Petroleum Law in 1955, most of the older oil countries had already introduced some radical changes into their taxation system. This indicates that Libya at that time, as a latecomer to the oil scenario, was in a position to profit from the experience of others. So the fiscal provisions as embodied in the original law assimilated the standard characteristics of the older Middle Eastern concessions though in many other ways they were less favourable to the treasury. According to the Petroleum Law, the government receives three kinds of payments from the foreign oil companies: (1) royalty, (2) income taxes on "profits" and (3) fringe payments, viz. fees, rents and bonuses. But the concession holders are exempted from all other form of taxation, including import and export duties, whether government or municipal, or other exactions of such nature as to render them liable to taxation or other dues(7).

Royalty

Conceptually, the royalty is distinct from taxation and is regarded as the share of the landowner in the oil produced, whether the landowner is a private citizen, as in the U.S., or the State. Economically, L. C. Gray justified it as "a compensation paid to the owner of an exhaustible asset for its capital value which reduces by exploitation" (8).

(7) Ibrahim M. Hangari, edit, *Libyan Petroleum Law*, (LAPE, Tripoli, Libya, 1966), pp. 21-22.

(8) L. C. Gray, "Rent under the Assumption of Exhaustibility", *Quarterly Journal of Economics*, May 1914, pp. 466-488.

In Libya, as in most other countries, by law all the subsoil wealth, insofar as it is a natural resource, is the property of the State. Accordingly, the government is the only beneficiary from the royalty. Following the modern and fairly generalized practice, instead of being stated in terms of a definite sum per unit of production, the royalty was stated in the form of a percentage of petroleum production. The Law stipulated that the concession holders should pay a royalty of 12½% of the value of all petroleum and natural gas recovered from the concession area; this rate is equivalent to one-eighth, traditionally paid to the private landowner in the U.S. Although the government has been pressing the companies to rise their payments to it, the rate of royalty has remained unchanged - with the exception of an Italian companies which from the beginning undertook to pay 17½%.

Understandably, like the other host governments - excluding Venezuela where the royalty is 16.2/3% - , the Libyan government has not increased the rate of royalty because it is not regarded as a credit against the companies' income tax liability in their home countries. The Law as amended in 1961 gave the government the option to receive the royalty either in cash based on posted prices or in kind. But the government, thinking that the posted price was higher than the real market price, has been extremely cautious in using its prerogative of receiving the royalty in kind. From the standpoint of treasury income this thesis was correct, but it has been argued that receiving royalty in kind opens up enormous possibilities for the country to develop a national oil-refining industry and to participate directly in petroleum exports.

As illustrated in Table 6, up to the fiscal year 1965/66, the royalty payments accounted for the bulk of the government oil receipts;

in 1963/64 for example, they constituted over 65%. But since then, though they increased in absolute value, their share in the total government oil revenues declined to about 27 percent in the fiscal year 1970/71. The reason for this is that until 1965 the royalty payments were totally deducted from the income tax that the concessionaire had to pay to the government, consequently the payments under the royalty heading were high while those under the income tax were meagre. So, under this system, the royalty whatever its rate and magnitude was a term without a fiscal substance. However, it was argued that ^{the} royalty still had a real significance. That was in the event the concessionaire was making no profit at all and thus no taxable income in it; then the government would still be able to collect its royalty and thereby was not entirely deprived of income from a wasting asset (10). But this case was purely hypothetical because it was difficult to envisage the absence of net profits in the oil industry.

In the early 1960s, the OPEC challenged this approach, which was followed in all OPEC members except Venezuela, and insisted on infusing the royalty with some practical meaning. In 1962, the OPEC under the leadership of Professor Fuad Rouhani (then its Secretary General) began a series of negotiations with the major producing companies, arguing that "the royalty is a payment which is ordinarily made to the owner of the ground in consideration of depletion of the natural resource and for that reason should be paid to the government independently of the tax" (11). In 1964, agreement was reached between the major oil companies and OPEC as representing the government concerned on what was described as the "expensing" of royalties. This meant treating

(10) OPEC, '*Taxation Economics in Crude Production*' paper presented in 'Vth Arab Petroleum Congress' (Cairo, March 16th-23rd, 1965) Mimeo. p.10.

(11) Henry Cattán, *The Evolution of Oil Concessions in the Middle East and North Africa*, (Oceana publications, inc., New York, 1967), p.91.

Table 6

GOVERNMENT OIL RECEIPTS
(In millions of Libyan Dinars)



Illustration removed for copyright restrictions

- Sources: (i) International Monetary Fund, Libya: Basic Data (Washington, 1966) Mimeo., p.9, Table 7.
- (ii) The figures for 1963/64 and thereafter were obtained from Revenues Section, Ministry of Petroleum, (Tripoli, Libya).

royalty payments as an expense in computing income tax, instead of as credit against the income tax. In 1965, this principle was adopted in Libya after prolonged negotiations with the independent companies (this term, as indicated in Chapter III, refers to the small companies as distinct from the major companies). As a consequence of the application of this principle, the percentage of net profits received by the government

was greatly increased. But it should be borne in mind that even with the expensing of royalty payments, the share of the government in the profits is still less by at least 6% than the nominal rate. The reason is clear. The royalty payments are being added to the costs, which are of course all deducted from the gross income, and assuming an income tax rate of 50 percent of the net profit, half of the royalty payment is indirectly deducted from the income tax.

Income Tax

In addition to royalty payments, the oil companies are subject to income tax. However, until 1965, the rate of income tax was undefined and tax payment was added to royalty and other payments to bring the total government oil receipts up to 50 percent of the total concessionaire profits; despite the fact that income tax, being based on the element of national sovereignty, is quite different from royalty, exaction of which is based on the direct state-ownership of oil resources. In 1965, the original oil legislation was modified and the 12½ percent royalty was no longer accounted as a tax credit. Consequently the income tax had become 50 percent of net earnings. This with the royalty payments brought the government oil income up to 56.25 percent of the companies' profits. As indicated in Table 6, since the 1965 arrangement the income tax payments have become the major component of the government oil income.

In 1971, the government concluded a new agreement with the oil companies, providing for an upward adjustment of the government share in the companies' profits. The basic income tax rate was raised from 50 to 55 percent. Furthermore then companies agreed to pay an equivalent of 5 percent of their profits in lieu of retroactive payments

resulting from the price settlement. Thus, in addition to the royalty, the income tax has become *de facto* 60 percent of the companies' net earnings.

Fringe payments

Commonly the concessionaire companies make bonus payments to the host governments on the occasion of the grant of the concession, as well as undertaking to pay rental charges during the stage of exploration. In the case of Libya, the bonus payments were modest during the early years. In 1968, however, as a result of severe competition between applicants for the grant of concessions in promising areas, the bonuses amounted to very large sums. Surface rents and fees were insignificant, their totals never rising above LD. 0.5 million in any single year; so it was, as shown in Table 6, the total fringe payments which constituted the bulk of the government oil income, until the start of oil exports. It should be noted that these fringe payments, unlike the royalties, are still a direct offset against the income tax, therefore they benefit the budget only in the absence of taxable income.

Dependence of the Budget on the Oil Revenues

Total government revenues from all sources and the oil receipts are summarized in Table 7 below. As expected, oil revenues accruing directly to the government exchequer have occupied a prominent place in the budget since the upsurge of crude oil exports in the early 1960s, and with the rapid increase in oil production during the last years of the 1960s they have become the mainstay of the budget. As indicated in Table 7, in recent years the share of oil revenues in the total disposable funds available to the government has sharply increased from 37.6 percent in the fiscal year 1963/64 - based upon a low level of

Table 7

THE SHARE OF OIL REVENUE IN THE GOVERNMENT TOTAL REVENUES

(In million of LD. at current prices)



Source: (1) Bank of Libya 'Annual Reports' 1962/63 to 1971/72

Note: (2) There is apparent discrepancy between these figures and the last column of Table 6. The exploration lies in the different time-basis of reporting as between the Ministry and the Central Bank.

government revenues in that year - to 88.5 percent in the fiscal year 1971/72. Indirectly, the oil industry provides far more, since the figures recorded in the budget do not include income tax on the salaries of oil companies employees, not to mention government personnel paid out of oil taxation and the indirect taxes paid by both groups. Similarly, a considerable proportion of customs duties, which are the

second most important source of government revenue, is generated by or related to the oil industry. These and the previously cited figures are merely alternative ways of expressing the dominance of oil revenue in the budget, and if an accurate calculation is made, the government budget's percentage dependence upon oil industry may be deemed to be reaching a plateau in the vicinity of 98 percent.

Characteristics of Oil Revenues

Clearly, the spectacular growth in oil revenues demonstrates that the presence of an oil industry does provide the country with vast resources of capital and has thereby offered a real opportunity for developing the rest of the economy without the necessity and the hardship of reducing current personal consumption. However, a brief examination of the main features of the oil revenues reveals that they have some special characteristics. Consequently, from the point of view of economic and social development, the impacts of oil revenues are in many ways different from those of the other forms of fiscal receipts.

One of these characteristics is that, unlike the other sources of government income, oil revenues are easily collected. In Libya, as in most developing countries, financing government spending programmes through the customary sources involves many difficulties. Taxes are still unpopular and are regarded as an instrument of a hated colonial power. Until recently, the upper income earners and wealthy persons were the major sources of power, who would certainly resist any progressive tax policy. Furthermore, although the average per capita in Libya is fairly high, because of the uneven distribution of income, the majority of the population still remains poor, and thus their taxable capacity is very low. Another familiar problem is the technical inefficiency of the government machinery for the assessment and

collection of taxes. In contrast, the relevant amounts of oil revenues are simply transferred to the government account within the period stipulated by the concession agreements.

Another characteristic of oil revenues is that they do not represent work and efforts on the part of taxpayers; therefore no one, in the current generation, feels their burden. This is mainly due to the fact that oil exports, from which oil revenues are derived, involving only a small proportion of indigenous labour and materials, do not depend so much on the supply of local inputs and prices as on the external demand for oil products. Accordingly, though oil revenues are regarded as the price of crude oil exports, they accrue to the country merely by virtue of ownership. This implies that the influx of oil revenues has almost no effect on domestic effort, in contrast to other forms of fiscal income which have multiple influences on domestic activities, effort, production, investment, saving, income distribution, etc.

Furthermore, oil revenues as income from exports tended to be less fluctuating than revenues from other primary international commodities, of which prices fluctuate widely in the world market, with ensuing fortunes or misfortunes to the budgets depending on such commodities. Indeed, with the increasing world demand for oil products, almost every year brings news of further increase in the crude oil prices, and a rise in the government income. In these circumstances, the magnitude of oil revenues depends on the scale of production which in turn, being independent of the supply of local inputs, is largely set by the government oil policy and the government's relations with the producing companies. From the long run point of view, however, the scale of production and the oil revenues will be more or less determined by the volume of the uncovered reserve. This will of course become exhausted unless there are further discoveries which can be made only by maintaining a continual exploration activity.

Moreover, it should be recalled that oil revenues accrue to the treasury in the form of foreign exchange. This, in addition to strengthening the external payments position of the country, gives the government a great command over a wide range of foreign goods and services. In this respect, the effects of oil revenue are somewhat similar to those of the inflow of external financial aid. By financing the procurement of real resources from foreign countries, it eases in many ways the undertaking of development programmes. It ensures the speeding up of capital formation by making it possible to start highly capital-intensive programmes, the execution of which may require importation of virtually all the materials and equipment. It augments the domestic supply of consumer goods and thus enables the country to maintain consumption at higher levels than would otherwise be possible. It helps to keep the inflationary pressure under control. Since oil revenue accruing to the government does not constitute payment for the services of Libyan factors of production, it is, like the external aid, essentially an autonomous source of financing. This leaves the government with a higher degree of freedom in optimizing the rhythm of infusing capital, hence oil revenue facilitates the mobilization of domestic resources and secures the maximum rate of economic development.

However, oil revenue has certain advantages, as compared to foreign aid. First, its magnitude far exceeds any conceivable foreign aid programme. Second, the government is not under any compulsion to match its expenditure by the accruing revenue immediately, so it can utilize the budget surplus occurring at times of oil boom in building up foreign reserves which can be run down at the time of need. This serves as a hedge against a possible shortage of fiscal revenue as well as enabling the country to maintain a considerable import capacity. It also

gives the government a wide breathing space by making it possible to plan for a number of years ahead, and to undertake schemes of development which would take a long time for completion. Third, oil revenue, unlike foreign aid, is not tied to be spent in a certain country or for procuring specific goods and services; the government can buy its imports from the cheapest market. In other words, the oil revenue strengthens the bargaining position of the government in its dealings with its foreign suppliers. Fourth, the oil revenue does not impose on the government a burden of repayment obligations at a future point of time, so it does not make future generations bear part of the strain of capital formation and economic development. But this latter point, combined with the fact that oil revenue is not a result of indigenous efforts, may lull some unsophisticated people into conceiving of oil revenue as a windfall income. This is quite a dangerous illusion, as a United Nations expert pointed out:

"The soonest public authorities will realize that oil revenue is not a free good, the better for the Libyan people. Exchanging its oil deposits for foreign currency in order to finance economic development, the Libyan economy disposes of part of its natural wealth. The depletion of its nonreproducible natural wealth is the price... This depletion for financing purposes constitutes the major issue of responsibility to generations of the future... The cost of acquiring this capital under the present conditions must be considered as being high enough, amounting to at least 10% of the value of oil exports and 20% of the Libyan oil revenues" (12).

Besides its high cost, oil revenue, when it suddenly flows in, has serious internal effects. The sudden oil income accruing to a poor country, such as Libya was before the oil industry, can be likened to rain. As one commentator observed: "Falling in moderation it is

(12) Prof. A. Canellopoulus, *'On the Revision of the Second Five-Year Development Plan (1968-73) of the Libyan Arab Republic'* (Tripoli, 1969), pp. 53-54. (Mimeo.)

beneficial; falling in torrents it is like the flash flood that sweeps away all familiar landmarks. Financially, economically and socially sudden wealth on this scale has created freak conditions" (13). In Libya, there are many and clear indications of the existence of such conditions which are in reverse to the requirements of economic development.

Firstly, the availability of oil revenue on a large-scale tended to create adverse effects on the fiscal structure in the country. It lulled the government (in both the monarchical and revolutionary regimes) to the extent it neglected the tax situation. Until recently, the tax system in Libya was an antiquated apparatus designed for the purpose of raising revenue from low-income earners. In other words, it was a regressive tax system. Especially worthy of mention is that in the country there is still no practical taxation on property, real estate, capital gains and land speculation. Inevitably, this ironic situation, which indicates that some of the main principles of fiscal policy have been fully neutralized, is the main factor responsible for the diversion of scarce factors as manifested by the flight of the potential economic surplus to unproductive hoarding and luxurious consumption.

Secondly, oil revenue, like other revenues received by the government in foreign exchange, cannot be spent for procuring domestic products and services without serious danger of inflation. Of course, if such spending is entirely offset by an increase in imports, saving and taxes, there would be little or no increase in inflationary pressure. But since these conditions were not totally fulfilled in Libya, the effects of local infusion of oil revenues tended to typify those of money

(13) Miss Elizabeth Monroe, quoted by the Times, February 2, 1973.

creation in a situation where labour was scar or immobile, enterprise was deficient, and the government lacked an adequate policy. So, in such case, the argument that unlimited supply of foreign exchange permits economic development with spiraling inflation is simply irrelevant.

Thirdly, the fact that no one feels the direct burden of oil revenue, coupled with its local infusion on a large scale, weakened the relationship between effort and reward, particularly within the younger generation who have been inclined more toward the life of leisure than toward increasing productivity. This attitude is largely based on a naive assumption that oil revenue enables the country to purchase abroad anything it needs, be it a skill, commodity, or experience, rather than developing the requirement at home. Thus, the oil monies, by inducing lethargy, discourage economic incentive and undermine the country's capacity to absorb capital in productive channels.

Fourthly, oil revenue is associated with other kinds of diseconomies. It has created a comatose state of public opinion, in which unscrupulous operators could mismanage and abuse public funds. One typical example is the heavy spending on prestige projects which not only are without productive return but have been draining the scarce resources. More serious is ambezzlement of public funds and the wide spread of corruption without effective measures taken to punish the culprits. At this point, it should however be stressed that the oil companies themselves had played a direct role in spreading corruption. It reported that some of the oilmen secured their entrée to the Libyan oilfields by "wheeling and dealing" in an atmosphere described as "redolent of buying and selling, winning and losing, bribery, and the transfer of money to Swiss banks" (14).

(14) Fortune, July 1968, p.13.

Inevitably, such behaviour has demoralized some ministers, courtiers and bureaucrats, and created an indecent political situation portrayed by Western journalists:

"The King's favorites often became millionaires after holding office for a year or two..... Oil companies seeking to join in the exploration of the desert oilfields reportedly had to pay \$1 million in bribes just to have their applications passed up to the Council of Ministers. Another million or two changed hands before that body approved of the applications. The Shelhi family piled up vast fortunes as royal advisers, one of them supposedly having collected \$125 million during his four years in the government" (15).

With the spread of corruption among the highly placed, the disease spread alarmingly over the government machinery, and the situation became rationalized in the idea that corruption is an unavoidable concomitant of a sudden rise in fortune. This stimulated some of the clever bureaucrats to join the scramble of corruption and squandering. Certainly, had the public felt the burden of the abuse of funds, such a situation would not have been tolerated. The ill-effects of corruption on the course of economic development are many. Aside from the waste of funds, it leads to the spread of cynicism among the public and to damping the eagerness of the population for economic development. It also, as Myrdal said, "helps to preserve the 'soft state' with its low degree of social discipline (16). Indeed, oil revenue is a mixed blessing.

DIRECT IMPACT OF OIL INCOME ON GROSS DOMESTIC PRODUCT

The contribution of an industry to gross domestic product (GDP) is commonly regarded as a useful index of the impact of such an industry

(15) O'Connor, Richard, *'The Oil Barons'* (Little, Brown and Company, Boston, 1972), pp. 391-2.

(16) Myrdal, G. *'Asian Drama'*, Vol. II (Penguin, 1968), p.952.

on the total territorial economic activity; even though the magnitude of GDP is far from being an accurate reflection of the wellbeing of the country. To the crude form of the Libyan GDP, the contribution of the oil industry has been the governing dynamic component of the exciting rate of growth of the GDP. Considering only the direct contribution which can be numerically adduced, the share of the industry in the total GDP increased at current prices from 24.4 percent in 1962, when crude oil production and exports really started, to 63.9 percent in 1970. These developments are shown in the table below:

Table 8.
DIRECT CONTRIBUTION OF OIL INDUDTRY TO GDP
(In millions of LD. at current prices)



- Sources: (1) IBRD '*the Economic Development of Libya*' (The John Hopkins Press, 1960), p.371.
(2) N. C. Tsutsoplidis, '*Accounting Petroleum Sector in LAR*' (Tripoli, 1971), p.2 (mimeo.)

Table 9
GROSS OUTPUT AND VALUE ADDED OF OIL INDUSTRY (LD. millions at current prices)



Sources: N. C. Tsutsoplidis, *ibid.*, Tables 15 and 18.

As indicated in Table 8, the Libyan economy had felt the impact of the oil industry even before the start of oil production. In 1958, 3 years before the start of oil production and exports, the industry accounted for about 7 percent of GDP - though the expenditure incurred by the companies on exploration. Since then the direct share of the industry in GDP has been steadily increasing; except in 1967. The decline of the share of the industry in GDP for that year was due to the slowdown in the exploration activity, which in terms of expenditure decreased from LD. 43.9 million in 1966 to LD. 18.8 million in 1967 (see Table 9).

The breakdown of the industry's domestic product by using both "output" and "expenditure" approaches and analyzing the major components ought to furnish some useful insights into the nature of the industry's impact on the rest of the economy. As indicated in part A of table 9, the gross output of the industry is made up of the following items:

- (a) Exports; (b) Domestic Sales; (c) Change in Stocks; (d) Surveys, exploration and drilling, treated as capital formation; (e) The gross output attributed to the enterprises directly associated with the oil industry, i.e. contractors; and (f) Work done for others and miscellaneous income receipts. The sum totals of these items is the gross output of the industry. To reach the gross value added, the total value of current inputs (intermediate consumption) is to be subtracted from the total gross output. Using the "expenditure approach" the gross value added consists of the following items: (a) Employment costs; (b) Rents and other income payments; (c) Payments to government; (d) Depreciation; (e) Profits; and (f) The gross value added of the associated enterprises.

In an accounting sense, the total of these items is equal to the gross value added reached in Part A of the table. But the classification in Part B is a more adequate indication of the direct income contribution by the industry; because it includes the payments to the national economy as well as those payments that leak abroad immediately, i.e. profits and depreciation. There are, however, in both parts of the table a number of features worth of comment.

The first notable feature is the high share of the gross value added (GVA) in the gross output and the correspondingly low share of intermediate inputs. For instance, the share of inputs in the gross output (GOP) shows a remarkable fall over the last four years, from 55 percent in 1962 to less than 15 percent in 1969. This indicates that the industry can expand its output much faster than its demand for inputs. Second, there is a loose correlation between the whole gross output of the industry and that proportion attributed to the industry's satellites, i.e. services and supply companies under contract with the concession-holders. Their share in GOP shows marked variation from year to year. This suggests the activity of the satellites is connected with the initiation and completion of major products rather than with the process of oil production. This and the low share of inputs can be expected in the oil industry since, as an extractive industry, its chief inputs are capital equipment with few materials used in the beneficiation process.

A third feature is that the employment cost is only a fringe item of the total industry payments and its share in the value added shows a remarkable decline over the seven years, from 20 percent in 1962 to just over 3 percent in 1969. This is, of course, a reflection of the capital-intensity of the industry as revealed in the relatively high share of depreciation allowances in the value added. Since the foregoing three items - employment cost, intermediate inputs, and share

of related enterprises - are the main determinants of the industry's quantitative contributions to the rest of the economy, their low share in the value added indicates that the local participation in the industry operations is insignificant.

These three items represent the upper limit to the national content in the industry's output, not the lower. The reasons are not difficult to find. One is that a considerable part of the industry's inputs is directly imported by the industry itself. Another is that a large part of capital expenditure paid out to the local contractors immediately leaks abroad because these contractors employ imported machinery and equipment. Consequently, the industry's initial stimulus to the local income creation is less than the recorded figures indicate.

There are two major aspects of the industry. One is that almost all the industry output is exported. At this point, the industry is clearly divorced from the rest of the economy. The other is that with the expansion of output there is a distinct tendency for capital accumulation and investment by the industry to lag in money terms behind depreciation. This has many implications. The reinvestment by the industry and correspondingly its contribution to capital accumulation within the economy is low compared with the operating profit (pre-tax profit) and depreciation. Another implication is that since the net investment by the industry is negative - depreciation is larger than gross investment - the question of decapitalization may in the long run become very serious. Furthermore, the surplus generated by the industry is in no meaningful sense regarded as a part of the potential supply of investible funds available to the local economy. This is because the capital mobility between the industry and other industries within the Libyan economy did not exist as the industry was basically foreign-owned. Consequently, the money equivalent of depreciation and net profit imputed

to the oil industry are repatriated. This means the industry contribution to national income, the magnitude of which is more relevant to the benefits actually accruing to the country's own citizens, is far less than to the gross domestic product.

On the evidence presented here, it seems possible to make general observations. First, the initial impact of the oil industry on the national income in the form of inter-industry transactions is alarmingly low. In terms of Hirschman's "backward linkage effects", the industry is very poorly linked with the rest of the economy. This result is hardly unexpected. The oil operations are in general very capital intensive and of a highly sophisticated variety. On the other hand, the local economy was too backward to provide the industry with even simple requirements, let alone providing the heavy capital equipment it requires. Indeed, Hirschmann himself noted the low backward linkage of extractive industries had been the intuitive source of the enmity of developing countries toward the foreign enterprises engaged in such activities. He stated, "The grudge against what has become known as the "enclave" type of development is due to this ability of primary products from mines, wells...to slip out of a country without leaving much of a trace in the rest of the economy" (17).

Second, although the oil industry has been known to possess better forward than backward linkage, the disposition of its output and the net profit showed that it remained insignificantly integrative with the local economy. In this context, it should be stressed, however, that this is largely due to the low state of development of the rest of the economy and its small size in relation to that of the oil industry. The industry itself has great potential forward linkage effects. The production of crude oil and natural gas could lead to

(17) Albert O. Hirschman, *Strategy of Economic Development*, (New Haven, 1958), p.110.

the establishment of a wide range of industries from oil refining to gas manufacturing, the fertilizer, plastic, pharmaceutical and the other kinds of oil based industries. The government, with participation of foreign ventures, is working hard to exploit these potentials. But until these efforts come to fruition, the forward linkage of the industry remains remotely potential.

Third, as the loose correlation of the output attributed to satellite enterprises with the expansion of the oil output indicates, the industry's contact with the surrounding economy is associated with the exploration process rather than with the production of crude oil. Accordingly, when the industry confines its operations to crude oil production, its integrative aspects tend to disappear. These observations lead us to conclude that the industry has not so far functioned as a critical sector in the process of economic transformation, and so it could not be expected that it would bring about all-round economic development.

Obviously, these considerations would have imposed on the government a special responsibility to intervene in the disposition of the surplus imputed to the oil industry. This economic rationality clearly vindicates the government policy of increasing concern for raising taxes and royalties for every barrel of oil produced. Indeed, by a process of threat and bargaining, the government has been rapidly learning how to achieve this objective. As documented by Part B of Table 8, the share of the government income in the value added of the oil industry increased from 37 percent in 1962 to 56.5 percent in 1969, constituting the bulk of retained value from oil operations. Moreover, there is a strong evidence that, as a direct result of the widespread tax increase negotiated with the oil companies in 1971, the government oil receipts have shown a dramatic increase, reaching more than \$4,000 million in 1973.

Given the more recent rises in oil prices, the government revenue is expected to reach \$6,000 million in 1975 even though the volume of oil production is showing signs of a continuous reduction.

To the government, the oil revenue and its expansion have brought immediate results. It enabled the state to replace its earlier fiscal dependence on external assistance. It transformed the government from one of the poorest in the world to one of the richest, from one of the most insignificant to one of the most dynamic in African and Mediterranean politics. Most important, oil revenue provided the government with almost unlimited capacity to finance substantially higher levels of public expenditure. Through this, the oil industry has provided the most important component of aggregate demand in Libya, and its contribution to national income has been greatly furthered. The more than ten-fold increase in non-oil GDP between 1958 and 197 is largely attributed to this process. It is difficult to produce even crude figures as to how much the total GDP is dependent on the gross contribution of the industry. In the appendix, attempts are made to calculate this, as shown there, if the oil industry had not existed, the GDP at current prices in 1969 would have reached only LD. 167.6 million. This figure is just 13.5 percent of the actual GDP in 1969, leaving the residual of 86.5 percent attributable to the gross (direct and indirect) contributions of the oil industry.

But what concerns us here is the extent of the impact of these fiscal payments on the course of the country's overall economic and social development. To assess this requires a detailed investigation of the role of the public sector, such as is carried out in Chapters V and VI.

