Oil Dependency, Economic Diversification and Development A Case Study of Libya

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ABSTRACT

The Libyan economy relies heavily on increasing oil revenues, which may deteriorate with a future oil price decline. The Libyan economy performed as well as resource poor countries over the past few decades.

The oil booms of 1973 and 1979 brought unprecedented income to Libya but, despite the substantial oil revenues, much of the potential benefit of the windfall has been dissipated. Libya relies heavily on oil receipts, the price of which tends to fluctuate widely in the international market. Also, the Libyan economy is dominated by hydrocarbons and the public sector. Sizeable oil wealth has supported a decent living standard for Libya's population, and socio-economic development compares favourably with standards in other Middle Eastern and North African countries. Libya has the potential to raise oil production and revenues significantly in coming years, given its large reserve. The reliance of public finance on a single sector means that shocks threaten the economy's fiscal balance and stability. Libya has over-consumed in response to windfalls from surges in world prices. Libyan government spending has outstripped the gain in revenues. These sharp increases in government spending are difficult to reverse when the boom ends and often lead to large fiscal deficits rather than surplus.

However, the main challenge for Libya is to promote growth of the non-oil sector and spur diversification of its economy. Non-hydrocarbon GDP growth has been weak and oil revenue volatility has been transmitted to non-hydrocarbon GDP. Weak non-oil GDP growth reflects both insufficient private investment and low productivity of capital importing efficiency. Productivity growth is a precondition for faster growth and greater investment effort. Strong productivity growth is also a prerequisite for competitive diversification out of hydrocarbon. Projected high oil revenue will provide the finance for growth but will not necessarily spur sustained growth in the non-oil sector. Over-optimistic predictions of future oil revenues are shown to have seriously adverse consequences, particularly if the non-oil economy adjusts to falling demand through underdevelopment and capital flight is provoked.

Policy options for protecting the economy from volatility in oil revenues, without eliminating the benefits from rising prices include the formation of a stabilization fund

and hedging strategies in the international markets. The stabilization fund would smooth consumption and reduce the costs associated with volatile spending. Libya needs sound economic management and to address the problems associated with oil windfalls. Market processes are required to help allocate public resources, and governments and others responsible must take account of risk and uncertainty when selecting projects, and formulating plans for development. Consequently, there is a macroeconomic need to diversify the economy to avoid the pitfalls which so often plague developing countries with vast natural resources.

The decisions concerning public investment in a social economic infrastructure would be better if unconnected to the presence of hydrocarbon windfalls. To speed up non-oil growth and job creation, the oil windfalls should be used strategically, with the aim of facilitating the transition to a competitive, market-led economy. Over the long-term, the intermediation of hydrocarbon windfalls through the household and business sectors might produce superior long-term growth, but it should go in tandem with considerable strengthening of the investment climate. Enhancing the quality of Libya's human resources will also be essential to improve productivity and diversify out of oil - especially into services - and compete in the global economy. Improving the quality of governance deserves particular attention, because it underlies the development reform agenda. Libya would probably have seen a larger benefit from its windfalls had it saved a higher proportion abroad and limited domestic investment through applying market criteria more rigorously.

Quite clearly, good fiscal control of periodic boom episodes enables the boom to temporarily accelerate the rate of economic development. In addition, such questions as the magnitude of the windfalls, how Libya has used them and their impact on non-oil a sector have been addressed in this research.

The adoption of sound economic policies and the good management of oil windfall gains will allow Libya to continuously manage growth and become one of the greatest success stories of all developing countries.