CHAPTER V

DEVELOPMENT PLANNING BASED ON OIL REVENUES

"Money is like muck, not good
except it be spread" (1)

(Francis Bacon)

It was indicated in the previous chapter that because of the weak input-output relationship between the oil sector and the rest of the economy, the role of the former in directly initiating economic development (in the sense of a fundamental socio-economic transformation) is limited. This in addition to the fact that oil revenue accrues directly to the public treasury has put the government in a particularly sensitive position vis-a-vis the requirements of economic development. In response to this, most oil exporting countries are nowadays mounting some sort of development programming based on oil money, and all these programmes are aiming at what in Venezuela is termed 'sewing oil' (integrating the effects of oil income into the whole economy in such a way that they eliminate the socio-economic backwardness).

But the barriers to the realization of such an objective are many and complexedly interlocked, particularly in those countries which have a shortage of almost everything except money. The particular impediments stressed in the case of Libya during the early years of the oil industry were the absence of a minimum panoply of institutional bases and the existence of strong centrifugal forces within the governmental

(1) Francis Bacon, quoted in *the Economist*, May 5, 1973, p.40.

structure. The conflict between each of the three provinces in the last federal system, which prevailed until 1963, had inhibited a truly national approach to a constructive long-range use of oil revenues. Nevertheless, as it was only in Libya that planning for the use of oil revenue began before there was any such revenue. But this should in no way be taken to mean that the monarchical regime was "economic development minded" or that the Libyan people had a smaller appetancy for luxurious living than those of other oil exporting countries. The various reasons for this early planning, external as well as internal, are all clear and recognisable.

First, unlike some of the other major oil countries on the eve of their rich discoveries, Libya was, as we have seen in Chapter II, already experiencing some sort of development programming. So that, when a new financial resource was expected, programmes for using it had to be made in advance. Second, in Libya oil strikes were made just at the time when the whole developing world was in a revolution of rising expectations. As noted earlier, the first oil field was discovered in 1959, precisely on the eve of the United Nations' first Development Decade. Given that Libya was regarded as the 'U.N.'s baby' (2), understandably the Libyan government was bound to follow the U.N.'s advice and to accelerate planning activities in the country. Third, despite the weak backward linkage with the rest of the economy, the existence of the oil companies and their large-scale operations resulted in spiralling costs of living and raising the rate of open unemployment which was largely due

(2) Benjamin Higgins, Economic Development (W. W. Norton & Co. 1959), p.37.

to the inability of the companies to provide enough jobs for the tillers and shepherds who "smelt oil" and swarmed around the oil fields. These effects, which were felt even before the start of oil exports, caused some sort of social tension throughout the country. To calm the situation and to assure the people that oil companies were not foreign intruders but were catalysts in a real situation, bringing out "the poetic justice of the notorious desert", the government had to implement development programmes and declare that oil would benefit everybody. Fourth, the oil companies' experience, proving that "a petroleum economy has a potentially explosive character" (3), influenced the government to do some programming, and some of these companies promised advance payments.

DEVELOPMENT PLANNING: RETROSPECT

Preparation for using oil revenue:

The initiation of preparing development policy based on oil revenue began in 1959, three years before oil revenues became a principal source of income for the government. During that year, at the request of the Libyan government the World Bank sent an economic mission to Libya. Reportedly the main task assigned to the mission was "to appraise the progress of Libya's economic development since independence and to propose, in a form as specific and as practical as possible, appropriate targets for further developments over the next five to ten years".

Incidentally, at the time of the mission's visit successive oil strikes were made; so it became certain that the country had a potentially new natural resource, though the extent of its supply was not

(3) Dudley Seers, "The Mechanism of an Open Petroleum Economy", *Social and Economic Studies*, June 1964, p.235.

yet known. However, the mission was charged with investigating the new long-term possibilities opened up by the discovery of oil. After a visit of some three months, the mission submitted to the government an inclusive report on the economic development conditions in the country, and an outline of a five-year development programme for the first half of the 1960s. The proposed programme was restricted in size to a total of LD. 25 million. The reasons for the smallness of this programme were the shortage of trained men, which limited the country's capacity to absorb capital and the fact that the mission did not anticipate a large inflow of oil revenue during the period of the programme. However, the latter seemed the main consideration, because the mission suggested a supplementary programme in case substantial oil revenues were forthcoming before the end of the original programme.

The mission described its programme as government action designed to assist and encourage private enterprise (4). Accordingly its proposals placed a major emphasis on certain fields, either those in which private initiative could be promoted, or those which could not be undertaken by private business. As could be expected, it was suggested that 52 percent of the proposed expenditure go to infrastructure projects (public utilities, transport, water resources and power), 21 percent to social overhead (education and health) and 20 percent to agricultural projects.

However, as the prospect of oil revenue drew closer, it was felt that the programme outlined by the World Bank's mission was outmoded, and in 1961 a formulation of new programmes was assigned to the DB (Development Board), which has been considerably strengthened. But the

(4) World Bank, *The Economic Development of Libya*, (John S. Hopkins, 1960).

efforts and performance of the DB were frustrated by several problems. First, the DB, in sorting out development priorities was faced with the problem of competing claims between the then three provincial governments for the largest possible share of the plan in terms of money. This problem was further complicated by the fact that the oil was found within the borders of the less populous provinces. Second, the oil companies gave no indication of the level of oil production and exports during the following five years. As a result the amounts likely to be available for development from petroleum revenues for any year of the five-year period were not known. Third, the DB itself was short of trained personnel so that it relied almost completely on the experts it inherited from the foreign development agencies, which experts had reportedly given a great deal of conflicting advice to the DB.

In 1962, after the authority of the Federal government was strengthened, the DB was ordered to draft a five-year plan. The DB began its work by asking the heads of the various departments dealing with social and economic services to submit the projects they envisaged undertaking during the following five years. The departments sent the DB lists of the projects, but few of them reported any priorities for the listed projects. In the event, the DB drew from their lists a five-year plan. The plan was referred to as the "First Five-Year Economic and Social Development Plan" for 1963-68 (henceforth FFYP) and its execution started at the beginning of the Fiscal year (April) 1963/64, though its promulgation was delayed until August 1963, just two months after the form of the government was completely changed from Federal to Unitary.

Also, on the day the plan was promulgated, a new planning machinery was instituted. The DB was replaced by a more authoritative policy-making board called "the Higher National Planning Council" (HNPC) headed by the Prime Minister. A new portfolio of "the Ministry of Planning and Development" (MPD) was established to serve as the executive arm of the HNPC. This reorganization and the declaration of the FFYP were widely hailed by the government-controlled media as the first national endeavour in drawing up a coordinated and effective planning for using the oil revenues for the best interests and welfare of all sections and future generations of the Libyan people.

The First Five-Year Plan (1963-68)

The FFYP was the first programme launched after the responsibility for economic development was shifted from the foreign development agencies directly to the government itself. It came just after the discovery of oil relieved the country of financial dependence on foreigners. But the way of making this plan was unusual, and far from comprehensive planning. In the words of a UN economist "The draft plan had to be improvised from list of projects which were, in fact, no more than statements of aspirations submitted by authorities, each of which was competing with all the others for the largest possible share of the plan in terms of money. Orders were given to the author of the draft plan that it was to be "based on the projects submitted, regardless of goals" (5).

This was reflected in the plan document which was described as "relatively short and (as having) set out in general terms the programmes for various sectors, described under 78 heads. Little project

(5) C. J. Martin, "Proposals for Improving the Organization of Planning in the Kingdom of Libya; IBRD, Washington D.C. September 26, 1968 (mimeographed), p.7.

identification was attempted and, for most of the proposals, there was no economic justification or technical feasibility incorporated in the plan document" (6). The plan's objectives as stated were nothing but aspirations, set out in the following terms: improving the economic and social situation in the country, raising the people's standard of living, promoting agriculture and industry, developing the rural areas, accelerating the development of education and improving the health services, and insuring economic stability" (7).

The plan originally provided for total expenditure of LD. 169.1 million. Of this amount LD. 60 million were allotted for completion of projects which were undertaken prior to its inception. However at the end of the first two years of the plan, the government income from oil had increased at a faster rate than had been anticipated. It rose from LD. 23.8 million in the first year of the plan to LD. 83.6 in the third year (1965/66) and reached LD. 190.8 million in the fifth year (1967/68). Since it was provided by law that no less than 70 percent of the petroleum revenue was to be channelled to development (8), the money available for planning soon exceeded the amounts originally allocated in the plan. But it was decided that instead of revising the plan or preparing a new one, the existing one would be modified through annual programming and budgeting. So the initial magnitude of the plan was revised upward, and a number of projects, thought to be individually beneficial to the country, were added in each year of the remaining period of the plan's life. As shown in Table 1, the allocations for the plan were more than doubled, amounting to LD. 337.1 million.

(6) *Ministry of Planning and Development, Libya, "Five-Year Economic and Social Development Plan, 1963-68, pp. 12 and 13.*

(7) *Ministry of Petroleum "Libyan Oil 1954-67; Tripoli, 1968; pp. 50,51.*

(8) *Ministry of Planning and Development, Libya "Law No. 5 for the Organization of Planning and Development Affairs....."; Tripoli; p.13.*

This rise in the magnitude of the allocations resulted in diverting the initial direction of the plan, which had become swollen with a wide variety of lavish projects. Among these projects were the construction of a new coastal road running from the Tunisian to the Egyptian border, a large housing scheme calling for 100,000 new housing units, construction of two "sports cities" (one in Tripoli and the other in Benghazi) and twenty-one playgrounds. Another item called 'Interior' was also added to the plan, but most of the projects listed under this item were only remotely connected with social and economic development, being such things as prisons and police stations.

Table 1

Allocations and Actual Expenditure under Five Five-Year Plan 1963-68

(In millions of Libyan Pounds)



Aston University

Illustration removed for copyright restrictions

Sources: International Monetary Fund, Libya: Basic Data, June 1968, p.2, Table 15; and September 1970, p.21, Table 12.

In the event, the FFYP was a series of annual public works budgets of a kind found in many developing countries. As indicated in Table 2, infrastructure sectors received the lion's share of allocated funds, 39 percent of the original plan and 48 percent of the actual expenditure. Followed by the social overhead sector (education, health and social affairs, which received 25 percent of the original allocation, 17 percent of actual allocations. The productive sector (agriculture and industry) was the third largest recipient of the development funds in the original plan and the second in the actual expenditure.

The Second Five-Year Plan

In accordance with article 2 of Law No. 5 of 1963, which provided that the government had to use planning techniques for economic and social development, the HNPC decided in 1966 to prepare a second five-year plan, for the period 1968/69 - 1972/73. In order that sufficient time would be available to carry out this task, immediately after this decision the Ministry of Planning and Development (MPD) requested the other ministries dealing with social and economic services to provide the MPD with a list of projects which each ministry would implement over the period of the life of the plan. The MPD's request included also that "Each ministry had to give separately the financing required (a) to complete on-going projects and (b) to initiate new projects together with an estimate of the skilled manpower, both Libyan and non-Libyan, by categories required during 1968/69-1972/73 to implement the programme" (9).

(9) C. J. Martin, *op.cit.* p.8.

In 1967, a UN planning team came to the country to assist in drafting the outline of the proposed plan. Meanwhile the lists of the projects submitted by the various ministries were collected, and it was found that the estimated costs of all listed projects amounted to some LD. 2,000 million. However, following the outbreak of the Arab-Israel War the preparation of the Plan was halted. This was due to two factors stemming from the War. First, because of the emergency transfer of funds to the affected Arab countries and the disruption of the oil industry, it became clear that not all the projects of the first plan would be completed in the scheduled time. Second, the war and the military defeat of the Arabs scaled up the political and social tension in Libya so that it became certain that the country was on the verge of revolt.

Early in 1968, after calm was restored, a new minister for planning was appointed. He called immediately for deferment of the implementation of the proposed plan, which had been scheduled to begin in April 1968, until 1969. At the same time it was decided to extend the first plan by one year with an expenditure of LD. 143.29 million. All these amounts were allocated for the completion of the FFYDP's projects. By adding this year, the first plan period became six years with total allocations amounting to LD. 480.35 million and the actual expenditure totalling LD. 430.3 million, or about 90 percent of the development funds.

Late in 1968, the preparation of the Second Plan reached its final stage. Early in the following year, it was promulgated and was referred to as "the Second Five-Year Development Plan for 1969-74 (SFYDP)".

Content of the Second Five-Year Plan

The SFYP was framed in a real abundance of capital. Its planned allocations amounted to LD. 1149.5 million, almost seven times the original allocations of the First Five-Year Plan. It was also, unlike the FFYPD, based on a detailed inventory of all physical, demographic, economic and social conditions in every inhabited place in the country. Furthermore, it was guided by the experience gained during the six-year period of the former plan. On this background, the SFYP would embrace all the sectors of the Libyan economy as well as the various regions of the country. However, its objectives were, as in the FFYP, in general terms without specifications. According to its chief architect, Dr. Attiga, "the plan was basically designed to promote the diversification of the economy and to increase the productivity of its primary and secondary sectors" (10).

Yet, although Dr. Attiga was himself aware that the realization of this task in an economy overshadowed by the predominance of the oil sector was exceedingly difficult, the plan document contained no indication of how this difficulty could be overcome except by pumping funds into the economy, the real resources of which were already under a heavy pressure exerted by public expenditure. A breakdown of the proposed expenditure reveals that the plan was a continuation of the past efforts geared to improving what might be termed the hardware of economic development. As shown in Table 2, the infrastructure sub-sectors were still in the lead. The share of public works was stepped up from the third place in the first plan to the first in the second plan.

(10) Dr. Ale Attiga, "the Second Plan", The Financial Times, March 6, 1969.

Table 2

Comparison between the Actual Allocations of the FFYDP and the
Projected Allocations of the SRYDP (in LD. Millions).



Aston University

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Source: Bank of Libya, Thirteenth Annual Report of the Board of Directors, 1968/69; Tripoli; p.109.

Communications and transport came next in the second plan. The allocations for social overhead sub-sectors, including housing, had on the average more than doubled, with notable increase in the shares of health and social affairs. The productive sectors (agriculture and industry) were given just over 20 percent of the total plan's projected expenditure, whereas they had been allocated 12.8 percent of the total actual expenditure under the First Five-Year Plan. It should however, be borne in mind that many of the projects classified under agricultural items actually fall into the category of infrastructure or social overhead capital, e.g. agricultural roads and agricultural training.

With regard to the financing of the plan, it was, as in the FFYDP, in accordance with article II of Law No. 5 of 1963 which provided for at least 70 percent of oil revenues to be earmarked for development. However, the document of the SFYDP contained some guesswork about the oil revenues likely to flow during the life of the plan. It was projected that the total revenues for the years 1969/70 - 1973/74 would amount to about LD. 2,411 million (11). Out of this amount, LD. 500 million was earmarked for national defence and Arab aid, LD. 200 million for contingencies and LD. 14 million for settlement of previous accounts. Only 70 percent of the remainder (1697 million) was allotted to development planning, or LD. 1187.9 million. This suggests that the actual share of development planning was just less than 50 percent of the total oil revenues though it was provided by law that it should be at least 70 percent of the total.

(11) Bank of Libya, *Thirteenth Annual Report 1968/69*, (Tripoli) p.

The Revolution and Development Planning

During the first year of the Second Five-Year Plan, the September 1st Revolution took place and introduced a number of structural changes in the economy. These changes resulted in a slowing down of the implementation of the plan; however, the development spending continued through the annual budgeting. In 1972, the SFYD was officially jettisoned, the revolutionary government announcing a three-year development plan for the period 1973-1975 (henceforth TYDP). This plan was provided with a total expenditure of LD. 1,965 million.

As mentioned in its document, the TYDP was based on aggregative accounting of the country's resources. The declared strategy of the plan was "to remove encumbrances and anomalies in the economic and social structure, more prominent of which is the trend taken by the pattern of growth in the sixties which created a high rate of growth resulting from the increase of production of crude oil without giving adequate attention to the development of production activities such as agriculture and manufacturing" (12).

The TYDP was an ambitious plan. Reflecting the radical economic and social changes introduced by the revolutionary regime, it had many and various objectives. These included increasing the real gross national income by an annual compound rate of 10.5 percent and distributing national income on a more equitable basis. However, the central focus of the plan was on the following aims: moving toward economic self-sufficiency by placing the highest priority on agricultural and industrial development; narrowing the gap between rural and urban levels

(12) Ministry of Planning, *The Three-Year Economic and Social Development in brief*, (Tripoli, June 1973), p.1. (Memog.)

of living by mitigating the variations and anomalies in the social conditions between different areas; and reducing the overwhelming dependence of the economy on oil revenues through diversifying the economic activities and reviving the non-oil exports. These latter were projected to increase by an annual rate of 6.3 percent. The plan aimed at raising the absorptive capacity of the country by improving the social conditions.

All these aims were mirrored in the sectoral targets and in allocations of funds during the plan period. As shown in Table 3, the prime priority was given to the productive sectors, viz. agriculture, industry and mineral resources including petroleum. Total allocations for these sectors amounted to LD. 808.8 million, or 41.2 percent of the total projected spending. The allocations of such sizeable amounts may be viewed in the light of the government's avowed intention of achieving simultaneously an agricultural revolution and setting the country on the path of industrialization. The gross domestic product of these two sectors was envisaged to grow in real terms by a rate of 16 percent a year. The inclusion of the oil industry in the plan and allocation of 8.4 percent of the funds to this sector commensurated with the country's aspiration for direct partnership in utilization of the oil wealth and acquisition of the technical and managerial experience necessary for all stages of the oil industry.

Total allocations to the social infrastructure came in the second position. This sector, which shared 30.8 percent of the plan funds, included education, health and sanitation, urban development and housing. The purpose of a considerable portion of the plan was mainly

Table 3

Total allocations of Development Budget in the Three Year Plan 1973-75

(Summary)



Illustration removed for copyright restrictions

to provide houses for the lower-income families and to settle the nomads. The provision of funds to the other social sub-sectors was intended for developing and improving the human resources; this is described by the authors of the TYDP as "the paramount aim of any development plan and the means by which it achieves its objectives" (13).

Next in order came the total allocations to the physical infrastructure, which was provided with 19.4 percent of the plan's funds; divided equally between "electricity" and "transport and communications". Most of the projects included in these two sub-sectors were designed to boost economic activities in productive sectors and to bring about changes in the structure of the economy. According to the plan document, these projected changes would be in favour of agriculture and industry.

Most of the remainder of the plan's proposed spending was allotted to the public administration and local government. The latter was given a high portion of the funds. This reflected the government efforts and ingenuity in placing emphasis on rural development.

Remarks on the TYDP

The TYDP, which came after three years of the revolution, was proclaimed to be a well-conceived development plan and the cornerstone of several plans to follow. Its architects stressed that the formulation of the plan was based on a macro-economic appraisal of the country's potentials and immediate needs. Indeed, the plan's document to some extent features certain macrovariables, which reflect *inter alia*

(13) *Ibid*, p.13.

national product, investment, consumption, saving, investment, exports and imports. On the face of this, the plan might give the impression that it represented a switchover to a comprehensive planning based upon clearly defined and coherent economic and social objectives. Yet the TYDP was little or no different from the former plans, the weaknesses of which will be discussed in this chapter. However, because the TYDP was presumed to constitute the institutional foundation of the government's meticulous effort to set the economy on the pace of socialism, a few observations about its weaknesses must be made.

First, aside from the question of whether or not the estimates mentioned in the plan's document were little more than arbitrary numbers that added up to an arbitrary total, the technique used in formulating the plan is not appropriate to Libya's economic conditions. The conception of planning as directing the macroeconomic relations might be suitable to countries where the problem is how to increase the national product whilst absorbing the increasing labour force. In contrast Libya's problem is that of supply rather than of income and employment. So, the principal orientation of the development strategy should be the economizing of scarce resources and making an intensive and optimum use of them. Since the most scarce resource in Libya is labour, the immediate aims of the plan must be increasing productivity and tapping the labour force to the fullest, rather than at producing impressive statistics of economic growth. In this context the plan's formulation should be based on disaggregation rather than aggregation; or, as Dudley Seers noted on economy similar to that of Libya, "We must look toward Leontief rather than Keynes for our tools of analysis" (14). But in the TYDP no

(14) Dudley Seers, "The use of a modified input-output system for an economic programme in Zambia", in Irma Adelman and Erik Thorbecke, *The Theory and Design of Economic Development*, (John Hopkins Press, 1966), p.212.

overall check on project and sectoral consistency has been applied and no input-output table has been attempted.

Second, although the plan did contain a brief and sketchy discussion of its representation of the state's socio-economic commitments, it failed to formulate them in concrete proposals. It confined itself either to proclaiming generalities or to indicating desirable directions of changes without proposing actions to achieve them. A case in point is the social objective of the plan. As stated in the document of the plan, it was as follows:

"Realization of social equity by broadening the distribution base, seeing that low income categories of the population get their reasonable share in the fruit of development, removing disequilibrium in the distribution of income, and eliminating all forms of exploitation" (15).

Few would question the desirability of these measures but anyone would ask what the government intended to do in these respects. The plan document, in different places where the above-mentioned measures were recalled, appended a short and vague sentence, saying that 'in order to attain these objectives it will be desirable that the government does its best in expediting functions'. However, it was quite possible this vagueness was deliberate because the drafters of the plan felt unable to speak authoritatively about major social issues and the working out of actions thereon was left to the leaders of the revolution.

Third, as officially proclaimed, the plan was well balanced, and all planning decisions were harmonized with each other so that there were no contradictions between its components. Notoriously, contradiction and inconsistency are the major weaknesses of the plan. For example, despite all the rhetoric that the planning strategy in Libya should, because of the scarcity of labour and the abundance of capital, be devised

(15) Ministry of Planning, *The Three-Year Social and Economic Development Plan 1973-75* (Tripoli, 1973), p.3.

to use more and more capital-intensive methods, the drafters of the TYDP complimented themselves that the plan would open 125,900 additional job opportunities, and the total employment during the plan period would increase by 7% a year. Ironically, 20,000 of these additional jobs would be in agriculture, which was projected to absorb 26.9 percent of the total employment, even though the contribution of this sector to GDP was not expected to reach more than 3%. The plan did realize that its requirement of labour would be much higher than the supply of indigenous labour; it envisaged that the number of non-Libyan workers would reach 134,000, or about 20 percent of the total employment at the end of its period.

In regard to projected employment in agriculture, the plan left two questions unanswered. One was, how the plan's strategy of introducing large-scale mechanization into agriculture as well as raising labour productivity could be reconciled with increasing the number of agricultural workers. The other was, how the plan's social objectives of mitigating the variations in social conditions could be made consistent with the plan's projection implying that more than 30 percent (the agricultural workers and their dependents)^{of the population} would still produce less than 3 percent of GNP and perhaps receive less than that portion.

Fourth, the plan ignored the possibility that the infusion of so much money into an already over-heated economy would create extreme inflationary pressures, let alone proposing measures to deal with it. As it happened, discussing inflation was officially discouraged during the monarchic regime. But it remains striking that, in spite of the revolution's emphasis on restructuring the economy, the TYDP failed to deal with the inflationary pressure which, in the light of the country's massive dependence on oil revenue, is inevitable.

Many other weaknesses in the TYDP will be exposed below, when the efficiency of planning is discussed. However, the above observations alone give a clear indication that the TYDP was not an absolutely comprehensive programme. It was weak and imperfect, both in content and in form. Its content represented nothing but a revised edition of the short-lived Second Five-Year Plan, which reflected the government policy of pumping oil monies into the economy at a higher rate through a range of public works. The TYDP was markedly distinguished, however, from the SFYP in the strong emphasis it put on agricultural development, both in its allocation of funds and its strategy. Expenditure on regional development was greatly expanded; especially for improving roads and providing the formerly neglected villages and rural areas with water and electricity. Also, the oil sector was incorporated for the first time into planning. It was allocated 8.4 percent of the TYDP's proposed expenditure; most of this was destined to capitalize public enterprises in the oil industry.

OIL REVENUE IN THE FINANCE OF PLANNING

Before 1963, oil revenue was not yet significant, and the development programmes were largely financed by foreign aid. During that year the First Five-Year Plan was launched and the legal provision of financing the country's development plans was set out in Law No. 5 of 1963. According to this Law the planning should be financed from one or more of the following sources: "(a) funds allocated to development by the government provided that such funds are not less than 70% of petroleum revenue; (b) funds allocated from loans raised by the government; (c) funds or property allocated by the government under

international agreements or agreements with international organisations; and (d) other funds or property made available for development purposes" (16).

Although the law mentioned various sources, the real intention was that the 70 percent of oil revenue should be the main means of financing the expenditure under Libya's development plans. Under this formula, no more than 30 percent of the oil revenue expected to accrue to the government would be allocated to the general budget, which normally covers the administrative expenditure; the rest of it was to revert to the development budget. Consequently, as the actual oil revenue had substantially exceeded the level anticipated when the plan was drafted, the actual allocations in the annual development budgets were greatly adjusted upward. So the original allocations of the plan represent no more than broad indications of the government's intention. As already shown in Table 1, the actual allocations under the First Five-Year Plan amounted to LD. 337.1 million while the original allocations were only LD. 169.1 million; i.e. about 100 percent increase.

However, although the allocations to development have been rising, the factual evidence reveals that except for a few years the total funds allocated to the development budget were far below the lower limit stipulated by the law, and the actual expenditure never reached that limit since 1963, when the legal division of the oil revenue was defined. Table 4 provides a comparison of the annual oil revenue accruing to the government since the start of oil exports in 1961 with the annual development budget and the actual expenditure for

(16) C. J. Martin, *op.cit.*, p.10.

development purposes from 1961 to 1970. The table shows that while the government's oil receipts during the ten years indicated in the table totalled LD. 1742.7 million, the total funds allocated to development were 844.1 million and of this amount only 705.6 million was actually spent. In other words, despite the legal provision that at least 70 percent of oil revenue should be appropriated to development, over the 1960s only 47.9 percent went in that direct and just over 39 percent was disbursed.

Table 4

Share of Development Planning in Oil Revenue for 1961-71 (in LD. Millions)



- Sources:
- (1) Bank of Libya, Annual Reports of Board of Directors: for the years from 1962/63 to 1971/72.
 - (2) International Monetary Fund, Libya: Background Material for 1963 Consultations (Washington 1964), p.14 (Mimeo.)
 - (a) Some of this expenditure belongs to the previous years, but because it was paid during this year the Auditor General accounted it accordingly.

This lag of the share of development in the oil money cannot be attributed to the lack of the government appetite for spending, but it basically reflects in part the limit of the organisational and administrative capacity and in part the exceeding growth of oil income itself. Additionally, it reflects the influence of a number of other factors.

First, the oil companies, which were until recently the real decision-makers of the policy pertaining to oil production and pricing, were reluctant to provide the government with their future plans; and since these plans were not synchronised with the country's development programmes, which had been formulated some years before they were carried out, the planning authorities had no guidelines to the expected oil receipts. Thus the uncertainty in forecasting oil income confused the budgeting process; hence the development budget itself became nothing but guesswork. For instance, the development expenditure for the fiscal year 1965/66 was budgeted on the expectation that oil revenue would reach LD. 124 million during that year. But, although oil exports recorded a rapid increase, the targeted income did not materialize because some of the companies slashed prices and consequently the government's per barrel income was reduced. Conversely, in the following year the development investment outlay was increased by just 5 percent and the oil revenue was reckoned to be only LD. 138.8 million. But as it turned out the actual income was about twice the original estimate, largely because the government succeeded in securing higher income per barrel and in forcing the companies to make substantial retrospective payments for the previous years. So, there is serious ground for the argument that the national ownership or control of oil industry facilitates the task of development programming.

Second, in 1968 the legal division of the oil revenue was amended with the effect of reducing the share of development. This amendment provided that out of the total oil revenue accruing to the government an unspecified amount would be transferred to a new account in the ordinary budget called 'special allocations', while at least 70 percent of the balance should go to development and the rest was appropriated to the general expenditure. The special allocations covered mainly aid to the defeated Arab states in the 1967 Middle East War. In the fiscal year 1968/69 the amount of these allocations was budgeted for LD. 71 million, and in the following year they were slightly increased to 76 million. No data on actual expenditure of these allocations are available, nor are budget estimates available beginning with the fiscal year 1970/71. However, it is understood that the sum of these allocations has increased considerably during the more recent years. An indication of this is the recent press revelation that Libya had extended no less than \$711 million (£290 million) of aid to Egypt and Syria during and immediately after the 1973 Middle East War (17).

Thirdly, immediately after the revolution the new government visualised that because of the treasury's heavy dependence on the oil revenue the country was poorly hedged against the vicissitudes of oil politics and therefore it was necessary to consolidate the increase in national saving by earmarking a portion of oil income to the general reserve account which had already been set up to meet future emergencies. Accordingly, in 1970 a law was promulgated which provided that not less than 15 percent of oil revenue must be transferred to the said account,

(17) Alfatch (daily paper), No. 13, June 19, 1974.

plus all the retrospective payments which the operating oil companies undertook to pay to the government (as adjustments to differences in the posted prices of crude oil exported from the beginning of 1965 to the end of 1970). Thus, the current share of development in oil revenue was further reduced.

Fourth, despite the rising costs of development projects, the actual expenditure fell short of the budget allocations. As shown in column 6 of Table 4 on page 180, the spent proportion of the annual development budgets for the early years of the FFYP was as low as 57 percent in the fiscal year 1963/64. This lag in actual outlay, which indicates the low level of planning implementation, was largely due to the administrative inexperience in project preparation, the time-consuming nature of feasibility study and the weakness of the planning machinery. However, in the latter years spending tended to move into a high gear as preparation of tender documents was simplified.

GENERAL OBSERVATIONS ON DEVELOPMENT PLANNING

It is beyond the scope of this study to attempt assessing the government planning efforts. It may be unfair to judge three development plans in a few pages. These observations may however shed light on some of the major drawbacks of the government development policy, and by identifying critical issues they provide an exercise for tentative evaluations of the country's future development. W. A. Lewis has put it rightly; assessing a development plan is not a mechanical nor a precise operation but an exercise in identifying critical issues (18).

(18) I. Livingstone, edit., *Economic policy for development*, Penguin 1971, p.389.

Over-emphasis on infrastructure

In many other developing countries it is generally contended that the limited opportunities of productive capital formation and the lower standard of efficiency in handling modern technology should be traced to inadequate infrastructure and the underdevelopment of human resources. So in Libya it is accepted that there is a necessity for infrastructure facilities (transport, power and public utilities) and social overhead services, viz. housing, education and health. But the question that tended to cause some controversy in literature on development planning is related to the timing of the infrastructural projects. Some have insisted that laying the economic and social infrastructure is a pre-condition of actual economic development whereas the more recent school of thought contends that the emphasis on this area has been overdone and argues that surplus infrastructure may safely be left till later. In particular this school believes that it would be easier to keep demand and supply in step if, for example, hospitals, schools and residential housing could be built up in a more piecemeal manner.

It is not within the scope of the present study to elucidate these views which in one way or another are connected with the balanced versus unbalanced growth controversy. But the plain fact is that the Libyan planmakers have adhered strictly to the view of the first grouping. In other words they attached special importance to the creation of economic infrastructure and placed excessive reliance on the stimulative effects of the investments in this area. The review of the planning appropriations in Table 1 (page 165) shows that close to two thirds were devoted to the social overhead and infrastructural sub-sectors, including housing and urban development.

Generally speaking, avoiding any complex discussion of the relative merits of the main infrastructural projects undertaken, it must be recognized that the concentration of public investments and efforts in this area not only failed to generate a significant contribution to the social welfare but it created problems that tended to reinforce the obstacles impeding the realization of the country's main objectives. The underlying reason for this comes out of the orientalism of the projects.

First, some of the schemes, which were given a high priority in outlays, were remotely related to the economic development of the country. There are two outstanding examples for such schemes. One is the building of a new capital city 'Beida'. This scheme absorbed a considerable proportion of the development activities because its completion was pressed by the former King Idris even though the constitution provided that the country's dual capitals were to be Tripoli and Benghazi. The other example is the expenditure of over LD. 50 million of development funds for the expansion of the Islamic university and the Senussi Zawia (religious institutions founded by the grandfather of the former King Idris). After the revolution, the expansion of such schemes was immediately suspended but the completed projects still involve recurrent and maintenance expenditure.

Second, it was reported that for most of the projects incorporated in the first Five-Year Plan there was no economic justification or technical feasibility (19). This gives a clear indication that much of public resources was expended for poorly conceived infrastructural projects which were evaluated neither by rate of return nor by their place in a national pattern of mutually complementary investments. Together the

(19) C. J. Martin, *op.cit.*, p.7.

above two characteristics and the failure of the Libyan planners to balance promotion of other infrastructural projects with the commodity-producing sectors give rise to the suggestion that the bulk of public development expenditure had in many ways adverse effects on the capacity-creating investments. Beside the inflationary effects of such an unproductive shift in the composition of development expenditure, it tended to compete for resources that might otherwise have been devoted to productive investments. In particular, the infrastructural projects exhausted labour services and building materials. In this connection the planners made the following note in 1968:

"Construction capacity.....spurred by the requirements of the private sector and the demands of the government for building....has been strained to the utmost. As a further indication it can be noted that imports of building materials (by value) increased 25% from 1964 to 1965 and 42% from 1965 to 1966. In view of the lack of skilled manpower required by the industry, it is doubtful whether a rate of increase of more than, say, 20% per year can be sustained in the near future. This then will impose some limits on the construction required for the Second Five-Year Plan (20).

Despite these facts the government development policy persisted in the traditional assumption that devoting larger and larger amounts to infrastructure investments would bring about overall economic development. Accordingly, the share of these investments was more than 75 percent of the total public development expenditure during the years 1963 to 1970. As we shall see later, this policy not only resulted in a further deterioration of productive investments in agriculture and industry but also aggravated some of the existing problems which obstructed real economic development.

In the first place, it was reported that the high cost for development projects was connected with the pattern of the public

(20) Ministry of Planning, Economic and Social Development in Libya (Tripoli, 1968), p.18 (Mimeo.)

programming.

"To the rise of cost contributed also the ineffective control of public and private current expenditure and the concentration of the bulk of it...on construction originating an undue expansion of the services and high windfall rewards accruing to factors engaged in many service activities, which were not matched by increased efficiency" (21).

At this point one can deduce that Libya's experience provides a clear confirmation of Professor W. A. Lewis's observation on Ghana's experience involving a similar mistake;

"considering how much was wasted by overloading the building industry, one can say without hesitation that the country would have made more progress if it had spent less and had better economic policy" (22).

In the second place, the government development policy tended to give rise to inflationary pressure, even though it was accompanied by a liberal import policy. The reason for this is simple and clear. Construction of infrastructural projects cannot be carried out entirely by importing goods and services. So it inevitably involves local services and domestic materials; and since the projects constructed are incapable by themselves of increasing the economy's productive capacity at least in the short run, the expenditure on them is inherently inflationary. Indeed, M. D. Bryce has put it rightly:

"a country could be ruined for a generation by too much investment in infrastructure, or by the wrong kind of investment, just as easily as its development could be frustrated through lack of enough investment of this kind" (23).

(21) Professor A. Canellopoulos, *op.cit.*, p.3.

(22) W. A. Lewis, on Assessing a Development Plan, in "*Economic Policy for Development*", edited by J. Livingstone (Penguin, 1971), p.407.

(23) M. D. Bryce, *Policies and methods for industrial Development*, C. McGraw Hill Book, 1965, p.64.

Persistent Reliance on Oil Revenue

As indicated earlier, planning expenditure was almost entirely financed by oil revenue. Meanwhile current budget expenditure, which had almost achieved equality with the planning budget expenditure, was largely derived from oil revenue. For example, in the fiscal year 1969/70, the total revenue from direct taxes (non-oil taxes) was estimated at LD. 9 million, accounting for 2 percent of the total public expenditure (LD. 405 million) during the same year (24). This meant that the populace was being relieved from excessive taxation and other complicated restrictions of personal incomes. In other words, oil industry provided the government with the funds for the capitalization of the economy and stimulating development without resorting to any of the various devices normally followed by developing countries to secure what the economists called 'a societal surplus'.

But, more serious, it meant that there was no effective tax system in the country and no effective effort was made to restrain public expenditure on consumption. All these implied that the principal means of fiscal policy, in its broad social and economic implications, had never been exercised. Certainly such an extraordinary situation would have had multiple adverse effects on the fiscal structure in the country. But since these effects are related to spending oil revenue, some facts about its characteristics must first be established. It was mentioned in Chapter IV that oil revenues are the payments received by the government in foreign exchange for the depletion of national wealth. Although it is quite correct that, from the national accounting point of view, the payments relate to current exports, they are in fact

(24) Canellopoulos, *op.cit.*, p.3.

independent from the current productive efforts and results of the local economy *per se*. In other words, Libya obtains so many millions of pounds per year not because her economy was suddenly developed to the point of producing and selling abroad a huge amount of exportables, but only because of depletion of a fortuitously discovered natural resource. Viewing this in the proper fiscal perspective, two facts about oil revenue emerge.

First, a surplus in the budget financed by oil revenue does not necessarily have the deflationary effects that one would expect in more conventional economies, in which a budget surplus implies that some person or institution had had its spending power reduced and transferred to the government, but not totally used by it, in Libya budget surpluses have been largely the result of developments in oil production and prices, which circumstance in itself releases no internal resources to the government. So it is obvious that oil revenue is an autonomous financial variable that can be called upon only to cover the domestic saving deficit.

Second, oil revenue being received in foreign exchange should be thought of and treated quite differently from domestic sources of government finance: Ideally, it should be treated as foreign aid or other sorts of foreign capital inflow, which normally are spent for procuring foreign goods and services or for other transactions resulting in a debit entry in the balance of payments, including a purchase of foreign assets that could be run down in case of need.

However, in practice the government exchanges the oil income for local currency, and from the proceeds it finances the entire development programmes and the bulk of the government's traditional functions. Of course some of the proceeds leak out of the local economy rapidly because carrying out some of the government duties involves importing goods and

services. But the bulk of the government oil proceeds is still spent on the procurement of domestic resources. The effects of this on the economy depend primarily on the country's propensities to import and to save, but in the event the effects are the same as if the central bank printed money (with or without the backing of foreign exchange) and gave it to the government to spend. If this sort of money creation has been fully offset by an increase in saving and taxes, it is not necessarily inflationary. Unfortunately, it is in this area that the major weakness of the government policy exists.

On the one hand, the government has made no serious attempt to mop up the vast amount of purchasing power which has been pumped into the economy by the expansion of public expenditure. The tax situation in the country was neglected. Until very recently, the fiscal structure was an antiquated apparatus inherited from the previous colonial administrations and designed for the purpose of raising revenue from low-income earners, i.e. tillers, shepherds etc. In other words, it was a regressive tax system.

Especially worthy of mention is that in Libya there is no practical taxation on property, real estate, capital gains and land speculation. On the other hand, in spite of the government rhetoric about the vital role of the private sector, in almost all development plans there was no adequate inducement for potential savers to participate in financing their country's economic development and no serious efforts were made to create the proper environment that would activate entrepreneurs and investors and give a greater number of the savers the opportunity to participate directly in the process of carrying out the plans.

In such circumstances, the development expenditure was bound to create some sort of fiscal and financial imbroglis which tended to reinforce the obstacles impeding a real economic progress. In the first place, the forces of inflation gathered momentum in the economy. Between 1963 and 1970 money supply rose at an average annual rate of 38 percent, while the total supply of resources (gross domestic product plus net imports) grew at an annual rate of 21 percent, i.e. 17 below the growth in monetary claims. This suggests that the annual rate of inflation was higher than the rate of 10 percent reported by the planning authorities (25). This inflationary trend not only frustrated part of the achievements in people's living standards, particularly the purchasing power of the lower income groups, but also raised the development cost. It was reported that the higher costs, particularly in the most strained sector, construction, were a basic cause behind the near doubling of the size of the first Five-Year Plan, from LD. 196 million fixed in 1963 to almost LD. 337 million.

In the second place, since the plan-makers neglected the private sector, the business community tended to put its money in commerce and real estate speculations rather than in long-run investments in productive enterprises that would strengthen the productive capacity of the economy. Of course the rising rate of inflation aggravated this tendency, particularly with respect to land speculation. The frenzy has seized both the wealthy and those with small savings. During the 1960s, land prices had risen to between four times to twenty times their former levels, dragging upward with them both housing costs and rents. For example, the rent index for dwellings

(25) Ministry of Planning, *op.cit.*, p.31.

showed that the rents in Tripoli recorded an annual increase of about 23 percent during the three years 1964 to 1967. In recent years the government made some attempts to bar this trend by fixing land prices and rents. But these attempts have not yet proved successful. Indeed, speculation tends to flourish when people lack other alternatives for their savings and are certain that the government will not take serious action against those accused of profiteering in land and real estate. So it is obvious that the persistent reliance on oil revenue is a self-defeating policy not only in the sense that it is inflationary but, more seriously, it resulted in a deflection of investment and scarce factors from productive enterprise to unproductive activities. In this connection, it seems that the argument stating that more rapid expansion of exports permits more rapid economic development without danger of inflation is simply wrong when the exports are oil: and this supports P. Streeten's conclusion;

"yet, countries which enjoy large oil revenues or have a plentiful supply of foreign exchange for other reasons have not been more successful in accelerating development" (26).

Centralization of Planning Decisions

Following the change of the form of the government from federal to unitary in 1963 and the subsequent concentration of government in the capital, almost all the aspects of planning preparation and development responsibility were confined in the headquarters of the planning authorities. The provincial representatives of the planning

(26) P. Streeten, *The Frontiers of Development Studies* in "Economic Policy for Development", ed. I. Livingstone (Penguin, 1971), p.349.

administration had virtually no authority; all matters were to be referred to the capital, where even the pettiest decisions on development were made. For historical and geographical reasons this was seen as a necessity for keeping in check centrifugal regional and tribal forces. Also it postulated a possibility of pursuing a coordinated and integrated economic development policy, never achieved before 1963. But on the other hand the centralization of planning authority had some side effects which might outweigh its advantages. The first is that the planning itself became a kind of political decision from the top down without a real participation by the local government organizations. This, coupled with the absence of an effective device for securing coordination with private initiatives, inhibited some people from showing new ideas and thereby denied the public the experience that comes with participation and responsibility. So it is hardly surprising that until the revolution there was neither public participation in the planning implementation nor voluntary effort; both vital ingredients in any successful programme of economic development.

Second, although the local governors, who were appointed by the central government, had as their main function the maintenance of law and order in the provinces, some of those who took an interest in the fate of their provinces and had relative political strength vis-a-vis the planning authorities succeeded in influencing the provincial programmes. Since this process did not have publicity, it is difficult to trace its effects in detail. However, it can be deduced that it was the main factor behind the uneven distribution of development funds among equally promising regions. This in turn reportedly led to

"an extraordinary and disproportionate shift of the population, particularly to the urban centres, and created an acute problem of urbanization, provoking an untimely despoliation of some of rural areas and distortion of development expenditure on additional social services and urban infrastructure" (27).

However, after the revolution there has been a marked change toward decentralization. The authority of local administrators was considerably strengthened. Special emphasis was placed on developing the regions less favoured during the monarchic regime. But, unfortunately, the well-publicised corruption trials led to striking resistance to delegation of authority and the unwillingness of the administrators to accept responsibility. This has slowed down the implementation of many vital development programmes. In 1973, the situation was completely changed. The popular committees were empowered to appoint and dismiss all local administrators and were given a considerable say in the preparation and implementation of regional programmes. It is too early to evaluate the work of these committees; but there is anxiety that they have gone to the other extreme to the extent that their decisions were mutually inconsistent and sometimes contradictory. This is reinforced by the fact that the decisions of the committees are sometimes made on the spur of the moment without preparation and without analysis of the problem by competent and informed professionals.

CONCLUDING REMARKS

From this brief account of the country's effort to put oil revenue to productive use a few conclusions can be drawn. The first is that over the period from 1963 to 1972 attempts were made to fulfil the government

(27) Canellopoulos, *op.cit.*, p.5.

commitment to use oil revenue for raising the living standards of the people and providing them with social services. Although the target of spending at least 70 percent of the total government oil income for development purposes was not realized, the total development disbursements for the eight fiscal years from 1963/4 to 70/1 was, on the scale of the Libyan economy, exceedingly high; it amounted to approximately 28 percent of the total GDP of all sectors other than oil, for the eight years from 1963 to 1970. As compared to other developing countries it is very high. But the infusion of such magnitudes of money into the local economy was without a formulation of a comprehensive development policy, in terms of targets, policy instruments, and coordination among various sectors. Instead, the three plans launched during the period can at best be regarded as summations of public investment projects with no overall analytical framework to determine their contribution to the productive capacity of the country.

The second is that the planning-makers in Libya hold the erroneous belief (or behaved as though they believed) that the main obstacle to economic development is an adequate supply of capital and foreign exchange; as a consequence they relied heavily on pumping oil money into the economy without an optimal adjustment of its pace to the absorptive capacity of the country.

The third is that the government in both the monarchical and revolutionary regimes adhered to the naive idea that oil revenue, whatever its size is of the nature of a grant that can be spent without calling for extreme rationality; this assumption led the majority of the people to believe that the government should further economic

development without having to squeeze anyone, including the rich. This belief is firmly held; it is difficult for anyone who knows Libya today to see any future situation in which this misconception would be abandoned. Unless these attitudes are seriously challenged, the Libyan economy outside the oil industry could well become a consumption-oriented economy, plagued by inflation and hardly capable of achieving a self-sustained development process.

CHAPTER VI

ASSESSMENT OF ECONOMIC AND SOCIAL DEVELOPMENT: ON A BROAD FRONT

"Libya was said to be the
richest country in the world,
yet her people were the
poorest" (1)

(Col. Quaddafi)

An appropriate evaluation of Libya's socio-economic development and its course since the advent of the oil industry is only possible if there are well-defined sets of socio-economic policy about which a normative judgment can be made. Unfortunately, for at least two reasons such evaluation cannot be made with any great degree of precision. In the first place, although planning for putting oil revenue to productive use has been the central element of the country's overall economic policy, the objectives and the real direction of this planning have never been crystallized. In the second place, until very recently most of the development funds were spent on projects which were infra-structural rather than directly productive, and data which would facilitate measuring their indirect effects do not exist. In such circumstances, we have to settle for a selection of a few objective criteria that may be judged in terms of the basic structure of the society to actuate social and economic principles; and to choose in the light of the country's own circumstances a series of indicators which would provide bases for a satisfactory assessment of the extent to which the national goals were achieved.

Libya, as a young and a developing nation, seeks to achieve a wide range of socio-economic objectives. Over the long run, those

(1) Ministry of Information, *Achievements of 1st of September Revolution* (Tripoli, Sept. 1971), p.28.

objectives could be summarised as follows: raising national income and insuring that economic development is beneficial to all the segments of the population; building a diversified self-sustaining economy; enhancing the capacity of the society to make productive use of the available resources and to function continuously for the well-being of its members; and assuring economic security for future generations.

Before embarking on examining the pace at which the country has gone toward achieving those objectives, it may be well to indicate two points. First, the listing of the above objectives is suggestive and is not a reflection of the country's order of priorities. Second, although the above objectives are analytically different, they mostly appear in a certain mixture and it may be difficult to disentangle them one from another.

TRENDS IN GROSS OUTPUT

In measuring the overall economic advance, economic literature pays considerable attention to the performance of macro-economic magnitudes. It is therefore natural to turn first to the national accounts, though in the case of Libya these are not the appropriate guiding set. Prior to 1967, there was no system of national accounting in Libya and therefore detailed information about national income and components was scarce. In 1969, the National Account Section (NAS) at the Ministry of Planning began publishing annual statistical data covering the period from 1962 to the present for the major macro-economic variables expressed in both current and constant 1964 prices. Although

some of those data are no more than informed guesswork and, as acknowledged by NAS, most of the results are subject to a wide margin of error reaching in some cases $\pm 15\%$, they generally give an indication in broad terms of the behaviour of some of the main economic aggregates since the start of oil production in 1961.

In Table 1, Gross Domestic Product and some of its components are presented for 1958, 1962, 1968 and 1971 in both aggregate and per capita terms at current prices. As indicated in the table, GDP increased during the thirteen years from 1958 to 1971 by an accumulative annual rate of 29.5 percent. In per capita terms, even after allowing 3.5 percent annual increase in the population, it rose from just LD. 42 in 1958 to LD. 696 in 1971, representing an annual rate of growth of 24%. Superficially, from the data, the economy has been growing spectacularly. But the magnitude of Libya's GDP is far from being an accurate reflection of the value of economic activity, let alone evidence of real improvement in the well-being of the nation as a whole. The truth of this judgment rests on the following facts:

(a) The difference between GDP and GNP

The national^{*} income publications in a few countries make no distinction between GDP and GNP. This is because the two variants coincide within one half of one percent, therefore the difference is not of great importance. In the case of Libya, however, where a considerable part of GDP accrues as profits to non-resident owners of oil industry and therefore should not be counted as part of the true national income, the distinction between the two concepts is very important indeed. As shown in rows 4 and 5 of Table 1, the net factor

Table 1

GNP AND SOME OF ITS COMPONENTS AT CURRENT PRICES

Aggregates in LD. million and Per capita in LDs. At factor cost.



Illustration removed for copyright restrictions

- Sources: (a) IBRD, *Economic Development of Libya* (John Hopkins 1960), p.371.
(b) Ministry of Planning, National Accounts of *Libyan Arab Republic*, (Tripoli, October 1972), p.28.

payments abroad had increased from LD. 0.5 million in 1958 to LD. 228.3 in 1968, representing 21.5% of GDP for the latter year. As a result, GNP and the per capita income of Libyans did not grow as fast as GDP. Although the deficit in net factor payments abroad still remained appreciable high; it did show a significant decline in recent years. As indicated in the table, its share in GDP had dropped from 21.5% in 1968 to 14.5% in 1971. For this, there are two reasons. In the first place, the remittance of profits by the oil companies was reduced mainly because of the rise of the government share in the profits realized by the oil industry and the reduction in the

volume of oil production. In the second place, the country's earnings from official financial investment abroad had witnessed a significant rise during the last few years, reaching an amount of LD. 45.8 million in 1971 against 11.6 million in 1968 (2). The rise in these earnings, which had offset part of the non-residents' share in Libya's GDP, reflects the increase in the country's foreign assets and the rise in rates of interest in international financial centres.

(b) Inflation

As already indicated in the previous chapter, one of the characteristics of Libya's economic situation since the mid 1950s was an interaction of both demand and cost inflation. So, since the figures of national accounts displayed in Table 1 are expressed in current prices, the inflation effects add large uncertainties concerning the real value of such aggregates as GDP and GNP and reduce the real rate of growth in national income. How great was the rate of the annual fall in money value over the period? Unfortunately, no reliable information is available about movements in prices and costs, and the experiences of different parts of the economy over the period must have varied greatly. Recently, the NAS made an attempt to deflate the national aggregates on 1964 prices. But NAS's attempt did not cover the years before 1962. Further, the deflated figures reported by NAS were almost entirely based on an interaction of theorizing and speculative hypotheses rather than on an intensive investigation of the inflationary process. However, the general trends of inflation from 1958 to 1971 could be characterised as a combination of deflated national accounts

(2) Bank of Libya, *Annual Reports for the Years*, 1968/69, p.126 and for 1971/72, p.130.

as reported by NAS and reports of the Central Bank of Libya about the cost of living index for Tripoli. The latter indicated that the average annual increase in prices was about 10 percent between 1958 and 1964. So the GDP for 1958 had to be inflated by a compound annual rate of 10 percent. The results are displayed in Table 2. Although the figures presented in Table 2 are somewhat sketchy, they make clear that the inflationary effect had considerably reduced the increase of the aggregate accounts, and consequently their real annual rate of growth over the period was far less than that expressed at the

Table 2

TRENDS IN NATIONAL ACCOUNTS AT CONSTANT 1964 PRICES.

(Aggregates in LD. mn. and per capita in LDs. At factor cost)



Illustration removed for copyright restrictions

- Sources: (a) Figures in rows 2, 3, 4 and 6 for 1962 on were derived from NAS's report on national accounts, *op.cit.*, pp. 92.93.
(b) The original GDP for 1958 at 1964 prices.

current money values. In 1964 prices, GNP had grown by 17.5 percent a year while at current prices it recorded an average annual rate of growth of 28 over the period 1958-1971. The real per capita GNP had grown by just 11 percent per annum against an annual rate of 23.5 percent at current prices. But, in this context, a certain *obiter dictum* must be added. The prices of foodstuffs, housing and services had recorded the highest increase of any items. It must accordingly be borne in mind that such real per capita figures still have some of the inflation defects and therefore they are far from being an accurate measure of the real improvement in the standard of living even in the average terms.

Another characteristic emerging from Table 2 is that the rate of growth of GDP in 1964 prices had slowed down during the last three years (1968-71), averaging just 4.5%. This was not sufficient to maintain real per capita income, because the population had increased by an annual rate of 5 percent during the three years (this rate of increase in the population was exceptionally high because of influx of large number of workers from the Arab states during the last years). In part the stagnation of GDP and the actual decline in available real per capita incomes may be attributed to the uncertainties associated with the change of the political regime in 1969 and the consequent reorientation of economic policies. In addition, the GDP for the first two years of the Revolution was adversely affected by the tapering off of oil production and the repatriation of many Italian nationals formerly present in the country. However, partial information for the more recent years indicates a sharp rise in oil income and a recovery in investment spending, and suggests a pickup in the rate of growth at current prices, to perhaps 20 to 25 percent a year.

(c) Service-oriented growth

The composition of GDP by industrial origin, as given in Table 3 on page 205, shows the relative growth and importance of the various sectors. The analysis of this composition as well as the contribution of the main sectors of the GDP over the period ought to afford us some useful insights regarding the nature of Libyan economic growth. As Table 3 makes clear, it is immediately evident that the most outstanding changes were the rapid rise of the share of the oil industry - from around 25 percent in the first full year of oil exports, 1962, to about 63 percent in 1971 - and the steep fall in the share of other commodity-producing sectors, - i.e. agriculture and manufacturing - from about 38 percent in 1958 to less than 4 percent of the total GDP for 1971.

Thus the chief dynamic factor in the growth of the economy over the period was the explosive growth of the oil industry.