LIST OF ABBREVIATIONS

Agoco	Arabian Gulf Oil Company
API	American Petroleum Institute
BP	British Petroleum
CBV	Central Bank of Venezuela
ENI	Ente Nazionale Idrocarburi
EPSA	Exploration and Production Sharing Agreements
GDP	Gross Domestic Product
HEM	Hexane Extractable Material
IMF	International Monetary Fund
LCB	Libyan Central Bank
MB/D	Million Barrel a Day
NAME	North African and Middle East
NIGC	National Iranian Gas Company
NIR	Net International Reserves
NOC	National Oil Company
OECD	Organization for Economic Co-operation and Development
OPEC	Organization of Petroleum Exporting Countries
PPP	Purchasing Power Parity
PDVSA	Pteroleos de Venezuela Socialed Anonima
PVC	Poly Vinyl Chloride
UAE	United Arab Emirates
UN	United Nations
USA	United States of America
VIF	Venezuela International Fund
YPF	Yacimientos Petrolitoros Fiscales

CHAPTER ONE: GENERAL INTRODUCTION

1.1 Background

The sizeable oil wealth has supported decent living standards for Libya's population. Libya ranks ahead of several other oil-producing countries in terms of per capita GDP adjusted for differences in purchasing power parity (PPP) to GDP and, reflecting a swing in oil revenues, per capita PPP GDP hovered around US$ 9, 269 on average during 1990-2000 reaching US$ US$ 9, 965 in 2004. Despite frozen wages, living standards have been supported through an extensive social safety net with the provision of free housing education and health care, subsidized food and utility prices and sizeable energy subsidies.

Oil wealth creates major opportunities, especially in developing countries. The government, including parliament, plays an important role in managing these windfalls. At what pace should the oil be extracted? How should the proceeds be spent and used? Which investments will address the country's development needs? The decisions made on such issues can have a long-lasting impact and can affect the well-being of today's as well as future generations in a society.

Libya has a substantial endowment of oil and gas deposits. Oil production in Libya is projected to increase sharply by the early 2010, and to reach as high a peak as in the early 1970s' at 3.3 million barrels per day. As Table 1.1 demonstrates, the windfall to the government of Libya has been substantial. Libya faces the challenging task of reducing its dependence on short-lived and potentially volatile oil revenue. It is vital to the country's economic future that the government manage this revenue in a way which allows the diversification of the economy, in order to ensure a steady increase in the living standards of the Libyan population. The lack of multi-resource income makes the economy vulnerable to oil price shocks.

Yet, at the same time, experience in Libya in the management of oil wealth offers a dramatic illustration of the problems that these windfalls could pose.

Table 1. 1 Crude Oil Production in Selected Exporting Countries (1970-2000)

(1,000b/d)

Years	1970	1975	1980	1985	1990	1995	2000
Kuwait	2.989	2.084	1.663	0.936	0.858	2.006	1.996
Libya	3.318	1.479	1.831	0.997	1.389	1.399	1.347
Nigeria	1.083	1.783	2.058	1.498	1.716	1.820	2.053
Norway	0.0	0.280	0.530	0.790	1.716	2.903	3.343
Venezuela	3.708	2.346	2.165	1.564	2.135	2.378	2.891

Source: OPEC Annual Statistical Bulletin, (2003)

Typically, the exploitation of oil generates very large and sudden inflows of revenue. This change alone creates significant challenges for developing countries, not least because their administrative systems are often ill-equipped to handle such flows. Moreover, the uncertainty associated with volatile oil prices adds a layer of complexity that further strains an already over-burdened system. At best, these circumstances challenge the most able policymaker on how to handle the new found wealth. The largest drawback in oil export is economic. Building and facilitating a natural gas infrastructure and the adroit use of taxes and incentives can only play a very constructive, substantive role in a social and economic transformation (Economides and Oligney, 2000).

Hydrocarbon deposits may be very generous but the size of the mineral gifts is finite sooner or later, all the reservoirs that exist on our planet will be discovered. In addition, if the demand for fossil fuels remains positive for as long as supplies are forthcoming, full depletion will inevitably occur. On this assumption, supplies will dry up at some future date, (Mabro, 2003) a date which is yet highly uncertain. Arezki and Ploeg (2007) conclude that the resource-rich countries such as Congo, Nigeria and Venezuela have a weak economic performance and worse than resource poor countries like Asian Tigers.

The challenge of macroeconomic policy in Libya, as an oil exporting country, is to stabilize budgetary expenditure and sterilize excess revenue inflows in the context of medium- to long- term sustainability consideration, and thereby provide an environment

conducive to growth and overcoming unemployment. In most of the oil-producing countries, there has been a strong deficit bias and a procyclical fiscal policy has been driven by oil price development. Furthermore, how the income of hydrocarbon rent investment should be used to get more benefit must be combined. The main argument is to support the urgent need to improve social facilities such as education, health and infrastructure (Hanneson, 2001).