Aside from oil and the stagnation of agriculture and manufacturing, perhaps the most striking other feature revealed by the composition of GDP is the general tendency of the services sector to occupy an excessively large proportion of economic activity. Among those services contributing to GDP, distribution, housing and construction, transport and communications, public administration and the government services are by far the largest after the oil industry. As could be gleaned from Table 3 below, a third of the total GDP for 1971 was derived from the sub-tertiary sectors which, as shown in Table 4 below, had grown at an average compound rate of 30 percent per annum over the thirteen years.

Moreover, if the direct contribution by the oil industry is excluded from GDP, the share of the services in GDP would rise from 33 percent in 1958 to 89.5 percent in 1971, pushing down the share of

Table 3
INDUSTRIAL ORIGIN OF GDP FOR SELECTED YEARS



Sources: a. World Bank, The Economic Development of Libya, 1960, p.371.
b. National Accounts Section, National Accounts of the LAR, 1962-69, June 1971, Part III, pp. 28, Table 1.

Table 4

INDUSTRIAL ORIGIN OF NON-OIL GDP

At factor cost. At current prices.

Sector	1958 In LD. mns.	%	1971 In LD. mns.	%	Average annual rate of growth
Total non-oil GDP*	48.6	100	548.1	100	20.5%
of which contributed by:					
(1) Agriculture	26.1	54	32.9	6	7.0%
(2) Manufacturing and repairing	6.0	13	25.0	4.5	11.5%
(3) Services including the Government, construction and transport	16.5	33	490.2	89.5	30.0%

Source: deduced from Table 3.

(*) Only the direct contribution of oil is subtracted from the total GDP.

productive sectors (agriculture and manufacturing) from 67 percent in 1958 to just over 10 percent in 1971. The figures presented in both Tables 3 and 4 make clear that the growth in non-oil GDP was almost entirely due to the staggering rise in the services sectors, rather than to the production of material goods on which the level of physical consumption and investment initially depends.

Ostensibly, one may interpolate A.G.B. Fisher's thesis that the rapid growth of the tertiary sector and its dominance of GDP are signs of economic and social progress. Fisher postulated in the 1930s that, "as income rises demand shifts from the primary to the secondary and then to the tertiary industries" (3). Unfortunately,

(3) Everett E. Hagen, *Economics of Development* (Richard D. Irwin, 1968), p.45.

within the milieu of Libya's economic conditions, Fisher's widely-held view is not applicable. This is not only because the commodity sectors have never developed beyond the primary stage, let alone experienced a surplus in their products, a necessary condition in Fisher's thesis; but the most important reasons lie in peculiarities of the way the services sector had grown. These peculiarities can be better pictured by a brief examination of the major components of the services sector:

(i) Public administration and government services. These include health and education but exclude a large part of the economic services (roads, agriculture, housing, industry). As indicated in row 10 of Table 3, the contribution of this sub-sector to GDP rose from LD. 6.7 million in 1958 to LD. 163.3 million in 1971. This is based, of course, on the conventional national income accounting which takes the value added by the government at cost. Thus, in per capita terms the value of the government services rose from LD. 5.5 in 1958 to LD. 78 in 1971 at current prices; implying that over the thirteen years the functions of the public administration had experienced substantial improvements, viz. better maintenance of law and order, external security, business regulation and so forth.

Yet, one can say without hesitation that the performance of public services would have been better if the country had spent less for that purpose. Of course, this argument involves value judgements, which are somewhat alien to scientific economics, but it is not without supporting evidences. In the first place, the rise in the value added of public administration reflects the soaring costs of multiplying government employment which had risen out of proportion and reason.

Since such growth in bureaucracy was initially based on the splitting of departments into new ones, it resulted in duplication of functions, multiplication of regulation and control and unnecessary complexity in certain parts of the administration. All these, with the rising proportion of less talented personnel, meant poor performance of public services, a spread of openings for corruption and a lower standard of public morality; in the second place, it is generally observed that low productivity has attached to the activity of public administration in Libya. For instance, in 1968 a world expert noted; "Many times an individual who is educated at great expense to the general public gets a government job and then just sits and does practically nothing..... When I visited Beida and saw the huge development of office buildings and housing, I could not help but feel very disturbed that perhaps Libya is committing the same mistake. The multiplication of officials.... can absorb an enormous amount of capital, effort and wealth yet produce nothing" (4).

The above observation made it clear that the expansion of bureaucracy in Libya added almost nothing to the welfare of the nation. Indeed, it brought serious hardship to the people, not only because it resulted in a waste of scarce resources but also because the amazing amounts it cost were inherently inflationary, since incomes were paid for no concomitant increase in output. Yet the compilers of national accounts have to be blind to all this, collect all the net costs of public administration and add them to the GDP.

(4) Murray D. Dryce; Some Alternatives to Development: Lessons for Libya. *The Libyan Economic and Business Review*, Vol. 1v, No. 2, 1968, p.10.

(ii) Transport and trade distribution. Although the share of these sub-sectors in the total GDP had actually declined between 1958 and 1971, they experienced substantial growth in absolute terms during the period. If oil industry is excluded, their total value added represented the largest single contribution to GDP in 1971. In that year the magnitude of each of them exceeded the whole value added of the commodity sectors. The relatively large size of the value added of these services is due to a number of factors. The development of the Libyan economy into an import-oriented one after independence meant originally that transport and distribution of imports were some of the chief fields of economic activity. Over time this was reinforced by the economic boom, the low degree of risk, the drift from the low-rewarding agricultural and industrial activities, and by easy entry into the growing sectors.

Another important factor contributory to the growth of the value added in distribution and transport was the tendency for the costs of these services to rise. For this there are various, but interwoven, reasons. On the one hand, by years of experience, a small number of importers could establish a monopoly position in import trade, and this position has been reinforced by the complexity of the restrictive licensing. Of course this situation, coupled with the augmenting number of wholesalers bidding up import prices to get larger supplies, meant the costs of distribution had already been swelling within the first ring of the chain. On the other hand, as in many other developing countries, the chain of distribution in Libya is characterized by the multiplicity of intermediaries and proliferation of petty traders. In the distribution of some products, there are as many as five intermediaries between the producers or the importer and the small shops located in the living quarters. Although competition between the intermediaries

and the numerous petty traders is sharp, it is necessary for them to increase the mark-up because each of them handles a relatively small turnover and because they had to increase their money income at approximately the same rate as incomes elsewhere.

Furthermore, the existence of too many intermediaries in the distributive chain resulted in unnecessary multiplication of transport and storage facilities. This is reflected in the growth of the value added in transport and communications. However, it should be noted that the long distances and the poor communications are also responsible for the growth of costs and of value added in "transport". It is obvious that the contribution of trade and transport to national income overstates the real benefits conferred on the society by these subsectors.

(d) Income Distribution

It is generally agreed that the speedy rise in the GDP and its components should be viewed critically when such rise is not shared by the whole population. In socio-political terms, the social scientists have expressed their awareness of the harmful effects of income inequality, ever since the time of Aristotle, who stated that:

"In human society extremes of wealth and poverty are the main sources of evil... Where a population is divided into the two classes of the very rich and the very poor, there can be no real state; for there can be no real friendship between the classes, and friendship is the essential of all association" (5).

In recent year, the attention to problems of maldistribution of GNP seems to be increasing; it is hard to imagine a development programme which does not analyze the existing distribution of income and

(5) Quoted by Richard Ward, Aspects of the Income Inequality Problem in the Less Developed Countries; *Economia Internazionale*, Vol. XXV, N.1, Feb. 1972, p.122.

its evolution within the objective of the plan. Even the World Bank, the main objectives of which are still, in the view of many people, to strengthen and expand the capitalist system, has increased its attention to this problem; in 1972 its President, who was once the head of the largest private corporation in the world, made it clear that the matter should be of great concern to all those interested in development. He stated:

"When the highly privileged are few and the desperately poor are many - and when the gap between them is worsening - it is only a question of time before a decisive choice must be made between the political costs of reform and the political risks of rebellion" (6).

In Libya, it is unfortunate that despite the abundant wordage recently directed by the leaders of the revolution at social cleavages exacerbated by the oil boom, the income inequality issue has not yet received attention. None of the series of publications made available in recent years on the state of the economy contains even rough estimates on how widely the distribution of income is dispersed around the per capita average, let alone measuring it with some accuracy. A possible explanation for this is that the matter is a very sensitive issue which the Planning authorities prefer to play down. Another plausible reason is that income inequality is so obvious that no one has felt it necessary to measure it.

However, the unequal nature of the distribution of the income and the recent trends of the gap between the different strata of the population can be illustrated by various kinds of direct data and indirect indications. First, it was reported in 1972 by the Economist Intelligence Unit, which was periodically commissioned to study some

(6) R. McNamara quoted by Richard N. Bird, Public Finance and Inequality; *Finance and Development*, Vol. XI, No. 1, March 1974, p.2.

economic issues in the country, that:

"In 1968 it was estimated that while mean GNP per head was about LD. 450, median disposable income was only LD. 180 in Tripoli, a much lower figure obtaining in rural areas. The top 10 percent of the population probably received more than half the national income" (7).

Second, similar results were deduced from a sampling survey made in 1969 for estimating the monthly income of households in Benghazi city during the same year. Some original figures of that survey are presented in Table 5. It is deduced from the national accounts and the population estimates that the per capita disposable income for 1969 was LD. 306 or about LD. 25.5 per month and the average size of the household was about 6 persons. Combining these figures, the average monthly disposable income of the household would be roughly LD. 150. So, according to the figures displayed in Table 5, the disposable monthly income of about 73 of the sample is below the national average, even though the average per capita income in Benghazi is the highest in the nation. Third, the sectoral distribution of GDP displayed in Table 3 shows that the share of agriculture, forestry and fishing in GDP (item 1) declined from 26.1 percent in 1958 to less than 3 percent in 1971. Maybe one might doubt the relevance of this but, when the population deriving its income from these sources has not proportionally declined, there being still about 30.8 percent of the labour force engaged in these activities in 1971, the figures not only mean that about a third of the population received less than 3 percent of their country's total GDP but also it can be inferred that the gap of average income between the urban and rural population has been dangerously worsening.

(7) The Economist Intelligent Unit, Quarterly Economic Review - (Libya - Tunisia - Malta). Annual Supplement 1972, p.1.

Table 5

ESTIMATE OF DISTRIBUTION OF HOUSEHOLD BY MONTHLY INCOME, IN BENGHAZI IN 1969



Sources: The Economist Intelligent Unit LD., *The Prospects for a General Investment Company in Libya*, (June 1971), Unpublished, p.19.

One should, however, consider the income transferred by the government in the form of subsidies to the farm sector, and the possibility that there is a considerable degree of underestimation of GDP attributed to the farming sector because a substantial part of its products do not pass through the market. But the gap is so wide that one cannot imagine the disparity between urban and rural incomes would have been markedly reduced. The possibility is not precluded that distribution of income within the urban areas has also become unequal. The only evidence that may prove this is that the share of wages and salaries of employees in gross national income had declined from 34 percent in 1962 to 24 percent in 1971 (8).

(8) Ministry of Planning, *National Accounts, op.cit.*, Table 16, p.14.

It is unfair to attribute the uneven distribution of income directly to the oil industry. Certainly, the Libyans who were lucky enough to be linked with the industry as contractors or suppliers have become very rich during the expansion of oil operations. But those are very few. The main factor behind the problem is the spectacular growth of public expenditure which has been financed by oil revenue. So the people who have been connected with government business were the main beneficiaries. These include the owners of local enterprises engaged in growth activities such as construction, real estate, commerce and foreign trade, followed by a group including professionals, management officials in the private sector and senior civil service employees, followed by the employees in the private sector, within which the range of incomes is also fairly wide.

After the revolution, some measures were taken to improve the distribution of national income. These included launching large development schemes in the rural areas, providing family allowances extending social insurances, and expanding social-type expenditure on behalf of the poor, such as considerable increases in outlays for health, education and various forms of welfare and subsidies on food. On the one hand there is evidence that such measures have improved the situation. The regional imbalance in development appeared to be declining in recent years, though this cannot be presented in quantitative terms. A larger proportion of the population were able to reap the benefits of the country's oil wealth. On the other hand, there is still a considerable portion of the poor and the relatively poor - those that are scholars called '*marginados*' (9) - unaffected by the revolutionary government

(9) Vito Tanzi, Redistribution income through the Budget in Latin America, Banca Nazionale Del Lavoro Quarterly Review, Vol. XXII, 1969, p.85.

measures or at least unable to receive full benefits from them. For this there are at least two courses. First, the government measures centred almost exclusively on a public expenditure approach rather than taxation; so they were inevitably inflationary; which in turn had ill effects on the poor rather than on the expanding urban middle class. The other is that often this group is geographically dispersed, socially and culturally alienated from the centres of government welfare activities. At this point the statement of the leader of the revolution, Col. Quaddafi, quoted at the head of this chapter, is certainly true.

THE COURSE OF PHYSICAL PRODUCTION

Whatever else economic development means for developing countries, the most critical approach for appraising development performance in Libya is to investigate what has been happening in the non-oil commodity sectors, namely, agriculture and manufacturing. This is not only because the increase in output of these sectors means the enlargement of the supply of material things available to all citizens, but the most important is that the nation's objective of building a diversified self-sustaining economy is closely bound up both directly and indirectly with developments in the non-oil commodity sectors.

Agriculture

The salient features of agriculture and the patterns of land utilization were outlined in Chapter II, where it was also indicated that yields were generally low for physical and socio-technological reasons. Besides, it is frequently reiterated that agricultural potential is severely limited in the country because desert and climate conditions

have greatly reduced the areas fit for settled living. However, there were some indications that cultivation and pastoralism had been carried on extensively in Libya before human action and negligence led to destruction of many of the land-assets and deforestation. The well-known expert, Paul G. Hoffman summarised precisely how this happened:

"Libya had been one of the granaries of the Roman Empire. But over the centuries the wells filled with sands, and neglect, deforestation, and the relentless onrush of the desert had largely denuded the land.... by the mid-twentieth century (it) had become barren desert" (10).

Nevertheless, despite these harsh facts, hopes remained high of developing Libya agriculturally. Efforts to realize these hopes can be traced to the 1930s when the Italians spent some 1.8 billion Lire (equal to about 150 million pre-war U.S. dollars) for creating the proper infrastructure and developing the lusher and more readily profit-bearing areas, most of which was confiscated from the natives for the settlement of Italian farmers. But the fighting that flowed back and forth during the early years of the last war led to destruction of most of what progress had been made. During the 1950s, a number of rudimentary attempts were made to revive the commercial farms founded by the Italians and to resettle Libyans in farms reclaimed through afforestation and other abandoned by their Italian owners after the war.

But the first national attempt to improve both the country's agricultural base and rural living standards started in the early 1960s, after the improvement in financial resources was assessed. As indicated in the previous chapter, all the plans placed a considerable emphasis on agricultural development. The First Five-Year plan document stated that "agriculture would continue to be the main source of employment and its

(10) Paul G. Hoffman, *World without Want* (Chatto & Windus Ltd., London, 1963), p.103.

development was therefore the most important means by which most of the people could benefit from the wealth received from oil"⁽¹¹⁾.

In terms of allocation of development funds, agriculture remained second only to public works in the scale of priorities. Between 1963 and 1971, the funds allocated to agriculture totalled LD. 112.5 million, and of this amount LD. 88.5 million was actually spent. Most of these funds were used to finance the government activities in the following areas: providing the native farmers with interest-free long-term loans for the purchase of agricultural land from the Italian settlers, who had acquired it during the Italian colonisation; supplying adequate credit to farmers; widening dissemination of knowledge of modern farming and livestock practices; prices such as guaranteeing the purchase of major products without any quantitative limit and at a price generally above that prevailing in the world market; undertaking a comprehensive study of the natural resources of the country, especially soil and water resources; and providing rural areas with the necessary infrastructure. Besides, the government has provided a further stimulus to agriculture in the form of subsidizing farm machinery, fertilizers, well drilling, fodder and seeds.

Despite the channelling of a significant amount of public expenditure and despite the rapid increase in demand for food products, the position of agriculture in the economy has greatly deteriorated since the beginning of the 1960s. As indicated earlier, the share of agriculture and related activities in the total GDP dropped from 26.1 percent in 1958 to less than 3 percent in 1971 (Table 3 on p. 205) because the agricultural output tended to stagnate. Over the period, it had grown only by 7 percent a year while the total GDP recorded an annual rate of

(11) Ministry of Planning, *Agriculture, 1973-1975* (Tripoli, 19.3.1973), p. 17, (Mimeo.)

growth of 29.5 percent. So with 10 percent annual rate of inflation, the real value added of agriculture has actually declined. Also it was reported that, despite the introduction of mechanization on a considerable scale, the productivity per man still remains very low; in 1968 it was six times smaller than the average in other sectors of the economy (12). Clearly these facts indicate that there are widening disparities in the regional prosperity and increasing reliance on importation of foodstuffs. Yet, in spite of its poor performance, agriculture still remains the largest source of employment, as 30 percent of the population obtain their income from it. This implies that the intangible benefits derived from this sector, which cannot be expressed in terms of quantitative value, are still significant. In any event, it is indubitable that the objective of improving both the country's agricultural base and rural living standards has not been yet realized, let alone achieving the aim of expanding agricultural products in pace with the growth of domestic demand.

A great deal of literature was produced about the failure of agriculture to respond to the various stimuli provided by the government and to the economic boom brought about by the oil industry. Dr. Ali Attiga, who had been in close touch with Libya's development problems, stressed *inter alia* two problems which stood in the way of rising agricultural production. One was created by the advent of the oil industry. Dr. Attiga pointed out the adverse effects of oil on agriculture: "in the face of increased earnings and brighter prospects in the trade sector and the construction and service industries, brought about by the discovery of oil, both labour and capital moved away from agriculture. With this movement, Libyan agriculture was left

(12) Dr. Ali Ahmed Attiga, *The Economic Impact of Oil on Libyan Agriculture in Libyan "University - London University Joint Research Project on Agriculture and the Economic Development of Libya* (Allan & McLachlan, 1970), p. 11.

to stagnate in its low level of development, and the consumer turned to the world market for the purchase of his daily food" (13).

The other problem stressed by Dr. Attiga is related to the defects of the government credit policy which not only resulted in a sudden increase in the value of agricultural land but also led to a further raise in the costs of agricultural production, thereby diminishing its competitive position in the economy. But the most harmful effect of this policy was the tendency to grant long-term credits to urban people who, according to Dr. Attiga: "had neither the experience, nor the necessity to maintain and improve the productive capacity of their newly acquired farms". He explains this as follows:

"since they had other sources of income, either in government or in the tertiary sector, they generally looked upon their purchases of these farms as good investment outlets in the face of rising inflationary trends initiated by the oil industry. Another motive for buying these farms was the recreational environment associated with agriculture and highly valued by urban people. In other words, production was not a primary objective in the purchase of these farms. In the case of small lots of land, where long-term credit was extended for the whole value of the purchased farm, the result was excessive fragmentation of economic farm units, adding to the sale prices of agricultural and further diminishing its productivity" (14).

Besides this, it was reported that the government agricultural policy during the 1960s was ineffective because of two major defects in its formulation. One was that the agricultural planning and its elaboration were inappropriate. According to an official report, "Development projects started without adequate investigation and studies; follow-up and evaluation of projects were not performed

(13) *Ibid*, p.13.

(14) *Ibid*, pp. 13, 14.

satisfactorily; agricultural cooperatives have not been sufficiently supported; 50% of agricultural graduates worked outside agriculture, and the Ministry of Agriculture was not adequately organized" (15). The other major defect was that the government made no attempt to circumvent the institutional barriers to agricultural development. In this context, in 1970, a United Nations' expert, who had been a senior adviser to the Libyan economic planners, noted that the prevailing situation in Libyan agriculture might sufficiently explain the low productivity of labour in this sector and the rising shift of farmers toward urban centres. In particular, he stressed the problems connected with the system of tribal tenure, the small size of holdings, excessive fragmentation of land lots, uneven distribution of arable area, the relatively extended system of land tenure and sharply unequal geographical distribution of arable land (16). Certainly, this expert was quite right in his emphasis on the necessity for tackling these problems before launching any ambitious programme for agricultural development.

Fortunately, the revolutionary government realized this urgent need. An agricultural revolution was announced in 1971. This included a semi-expropriation of some of the unutilized areas under the tribal tenure and undertaking directly and indirectly compulsory measures to reorganize the prevailing tenure system. In June 1972, a special agricultural plan calling for expenditure of LD. 700 million was announced, and multi-million dinar agricultural contracts were awarded to the foreign firms. Most of these contracts involved

(15) Ministry of Planning, *Agriculture, 1973-1975* (Tripoli, 19.3.1973) p.2.

(16) Prof. A. Canellopoulus, *On the Revision of the second Five-Year Development Plan (1968-1973) of the Libyan Arab Republic* (Tripoli, Dec. 1969), pp. 15, 16, 17.

reclaiming former wastelands and carrying out a number of pilot irrigation projects, which were all part of a grand design to attain self-sufficiency in food production with the long-term intention of creating an export surplus.

These projects have not yet produced results that can serve as a satisfactory guide for a fair assessment: Aside from a reported series of errors in planning and execution, some of the projects involved excessive capital costs in relation to the value of the crops that can be produced; and there is general anxiety that a further large-scheme may absorb the country's oil revenue, leaving the treasury without a sufficient reserve to hedge against the vicissitudes of oil politics. Nevertheless, the profitability of the venture cannot be calculated on a short-term basis, and the leaders of the revolution did feel that whatever the costs of this type of revolution in agriculture, they will in the long run be outweighed by the benefits. Indeed, in the light of the present world monetary turmoil, it is extremely difficult to argue against the government policy, particularly if the alternative would be boarding oil revenue in paper money.

Manufacturing

Reference has been already made in Chapter II to the state of manufacturing industry up to 1960. In that year the government began to play an active role in promoting industrial development. A Ministry of Industry was established in 1961 to undertake the policy of industrialization. In 1963, the year of the First Five-Year Plan, the government announced its industrial policy the aims of which were:

"To raise the present level of production, in quantity, kind and quality, to promote consumption of Libyan manufactured goods so as to lessen dependence on foreign goods, and to create an export market and a higher level of employment" (17).

To this end, a number of measures were employed. In 1963 the Industrial Development Corporation was created to provide financial assistance to private industrial enterprises. The tariffs on goods produced domestically were increased and imports of machinery, equipment, spare parts and raw materials used in industry were exempted from duties. However, due to the inflationary pressure, the policy of protective tariffs was ineffective; nevertheless the government subsidy was increased by the provision of interest-free long-term loans with maturities of up to twenty years. The government industrial programme included also direct measures. Among these measures were the establishment of a network of industrial estates providing the private initiatives with suitable and well-located industrial sites, adequate streets and cheap utilities; creating a number of industrial centres for providing technical assistance and management counsel to the existing industries.

Thus, together with the rising level of income and the influx of labour from the rural areas, manufacturing activities have shown a significant growth during the 1960s through the contribution of the sector to GDP dropped from 11.5 percent in 1958 to 1.7% in 1971. As indicated in Table 3 on page 205, value added in manufacturing and repairing rose at an average rate of 11.5 percent during the period between 1958 and 1971, but at constant prices the real rate of growth may fall below 3.5% a year. More detailed data covering only the gross

(17) John Wright, *Libya*, (Ernest Benn Ltd. 1969), p.271.

value of production in large manufacturing establishments for the last five years of 1960 are displayed in Table 6 below.

Table 6
GROSS VALUE OF INDUSTRIAL OUTPUT IN LARGE MANUFACTURING ESTABLISHMENTS
(In thousands of Libyan dinars at current prices)

Industry	1965	1966	1967	1968	1969	1970
Food	3,681	5,098	5,769	7,690	7,468	8,258
Beverages	1,626	2,396	2,558	3,625	3,974	2,174
Tobacco	3,122	4,227	5,243	8,648	8,040	9,219
Textiles	905	1,007	1,249	1,543	1,800	1,743
Wood, cork, etc.	60	149	164	122	407	602
Furniture & fixtures	297	749	727	406	421	486
Printing, publishing, etc.	504	513	671	817	817	836
Leather products	46	63	37	15	16	---
Chemical products	2,561	2,703	3,259	4,097 ^{1/}	4,841	4,806
Non-metallic mineral products	703	1,086	1,209	382 ^{1/}	280	152
Metal products	1,053	1,288	1,094	1,728	1,869	1,828
Electrical machinery	544	427	37	38 ^{1/}	76	111
Cement	---	---	---	1,197 ^{1/}	1,991	2,371
Miscellaneous industries	405	423	478	390	567	708
TOTAL	15,507	20,129	22,495	30,698	32,567	33,294

Source: Census and Statistical Department

^{1/} Until 1968 cement was included under non-metallic mineral products.

The data shows that the output of the sector recorded an average annual growth rate of 26 percent during the 1966-68 period, but in 1969 and 1970 the growth rate slowed to about 6 percent and 2 percent respectively. The slowdown in the latter years was related to the decline in public investment outlay, a halt in production

of wine and beer after the 1969's decree banning production and sale of all alcoholic beverages in Libya, and dismissal of the Italian settlers who had been running most of the manufacturing undertakings in the country.

The data in the table also indicate that, with the exception of building materials production, which with the addition of two cement plants has expanded considerably in most recent years, the pattern of manufacturing activity remained almost confined to small-scale operations related to food and other light industries. Food, beverages and tobacco; together these products accounted for 59 percent of the total value of output of large industrial firms in 1970 and until 1969, a somewhat greater proportion of the total growth in output.

However, the production of durable consumer goods is still a significant contributor to the industrial output, particularly that of bazaar crafts and crude textile weaving, the output of which is not entirely covered in the statistics. But at any event, the manufacturing sector is still at the primary stage of development. Its general accent until now has been on the utilization of simple locally-produced materials, hence the emphasis on food canning, date packing, processing of cement, cigarettes, matches, and manufacturing of plastics, aluminium, confectionery, soap and simple leather goods.

Although government subsidies have been extremely generous and perhaps Libyan industry is one of the most subsidized in the world, the poor performance of the manufacturing sector is quite expected. In fact, with an exception of capital which is abundant and cheaply available, the general environment has not been favourable to industrial development. The biggest hurdle to industry is the critical shortage of labour, especially trained labour; and since the advent of the oil

industry this hurdle has been raised by the attractiveness of wages paid by the oil industry, the tertiary sector and government sponsored construction projects. This implies that some major elements on which industry is normally based are absent in Libya, such as lack of alternative opportunities outside industry and redundant workers.

Other major problems which have impeded the establishment of an industrial base in the country are the scarcity of natural resources apart from petroleum, the smallness of the home market and the absence of an effective protection. The latter was mainly due to the oil-induced prosperity, which **certainly** provided the consumer with increased income for purchases of foreign goods, and the internal inflation. This involves a further impeding problem for the future policy of industrialization because the consumer has already tested the well-designed foreign goods and it will be very difficult for the local manufacturers to win his confidence in their products. An exception to this general proposition (which is just a proposition) is where the manufacturers will be unusually efficient and produce particularly good specialized designs that will meet local tastes. Alternatively, the government must erect a strong wall of protection, a sort of policy that will be unpopular and difficult to execute. The government should also take effective and appropriate measures to direct private initiatives toward industrialization; without such measures the local business men will continue putting their money in real estate and trade where the profits are large and turnover is rapid.

Besides these general hurdles, within the structure of the manufacturing sector there are some obstacles that tend to slow the pace of industrial development. According to an official report prepared by a U.N. industrial economist, these obstacles include poor

management, excess capacities, fragmented production, low degree of specialisation and cooperation, and low labour productivity (18).

Efforts have been made to tackle the last mentioned obstacles and the manufacturers have tended to adopt capital intensive techniques. But this reportedly involved some other difficulties. "The maintenance of machines and equipment is the key problem...for the lack of necessary skilled workers. Additionally, in such a plant the underutilisation of capacity has more serious consequences than in a plant applying labour-intensive techniques" (19).

In general, the government recognised that providing feasibility studies and the laying of the industrial infrastructure would not be sufficient for the installation of a modern manufacturing sector by the private sector. It was felt in the late 1960s that direct government intervention was necessary; so a state industrial development corporation was established. This began initiating medium scale projects in cooperation with either a local or a foreign partner. It was proposed the Corporation would sell out its holdings once the venture proved a success. But after the outbreak of the revolution in 1969 the idea ran into some opposition from the new regime.

In 1970, the Revolution's industrial policy was outlined in a decree. According to the provisions of the decree, only small-scale industry was left to the private sector and the large-scale industries were confined to the public sector with option for minority participation by the private sector. Foreign minority participation was permitted only in industries utilizing the latest technology or producing for the export markets. Also in the same year a government body referred to as an 'Industrial Institute' was set up to supervise the nationalized

(18) Ministry of Planning, *Manufacturing Sector: Tentative Development Programme 1969-1973* (Tripoli, March 1969) Volume 1, pp. 27, 28, 29.

(19) *Ibid*, p.27.

enterprises and to carry out the government policy including undertaking new ventures.

Shortly after its establishment, the Institute began carrying out a variety of projects, and during recent years it awarded contracts to a number of foreign firms to construct these projects. These included a steel pipe factory, sardine canning, eternite, wool washing and dyeing, a ready-made suits unit, electric wires and cables factory, and bottles and home appliances project. Additionally, there is under study a long list of other projects, execution of each of which would soak up tens of millions of dinars. However, there are some indications that the execution of some of the essential projects was delayed mainly because of shortage of experienced personnel and the time-consuming nature of feasibility studies, signs that the administrative capacity of the industrial authorities was limited.

But the centre of the moving spectrum of the government's industrial policy has recently been occupied by petrochemicals and other oil-based industries. The state-owned National Oil Corporation (NOC) took major steps towards building a petrochemical complex and many other projects. In 1971 an amount of over \$200 million was earmarked for installation of an ammonia plant, a methanol plant and a 150,000 bpd export refinery. In the following year, the construction of both ammonia and methanol plants began and is expected to be completed in 1975. Both plants have a capacity rating of 1,000 tons per day, and arrangements were being negotiated for marketing the bulk of output to overseas areas. Besides, a large liquified natural gas (LNG) plant owned by Esso was already constructed and in 1972 it was operating at about 75 percent of capacity under a phased programme to reach full capacity of 345 million cubic feet

per day in the near future (20). Plans for other multi-millions of Dinars petrochemical projects are well advanced, in some of which foreign interests would have a minority share.

Understandably, the country's rush into a rapid industrialization in spite of the existence of complicated constraints reflects in part the revolutionary government's nervousness that the monarchical regime had failed in laying the industrial bases and in part the emergence of a school of thinking which says that the country's best policy is to push ahead with projects even at the risk of making some disastrous mistakes. Of course this view is enhanced by the existence of a number of salesmen representing foreign companies which would be very happy to sell factories the installation of which would look initially like wonderful progress and could be started with great speeches and publicity. Generally speaking, the government has been enchanted by this vision and the greatest danger of this is that the country will be pushed into the trap of spending hundreds of millions of dinars in starting quickly new industries of the wrong kind which will be uneconomic and require continuous and substantial subsidies.

Nevertheless, there is a considerable case for those who advocate centration on petrochemicals. In particular, there are some features which characterize the industry and make it attractive to Libyan development. First, it is a heavily capital-intensive undertaking and therefore is suitable to the current factoral make-up in the country. Second, the country can benefit from the backlog of research and experience amassed by the more established producers, especially if the

(20) International Monetary Fund, Libyan Arab Republic: *Recent Economic Development*, (Washington, June 26, 1972), p.13.

undertaking is in participation with foreign ventures. Third, the industry has a core of increasing returns to scale. According to Professor El-Mallakh, the industry could be expanded threefold with an additional cost of a range of only 20 to 45 percent of the original level (21). Finally, the industry has several indirect products which can also stimulate the development of other chemicals industries. So, integrating the country's capital and hydrocarbon resources will not only give the advantages of obtaining the most value added and forward linkages of the petroleum industry but also may have developmental repercussions on the rest of the economy. On the latter point, a word of caution must however be said. Since the petrochemicals are capital intensive and the labour cost is a very small part of their total costs, they are always willing to give wage increases to their workers. Because this will tend to create in the country an expectation of high wages which most secondary industry cannot afford, eventually it will discourage a broad industrial development, unless the country is going to accept the existence of a second class of workers, a condition that is socially and politically impossible.

In any event, the major question that remains involves the arrangements for marketing the output of the planned petrochemical products. On the one hand, the world appears to need more and more of this sort of product, particularly in the field of organic chemicals. Furthermore, the raw materials are not readily available in all countries. On the other hand, the modern tendency is to build industries based on hydrocarbon products near the centre of demand rather than the source of supply. The major world markets, Western industrial countries, Eastern Europe,

(21) Ragaei El-Mallakh, *Economic Development and Regional Cooperation: Kuwait* (The University of Chicago Press, 1968), p.113.

Russia and Japan, together account for about 90 percent of annual world petrochemical production and consumption. Therefore, in regard to end products, they are almost self-sufficient. But all except a few of them depend in varying degrees on imports of certain intermediate products. Obviously the answer to the above question requires a rational and sound appraisal of the world market, which will show whether the emphasis should be on intermediate products or on the end ones.

INFRASTRUCTURE AND SOCIAL OVERHEAD

In the previous chapter it was noted that during the 1960s the primary emphasis of Libya's development strategy and resource allocation was given to creating the economic infrastructure and providing the general facilities that were to become the foundation for a later period of economic and social development. This strategy was based on three conventional assumptions. First, infrastructure investments have stimulative effects on the commodity sectors. In other words, provision of the infrastructure early in the development process makes it possible for productive sectors to make more of a contribution to welfare and to make it sooner. Second, directing development efforts to the immense need for social services, housing, education and health services, is a pre-condition for any long-term effort to transform the economic and social structure. Third, infrastructure and social overhead are regarded as the main premises on which the government can attack economic and technological underdevelopment. Regardless, therefore, of the question of whether the government's emphasis on this type of public investment was economically justified, investigation of what was done in these fields will provide some development indicators.

Transport and Communications

Until the Italian occupation, transport facilities were confined to caravan routes and the modes of travel throughout the country had been by camel, by horse or on foot. During the 1930s, when the Italian military needs were at their height, the Italians centred their effort on building up a transport system capable of carrying men and equipment. Just before the outbreak of World War II there were in the country some 2,800 kilometres of metalled road linking all the towns in the coastal zone, and two small single-track narrow-gauge railways, each about 165 kilometres long, centred respectively on Tripoli and Benghazi. But all these suffered severe damage during the war, so that the transport system became inadequate to serve the needs of the country.

When the inflow of oil revenue enabled the government to assume the responsibility for development planning, the developing of transport infrastructure was given the highest priority for three considerations. First, it was accepted that the provision of transport facilities and modern communications represented the initiation of economic development. Second, there was the goal of unifying the country by linking the widely separated regions. Third, it was thought that the backwardness and the isolation of some oases in the southern and southeastern areas could be remedied by the construction of modern roads. At this point the government was also influenced by the oil companies which found the inadequacy of the roads outside the coastal zone a major bottleneck for developing oilfields.

Early in the 1960s the government appointed a firm of distinguished consultants to make a general survey of the transport network in the country and to recommend a future development policy in

this area. The consultants reported that the existing system was not adequate to serve the needs of the country and stressed the need to develop a new one as rapidly as possible. So the transport infrastructure was given the highest priority in almost all development plans. As shown in Table 7 below, which highlights the industrial classification of the fixed capital formation outside the oil industry, the transport sector has taken the lion's share in the early years of development. More than LD. 224.3 million of capital formation was in this sector, and this accounted for about 20 percent of the total heavy investments made during the ten years from 1962 to 1971. Although much of the investment devoted to this sector was vitiated by inflation and the rising costs of construction, there are signs of appreciable improvements in almost all the aspects of transport infrastructure and communications facilities.

(a) Roads. In 1972, Libya had in all some 6,669 kilometres of asphalted roads (22), connecting all the towns in the coastal zone and the important cities in the southern region. More than two thirds of these roads were constructed between 1962 and 1971, and the rest had been improved and expanded during the same period. In addition, there are 328 km. under construction, and 1363 km. are out to tender or under design. However, the most notable achievement was the reconstruction of the 1,756 km. coastal road which is regarded as an international highway linking Libya with Tunisia and Egypt. There is also the reconstruction of the Fezzan road which links the coastal road to Sebha in the south. Further, it is projected that the Fezzan road will be extended south across the Sahara to become another international

(22) Ministry of Planning, *Khoutta Etholatya Lettanmya Elaqtissadya wa Elejtamia 1973-1975* (Tripoli, 1973), p.250.

Table 7
INDUSTRIAL CLASSIFICATION OF THE FIXED DOMESTIC CAPITAL FORMATION (EXCLUDING THE OIL INDUSTRY)



road connecting the south of Libya with Niger and Chad; but this project is still under study, and there are some indications that its execution would require heavy investment and the effective cooperation of both Chad and Niger.

(b) Ports and Harbours. Libya has three major seaports located on the Mediterranean: Tripoli, Benghazi and Tobruk. In addition there are a number of small ports which can accurately be described as anchorages. Although Tobruk is the only natural port with a large harbour located at the end of a deep inlet of the sea, the main gateways of Libyan trade have always been the ports of Tripoli and Benghazi, serving respectively the hinterlands of the western and eastern regions. With the traffic in these two big ports rapidly increasing, it was right that the early efforts were directed towards improving and extending those ports.

Benghazi port had undergone extensive development during the period 1960 to 1968. This involved the reconstruction of an outer harbour with five berths of 30 ft. draught and two smaller berths of 18 ft. each. In addition, new warehouses and modern equipment were added for port operation and maintenance. The port of Tripoli is already under reconstruction, and its capacity is projected to increase from 2 million tons to 3.5 million a year. The total length of the port's quays is expected to increase by 2,700 metres to reach 4,420 metres before 1976 (23). More recently, an ambitious plan was adopted for reconstruction and expansion of other ports near the other major coastal cities. In 1971, foreign firms were contracted to build a new port, near Misurata and to develop Derna port, with projected capacities of 1 million and 0.5 million tons respectively. Also, the oil companies had built six oil terminals,

(23) *Ibid*, p.251.

but the use of these is still confined to oil exports and to handling some of the equipment needed by the companies.

(c) Air Transport. In view of the vast and difficult nature of the terrain and the long distances separating the main urban centres, air transportation has assumed special importance. The country's three main airports were appreciably improved. The navigational aids and other equipment have been modernized. In addition, a number of secondary airports and landing strips were developed or constructed. Of special importance is the establishment of the national airlines corporation which brought about a substantial increase in the volume of domestic traffic.

(d) Railroad. The development of the road network and the expansion of motor transport reduced what importance was left to the railway services, and as a result the railway inherited from the Italian occupation was running at a rather heavy deficit. Early in the 1960s the World Bank mission to Libya recommended the abandonment of the whole railway services in the country on the ground that rehabilitating and extending the railways would be extremely costly. Accordingly, the railway operations were discontinued and the two narrow-gauge railways were completely neglected. In recent years an ambitious plan was however adopted to build a railway linking Tripoli with Tunis and another line linking Wadi Shatti in the south with the coastal zone.

(e) Communication. During the 1960s, the creation of a modern telecommunications system was greatly accelerated. The big towns are linked by radio telephone and almost all settlements have telephones. The most notable achievement in recent years is the installation of automatic exchanges in the major cities, and the interconnection of all the coastal cities by a nationwide microwave network which is also combined with the related international connections. However, the expansion

achieved had not kept pace with public demand, owing to the vast size of the country, the dispersion of the population and the unavailability of technicians.

Electric Power

Despite the abundance of natural gas, electricity supply has been the most important source of power in the country. In order to meet the rapidly growing demand for electricity, the development plans included big investment programmes to enlarge the installed capacity. Fixed capital formation in electricity increased from LD. 1.3 million in 1962 to LD. 22.6 million in 1971 and during the ten years it totalled LD. 102.1 million, which accounted for more than 50 percent of the total capital formation in public utilities (LD. 192.1 m., see Table 7). This growth of investment expenditure made it possible to build several modern power stations and to develop high voltage line systems across the coastal zone.

In quantitative terms, this also resulted in a visible progress. Installed capacity rose from less than 55 MW (megawatts) at the end of 1963 to 391 MW in the middle of 1972, and is expected to reach 595 MW in 1975 when the construction of the two big power stations is completed (22). The production of electric power has increased rapidly; it rose from 133 million kilowatt hours (MKH) in 1963 to 970 MKH in 1972 and it is projected to reach 1610 MKH in 1975. This resulted in a substantial start on rural electrification. Most of the villages in the coastal zone were provided with electricity, and in almost all the case in the interior

(22) *Ibid.*, p.261.

small generating stations were installed. On per capita terms, these developments correspond to an increase in per head production of electricity of over five times from 88 KWH in 1963 to about 465 KWH in 1972, which represent an annual rate of growth of more than 18 percent. However, while this rate of growth in electricity generation is above the average for developing countries, the per capita figures are still rather low in comparison with the countries in the middle stage of development, such as Greece 948 in 1969, Yugoslavia 1116, and Romania 1441.

In spite of the high increase in installed capacity, shortage of electricity occurs from time to time, breakdowns and black-outs are still frequent; nor was electricity being supplied at rates any less costly than before. For this there are two main reasons. First the difference between the minimum and maximum load is very high. For example, in the Tripoli Branch the minimum night demand amounts only to about 30 percent of the maximum load (23). This indicates that generating capacity is still overburdened at the peak periods. Second and more important is that the speedy rise in the installed capacity was not accompanied by corresponding developments in the field of organization and service management. According to a recent report, the lack of technical and economic apparatus is the main factor behind the poor performance of the electricity supply and many of its negative features, the latter reportedly include:

"Relatively small attention paid to the economic side of the activity of electricity branch; very high losses of the electric energy; out of date system of services paid to the customers ... growth of unit cost of electricity High losses of electricity caused by excessive technical losses in electric lines and electric transformers" (24).

(23) Ministry of Planning, *Economic Analysis of the Electricity Development during last Five Years 1966-1971 for Tripoli Branch*, (Tripoli, Oct. 1972) (Mimeo.), p. 6.

(24) *Ibid.*, p.8.

Housing

Reliable data on the housing conditions prior to the 1960s do not exist. It was however authoritatively reported that the general standard was extremely low: a large part of the population lived in primitive huts, tents or caves, lacking furniture and the simplest conveniences (25). With the movement of the landless labourers and educated young people toward the towns and the resulting excessive growth of urbanization, the problem of housing became intractable in the early 1960s. The outskirts of Tripoli and Benghazi were featured by shanty towns where people lived under depressing slum conditions. So it was evident that grappling with the housing problem was the most difficult task confronting the development planners in the country, not only because of lack of labour and building materials but also of lack of master plans for towns and villages (26).

In the event, the foreign experts advising policy-makers in the country stressed government pioneering of housing projects, though it was envisaged that such projects would be a serious drain on development potential. In an attempt to base its housing policy on sound foundations, in 1963 the government commissioned an international consulting firm, the Doxiades, to study the situation and to recommend an appropriate policy. The firm's report revealed that in 1964 there were only 110,000 adequate houses for 331,000 families in the country, and of these houses only 35 percent had three or more rooms (27). The firm also forecast housing needs for the country to be at the level of 298,000 by 1970, taking into account a 5 percent annual increase in

(25) *Ibid*, pp. 37-38.

(26) IBRD, *Economic Development of Libya*, (John Hopkins, 1960), p.293.

(27) UN Special Fund Assistance for the Establishment of the Housing Research and Development Centre, *Housing Situation in Libya (LY/150/69)* (Tripoli, Libya, Feb. 1969), p.7.

demand. Following this report the government launched an ambitious programme of housing and a sum of LD. 400 million was allocated in 1965 to build 100,000 dwellings over a period of 5 years, at the rate of 20,000 dwellings per year.

Unfortunately the scheme was not fully implemented; what had been promised was not performed. During the period from 1964 to 1972 the total number of housing units built by the government was only 21,000; i.e. less than an annual average of 3,000 dwellings. Even adding 36,000 units built by the private sector during the eight years, the total (57,000) was still less than 60 percent of the 1964 target of 100,000 dwellings, even though the period was extended from five to eight years and the rising oil revenue ensured the availability of funds. Although housing additions increased substantially, the total adequate housing in the country reaching about 166,000 in 1973 (28), the housing problem is still the most serious one facing the country.

Indeed, with Libya's birth rate of 3.6 percent and the corresponding increase of households, and with obsolescence and migration, the problem worsened. In 1971 it was reported that the density of families per dwelling unit had risen from 1.8 in 1964 to 1.94 in 1972. Further, it was estimated in 1971 that there were about 220,000 families living in huts, tents or shacks under conditions repugnant to human dignity (29).

It was hardly surprising in the circumstances that the people should have become rather impatient at the apparent lack of progress in this area. So, when the revolutionary regime came to

(28) Ministry of Planning, *Khoutta Etholatya Lettanmya Elaqtissadya wa Elejtamia 1973-1975* (Tripoli, 1973), pp. 310,311.

(29) Ministry of Information, L.A.R. 1st Sept. Revolution, *op.cit.* pp. 84-85.

power the provision of decent housing was the first of many high expectations which the new government had to satisfy. In 1970, the regime embarked on this task and the housing plans came first in the list of grandiose schemes which have coloured the country's internal development efforts in the very recent years. Budget allocations to State housing was increased rapidly from LD. 27.5 million for the financial year 1969/70 to more than 100 million dinars (about £145 m.) for the year 1972/3. In 1970, the Ministry of Housing laid down plans for the construction of 15,000 housing units per annum for a period of five years beginning from 1971 (30).

Meanwhile, a State housing corporation was set up at the end of 1970 with a capital of LD. 58 million, and this corporation shortly concluded contracts for the construction of 10,000 housing units during 1971. In addition, a decree issued during 1971 permitted commercial banks to extend construction loans to middle-income groups at 4 percent interest with an option to discount these loans at the Central Bank at 2.5 percent. Further, the Industrial and Real Estate Bank, which was established in 1965, considerably expanded its interest-free loans for persons with incomes of between LD. 30 and LD. 100 per month.

In view of these large housing programmes and the range of facilities provided for the prospective house-owner, some progress has been made. There are preliminary indications that the number of dwellings built annually rose from 6,500 in 1969 to 11,000 in 1971; and despite a more than 3.6 percent increase in the population the rate of housing production per 1000 of population rose from 3.4 to 5.5

(30) *Ibid*, p.84.

respectively (31). Of course this progress explains why the share of the housing sector in the fixed capital formation was the highest in the recent years, accounting for 27 percent of the total in 1970, or about twice the share of agriculture and industry combined (see Table 7).

From the above it is evident that the housing problem has been receiving the primary concern and attention of the Revolutionary government; and according to more recent declarations it will continue to assume direct responsibility for providing houses for a large segment of the people. Of course, the main objective of this policy is to raise the standards of the toiling masses. As officially declared, this was the fundamental tenet of the Revolution: "the creation of a society based on the socialist pattern having the interest of the individual as its first and foremost concern" (32). Certainly, the achievement of this objective is the most obvious indicator of socio-economic development. The appropriate standard of housing reduces the incidence of disease, crime, juvenile delinquency and labour turnover; and makes people live rightly, think rightly and produce more. Two other objectives could however be deduced. First, great importance might be attached to the housing projects as a means of securing benefit to the people from the increased income accruing to the government from oil revenue, diffusing oil money and encouraging redistributive development. The second, which is entirely suggestive, is that the provision of housing to the masses has become the central focus of the

(31) Ahmed A. Misurati, *Answers to questionnaire for Nation Monograph*, L.A.R., submitted for North African Subregional Meeting on aspects of housing finance (UNECA, Addis Ababa, 20-25 Nov. 1972), p.1.

(32) Ministry of Information, *op.cit.*, p.80.

governmental achievements. Therefore the emphasis on housing projects yields high immediate political results; and, as Dudley Seers reminds us, these possible results are visible for all to see (33).

Although the devotion of a larger proportion of public investments and much of the government efforts to housing is well justified for reasons relating to *la promotion de l'homme*, it must be recognized that the government's direct involvement in such a large-scale problem has been debated and its persistent rhetoric on housing projects has provoked severe criticism. Two main reasons could be suggested for this criticism.

First, in view of the overwhelming national demand for housing and the lack of capacity within the construction industry to build the required number of houses per year, it is impossible, even allowing for the introduction of industrialised building techniques, that the public housing projects can be implemented. So the argument is that it is neither rational nor necessary for the government to set, with great publicity, an ambitious housing target which cannot be fulfilled, on the ground that this will inevitably lead to general frustration. Hopefully this sort of nightmare will never become a reality, but in the light of the present situation it cannot be altogether eliminated. Despite the progress noted earlier in the building of new houses, the problem remains no less acute. Residential rentals kept rising alarmingly. Though quantitative information is grossly deficient, there are some indications that in 1972 more than 25 percent of family income was on the average spent on housing (34).

(33) Dudley Seers, *The Mechanism of an Open Petroleum.....*, *op.cit.*, p.237.

(34) Ahmed A. Misurati, *op.cit.*, p.2.

Rents paid for a "moderate" flat in Tripoli have become some of the highest in the world. The situation in the rural areas is even worse. For example, most of the 160,000 inhabitants of the Western Coastal Heights still live in houses constructed in holes in the rock, lacking adequate air and light. Certainly, the magnitude of the problem is causing some sort of commotion and much of the flame is directed to the government. But it is unfair to say that the source and the nature of the problem lies on the production side alone or on the failure of the government promises to be realised. The most obvious cause in the compound rise in demand which has been reinforced by the increased income and living standards, the changing attitudes as to what constitutes a modern home, and the strong demand for rented accommodation from foreign employees in the country.

Second, the inauguration of large housing programmes threw an additional heavy burden on the shoulders of public authorities already over-occupied with a major and essential programme in other directions. Given that the public administration has been features by dilatoriness and an indecisive bureaucracy, the housing schemes have become the victims of maladministrative procedures and perhaps red rape. Adding to this the lack of qualified labour and building materials which could not be imported speedily, the main consequences were not only failure of the government projects or at least serious shortfalls from the targets, but also a decrease in the share of dwellings built by the private sector, an alarming rise in the costs of public projects including the housing schemes. Of course, all these led to rapidly enriching the contractors and those linked with the construction business.

It may be argued that a tremendous improvement over the present situation would have been obtained if the government policy in the area of residential housing centred on establishing building and loan-type institutions operating under certain standards and profit margins, and encouraging such institutions by providing seed capital, amounts of credit and technicians. Certainly this approach has a number of advantages. In the first place, it would provide a way of overcoming administrative inertia and avoiding or at least lessening corruption and political bickering. In the second place, it stimulates private saving and mobilizes it in financing residential housing and thereby enhance the spirit of self-reliance. In the third place, it induces investments and develops entrepreneurial activities in home construction, which may lead to reducing the costs of houses as compared with those constructed by the government directly.

Unfortunately such self-help measures were not adopted in Libya on the ground that the *nouveau riche* government can provide everything without the necessity of causing hardship to anybody; though in fact hardship will oblige people to help themselves, which is an essential condition of economic development.

Health Services and Environmental Sanitation

Reference has already been made in Chapter II to the health of the population. It was indicated that although the country is in general a healthy land and it is not subject to the diseases that for so many years despoiled the tropical parts of the world, until recently the overall level of health was not good and there were at least three chronic diseases which were causing earlier mortality and a high rate of morbidity. The latter still incapacitate a considerable number of

people for productive employment over prolonged periods. So, even from the standpoint of productivity alone, the elimination of such diseases was an urgent necessity. With massive help from the world agencies, notably WHO, efforts were made during the 1950s to prevent and control the endemic and contagious diseases. Certainly a considerable step was made in that direction. But, as the following descriptive data embodied in the report of the World Bank's mission indicate, the health situation and state of public services in this respect were in 1959 very alarming:

"One out of every two Libyan babies born alive died during the first year; the infant mortality rate of Libya was still three or four times that of neighbouring territories; at least three quarters of the population showed signs of active or past inflammatory disease of the eyes; no less than 1 percent of the Libyan population were reportedly blind...; there were only 152 doctors in the whole country and that only five were Libyans, there were in Libya in 1959 no female Libyan nurses, midwives, or health visitors" (35).

In such circumstances, investments in health had to be emphasised when the process of development planning started in the early 1960s. Between 1962/63 and 1970/71 total annual public expenditure on health had increased LD. 2.97 million to 24.56 million. In quantitative terms, this rise in public expenditure on health has resulted in a tremendous expansion of public services in this area. As indicated in Table 8 below, the total number of physicians, surgeons and dentists increased from 214 in 1960 to 1525 in 1972. This represents a rise of doctors for the population from one for every 6,000 in 1960 to one for 1,400 inhabitants in 1972. Between 1960 and 1972 the bed capacity of public and private hospitals rose from 3,717 beds to 8,830, an increase from 3 beds per thousand inhabitants to 4.2 in 1972.

(35) IBRD, *op.cit.*

Table 8

SELECTED DATA ON PUBLIC HEALTH SERVICES FOR SOME YEARS



(n.a.) Data are not available.

- Sources: (1) From 1969 on, Ministry of Planning, *Khotta Etholtya*, *op.cit.*, p.276.
- (2) Ministry of Planning, *Survey of the National Economy*, (January 1970), pp. 34, 35.

In addition, the country has become well covered by a network of dispensaries and hospitals, all of which extend almost free medical services to the people living in the country. Certainly such development in health services should result in some improvement in the overall level of health; though, in the absence of accurate health records, this cannot be supported by statistics. According to Dr. O. Kadoushi, who has closely known the health situation in Libya over the last five years, average life expectancy is in the range of 40-50, and the infant mortality rate is well below 200 per 1,000 live

births (36). The incidence of some of the endemic diseases has considerably declined as a result of vigorous campaigns.