In most countries that are rich in oil, minerals and other natural resources, economic growth over the long haul tends to be slower than in other countries that are less endowed. It is often argued that there is an association between hydrocarbon riches and poor performance "the resource curse", and a significant body of literature has grown seeking to explain the relationship between resource abundance and economic performance. A key question in this regard is how a country like Libya can avoid the resource curse and turn their abundance in resources into a blessing. This question is relevant for a large number of countries. In addition to the possible adverse impact on growth, resource riches can be a major contributor to corruption and social unrest. In a number of countries, oil, gases (and diamonds) are associated with causing and financing civil war with its attendant social and economic costs (Collier, 1999).

While a completely satisfactory explanation for this particular type of "resource curse" is not available, the potential costs are well documented. In contrast, a range of countries (including USA, Norway, and Botswana) appear to have avoided these problems through prudent and transparent management practices.

The macroeconomics of oil exporting countries face challenges arising from three characteristics of oil revenue;

(i) Oil revenue is more volatile than revenue from other export commodities because of international market conditions,

(ii) Oil revenue is a foreign exchange inflow, and its use can have large effects on macroeconomic stability and economic structure, and

(iii) Oil is an exhaustible resource with a finite revenue stream.

For the most part, direct participation by the oil sector in industrial projects has been limited. Instead, the government has been satisfied with providing an infrastructure capable of attracting private and foreign government participation in investment. The

impact of oil on the fortunes of local states shows both remarkable similarities and subtle but important variations, which tell us a great deal about their respective state-building experiences. Oil-revenues in Libya became part of a larger, diversified, and productive economy. This led to distortions and other ills associated with hydrocarbon booms. However, such impacts remained tempered by the boom's contribution to over-all development. Where oil represented the exclusive income of the local revenue government, its impact on state-building, growth and development was more powerful (Vandewalle, 1998).

Few countries in the gulf that have been heavily dependent on the oil sector succeeded in managing their oil wealth in a manner that allowed for the simultaneous development of the boom-oil sector. Norway and Alaska are frequently cited as exceptions to this rule. The fact that Norway was already developed and had a diversified industrial economy base, with a long-tradition of democracy, a market-oriented economy, significant and varied non-energy exports, solid and mature institutions, may largely explain its success.

In brief, the discovery and exploration of oil has been and remains, the most dominant sector in the developing Libyan economy, especially for providing the financial surplus to fund the socio-economic development plans. The petroleum revenues have touched every aspect of the Libyan population's life and have resulted in extensive change in all economic functions of the population and physical resources. The changes, which have accrued in the economic sectors, are the result of many interrelated factors, but the dominant factor is government intervention policy which has played a significant role in the great changes of development in the Libyan economy since 1970. During the national social-economic development plan 1970-1985, massive funds were allocated for productive sectors, namely agriculture, industry tourism and infrastructure, which transformed the country's economy from being traditional dependent on oil revenue to a modern more diversified economy.

Libya has encountered the same challenges as other natural resource based countries, but their difficulties seem to be accentuated by the peculiar nature of oil markets and oil production. The main challenges come from the high volatility of oil prices, the enclave nature of the oil sector, the exhaustibility of oil reserves, and the high concentration of

revenue flows from the oil sector, which invites rent-seeking behaviour and may lead to governance problems. In the past, many oil-producing countries have been disappointed in their expectations that favourable resource endowments would lead to rapid improvements in development process indicators (World Bank, 1995).

It is often argued that there is a link between oil resource riches and poor economic performance, and a significant body of literature has grown seeking to explain the relationships between oil abundance and economic performance. Oil production provides the most dramatic illustration of the problems resource rich developing countries face. Very large, quickly growing, but time-limited production and revenue flows combined with weak administration, means that the ownership of such wealth provides ample scope for inefficient policies. Discretionary behaviour and out-right corruption, all contribute to poor growth performance and eventual dissipation of national oil wealth. The combination of resource riches on the one hand, and weak governance and limited administrative capacity on the other has proven to be disastrous for many countries. Addressing this weakness, however, will require time and sustained commitment.