However, it is widely reported that the health situation still remains critical, and the public services are not of good quality even for a developing country. There is a variety of reasons for this. First, the overwhelming majority of doctors are foreigners who came to the country without enough experience, and when they gain such experience they leave the country. Second, the shortage of medical and paramedical personnel, particularly nurses, is the most serious obstacle to the expansion of the health services, because the Libyan traditions still prejudice against having male physicians and attendants treat female patients. Further, the lack of female personnel, largely attributed to the traditions discouraging females from participation in public activities, has intensified the problem of teaching women and girls the essentials of hygiene. Third, the traditional beliefs still obstruct attempts to improve sanitation and control disease. "Practical" remedies, such as cauterization and healing herbs are still employed; and magical cures, such as invocations, charms and amulets are still believed in. Fourth, until very recently the health services were unequally distributed throughout the country; in 1968 for example, more than half of the doctors were residing in Tripoli and almost all the specialized physicians were serving only in Tripoli and Benghazi. Fortunately, solving this problem is one of the main objectives of the government policy in this field. Fifth, the poor environmental sanitation tended to raise health hazards. At this point, the government health policy had been widely criticised for emphasising medical care rather than

(36) Dr. Omar Kadoushi kindly supplied these figures to the author personally on 5th October, 1974.

strengthening the environmental health services which, according to a WHO report, could greatly reduce the present volume of disease and mortality. Fortunately, improving the environmental sanitation has been given great attention in the recent years, and this is clearly reflected in the rise of the share of public utilities in the fixed capital formation; as indicated in Table 7, their share rose from 11 percent in 1966 to 20 percent in 1971.

The provision of potable water ranked high among the recent development projects and accordingly the improvement of environmental health has been remarkable. For instance, it was reported that in 1972 more than 70 percent of the water supply was chlorinated (37). Some of the enteric diseases can be checked. But the lack of water resources in some places is handicapping the government efforts. To combat this problem, desalination plants are built to provide fresh water for domestic use. A considerable step is being taken also in installing sewage systems. Sewage purification plants were completed in both Benghazi and Tripoli, where the sewage systems were leading into the sea and causing pollution of the beaches. Construction of similar plants in the other main urban centres is in progress. In addition, the municipal garbage and trash collection systems were extended to most of the villages.

THE DEVELOPMENT OF HUMAN RESOURCES

Half a century ago the great economist Alfred Marshall made it clear that the most valuable of all capital is that invested in human beings (38). But the postwar view tended to emphasize almost

(37) The Times, 28.1.1974.

(38) Quoted by Andrew M. Kamark, *The Economics of African Development*, (Pall Mall, London, 1967), p.166.

exclusively the importance of the physical infrastructure and failed to take equal account of the role of human capital. In more recent years however, it appears that this view has been reversed. The economists have shifted their emphasis to the quality of the human resource input; they have tended to underplay the role of capital and to explain the inability of developing countries to fulfil their development targets in terms of the limitations imposed by the shortage of skills and knowledge. Whether the emergence of this current line of thought, which is near to form new orthodoxy, reflects the state of economic literature in which the pendulum swings from one extreme to the other, or is based on a large-scale empirical testing is still controversial matter. But in the case of Libya it has been increasingly ascertained that the shortage of human stock and its underdevelopment are the most serious obstacles to accelerating socio-economic progress and absorbing capital in productive investment.

Thus, in appraising the country's performance in respect of capacity creation, the extent of the progress that has been made in human capital formation should be the focus of interest. But the fundamental problems that confront the researcher in this area are that the dimensions of human stock development cannot be measured quantitatively and the difficulty to distangle its combinations one from the other because they mostly appear in a certain mixture. The approach fashionable today is using the Harbison and Myers composite index of human resource development. But this approach, which is constructed by combining and weighing various factors, requires a long series of calculations and analysis of numerous components; such lengthy procedures are beyond the scope of this study. The attributes of human capital formation are conveniently considered under four main heads; (1) national character

including social structure, the nature of the government and the institutional change favourable to socio-economic transformation; (2) education and the skills it creates; (3) manpower development; and (4) entrepreneurship. The development of the first has already been highlighted in different sections of Chapter II, and the developments in the last three are reviewed in order below.

Education

Just prior to the proclamation of independence, education was scanty and secular learning was non-existent. The main sources of education were the traditional Koranic schools and a few other religious institutions the curriculum of which was confined to reading, writing Koranic scripture and elementary Arabic. During the Italian occupation the Libyans were in a state of subjugation, and only a tiny segment of the country's youth was offered a primary education mainly for the purpose of producing a number of Italian-speaking pupils, instilled with respect and devotion for Fascist Italy. Even this was cut short by the outbreak of World War II which not only disturbed all schooling for more than four years but also destroyed most of the educational facilities.

Thus, when Libya arrived at independence illiteracy was widespread and only a few within the small number of educated Libyans had gone beyond the secondary level of education. So, the demand for education was mounting. But in 1950 there was no more than 110 small schools in which more than 150,000 children were seeking a place. Indeed, it was not possible for the poor headmasters to turn down the application of a child who had already lost several years of his schooling life. Certainly this had to be at the expense of the quality of schooling, which lacked most essential facilities. It was an unbelievable situation,

as the author who was a pupil can remember. A leading world expert was able to describe it as follows:

"The public-school system was primitive. A typical school had some sixty-five or seventy first-grade pupils, all boys. They had perhaps ten books and five or ten pencils to share among them. There were no desks; the pupils would sit on benches, or on the floor. They would be told to fold their arms, keep quiet, and repeat in turn the lessons dictated by the teacher..... Of eight hundred teachers in Tripolitania province, it was found, two hundred had themselves only been through the first or second grades. Another four hundred had had two to four years of schooling, and no training at all in how to teach" (39).

Improving this situation and satisfying the populace's appetite for education were the most enormous problems that had to be urgently solved by the first government of independent Libya which was set up in 1951. With massive help from the United Nations agencies, notably UNESCO, and a number of bilateral programmes, the government set out to build a public-education system. The allocation for education has been the largest single item in the national budget in almost all the financial years since independence: it rose from LD. 0.6 million in 1952/53 to LD. 91.6 million for the fiscal year 1972/73, including 39.8 million in the development budget (40). In per capita terms, it jumped from just over half a LD. to about LD. 380 respectively. To provide an incentive, all the costs of education in the public schools are paid by the government, in addition to granting all the university students a monthly allowance of LD. 30. Quantitatively, impressive progress was achieved at all levels of education. This is clearly demonstrated in Table 9 below, which displays statistical comparisons between the year prior to independence, 1963 (when oil revenue began

(39) Paul G. Hoffman, *op.cit.*, pp. 101, 102.

(40) Bank of Libya, Sixteenth Annual Report, 1971/72, p. 127 and Statistical Supplement, July 1967, Table 30.

Table 9

STATISTICAL COMPARISONS OF EDUCATIONAL STATUS, 1950/1951 and 1962/63
and 1971/72



Aston University

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Sources: Ministry of National Economy, *Statistical Abstract of Libya*, 1958-1962; Ministry of National Economy, *Statistical Abstract*, 1964 (Tripoli: Census and Statistical Dept.); Ministry of Education, *The Development of Education in Libya and Eradication of Illiteracy and Adult Education*, Ministry of Education Documents No. 1 and No. 8, respectively (Tripoli, 1966), and Ministry of Planning, *Planning Document No. 8* (Tripoli, 1973).

to flow in to the treasury) and 1972. As shown in Table 9 the total number of pupils and students in all levels of schooling except university jumped from 32,741 in 1951 to 467,393 in 1972. In 1955, a national university was founded and in 1972 it had 8,200 students enrolled in its ten faculties (41). In addition, there are more than a thousand Libyan students enrolled in foreign educational institutions, almost all of them at state expense.

Yet, in terms of the stock of human capital, the dramatic increase in school enrolment and the rise in expenditure on education do not mean that Libya has reached the educational 'take-off' stage. Even quantitatively, there are at least two reasons why enrolment statistics must be assumed to have very great deficiencies.

First, a high proportion (85% in 1972) of the pupils are enrolled at the elementary level. This indicates that the relationship between the number of pupils at different levels of the educational pyramid still remains unsatisfactory. In fact the percentage of the students in the secondary level and the number of those attending university fall terribly short of a UNESCO suggestion that the standard in developing countries should be of the order of 100:26:2 (42). For Libya to reach such a standard there should be for every 100 pupils enrolled in elementary schooling 26 students in secondary schools and two attending institutions of higher learning.

The other is that repetition and drop-out rates are still high. It was reported that the rate of re-sits in 1960s was as high as 65% in some elementary schools (43). Until 1970, it was estimated that less

(41) The Times, 28.1.1974.

(42) UNESCO, Report of Conference at Karachi and Tokyo, 1963, p.192.

(43) UNESCO, Conference of Ministers of Education, Final Report, ED/223, Paris, 1966.

than 90 in every 1,000 primary pupils completed their primary level (44). The causes of this high rate of student wastage are identifiable: inadequate facilities, shortage of properly trained teachers and, most important, the social prejudices which still cause the drop-out rate to be the highest for girls, particularly when they reach puberty. Certainly this problem has serious repercussions on the other socio-economic problems. It means that despite the percentage of people attending school being no less than 17 percent of the population during the 1960s, the illiteracy rate has not been reduced because pupils leaving school before the completion of the primary level never achieve more than a modicum of literacy and are liable to lapse into almost total illiteracy. This explains why the illiteracy rate was reported in 1970 to be as high as 70 percent among the population of over 10 years of age (45). More serious is that in too many instances children who attend school for a few years without finishing the primary level become less creative and constructive members of the community than if they had never been to school, mainly because their short attendance in school results in the inculcation of wrong attitudes and raising false expectations. It is usually established in their minds that they learned enough to be on the road to a well-paid white-collar job, though the completion of primary level does not equip students with the minimal education required to become skilled workers. In the past all such were employed as clerks and teachers; at the expense, of course, of the quality and performance of the services. With the increase in their number and possible constraints on their employment by the public sector, the problem will become more visible and serious.

(44) The Times, *op.cit.*

(45) Ministry of Information, *op.cit.*

Qualitatively, and this from an economic development point of view is the most important, education in Libya is not entirely adjusted to permit a rapid socioeconomic progress. Without attempting to be specific about all the deficiencies and drawbacks of the educational structure, observations should be made about three striking features which are adverse to efficiency and productivity. These are the obsolescence of curricula, the irrelevance of educational content, and the duality of the educational system. All these three are still dominant in spite of the government declarations that it is reversing them and adapting the educational structure to the manpower requirements.

The obsolescence of curricula. Schooling up to the university level is organised on a 12-year basis; six years' primary, three years' preparatory or intermediate and three years' secondary. Primary and preparatory schooling are compulsory but this was never enforced. Excluding a few institutions that provide technical and vocational training, the emphasis is placed upon general education and producing pen-pushers. Furthermore, the learning methods are reportedly ineffective. Both the teacher's and the student's time was wasted in memorising formulae and data. Because the prescribed curriculum is vague and the teacher is trained on old-established routines, which rely on learning by rote and repetitive exercise. In the words of an UNESCO report: "... the content and methods of education were geared to the requirements of an antiquated examination system rather than to the need for developing the abilities and interests of children" (46).

(46) Le Seelleur T.N., Libya, *Statistics for Educational Planning*, UNESCO, Paris, 1964, quoted by Farley R. *Planning for Development in Libya*, Praeger, 1971, p.99.

The irrelevance of education. As in most developing societies, the system of public education in Libya is directed to perform two broad functions. One is what can be called the 'socialisation' of the population. This, as declared in the government's education policy, includes creating the free Arab citizen professing belief in the Islamic religion, imparting the value of Islamic socialism and able to shed the negativity of the past. The other is to promote skill formation in a way that ensures the realization of the requirements of socioeconomic development (47). In Libya, these two functions are assumed to be complementary to each other. However, although assessing both functions and their intrinsic values is a subjective judgement, there are some indications that special attention is paid to general acculturation and sociopolitical indoctrinization, often without the necessary adjustments to the requirements of economic progress. For instance, the number of students in the Faculty of Arts, of which subjects are mainly classics and philosophy, has been the largest since the foundation of the university. In the secondary schools, science subjects are taken as academic rather than technical. This fundamental imbalance between the performance of the two functions is clearly pictured in the low percentage of students enrolled in the technical schools, often segregated into second-class polytechnics. This problem is now of growing concern to the government. But so far the thinking is centred on reshaping the educational system at the university level rather than diversifying the secondary education.

The Duality of Education. According to the original interpretations of Islamic teaching, Islam is not only a religion but also a state embracing the whole range of personal and social life. So the religious learning

(47) Ministry of Information, *op.cit.*, 84-85.

is essential and the Islamic state should provide the facilities for that matter. With the inflow of oil revenue, the traditional Koranic schools were expanded, new ones were created throughout the country and an Islamic university was founded. Because of the high value put on religious education by the populace, the intake by the Islamic schools was high and the educational system became composed of religious and secular schools. In terms of manpower supply, this duality poses a special problem. An official report stresses one aspect:

"the supply of religiously trained people. In light of our scarce manpower resources we cannot afford to produce an over-supply of people highly trained in religious affairs who, from the specialized nature of their training and with a lack of demand for their services, are unable to contribute to the social and economic life of our country" (48).

In these circumstances, it is very difficult to conclude that the country's past efforts to expand education have been effective in terms of channelling the people's energy to social and economic betterment. Indeed, the outflow from such an educational system may easily become an instigator of maladjustment rather than an active and integral part of the effort to achieve development. The existence of the numerous foreign technicians and their domination at all skill levels, in almost all sectors is ample proof of the failure of the educational system to fulfil the country's demand for educated and trained people. This problem is now increasingly recognized, and the government is considering reports designed to give more practical training to the great proportion of students. The government has set its sights on sending large numbers of students abroad, on the ground that economic development requires a class of exceptionally able people with high qualifications to provide

(48) Ministry of Planning, *Economic and Social Development in Libya*, Ch. 5, (Tripoli, Libya), p.15 (Mimeo.) 1968.

the dynamic leadership.

Manpower

Until the census of 1964, little information about the quality and the quantity of the labour force was available. During the 1950s, it was widely acknowledged that while Libya suffered from shortage of skill, the predominant feature of its labour force was unemployment. According to a report by Benjamin Higgins in 1953, the unemployment took at that time three forms: visible, disguised and potential (49). Interestingly, he pointed out that "the ratio of active to total population was higher in Libya than in some African countries, partly because about one-quarter of the children between ten and fourteen years of age were members of the labour force" (50). However, as could be expected, the economic and social changes which have been in progress since 1950s altered the structure of the labour force. For instance, with the expansion of schooling and the rise in the income of the family man, children gradually became less important as a source of labour supply. On the other hand, as society became more modernised, concealed employment tended to become more visible.

An enquiry in 1972 showed that the total number of the economically active population was about half a million persons in 1971. This figure, which is no more than a crude estimate, indicates that the total labour force increased by 100,000 between 1964 and 1971. Excluding the 40,000 foreign labour, the increase in the indigenous labourers is only 60,000. This increase is very low; it represents

(49) United Nations, The Economic and Social Development of Libya prepared by Benjamin Higgins (St/TAA/K/Libya/3, 12 Oct. 1953), p.84.

(50) Benjamin Higgins, *Economic Development*, (Constable, 1968), p.821.

roughly an annual rate of 1.7% compared to an estimated 3.6% annual rate of population growth. This difference between the two rates means that the dependency rate continued to rise and the ratio of labour force to the total population declined, from 26% in 1964 to 23% in 1971. The fall in the ratio of the labour force can be attributed to the expansion of schooling, growth in the population of young children, and withdrawal of most of the old men from the labour supply.

However, more serious is that the rate of economic participation is generally very low compared, for example, to the average of 39.4% in Africa (51). The reasons for this low ratio in Libya are clear. First, a high proportion (about 50%) of the country's population is under fifteen years of age. Second, due to traditions which abominate women's work outside the home and to religiosity, female participation in full-time work is almost negligible. However, in the countryside women still work hard, particularly during the seasonal peak of agriculture. For instance, processing farm products and tending animals are part of the normal duties of the housewife; and this sort of economic activity is important in terms of its contribution to the agricultural output though it is not regarded by the census enumerators as an employment.

At the present time, the shortage of both skilled and unskilled labour is chronicled by practically every employer and in almost every official economic report. Yet one wonders whether the reported shortage of unskilled labour is due to a quantitative deficiency in manpower reserves or to the lack of a proper labour policy. According to R. Mabro of Oxford, the main factors are, besides the institutional structure, certain employment policies which in combination have led to a situation where labour shortage and labour surpluses would exist simultaneously in

(51) United Nations, *Economic Bulletin for Africa*, Vo. X, No. 1, June 1970, p.63.

various sectors of the economy. He indicated to the government's employment policy which offered opportunities for an attractive job at high wages, and so tempting labourers to wait for these opportunities and fail to respond meanwhile to the demand of the private sector (52).

At this point, no one can dispute that the direct employment by the government and other public agencies has disrupted the labour force in the country. With personal influence the key to getting jobs, skilled and unskilled men were employed even where there was no post to fill. As shown in Table 10 below, in 1971 the number of those on the government pay-roll reached 136,00, excluding those in the armed forces. As indicated in the table, in terms of employment the government is the second largest sector, just after agriculture, and accounting for 28.5 percent of the total employment. This extraordinary situation is criticised even by the government itself. But the question that remains unexplained is why this situation was allowed to occur. To this there is a simple answer. In an economy where the main source of income belongs to the state, as is the case with oil in Libya, the government is bound to distribute the received income to some segments of the population, or at least to camouflage the cracks in the social and political structure brought forth by the impact of oil riches. To solve these problems, the government expanded its own agencies in such a way that both skilled and unskilled labourers found easy employment at a relatively high rate of pay. It is this policy which has given rise to the large of unskilled labour, rather than the small size of the population.

(52) R. E. Mabro, *Employment and Wage Rates in Libyan-London Universities Joint Research Project on the agricultural and economic development of Libya*, 1970 (Mimeo.), p.162.

Table 10

DISTRIBUTION OF LABOUR FORCE IN 1971



Source: Ministry of Labour, Tripoli, Libya.

Entrepreneurship and Managerial Abilities

It is widely known that in conceiving the idea of organization schooling can do much, but in acquiring the entrepreneurial abilities the best school is business itself. Prior to independence in 1951, the Libyans had no education and almost nothing to work with, moreover they were not allowed to participate in the modern sector initiated by the Italians. So, until then, indigenous entrepreneurship and managerial abilities were rare in Libya. Although this situation is still felt today, the socio-economic changes have, since the beginning of the 1960s, brought into

existence small and middle-sized business establishments. In 1966, Professor Higgins, who had been most pessimistic about the economic future of Libya, described the new situation in the following passage:

"Most impressive, however, was the upsurge of purely Libyan enterprise, not only in commerce and finance but also in manufacturing. Some of the new activities were directly related to the oil industry - oil drums, gas tanks, desert equipment, trailers, etc. - and some to rising levels of domestic consumption. Some of the most successful entrepreneurs are men of very limited formal education, but the few university graduates among the older generation have also found new outlets for their talents. Indeed the rapidity with which an indigenous entrepreneurial class has appeared raises grave doubts about the validity of the theories of the Weber-Hagen variety, which suggest the need for fundamental and slow-moving socio-cultural change before entrepreneurship can evolve" (53).

This improvement was indeed a surprise. However, a brief but close examination of the basic characteristics of the indigenous entrepreneurship reveals that, as far as the entrepreneurial factor is concerned, Libya is not yet on the runway of the take-off stage and Professor Higgins's statement overrates the real performance of the indigenous managerial abilities. First, although some small establishments in the industrial sector were observed during the 1960s, the Libyan entrepreneurs are generally Middle Easterners, Levantines. This means that they are not production-minded businessmen, but trade-oriented merchants and real estate speculators. Since this sort of activity normally does not involve sophisticated organisation and hard thinking, it does not result in development of managerial abilities. Understandably, the concentration of Libyan entrepreneurship in trade and real estate spheres is originally based on the economic fact that the prospects for successful industrial activities are less certain than in these areas in which a large profit is quickly possible without risk, particularly

(53) Benjamin Higgins, *op.cit.*, pp. 824-25.

with the infusion of greatly increased oil receipts into the economy. Furthermore, this tendency has been encouraged by other two factors. One is the reluctance of the government to impose progressive taxation or to control trade profiteering and speculation in urban land. The other is that despite generous subsidies provided by the government to industry, the relative hazards of industrial entrepreneurship are still undiminished, because of shortage of labour and the demand-push inflation which prevent the government from taking protective measures. Second, most of the enterprises connected with oil contracting and supplies were until recently purely Libyan in name. This was because certain kinds of activities were confined to Libyans; to evade the legal constraints some foreign enterprises hired Libyans, who are the owners in the eyes of the law but in fact they only supplied their names and nationality in return for good salaries and commission. This feature was clearly revealed after the revolution when some of the real owners of some enterprises left the country and many of the hired Libyans acknowledged that they were just compradores. Third, the majority of indigenous establishments are owned by individuals or families and even the small number of partnerships and the few joint stock companies are confined to friends and relatives.

In short, despite the wide opportunities offered by the oil boom and abundance of capital, entrepreneurs in the economic sense are still rare in Libya even on small scale, let alone undertaking large-scale manufacturing. Also, there are several social and political difficulties confronting the future development of an entrepreneurial class in the country.

Although wealth is still regarded as an important social asset, society does not attach prestige to the role of the industrialist;

therefore the incentive of social recognition through business ventures is weak. Public opinion also tends to see in the businessman only a profit-maker; only a few people regard him as a risk-bearer who brings into use the technique which will accelerate economic development. But to the man in the street, and often enough to the country radical leaders, the presence of large enterprises may be tolerated only in the absence of other productive alternatives. This feeling is partly nurtured by the attitude of some businessmen toward the social values. A new high-income group of contractors and merchants have rapidly taken on certain Western material values and have become dissatisfied with the traditional social system.

Also, a large number of the entrepreneurs were either former politicians or associated with the political grouping during the monarchical regime; as a result they are distrusted and some of them were held in custody after the revolution because of their responsibility for the corruption of the former regime. However, despite the fact that social s is one of the revolution's three principles, the leaders of the revolution declared on many occasions their respect for free enterprise (normally termed non-exploiting national capitalism) and their policy would be to protect and provide incentives for individual initiatives. But the ill-informed socialism, which to many people means an ultimate wide scale of nationalization, is one of the greatest obstacles to the emergence of an entrepreneurial class that can carry out the task of economic development. The government recognized the shortage and weakness of indigenous entrepreneurship and created a number of public agencies in various fields. These agencies now have the initiative in the recent industrialization programmes; and in view of this predominant tendency it appears that the role of private enterprises becomes somewhat academic. But on the other

hand, the success of public enterprises is dependent on the availability of paid entrepreneurs or technicians. The shortage in supply of those skills is now the basic dilemma confronting the public enterprises and it often prevents the government from embarking upon projects which are essential to the future development. It is obvious what a heavy price the country is paying for its social neglect of the entrepreneurial abilities and professional training, and hopefully a strenuous effort will be made to ensure that the development effort is not similarly handicapped in future.

CONCLUDING REMARKS

On a superficial view, the rapid expansion of the government's financial operations since the start of the oil boom created a very buoyant economy. In quantitative terms, the growth of national income during the last decade had been nothing short of spectacular, even after discounting the price distortions and reducing the figures to an average per capita basis. *Prima facie*, this indicates that the conventional objectives of raising national income and improving the living standards of the people reasonably met. The standard of material life and the provision of social services have been manifestly improved. Also the saving capacity and the rate of investment have risen.

Unfortunately, the evidence presented in this chapter suggests that Libya's economic growth is in many aspects artificial, if not entirely chimerical. In the first place, the rapid increase in national income is accounted for largely by extraneous forces, i.e. exploitation of oil resources by foreigners and the rise of oil prices. In other words, Libya's economic growth was not due to internal effort, it came

in fact at the expense of the running down of natural resources; their deterioration, the extent to which they were used up or wasted has never been taken into consideration in the conventional national accounts. So it is not entirely a 'doomsday' exaggeration to apply to Libya the observation made by H. V. Hodson that a country could have a high and rising GDP yet end up poor because its natural resources were becoming exhausted (54).

In the second place, the large government development outlays on infrastructural works tended to have expansionary effects on the tertiary sector rather than on the productive sectors. So the bulk of the aggregate demand created by public expenditure has been devoted to imports. This in turn has adverse implications for the agriculture and manufacturing sectors.

At the same time the per capita productivity in the tertiary sector (commerce, government services, etc.) did not rise and therefore the expansion in this sector drew the scarce factors away from the productive sectors. This process, coupled with the failure of the government to introduce restructuring measures into agriculture and industry, could be held responsible for the paradox of lagging rural incomes, the fall in agricultural production, and the stagnation in the industrial sector - all in the face of a rapid rise in aggregate demand and acceleration of imports of food and light industrial products. Judging on this basis, it seems clear that the main national objectives remained unfulfilled. But this is symptomatic of weakness in government leadership and the incompetence of the administration. The oil industry provided the means, but these were not utilised. Fortunately, the revolutionary government had understood the real situation, and there is a hope that its efforts to utilize the development potentials created by the discovery of subsoil wealth will bring about a genuine economic and social transformation.

(54) H. V. Hodson, *The Diseconomies of Growth* (Earth Island: London 1972)p.52.

CHAPTER VII

SUMMARY CONCLUSIONS

In sum, it is obvious that the dramatic change in Libya's situation within the last two decades offers some sort of laboratory sample of macrocosmic processes of poetic justice. When the country became independent in 1951, it was economically and socially prostrate, and the prospect for its economic development seemed to be almost hopeless. It was considered as a prototype of a poor country within which all the conditions inimical to social and economic improvements prevailed. Besides the paucity of capital, skilled labour and natural resources, the country was confronted to an unusual degree with complicated social problems. In the circumstances, it was taken for granted that for decades to come independent Libya was destined to endure the humiliation of poverty. Even to maintain the economic status quo would require outside help. Indeed, one of the world's most influential newspapers went even further, deriding the value of Libyan independence itself. "Of all the strange (and probably foolish) things done since the war in the name of nationalism the creation of the United Kingdom of Libya takes the prize"(1).

It was a tragical situation. But the experts' view that the country ought not waste time weeping and should make use of its strategic position - which happened to be of interest to the major world powers, for well-known reasons. Soon this, the chief asset the country had at that time, was leased by Britain and the United States for military

(1) New York Times, December 12, 1951.

purposes; they rented bases for their forces. Although this lease and its successors made of Libya just a political unity with nothing else, this furnished Libya with its largest single source of regular income during the 1950s.

Meanwhile the government approached the United Nations and some of the rich countries for help to narrow the yawning gap in the economy. Consequently, the country became almost a pilot plant for large-scale programmes of technical and capital assistance in which the UN agencies and some Western countries were participating. Although these programmes succeeded in improving the social conditions or at least in keeping the economy from full reversion to a "camel economy", their objectives of hauling the country out of the mire of poverty were not fulfilled. On the eve of the 1960s the cards were still heavily stacked against anything approaching a proper standard of living for the great majority of the people. In 1959 signs began to appear that Libya might nevertheless come into its own. Rich oil deposits were discovered in the hot Sirte Desert which previously had symbolized the extreme poverty of the country. Two years later, oil exports started and opened up for the Libyans new avenues of progress hitherto totally unexpected. By 1970 oil production, which has been almost totally exported in crude form, reached a daily average of more than 3.2 million barrels.

In no other country has the oil industry been developed more rapidly than in Libya, even though this happened at the time when apparently the excess capacity of the Middle East oilfields led to a glut of oil in the world. A combination of factors coalesced to bring about this extraordinary situation of what Higgins called a tale of "Arabian nights". Among these factors were the inherent political

instability around the world's main oil centres; the multiplicity of the companies, particularly the entry of newcomers to international oil industry and their anxiety to secure a foothold in Libya after being locked out of the Middle East by the international majors; the natural advantage of Libyan oil, in respect of both location and quality; and the generous fiscal terms offered by the Libyan government.

As in the other major oil exporting countries where oil was discovered and produced by Western enterprises, Libya followed the concession system. Under the terms of the concessionary agreements, the foreign-owned oil companies were granted rights and privileges which insulated them from the rest of the economy and gave them an exclusive control of decisions about all aspects of the industry, including the determination of the level of production. On the other hand the companies were obligated to pay the government fees and service rent and, when oil was produced, royalties and surtax in lieu of all other forms of taxes and fiscal duties. These conditions remained almost unchanged until the Revolution of 1969.

Shortly after the revolutionary regime took power, it became apparent that the then existing conditions were far from adequate under the new circumstances, and the government sought an alternative system which would achieve three broad objectives. These were: assuring an optimum return from the production through maximizing taxation on profits and raising the crude oil prices upon which income and tax are based; keeping the rate of exploitation at an optimum level in terms of the future of the product and the internal development process in the country; and assuring effective public control over the industry through acquisition of at least 51 percent of oil producing operations. By 1973, the leaders of the revolution succeeded in achieving all the above objectives, though this did not proceed amicably with the oil companies.

Focussing on the behavioural influence of the oil industry in promoting the local economy through enhancing the productive employment of the country's human and physical resources, our analysis shows that the operations of the industry had no appreciable effect on domestic economic activity. Despite its vast size, the industry had never been a major source of local employment. Its effects on the creation of skills and managerial abilities had been negligible. Also, the industry's intercourse with the rest of the economy was very limited. The reason for the oil industry's low development effects lies in part in the technological nature of oil operations and the reluctance of the oil companies to extend their operations beyond producing and exporting crude oil, and in a broader part in Libya's socioeconomic anatomy.

The absence of industry linkages with the rest of the economy, as well as the low employment opportunities in oil operations, imposed on the government the responsibility of breaking out the oil industry from its 'enclave situation'. In this respect the government intervention involved two courses. One was pressing the oil companies to process part of their crude oil production in a way that would lead to development of new oil-based industries in the country, whereby oil would be exported with a much higher value-added, after having already contributed more to the general level of domestic industrial activity. Unfortunately, this course was persistently rejected by the companies. The other approach was to maximise the fiscal returns from oil operations. For a variety of reasons, it was in this arena that the government efforts were successful. By a process of threat and bargaining the Libyan government has been rapidly learning how to retain in the country the bulk of value added from oil operations. The government oil income has been continually increasing even though the volume of output had been reduced in the recent years.

From the analysis of the industry direct effects, two conclusions were reached. Firstly, the behavioural influence of oil operations tended to be very limited, relating to a small percentage of the total value of national output. The findings in Chapters 3 and 4 indicated even more sharply that when the oil industry's operations reached a certain stage, i.e. when still confined to crude oil production, the initial contacts with the rest of the economy tended to disappear, consequently the isolation of the industry became more absolute. This conclusion, subject to the reservation about the effects of tax payments, clearly contradicts the widely-held proposition that enclave economies have set in motion a series of economic forces that operated to break open the enclave.

Secondly, the most important, if not the only visible, contribution of the industry was its increasing provision of hard currency to the government treasury. At this point the findings clearly support the proposition that the less-developed countries are rapidly learning how to improve their relative position *vis-à-vis* the foreign investments in extractive industries. In this connection, the influence of oil has been dramatic, specially in transforming the country's financial position. Previously there was a chronic deficit in the balance of trade, with a heavy dependence of balance of payments on external aid and the inflow of foreign military expenditure. This situation has, from shortly after the start of oil exports, been sharply reversed, and Libya has become a donor, instead of a main recipient of international aid.

The most striking aspect of this transformation has been, however, in the public sector. In the first place, the budget was considerably strengthened; with the sustained rise in oil receipts the

aggregate government revenue and spending have been constantly above the level of the preceding year, ever since 1961. In the second place, the inflow of oil monies eased the revenue constraint on public spending, which in many other developing countries is blamed for their inability to meet urgent welfare and development requirements. In the third place, the expansion in oil income enabled the public sector to obtain a larger share in national income, while the tax structure remained far less heavily weighted on the non-oil sectors. While this rise in the share of public sector represented a charge on the foreign owners of the industry, thus having a favourable effect on private consumption and savings, it made the task of controlling and eliminating inflation more onerous. In the fourth place, the treasury's appropriation of oil revenue has put the government in a particularly sensitive and strategic position *vis-à-vis* economic development requirements.

From the broad review of the government development policy and the efforts to put oil revenue to productive use, it seems that although the target of spending at least 70 percent of the entire government oil income was not realized, the total disbursement was, on the scale of the local economy, exceedingly high. It amounted to about 28 percent of the total GDP of all sectors other than oil for the eight years from 1963 to 1970. But the infusion of such magnitudes of money was effected without formulating a comprehensive policy. The two Five-Year plans launched during the 1960s were no more than enumerations of infrastructural projects, many of which were showy development schemes.

Examination of the effectiveness of development outlays on the performance of the non-oil sectors showed that while there was a great amount of waste, which was the inevitable outcome of abundance of financial resources in the hands of inexperienced and at times venal

officials, the sustained spending of the bulk of oil revenue was bound to have contributed to the general growth and development of some sectors. In quantitative terms, a high rate of growth was achieved. This is ascertained by the data provided by world organisations,(2) indicating that during the last decade Libya was leading all developing countries in terms of the average annual rate of growth in real per capita GNP. In contrast to the pre-oil era, social conditions have also manifestly been improved and the standard of material life has on the average reached fairly high levels.

Yet there is maldistribution of income, thus the prosperity is not shared equally by the whole population. More serious, the dramatic growth in GNP was not accompanied by an equivalent growth in the sectoral or factoral composition of the economy. The sectoral structure indicates a severe imbalance within the non-oil economy. The infusion of greatly increased oil receipts tended to benefit some sectors more than others, and this led to a relative deterioration in the status of the sections of the population engaged in the disadvantaged sectors. The increased demand-pull on goods and services gave a forced boost to the expansion of the services sector, but adversely affected the development of the commodity sectors. Agriculture was practically stagnant, despite generous government subsidies. Industry lagged far behind the tertiary sector and failed to flourish. The incidence of this situation, which was early predicted and the long-run consequences of which are deeply feared, is largely due to two factors. The expansion of the tertiary sector, including the government sector, tended to bid up the productive

(2) Among the sources:

(i) UN World Economic Survey 1970, part two, Figure III.p.31 and Table 9, p.32.

(ii) OECD, 1971 Review, Table VIII-3, p.117 and Table 22,pp.198-199.

factors in the commodity sectors, and this in turn benefitted persons who were interested in seizing the opportunities and able to do so. The other factor is that the availability of foreign exchange combined with the overvalued local currency encouraged imports of goods and reduced the competence of local producers.

In the circumstances it is reasonable to conclude that while the national income has been constantly rising, the expectations of diffusing oil income within all the segments of the population and building a diversified self-sustaining economy have not been yet fulfilled. Indeed, all the signs indicate that the country's economy and prosperity have become almost totally reliant on a single exhaustable asset, oil.

This situation, which means that the economy is very poorly hedged, especially where future prospects are concerned, has been of great concern to the government as well as to the public. In dealing with it government actions have centred on infrastructural investments, on the ground that a combination of physical capital accumulation and a big push in developing human resources must precede the development of agriculture and industry. During the 1960s a good deal was done in that direction. Considerable achievements have been realised in physical units, regarding transport and communications, power generation, housing, and educational facilities. Serious progress has also been observed in the health conditions and in education, though the expansion of the latter was neither accompanied by a substantial reduction in illiteracy rate nor by a corresponding growth of technical skills, a key factor in determining the quality of education.

Much has been achieved towards upgrading social overhead capital; but this is by no means yet reflected in a real development of agriculture and industry. Worse, it has tended to destroy more investment opportunities in the commodity sectors than the government's direct subsidies have encouraged. The main reasons for the failure of the infrastructural investments to have stimulative impact on agriculture and industry reside in the facts that such investments contributed heavily to misallocation of scarce resources, while their process requires a long gestation period. In other words, the emphasis on infrastructure and social overhead capital reinforced the crippling of the diversification of the economy, which is ascribable to high labour costs, paucity of technical, organisational and entrepreneurial skills, and to shortage of labour, qualitatively and quantitatively.

Of course, some of these obstacles exist as a legacy of the past, but some of the bottlenecks emerged because of the capability of the government. It was the government's employment policy of restricting the public administration that led to the absence of motivation to join the industrial labour force, because of the plentiful employment opportunities provided by the government agencies. It is also the government's failure to mobilise the untapped pool of womanpower that led to the shortage of labour. More serious, not even lip-service was paid to redirecting the growing entrepreneurship into productive fields; equally, the social prejudices were neglected, so that modern and traditional institutions existed side by side, sometimes in an ill-fitting coordination. Nevertheless, the efforts of the government to extract the maximum in benefits from the foreign-owned oil industry and to link the rest of the economy with those islands of modernity have been successful.

The traditional economy of the 1950s, noted in Chapter II, had been broken and the whole picture of the economy was completely changed in the course of the last decade. This change is mirrored in the appearance of some symptoms of development, such as a rapid rate of growth in both GNP and per capita income, improvement in the social services and the levels of living, a high level of employment, a high rate of savings, a favourable balance of payments, surplus of capital with an abundant supply of foreign exchange. Unfortunately, being financially rich is not synonymous with being advanced or developed. Beneath the surface lurked many of the fundamental problems of backwardness.

In addition to the paucity and incompetence of all development agents other than capital, there is an unfavourable balance of trade if oil exports are excluded, thus the country is overwhelmingly dependent on a single commodity. Although unemployment is non-existent, underemployment is widespread: particularly in the tertiary sector, within which the real degree of productivity has fallen. In respect of two out of the three characteristics used at the UNCTAD Conference in 1972 to define underdevelopment - i.e. in the share of industry in national income being less than 10% and in the rate of literacy being less than 20% among the population less than 15 years old, though not in GDP per capita reaching \$100 a year - Libya can be classified as standing within the group of twentyfive most underdeveloped countries (3).

Indeed, Libya remains underdeveloped; and its economy still a dual one, but in a different picture, in the sense that it is made up of two fairly separate parts, the oil sector and the non-oil sector.

(3) Financial Times, March 25 1972.

The former is very largely dominated by foreigners. In its outlook and performance, it applies high standards of efficiency. The rest of the economy, with the government as its centre of gravity, appears to function along different lines. With large elements of income transfers accruing to it from the oil sector, it acts as an absorber rather than creator of wealth. At this point, it is obvious that the main effect of the oil industry on the rest of the economy has been manifested in changing habits of consumption rather than raising the level of production and individual productivities.

In this sense, Libya remains another case of growth without development, a concept first illuminated by Robert W. Clower who applied it to the experience of another country, Liberia (4). Furthermore, Libya's experience in the 1960s seems, to those who argue that unbalanced growth, once started, can remain unbalanced for a frighteningly long time (5), to provide marked confirmation of their belief.

(4) Robert W. Clower et al. Growth Without Development; an Economic survey of Liberia (Evanston, Illinois, Northwestern University Press)

(5) Benjamin Higgins, op.cit. p.838.

APPENDIX A

THE HISTORICAL PERSPECTIVE OF THE OIL INDUSTRY IN LIBYA

Exploration activities and oil discoveries

According to the geologists, hydrocarbons have been lying underground in the Libyan desert for at least 500 million years. But the first recorded hydrocarbon strike in Libya dates back only to 1914, when methane gas was found in the course of drilling a water well near Tripoli. Later on, the Italian hydrologists noted occurrences of petroliferous materials in several places in the country in the course of their intensive search for underground water. However, no one took heed of these incidental strikes until 1935. In that year, an Italian geologist, Professor Ardito Desio, began watching petroleum traces in some drilled water wells, and he was able to collect enough crude oil to fill a bottle. Following this, the Italian authorities entrusted the Italian oil firm, Agip, with the exploration and exploitation of the hydrocarbon wealth of Libya. In 1936, Agip brought drilling tools into Libya and began searching for petroleum. It made eight deep borings. Although none of these gave a significant oil strike, they indicated that petroleum occurrences must have a much more profound origin than had previously been thought (1). However, the outbreak of the World War II soon put an end to the Italian programme.

Shortly after the war, a number of multi-national oil companies investigated the possibilities of venturing into Libya. But the uncertainty over the political future of the country compelled all of

(1) The United Nations, *"The Economic and Social Development of Libya"*, New York 1953, p.55.

them to wait. With the coming of independence, a rush of foreign private interest was anticipated, so a UN team of experts recommended that a basic mining law be drafted and enacted as soon as possible (2). This was done in 1953, and immediately the government announced its willingness to accept applications for prospecting permits. Surprisingly, the queue of applicants was composed not only of six of the seven major multinational petroleum companies (or the seven sisters as the late Italian oilman Enrico Mattei called them) but also another six newcomers. They were promptly allowed, individually or in consortia, to reconnoitre the Libyan subsoil.

As the geological survey progressed the results were so encouraging that all the companies then engaged in reconnaissance work, and some others, applied for exploration concessions. Meanwhile the government, persuaded by the oil companies, drafted the first comprehensive petroleum law; which was promulgated in July 1955. Just after the passage of this law, fourteen oil companies were granted concessions covering more than half the area of Libya. In April 1956, the first exploratory well was spudded, and by the summer of the same year most modern tools of exploration such as aerial photography, gravimetrics, seismics and rotary rigs were widely in use in Libya. However, it should be borne in mind that the exploratory operations in Libya faced an unusual difficulty. This was the existence of an estimated 3 million untouched mines laid in the country during World War II. Therefore, to ensure safety, 2,528 mine-sweeping-team-months were spent in removing mines and marking areas (3).

(2) The United Nations, *Economic and Social Development of Libya*, prepared by Benjamin Higgins, New York, 1953, p.7.

(3) Ministry of Petroleum, *L.A.R. Libyan Oil 1954-1967*, (Tripoli, 1969), Table 25.

Initially, the oil companies, stimulated by the then recent discoveries of hydrocarbons in the neighbouring Algerian Sahara, intensified their exploration work in the deep south-west of Libya. In 1957, despite the difficulties of moving drilling tools along a detour road of 1,600 km. through sand and hard rock desert, Esso Libya - an affiliate of Standard Oil of New Jersey - drilled two wells at a site 800 km. south of Tripoli. Although one of these wells started flowing with oil at the rate of 500 barrels per day (b/d) and thus proved that hydrocarbons existed in that area, when the company drilled another eleven wells all of them failed to yield any significant strike. Also British Petroleum (BP) spent L 20 million in its western concessions and found nothing (4).. Indeed, it was an expensive failure, a disappointment.

Nevertheless, putting all their eggs in one basket is not the habit of oilmen. A full-scale exploration was simultaneously being carried on in the hinterland of the Sirte Gulf. On June 11, 1959 when an Esso geologist Joe Brown was testing exploration well C1-6 in a site called Zelten 160 km. south of the Sirte Gulf's coast, crude oil flowed at the rate of 17,500 b/d. Shortly afterward, a series of further strikes in Zelten and nearby districts followed. Meanwhile, the pace of the entire exploratory and development process was being vigorously accelerated.

By 1960, a total sum of US \$ 282 million had been spent on exploration and on development of the discovered oil wells, drilled footage totalled 1.3 million, and there were 34 rigs working in the country (5). In return, half a dozen oil fields were found, and

(4) J.R.L. Anderson, *'East of Suez'*, (Hodder and Stoughton, 1969), p.256.

(5) Ministry of Petroleum, Libya, *'Petroleum Development in Libya 1954 through 1964'* (Tripoli, 1965), Plates 4 and 7.

thirty-five wells of an estimated capacity totalling 100,000 b/d. But the most important aspect for the oil world was that a show of hydrocarbons was found in more than 50 percent of the wells dug in the country (6). This gave the impression that the vast desert of Libya was floating on a series of oil pools, and subsequently the country became the cynosure of oil hunters all over the world.

Although many of the liberal concessionary terms provided in the original petroleum law of 1955 were removed or modified in 1961, the scramble for further concessions feverishly continued. In the event, the government open-door policy and the vastness of the country enabled all venturers to have a place in the game. With the steady increase in the number of oil hunters, exploration activity was speeded and extended far into the desert. However, although it continued at a brisk pace until 1970, it reached its peak (in terms of number of rigs and drilled wells) in the middle 1960s. As shown in Table 1, 54 rigs were operating in the country in 1965, almost one well per day. Oil flowed from 366 of these wells, ranging in depth from 600 to 3,000 metres (7).

Part of the decline in exploration activity after 1965 can be attributed to two factors. Firstly, the petroleum Law of 1955 provided that the concession-holder should relinquish 75 percent of the original size of his holding within five years from the date it was granted. In accordance with this legal obligation, the oil companies began to surrender a sizeable proportion of their concessions at the end of the specified period. In 1964, of the total of 1.2 million square km. land

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- (6) US Agency for International Development, *Geology and Mineral Resources of Libya*, (Washington 1970), p.94.
- (7) The Ministry of Petroleum, Libya, '*Libyan Oil 1954-1967*', Tripoli, 1968, Tables 13, 14.

Table 1

EXPLORATION ACTIVITY AND OIL EXPORTS FROM 1956-1970



- Sources: (a) Ministry of Petroleum, *ibid.*, Plate 4 and 7.
(b) Central Bank of Libya, *Economic Bulletin*, Vol.XI No.4 Aug.1971, Tables 29,33 and 34.
(c) Petroleum Press Service, Vol.XXXIX No.5 May 1972, p.196.
(*) Until 1964 the figures are extracted from source (a) plate 7 and from 1965 onwards from (b) Tables 33 & 34.

concessions, 466, 488 square km. had been surrendered (8). Presumably, this legal obligation while it exerted pressure on the concessionaires to explore and develop their holdings quickly, had an inverse influence on the exploration activities in the long-run. Second, during the period from 1964 to 1966, the government stopped granting new concessions though some of the original holders of the territories which had been handed back lobbied widely to have them re-assigned.

Thirdly, in 1965, major change was brought to the policy of allocating concessions. One feature of this change was that no more concessions were to be granted on the basis of "first come first served", but only through competitive bidding based on the bidder's "sweeteners" rather than his ability to find oil. For example, when the results of bidding for some promised areas were announced in 1966, most of the then major producers in the country were unsuccessful in the bidding even though they lobbied for preferential treatment. Instead, the promising lots went mainly to unknown organizations, most of which were French, German, Italian, Spanish and Swiss companies. Although the new basis brought some advantages to the country, a number of the overbidders lacked the resources to mount a full-scale exploration. Some of them were described by an oil commentator in this way:-

"Among these were three called Circle, Lion, and Mercury, which had been established in Geneva by a certain Mr. Gett only a few months previously. Although they were given more concessions than any other companies, they did not even have offices in Libya, and their joint capital amounted to a mere 140,000 Swiss francs. Despite these limited resources, the mysterious Mr. Gett was able to promise the Libyan Government a loan of \$50m. for a housing scheme. If the money is spent for this purpose well and good, but even so, the Circle/Lion/Mercury group may be unable to work its concessions, and Mr. Gett may have to earn his profit by reselling them, which can only delay the development of the country's resources (9)."

(8) *Ibid.*, Table 16.

(9) Christopher Tugendhat, *'Oil the Biggest Business'*, (Eyre & Spottiswoode, London), 1968, p.179.

Nevertheless, the number of discovered oil fields dramatically increased, from about a dozen in 1964 to 38 in 1971. Besides, the then existing companies made further significant discoveries, some of the newcomers made an exciting success. One of the principal discoveries since 1965 has been made by Occidental (an independent American company), one of the new concessionaires referred to above, largely in sites previously held and surrendered by other companies. Occidental discovered four major fields in 1967 with an initial productive capacity of 800,000 barrels per day. Equally important, the crude oil of these fields was of very high quality, of 43° to 45° API, with low wax and sulphur content (10).

However, exploration activities have slowed substantially since 1970. As indicated in Table 1, only 81 wells were drilled in 1971 as compared with 245 in the preceding year, and the number of rigs operating in the country was only 11 in 1972 compared with 55 in 1969. But it should be remembered that the notable increase in the number of rigs in 1969 as well as that of the wells in 1969 and 1970 reflected mainly drilling to expand output of already producing fields, rather than expanding exploration. Understandably, the foreign owned oil companies depressed their exploration activity as a reaction to the militant attitude of the revolutionary government. The government, however, requested the companies to accelerate their exploration activity, and also attempted to give assurances that the cutdown in production which it had ordered was not to exert pressure on the companies, as was commonly assumed, but to prevent the oilfields from becoming exhausted. In the event, an agreement was reached in March 1971 that each major operating group would maintain at least one exploration rig. But, more

(10) International Monetary Fund, *'Libya: the Basic Data'*, (Washington, 1968), p.4 (mimeo.).

recent reports have indicated that while there were eleven drilling rigs operating in the country in the summer of 1972, only five rigs were used in exploratory wells, the remaining were used either in development wells or in water injection (11).

Production and exports of crude oil

Until 1967, when a small refinery was set up to meet part of the local demand for oil products, all the oil output in Libya had been exported in the form of crude. Even at the present time, virtually all the production is exported in the same form, because the crude absorbed by the local refinery is still negligible. Consequently, the quantity of production is practically identical with that of exports, in other words production means exports and vice-versa. In exploiting the discoveries, the oil industry in Libya was faced with two geographical difficulties. One was that oil was found in one of the most formidable deserts in the world. The oil fields were 100 km. to 450 from the sea. All this meant that before crude oil could be produced and eventually exported many things had to be done; ranging from building a pipeline network, in an area where visibility is often impaired by heavy loads of dust in the air, to purifying sea water for providing fresh water. The other was that there was no loading facility along the Gulf of Sirte, and the coast itself had no sheltered deep-water harbour. "It is exposed to rough weather in winter, and such anchorages as it offers have next to no protection. Worse, it is shallow inshore, so that even if oil were piped there big tankers would have to lie far out, and oil got to them by a long submarine pipeline "(12).

(11) J.R.L. Anderson, *op.cit.*, p.227.

(12) *Ibid*, *Idem*.

But there was another deterrent problem: the crude of some oilfields is of high viscosity and wax content. This meant that

"If it had to be piped any considerable distance under the sea in winter it seems probable that it would solidify in the pipe. Heating an undersea pipe to ensure delivery of liquid oil would be an engineering task of horrible complexity and expense"(13).

Nevertheless, the oil industry has known that good sources of oil are always discovered in inaccessible and desolate locations, and by this it has learned how to overcome all the geographical difficulties in the way of getting the oil out.

Immediately after it became certain that oil existed in Libya, studies were made on the coastline of the Gulf of Sirte for a possible oil terminal, and the construction of pipelines between the oil-fields and the proposed sea terminal began. In October 1961, after the terminal facilities and the construction of the pipelines were completed, crude oil started to flow into the tanker "Esso CANTERBURY" at Marsa Jrega. By 1969, crude oil was being exported from five big terminals, which were fed from 38 oilfields through 3,000 km. of pipeline. Thus Libya became, after ten years of being a country with absolutely no oil, the third exporting and fifth producing country in the world, providing more than 25 percent of the Western Europe's total oil requirements in 1970.

As shown in Table 2, oil production and exports, after they began in 1961, increased substantially up to mid-1970. The notable increase was after 1967; output increased by 50 percent in 1968 and by 19 percent in 1969 to 3.1 million b/d. This increase reflected the increased demand for Libyan crude after the closing of the Suez Canal

(13) *Ibid, Idem.*

Table 2
DAILY AVERAGE AND TOTAL ANNUAL CRUDE OIL PRODUCTION
1961-1971

(Thousand Barrels)



Illustration removed for copyright restrictions

Sources: Ministry of Petroleum, *op.cit.*, Table 23.

in June 1967, and the coming of new fields into production, particularly those discovered by Occidental in 1967. The increase in production and exports continued at a slower rate until May 1970 when a general downward trend began. In June 1972, the output dropped to about 2 million b/d; little more than half the 3.3 million b/d peak in April 1970 (14). This sharp drop in production was mainly due to two reasons. One was that the government requested the oil producing companies to reduce production in order to preserve the oil wealth from quick depletion. The other was that after 1971 there was a drop in demand for Libyan crude resulting from a sharp increase in posted prices in April 1971.

Basic features of the development of oil in Libya

Although, as in many other oil major exporting countries, the development of oil industry was undertaken by the affiliates of some multi-national petroleum companies, the striking fact about oil in Libya is that the pattern of its development differed from that of the other major oil-exporting countries. Unlike each of those countries where the bulk of the industry was developed by and is still in the hands of a single company or a consortium, there were in 1968 about 37 companies of which 17 were producing and exporting crude oil.

Initially, most of them were American and British but the number of French, Italian and German companies has steadily increased in recent years. Some of the companies operating in Libya are themselves groups representing partnerships of a number of companies, and some are controlled agencies of consuming countries.

(14) Central Bank of Libya, *Sixteenth Annual Report of the Board of Directors 1971/1972*, p.143.

Another distinct feature of the industry in Libya is that a large major fraction of oil production and exports is undertaken by relatively small oil companies, widely referred to as "independents". This is in contrast to the major Middle Eastern oil countries where the industry is in the hands of the seven major petroleum companies in the world, or the seven sisters. As indicated in Table 3 in the Appendix, the groups representing the independents - as distinct from the majors - accounted for 68 percent of the total crude oil production in the country. The Oasis group (a consortium of three American Independent companies) has been the leading producer in the country since 1966; its production averaged in 1971 more than 824.4 b/d. Occidental, another American independent company, comes in second place with production averaging 586,400 b/p in 1971, even though it was more heavily subject to a decreed cutback in production than the others. Esso group, largely shared by Standard Oil of New Jersey, is in the third place though it was the pioneer in both discovery and exports of oil. BP/Hunt consortium, (Now called Injas) which was shared equally between BP until the nationalisation of its share in December 1971, and Nelson Bunker Hunt ranked fourth with an average daily production of 419,600 barrels in 1971. Besides these leading groups, there are another five representing more than a dozen companies, and it is also expected that the Italian company ENI will surge forward in the near future as one of the leading producers, particularly after the settlement of its participation dispute with the government.

Table 3

CRUDE OIL PRODUCTION BY OPERATING COMPANIES 1961-1971

(1,000 b/d)



Sources: Ministry of Petroleum, *op.cit.*, Table 24.

APPENDIX B

Summary of Balance of Payments

Table 4, Balance of Payments Before Oil



ources: International Monetary Fund; *Balance of Payments Yearbook*, various issues.

Table 2 Summary Balance of Payments with Oil



Sources: International Monetary Fund; *Balance of Payments Yearbook*, various issues.