The oil and gas industry has become the most value creating industry in Libya. In 2001, some 36% of Libya's GDP was from the oil and gas sector. The oil and gas revenue represented some 68% of total government revenue and the oil and gas industry's share of total exports were over 95%. The availability presents both an opportunity and a challenge. The sums involved can have an enormous positive impact on development. Unfortunately, while there are certainly exceptions, evidence to date suggests that petroleum revenue often becomes a curse rather than a blessing. Research in this regard has spawned a rich literature of case studies and theoretical frameworks for analysis of the rise of this problem. Yet petroleum revenue could, in principle unlock the constraints of foreign exchange, serving as a development and diversification spur.

Furthermore, fluctuating oil revenues and pro-cyclical fiscal policy increased government domestic borrowing, resulting in a high debt burden. A typical phenomenon in Libya has been that, during oil boom years, large expenditure programmes were initiated, but during the subsequent period of lower oil prices and lower government revenue, these programmes were cut back or postponed. The fiscal deficit records of the

late 1980s, and of the early of the 1990s, were financed by recourse to domestic borrowing. The debt-to-GDP ratio increased from about 30% in early 1980 to about 50% during 1999-2000, as a result of the oil price volatility.

In addition to Libya's economic management the focus during the last three decades has been on how to accommodate change in the international oil market. Besides, looking for other resources as a substitute for oil and gas, to aids economic diversification. In the past, the choice of individuals and institutions that have managed economic policy, has resulted in the poor management of oil resources with flow-on effects to the economy, reflected in the high variability of saving and investment.

For instance, in 2000, Libya received about 98 per cent of its revenue from oil export and 65% of government revenue from oil-related activities. This dependence on oil exports has, to a large extent, determined the economic policies implemented and economic growth in Libya. Forecasts of oil prices are crucial in fiscal projections when preparing the government budget each year. The issue of oil price uncertainty and its influence on the Libya economy has been studied extensively.

However, the economic context of Libya underwent a dramatic change with a surge in oil exports starting in September 1962 and a percentage increase in government oil revenue that reached its peak in 1970, at 3.3 million barrel a day. The magnitude of this change was enhanced by the fact that oil revenues, exploration and production rights are the exclusive right of the state. That is, the government is the owner of oil reserves and the only recipient of oil revenues and these accounts for over 60% of total government revenues. The massive influx of monies enabled the government to perform a new function in the economy that was not possible before the oil discovery, and the oil sector gradually dominated other traditional economic activities until oil become the main, if not the only source of national income.

The criterion for assessing the success or failure of Libyan economy development resides in determining the extent to which the development process is successful in furthering the diversification goals. Thus, failure of the development process in Libya, despite the priority of several development attempts and the massive financial resources allocated toward development since the early 1960s, has meant that only modest progress towards these goals has been achieved. The Libyan economy still lacks the

level of diversification that would enable the country to reduce its dependency on the oil sector.

An International Monetary Fund Survey (2005) stated that.

They "*encouraged and supported the authorities to attempt to reassess their one-sector-at-a-time approach to reform and to seek greater economic diversification. So far, there are no clear signs and specific plans to guide the country through the anticipated non-oil future*"pp194.

However, despite the opportunities that oil has conferred, its exploitation has also exacted high social, political and economic cost. It can only be speculated whether oil has been blessing or a curse to the Libyan people (Vandewalle, 1996). Despite, its inability to constrain the growth of government consumption, the government has managed to increase its investment in infrastructure quite rapidly

Moreover, it is difficult to make the case that a revenue windfall, especially if fairly sustained, can have a negative overall value since it expands the options available to the government and therefore to the entire country. Furthermore, certain sectors of the non-oil economy, especially those producing tradable goods dependent on this sector, will be adversely affected by the windfall (Galeb, 1988).