APPENDIX C

THE OIL-INDICED ECONOMIC GROWTH

While it is difficult to detail the welfare effects of the oil-induced economic growth, it is certain that the more than ten-fold increase in GDP of non-oil sectors during the period between 1958 and 1971 is largely attributable to the local infusion of oil revenue, and consequently the oil industry has, beyond its direct contribution to GDP, an indirect favourable impact on the total GNP. Besides its order effects, the oil-financed local public expenditure, whether destined to appease local discontent or to lay out the "hardware" of economic and social development, certainly has its multiplier effects. Whatever the propensity to import, the recipients of the incremental income created by public spending are bound to spend a portion on domestic goods and services and to save a fraction. The increment spent locally will increase the income of other producers who will raise their expenditure and saving, and so on. If data on the average and marginal propensities to consume, to save and import are available, and if these data display a stable pattern, then the multiplier effects of the local infusion of oil revenue as well as of the industry's local expenditure can be approximately calculated. But fulfilling these conditions is not possible in Libya, where the most glaring statistical lacunae exist in this field.

Nevertheless, a clear enough picture of the casual relationship between the performance of the GDP imputable to the rest of the economy and the spread effects of the industry may emerge

by hypothesizing an answer to the question: What would have been the position of GDP if the oil industry had not existed? While there is no reason to assume that without the oil industry the GDP would not have shown a reasonable rate of growth, with the low level of investment and technical skills available immediately before the upsurge of the industry, the actual growth would certainly have been substantially smaller.

An attempt to answer, 'how much the absence of the industry would have reduced the GDP', was made in 1965 by Dr. Arthur G. Auble, an American statistician working at that time with the Ministry of Planning of Libya. Dr. Auble who was interested in estimating the induced income contribution of the oil industry, based his attempt on two assumptions. First, he thought that in the absence of an oil industry the economy would have grown at an annual rate of 4 percent (1). Second, he imputed the residuals to both the order and spread effects of oil industry. While this latter assumption is quite plausible, the former is indisputable. He offered neither explanation for picking this rate nor indication whether it was expressed in real or money terms. However, it can be assumed that this rate was in real terms.

It can also be proposed that if no oil had been discovered and thus the oil industry would not have existed, the Libyan economy would have grown during the 1960s at the rate assumed by Dr. Auble. This proposition is based on the assumption that in the absence of the oil industry the rate of growth of the Libyan economy would be similar to the annual 4 percent achieved by many other developing countries that either lacked or did not fully exploit a resource endowment.

(1) Arthur G. Auble, Statistical Paper No. 15, *"National Accounts: The Petroleum Sector"*, (Ministry of Planning, Tripoli, 1966), p. 7 (Mimeo.)

Therefore, it is possible in attempting to answer the question to use Dr. Auble's basic ideas with a slight modification, that is taking into account the officially reported 8 percent annual rate of inflation. Accordingly, the assumed rate is 12 percent a year. The results of the calculation are shown in Table on the next page. It is estimated that if the oil industry had not existed, the GDP at current prices in 1971 would have reached LD. 173.2 million; this constitutes just 12 percent of the actual GDP in 1971, leaving the residual of 88 percent to the direct and indirect contributions of the oil industry. The resulting figures show also that the share of oil-induced GDP tended to lag far behind the share of direct contributions.

There is a variety of reasons for this phenomenon, which pertains to the weakness of multiplier effects of the oil industry. In the first place, the local infusion of oil money in an open economy such as of Libya usually results in making the economy more import-oriented. This is manifested in the about six-fold increase in the value of imports of goods and services during seven years, from LD. 119.9 million in 1962 to 695 million in 1971. Thus the spread effects of the oil contribution to GDP leak out rapidly. In the second place, since the oil industry is foreign-owned and financed with foreign capital, the resulting profits and depreciation allowances are inevitably paid abroad and thereby they have no spread effects on the local economy. In the third place, as is indicated in Table 1, the bulk of the industry's direct income contribution is in the form of payments to the government, and because in the recent years the government has tended to spend or hoard a considerable proportion of these payments abroad, the oil revenue-induced income has shrunk.

TABLE 6
Approximations of GDP without Oil, Industry and the Total Contribution
of Oil to the Actual GDP for selected years.

LD. million At Current Prices

Item	1958	1962	1964	1966	1968	1969	1971
(1) Total GDP	52.2	155.5	364.6	634.5	1,071	1,215.8	1,468.6
(2) GDP without Oil, Growing at 12% P.A.							
(3) Residuals (1-2) Imputed to Oil. Of Which	3.6	79.1	268.8	515.5	822.4	1,048.2	1,294.4
(3a) Direct Contribution	3.6	38.0	195.7	356.1	648.6	812.6	920.5
(3b) Indirect-induced (3-3a)	-	41.1	73.1	159.4	173.8	235.6	373.9
(4) % of Total Oil Share in GDP (% of 3 in 1) Of Which	6.9	51.0	73.1	81.0	86.0	86.5	88.0
(4a) Direct (% of 3a in 1)	6.9	24.4	53.6	56.0	60.5	62.1	62.7
(4b) Induced (% of 3b in 1)	--	26.6	19.5	25.0	25.5	24.4	25.4

BIBLIOGRAPHY

A. OFFICIAL SOURCES

I. Libya

The Central Bank of Libya, *Annual Reports of the Board of Directors*, from 1960/1961 to 1971/1972.

———. *Inflations in Libya*, Tripoli, 1961, *Monthly Economic Bulletin*, various issues from 1963 to 1972.

———. *The Development of Public Finance in Libya from 1945-1963*, Tripoli, 1966.

Ministry of Education, *Development of Education in Libya*, Tripoli, 1966.

———. *Woman Education in Libya*, Tripoli, 1966.

———. *Economic and Social Factors Affecting Education*, Tripoli, 1966.

———. *Statistics about Education in Libya* (in Arabic), Tripoli, 1973.

Ministry of Petroleum Affairs, *Petroleum Development in Libya 1954 through 1971*, Tripoli, 1973.

———. *Bulletin of Petroleum Statistics*, various issues.

Ministry of Planning. *Five-Year Economic and Social Development Plan 1963-1968*, Tripoli, 1964.

———. *National Planning Council's First Annual Report on Development Activities for the Year Ending 31st March, 1964*, Tripoli, 1964.

———. *Housing in Libya*, Vol. I, Existing Conditions. Prepared by Doxiadis Associates, Athens. 1964.

———. *Housing in Libya*. Vol. II, Problems - Policies - Programmes. Prepared by Doxiadis Associates, Athens, 1964.

———. *Transport in Libya: A General Survey and Study of the Means of Communications*, Preliminary Report prepared by Doxiadis Associates, Athens, 2 Vols. Tripoli, 1964.

- _____ . Statistical Paper No. 7, Tripoli, 1965.
- _____ . *Libyan Agriculture in the Light of Statistical Data*, Tripoli, 1965.
- _____ . *Utilization of Natural Gas Resources of Libya*, prepared by I.G.T., Tripoli, 1966.
- _____ . *An Analytical Model of the Libyan Economy*, prepared by G. Heitmann, Tripoli, 1966.
- _____ . *Preliminary Study of Libyan Industries Prospects*, Tripoli, 1967.
- _____ . *Manufacturing Sector Development Programme*, Tripoli, 1968.
- _____ . *Statistical Abstract*, Tripoli, 1968.
- _____ . *Framework of the Second Five-Year Development Plan, 1968-1973*, Tripoli, 1968.
- _____ . *Report of the Annual Survey on the Revision of the Second Five-year Development Plan (1968-1973)*, prepared by Prof. Canellopoulus, Tripoli, 1969.
- _____ . *A Study of Libyan Agriculture or Its Present Situation*, Tripoli, 1969.
- _____ . *Survey of the National Economy*, Tripoli, 1970.
- _____ . *Accounting Petroleum Sector in LAR*, prepared by N. C. Tsutsplidis, Tripoli, 1971.
- _____ . *Estimate of Private Consumption Expenditure of the L.A.R. 1962-1969*, Tripoli, 1971.
- _____ . *National Accounts of Libya, 1962-1971*, Tripoli, 1972.
- _____ . *The National Accounts Statistics of LAR*, Tripoli, 1972.
- _____ . *Development of Education in L.A.R. and its connection with the plans of economic and social development (Doc. No. 8) (In Arabic)* Tripoli, 1973.

University of Libya. *Students Statistics*, Benghazi, 1973.

II. The United Nations and World Agencies

United Nations Technical Assistance. *A General Economic Appraisal of Libya*, prepared by John Lindberg, New York, 1952.

- _____ . *Balance of Payments of Libya*, prepared by S. Kirkor, New York, 1953.

- _____ . *The Economic and Social Development of Libya*, prepared by Benjamin Higgins, New York, 1953.
- _____ . *Economic Planning and Development in Libya*, prepared by G. N. V. Nunn, Tripoli, 1962.
- _____ . *Living Conditions in Libya*, Tripoli, 1964.
- _____ . *A Look at the Social Welfare Services Run by the Ministry of Labour and Social Affairs of the L.A.R.*, prepared by A. Showky, Tripoli, 1970.
- UNESCO. *Report of the Mission to Libya*, Paris, 1952, (The Educational Mission, 5).
- _____ . *Statistics for Educational Planning in Libya*, prepared by T. N. Le Seelleur, Paris 1964.
- _____ . *Education Planning Mission to Libya*, Paris 1964.
- _____ . *Adult Education in Libya*, Paris 1965.
- _____ . *Primary Teacher Training of L.A.R.*, prepared by W. F. Vietmeyer, Paris 1970.
- F.A.O. *Livestock Development in Libya*, by D. G. Boothby, Rome, 1970.
- I.L.O. *Manpower Assessment and Planning Project for Libya*, Tripoli, 1968.
- _____ . *The Development of a Manpower Information Programme*, Geneva, 1969.
- W.H.O. *Health Progress in Libya*, Tripoli, 1964.
- _____ . *Health Services of Libya, Survey and Recommendations*, Alexandria, 1967.
- OPEC (Organization of Petroleum Exporting Countries), *Pricing Problems, Further Considerations*, Vienna, 1963.
- _____ . *From Concession to Contracts: OPEC Paper presented at Fifth Arab Petroleum Congress, Cairo, March, 1965.*
- _____ . *Selected Documents of the International Petroleum Industry*, Vienna, 1969.
- _____ . *Recent Development of Crude Oil Posted/Tax Reference Prices and Alternative for Adjustment at Equitable Levels*, Vienna, 1970.
- _____ . *Nationalization of Employment in Oil Companies in the Middle East*, Vienna, 1970.

- _____ . *Oil and OPEC*, A report prepared by Robert Schuil, n.a.
- _____ . *An Outlook on the Future Potentialities of the Oil Industry and its Competitors*, Vienna, May, 1970.
- _____ . *Effects of Recent Changes in Parity of Monies of Some Industrialized Countries on the Purchasing Power of OPEC Member Countries Oil Revenues*, Vienna, 1971.
- _____ . *First Progress Reports of the Study on "Integration of the Petroleum Industry"* (Vienna, April, 1971).
- _____ . *Comparative Review of the Estimated per Barrel Income of the Member Countries*, Vienna, Oct. 1971.
- _____ . *Review of Crude Oil and Refined Product Prices in the International Market*, Vienna, 1972.

BOOKS AND MONOGRAPHS

- Abdallah, Hussein Dr, and Omar, Sayed Ahmed, *The Role of Governments in Backing the National Petroleum Companies*, Seventh Arab Petroleum Congress (Kuwait, March 1970).
- Abraham, William, I, *National Income and Economic Accounting*: Prentice-Hall Inc., 1969.
- Adams, Water. (ed). *The Brain Drain* (Macmillan, 1968).
- Adelman, Irma, *Theories of Economic Growth and Development*, Stanford, Calif.: Stanford University Press, 1961.
- _____ and Thorbecke, Erik (eds.) *The Theory and Design of Economic Development*, John Hopkins Press, 1966.
- Adelman, Morris, *World Petroleum Market*, John Hopkins, 1973.
- Adler, John H., *Absorptive Capacity: The Concept and Its Determinants*. Washington, D.C.: The Brookings Institution, 1965.
- Agarwala, A.N. and Singh, S.P. (editors), *Economics of Underdevelopment*. Oxford University Press, 1963.
- Allan, J.A., McLachlan K.S., and Penrose J. (eds.), *Libya: Agriculture and Economic Development*, London, Frank Cass, 1973.
- The Arab Oil Review*, Monthly, Various Issues, 1964-1966.

- Baldwin, R.E., *Economic Development and Export Growth*.
Berkeley: University of California Press, 1966.
- Baran, Paul A., *Political Economy of Growth*. Marzani and Munsel
(Prometheus Edition), 1964.
- Basch, Antonin, *Financing Economic Development*, New York:
Macmillan Co., 1964.
- Baster, Nancy, (ed.), *Measuring Development*, Frank Cass, London, 1972.
- Belassa, Bela, *The Theory of Economic Integration*, Homewood, Ill.:
Richard D. Irwin, Inc., 1961.
- . *Trade Prospects for Developing Countries*. Homewood,
Ill.: Richard D. Irwin, Inc., 1964.
- Bengur, Ali, R., "Financial Aspects of Libya's Oil Economy",
Finance and Development, IV, 1 (March, 1967).
- Bhagwati, Jagdish, *The Economics of Underdeveloped Countries*,
New York: McGraw-Hill Book Company, 1966.
- Blunsum, Terence, *Libya: the Country and Its People*, Queen Anne
Press, 1968.
- Bruton, Henry, J. *Principles of Development Economics*, Englewood
Cliffs, N.W.: Prentice-Hall, Inc., 1966.
- Bryce, M.D., *Policies and Methods for Industrial Development*,
McGraw Hill Book Company, Inc., New York, 1965.
- Cattan, H., *The Evolution of Oil Concessions in the Middle
East and North Africa*, Dobbs/Ferry: Oceana
Publications, Inc., 1967.
- Clarke, J.I., Fisher, W.B. (eds.), *Population of the Middle East
and North Africa*, University of London Press, 1972.
- Clawson, Marion, ed., *Natural Resources and International Development*,
Baltimore: John Hopkins Press for Resources for the
Future, Inc., 1964. ("The World Oil Outlook",
M. A. Adelman, pp. 27-125).
- Chandler, Godfrey, "The Myth of Oil Power; International Groups and
National Sovereignty". *International Affairs*,
XLVI: 710-18, October 1970.
- Clower, R.W., Dalton, G., Harwitz, M. and A.A. Walters, *Growth
without Development: An Economic Survey of Liberia*.
Evanston, Ill.: Northwestern University Press, 1966.
- Darmstadter, Joel, "International Flows of Energy Sources;
ICEE Spectrum, May 1970.
- Due, John F., *Government Finance: Economics of the Public Sector*,
Irwin, 1968.

- Enke, Stephen, *Economics for Development*, Prentice-Hall, 1964.
- Farley, Rawle, *Planning for Development in Libya: the Exceptional Economy in the Developing World*, Praeger, New York, 1971.
- Fisher, W.B., *The Middle East*, Methuen's Advanced Geography, 1971.
- Frank, Helmut J., *Crude Oil Prices in the Middle East*, New York: Frederick A. Praeger; Praeger Special Studies in International Economics and Development, 1966.
- Frankel, Marvin, "Home Versus Foreign Investment: A Case Against Capital Export", *Kyklos*, XVIII: 411-433, 1965.
- Gabriel, P.P., *The International Transfer of Corporation Skills*. Boston: Graduate School of Business Administration, Harvard University, 1967.
- Gulhati, R.I., 'The need for Foreign Resources, Absorptive Capacity and Debt Servicing Capacity' in J.H. Adler and P.W. Kuznets (eds.), *Capital Movements and Economic Development - Proceedings of the Conference Held by the International Economic Association*, MacMillan - St. Martin's Press, New York 1967, pp.240-60.
- Hagen, Everett E., *Planning Economic Development*, Contribution to a study - from the Center for International Studies - M.I.T. Homewood, Ill.: Irwin, 1963.
- . *The Economics of Development*. Homewood, Ill.: Richard D. Irwin, Inc., 1968.
- Hartshorn, J.E., *Oil Companies and Governments*, London: Faber & Faber, Ltd., 1962.
- Heitmann, George, "Libya: An Analysis of the Oil Economy", *The Journal of Modern African Studies*, VII, 2 (1969), 249-63.
- Higgins, B.H., *Economic Development*, New York, W. W. Norton & Co., 1959 and 1968.
- Hirschman, A.O., *The Strategy of Economic Development*, Yale University Press, New Haven and London, eighth edition, 1964.
- Hirst, David, *Oil and Public Opinion in the Middle East*, London: Faber & Faber, Ltd., 1966.
- Huber, Paul B., *Absorptive Capacity and Development Planning*, Center for Development Planning, National Planning Association, December 1965.

IBRD (World Bank), *The Economic Development of Libya*,
John Hopkins Press, 1960.

———. *The Economic Development of Venezuela*, Baltimore:
John Hopkins Press, 1961.

The International Bank for Reconstruction and Development.
The Economic Development of Kuwait, Baltimore:
John Hopkins University Press, 1965.

Issawi, Charles, and Yeganeh, Mohammed, *The Economics of Middle
Eastern Oil*, New York: Frederick A. Praeger, 1962.

Keith, Agnes Newton, *Children of Allah*, Boston: Little, Brown
and Co., 1966.

Khadduri, Majid, *Modern Libya: A Study in Political Development*,
Baltimore: John Hopkins Press, 1963.

Kindleberger, C.P., *American Business Abroad: Six Lectures on
Direct Investment*. New Haven and London: Yale
University Press, 1969.

———. (ed). *The International Corporation, A Symposium*.
Cambridge, Mass: M.I.T. Press, 1970.

Kuznets, Simon. *Economic Growth and Structure*. New York:
W. W. Norton & Co., 1965.

Leeman, W.A., *The Price of Middle East Oil, An Essay in Political
Economy*, Ithaca: Cornell University Press, 1962.

Leibenstein, Harvey. *Economic Backwardness and Economic Growth*.
New York: John Wiley and Sons, 1957.

Lenczowski, George, *Oil and Slate in the Middle East*. Ithaca:
Cornell University Press, 1960.

Levy, Fred D., Jr., *Economic Planning in Venezuela*, New York:
Frederick A. Praeger, Publishers, 1968.

Lewis, W.A., *The Theory of Economic Growth*, London: George
Allen & Unwin, 1955.

———. *Development Planning - The Essentials of Economic
Policy*, George Allen and Unwin Ltd., London, 1966.

Litvak, L.A., and Maule, C.J. (eds.), *Foreign Investment: The
Experience of the Host Countries*, New York:
Praeger, 1969.

Livingstone, I., *Economic Policy and Development*, Penguin, 1971.

Lockwood, Agnese Nelma. *Libya, Building a Desert Economy*.
N.Y.: Carnegie Endowment for International Peace,
1957. (International Conciliation, No. 512), 57-1758.

- Longrigg, S.H., *Oil in the Middle East*, Oxford: Royal Institute of International Affairs, 1968.
- Lovejoy, W.F., and Homan P.T., *Economic Aspects of Oil Conservation Regulation*, Baltimore: John Hopkins Press, 1967.
- Lutfi, Ashraf, *Arab Oil: A Plan for the Future*, Beirut, Lebanon: The Middle East Research and Publishing Center, 1960. Middle East Oil Monographs: No. 3.
- Macdougall, G.D.A., "The Benefits and Costs of Private Foreign Investment: A Theoretical Approach", *Economic Record*, XXXVI: 13-35, June 1960.
- Magdoff, Harry, *The Age of Imperialism*, New York: Monthly Review Press, 1969.
- Mallakh, Ragaei El., *Economic Development and Regional Cooperation: Kuwait*, Chicago: University of Chicago Press, 1968.
- McGronhan, D.V., (ed), *Contents and Measurement of Socio-Economic Development*; Praeger, 1972.
- Martinez, Anibal R., *Our Gift, Our Oil*, Vienna, 1966.
- Mason, Edward, S., 'On the appropriate size of a development program', *Occasional Papers in International Affairs*, Harvard University, Center for International Affairs, No. 8, August, 1964.
- Meier, G.M., *Leading Issues in Development Economics - Selected Materials and Commentary*, Oxford University Press, New York, 1964.
- and Baldwin, R.E., *Economic Development - Theory, History, Policy*, John Wiley & Sons, Inc., New York, 1957.
- Meyer, A.J., *Middle East Capitalism*, Cambridge: Harvard University Press, 1959.
- Mikdashy, Zuhayr, *A Financial Analysis of Middle Eastern Oil Concessions: 1901-65*, Frederick A. Praeger, 1966.
- . *The Community of Oil-Exporting Countries*: Allen & Unwin, 1972.
- Mikesell, Raymond (ed.), *Foreign Investment in the Petroleum and Mineral Industries*. Baltimore and London: John Hopkins Press, 1971.
- Myint, H., 'Education and Economic Development', *Social and Economic Studies*, Vol. 14, No. 1, March 1965.
- . *The Economics of Developing Countries*, Hutchison, London, 1964.

- _____. 'The Interpretation of Economic Backwardness', *Oxford Economic Papers*, New Series, Vol. 6 (1954).
- _____. 'Social Flexibility, Social Discipline and Economic Growth', *International Social Science Journal*, Vol. XVI, No. 2, 1964.
- _____. *South East Asia, Economy*, Penguin, 1972.
- Mosley, Leonard, *Power Play*, (Weidenfeld and Nicolson, 1973).
- Myrdal, Gunnar, *An International Economy*, New York: Harper and Brothers, 1956.
- _____. *Economic Theory and Underdeveloped Regions*, Gerald Duckworth & Co. Ltd., London, 1957.
- _____. *Asian Drama, An Inquiry into the Poverty of Nations*, Pantheon, New York, 1968, 3 volumes.
- Najjar, J.M., *The Development of a one Research Economy: A Case Study of Kuwait*, Ph.D. Thesis, Indiana University, 1969.
- Nurkse, Ragnar, *Problems of Capital Formation in Underdeveloped Countries*, New York: Oxford University Press, 1953.
- Nyrop, Richard, *et al.*, *Area Handbook of Libya*, Washington, U.S. Government Printing Office, 1973.
- O'Connor, Harvey, *World Crisis in Oil*, Monthly Review, 1962.
- Odell, Peter R., *Oil and World Power*, Penguin, 1970.
- Pelt, Adrian, *Libyan Independence and the United Nations*, Yale University Press, 1970.
- Penrose, E.T., "Profit Sharing Between Producing Countries and Oil Companies in the Middle East", *Economics Journal (London)*, June 1959.
- _____. "Middle East Oil; The International Distribution of Profits and Income Taxes", *Economica (London)*, August, 1960.
- _____. "Vertical Integration with Joint Control of Raw Material Production", *Journal of Development Studies* I: 251-268, April 1965.
- _____. *The Large International Firm in Developing Countries: The International Petroleum Industry*, London. G. Allen and Unwin, 1968.

- Polk, William R., *The Developmental Revolution: North Africa, Middle East, South Asia*, Washington, D.C.: The Middle East Institute, 1963.
- Reddaway, W.B., *Effects of U.K. Direct Investment Overseas; An Interim Report*, Cambridge: Cambridge University Press, 1967.
- Schurr, Sam H., *et al.*, *Middle Eastern Oil and Western World*, (Elsevier, New York, 1971).
- Seers, D., "The Role of National Income Estimates in the Statistical Policy of an Underdeveloped Area", *Review of Economic Studies*, Vol. XX (1952-3).
- . 'Economic Programming in a Country Newly Independent', *Social and Economic Studies*, March 1962.
- . 'The Mechanism of an Open Petroleum Economy', *Social and Economic Studies*, Vol. 13, No. 2, June 1964.
- Serafy, Salah El., "Fundamental Changes in Economic Structure", *Libyan Economist*, Tripoli (April, 1969).
- Sharabi, H.B., *Libya's Pattern of Growth*, Current History, January, 1963.
- Shehab, Fakhri, "Kuwait: A Super-Affluent Society", *Foreign Affairs*, April 1964.
- Singer, Hans. W., *International Development: Growth and Change*. New York: McGraw-Hill, 1964.
- Spencer, Daniel L., and Woroniak, Alexander, 'The Feasibility of Developing Transfer of Technology Functions', *Kyklos*, XX: 431-457, 1967.
- Stevens, W. J., *Capital Absorptive Capacity in Developing Countries*, A. W. Sijthoff, Leiden, 1971.
- Tanzer, Michael, *The Political Economy of International Oil and the Underdeveloped Countries*, Boston: Beacon Press, 1969.
- Tugendhat, Christopher, *Oil the Biggest Business*, Eyre & Spottiswoode, London, 1968.
- . *The Multinationals*, Eyre & Spottiswoode, London, 1971.
- Turner, Louis, *Invisible Empires*, New York: Harcourt, Brace, Jovanovich, 1971.

United Nations, *Developing Countries*, New York: Department of Economics and Social Affairs, 1964 (E/3861/Rev. 1).

———. *Studies in Petrochemicals, Vol. 1 & 2, Teheran, Iran, 16-30 Nov. 1964*, New York, 1966.

———. *Foreign Investment in Developing Countries*, New York: Department of Economic and Social Affairs, 1968 (E/4446).

———. *"Increasing the Flow of Private Capital to Developing Countries"*, UNCTAD Document TD/II/Res/33, March 29, 1968.

———. *Economic Survey of Africa, Vol. II, North African Sub-Region* (E/CN. 14/403) 1968.

———. *Role of Private Enterprise in Investment and Promotion of Exports in Developing Countries*, Report Prepared by D. U. Stikker, New York: UNCTAD, 1968.

———. *Panel on Foreign Investment in Developing Countries*, New York: United Nations Publication, 1969.

———. *The Measurement of Development Effort*, (TD/C.3/75), 1970.

Vakil, C. and Brahmanand, P., *Planning for an Expanding Economy: Accumulation, Employment and Technical Progress*, New York, 1956.

Van Arkadie, B. and Frank C., *Economic Accounting and Development Planning*, New York: Oxford University Press, 1966.

Vernon, R. "International Investment and International Trade in the Product Cycle", *Quarterly Journal of Economics*, LXXX: 190-207, May 1966.

———. "Foreign Enterprises and Developing Nations in the Raw Materials Industries", *American Economic Review*, LX: 122-126, May 1970.

———. "Multinational Business and National Economic Goals", *International Organization*, XXV, No. 3, Summer 1971.

———. 'Multinationals business and national economic goals', *International Organization*, Vol. 25, No. 3 (Summer 1971).

Waddams, Frank, "Why Oil Revenues are High", *Libyan Economist*, Tripoli (April, 1969).

Waterston, Albert, "A Hard Look at Developing Planning", *Finance and Development*, June, 1966.
Quarterly publication of the International Monetary Fund and the International Bank for Reconstruction and Development, Washington D.C.

Wedley, William C., *Manpower Policies for Development Planning in Libya*, Ph.D. Dissertation, Columbia University, 1971.

Wilkins, Mira, *The Emergence of the Multinational Enterprise*, Cambridge: Harvard University Press, 1970.

Wolf, C., and Sufrin, S., *Capital Formation and Foreign Investment in Underdeveloped Areas*, Syracuse University Press, 1958.

Wright, John, *Libya*, Ernest Benn Ltd., London, 1969.

Zenoff, D.B. and J. Zwick, *International Financial Management*, Englewood Cliffs, N.J., Prentice-Hall, 1969.

Zimmerman, L.J. (ed.), *Economic Planning*, Mouton, The Hague, 1963.