Libya faces the difficult task of reducing its dependence on short-lived and potentially volatile oil revenue. It is vital to the country's economic future that the government manage this revenue in a way that allows for the diversification of the economy, in order to ensure a steady increase in the living standards of the Libyan population. This is essential not only because of the temporary nature of the boom, but also because the oil sector, while a substantial source of revenue for the country, is not a source of much employment, with only 11% of the Libyan labour force employed in the sector in 2000, (International Monetary Fund, 2005).

Libya is facing the challenge of economically managing the transition from plan to market as well as dealing with this oil wealth. Recently, Libya has made great strides on the path to market reforms and, in doing so, exploiting its windfall and trying to avert the potential risks of Libya's oil boom.

Thorvaldur, (2000) concludes that oil revenues bring risks. One risk is that too many people become locked in low-skill, oil-resource-based industries, including agriculture, and thus fail, through no fault of their own, to advance their own or their children's education and earning power. Another risk is that the authorities and other inhabitants of resource-rich countries become overconfident and therefore tend to underrate or overlook the need for good economic policies as well as the need for good education. A nation that believes that natural capital is their most important asset may develop a false sense of security and become negligent about the accumulation of human capital. (Amuzegar, 1990).

An equally high priority should be given to establishing clear policies for the use of hydrocarbon revenues targeting diversification to avoid oil revenue volatility. The need to preserve the value of finite resource assets and the wise use of proceeds from selling these assets should be clearly recognized in fiscal policy frameworks. Addressing other issues is more difficult and progress will necessarily be slower. For instance, there are high degrees of uncertainty over the value of resources and assets which are associated with extraction.

It will be necessary, therefore, to establish priorities among practices, both over time and according to Libya-specific circumstances. A high, immediate priority should be given to improving the quality of economic diversification related to oil endowment.
The government has benefited from large flows of revenue from the exploitation of natural resources and needs to address several important issues. First, they need to take measures to stabilize the budgetary and liquidity impact of revenues which are subject to high and unpredictable price volatility or other fluctuations. Second, since the resources are finite, policy should take account of the intergenerational distribution of income flows as well as the distribution of spending and the immediate social impact of resource industries. Besides, hydrocarbon resources will dry up sooner or later. Third, the impact of large inflows of resource revenues on exchange rate developments and the non-resource tradable sector need to be carefully considered. "Dutch Disease" (characterized by an appreciating real exchange rate and the associated adverse impact on the non-resource tradable sector of the economy) is an important issue for oil rich-countries. A clear policy framework that recognizes all of these oil-related issues is an

essential basis for designing an effective and transparent fiscal management plan in oil-rich countries.

Many countries have established separate funds for resource revenues, purportedly to tackle some of the above problems. However, the establishment of a resource fund, while necessary, is not a sufficient condition to address these problems adequately (Danis et al 2003). It is not necessary because, in principle all of the issues can be tackled as integral elements of government budget and fiscal policy.

Also, oil funds usually a sort out a number of problems and is recommended as a necessary contribution to resource revenues diversification. However, a number of countries have set up funds, purportedly to help protect the revenues, and subsequently to protect the government budget and economy from the volatility of revenue flows and to save for future generations, or for other purposes (e.g. development funds).

1.2 Research Focus

This study attempts to examine and evaluate the experience of the Libyan economy and its performance during the crucial 1970-2000 period within the framework of major hypotheses regarding the dynamics of economic development in an oil-based economy. Several fundamental questions are raised: How did the Libyan authorities allocate their oil windfalls among competing needs? What strategies and policies did they pursue in optimising returns on their fortunes during the oil boom, and controlling the damage during the oil bust? Moreover, to what extent did this allocation and strategy help them to achieve their state or implied rational socioeconomic agenda?

A wish to explore at least some of these answers underlies this study. Any examination of the nature and evolution of the Libyan economy on society needs is argued to be rooted in a consideration of a number of broader issues such as development sustainability, resource conservation, employment opportunities, the provision of social welfare benefits and political stability. In addition, the specific organisation and focus of national development plans themselves are also significant issues.

Also, this study aims to explore the problems and issues which accompany oil windfalls and set up the best solution for such problems.

To enhance non-resource based growth and overall domestic economic development, the likely outcome is that looser in short run, but growth enhancing, fiscal policy will be sustainable, while government unproductive policies will not, and a behavioural reaction function of the government could be introduced to look at what constitute both sustainable and optimal policies in the face of volatile world commodity prices. (Nigel, 1998).

1.3 Layout of the Thesis

Chapter Two concentrates on the literature review. Chapter Three investigates the research methodology. Chapter Four focuses on oil industry development. The achievement which has been attained so far and how to get more benefit from this sector by further investment and significant contribution to the GPD in addition to more emphasis on the role of oil revenue development is considered. Chapter Five will concentrate on the development process dilemma and diversification problem and looks at overcoming the obstacles which faced Libya including the most recent developments in the oil industry over the chosen time period. How can Libya divert this windfall from a curse to a blessing through economic diversification from dependence on a single resource? There is emphasis on the interview analysis with Libyan policy-makers, their views in respect of Libyan economic development and how they can benefit from the windfalls. Chapter Six shows the Venezuelan experience of how they dealt with such wealth in the past. Chapter Seven look at findings and recommendations. Finally, Chapter Eight is the conclusion.

1.4 Historical Background

The Libya population grew 4 389,700 in 1995 to 5 021,400 in 2000. The rate of increase in 1997 was 6.5% as Table 1.2 demonstrates. The highest rate of increase in the Libyan population over this 5 years period was concentrated in urban areas (more than 80%) and most of the population were living in cities and working in business, administration, trade and tourism. (Information and Documentation Corporation, 2003)

The 1950s, Libya was characterized by great poverty. Minimal economic development was made possible only by the payment and loans received from various Western nations (see map) Appendix A.

The economic underdevelopment resulted from a scarcity of political and economic resources. In 1955, petroleum was discovered in the country and by the early 1960's

Table 1. 2 Libyan Population (1995–2000)

Year	Population (.000)			Population rate increase (%)		
	Libyan	Non-Libyan	Total	Libyan	Non-Libyan	Total
1995	4 389.7	409.3	4 799.0	2.7	-31.8	-1.5
1996	4 519.4	500.1	5 019.5	3.0	22.2	4.6
1997	4 647.5	700.0	5 347.5	2.8	39.9	6.5
1998	4 768.8	405.4	5 174.2	2.6	-42.1	-3.2
1999	4 895.1	405.4	5 300.5	2.8	4.0	2.9
2000	5 021.4	405.4	5 426.8	4.5	4.0	4.5

Source: General Planning Council, 2002

Libya was taking in growing revenues from the exploitation of that resource. In 1953, Anglo-Libyan and American-Libyan treaties were concluded that allowed Britain and the United States of America to establish military bases in Libya in return for economic subsidies. This was terminated by Libya in 1964. British and American troops were withdrawn in early 1970.

At the time of independence, the Libyan economy was based on agriculture, which was divided unevenly between tree crops and livestock products. Agriculture provided raw materials for much of the country's industrial sector, exports, and trade. It employed more than 70% of the labour force and contributed about 30% of the GDP, dependent on climatic conditions.

For the most part, agricultural resources were limited to two comparatively narrow stretches along the Mediterranean Sea and a few desert oases. The cropland had been maltreated, and the pasture had been overgrazed. Erosion was common, production methods were primitive, and close to a quarter of the agriculture area was held on a tribal basis and was being used inefficiently. Rainfall was unpredictable, except that

usually, it was scarce and ill-timed. When the rain did come, however, it was likely to be excessive. Groundwater was in short supply in the agricultural areas. In some locations it had been excessively drawn upon and so had become brackish or saline and was no longer suitable, even for agriculture. Because the country has no perennial rivers, there is only limited potential for irrigation and even less for hydroelectric power.

At the time of independence, the apparently abundant subterranean water supplies located in the lower Sahara had not been discovered. Even if officials had known about the water, its presence, while encouraging, would not have been very helpful in the short-term due to lack of development funds, inadequate transport and storage facilities. In 1986, although agriculture contributed a very small share to the GDP, it still provided employment opportunities for a large portion of the population and was, therefore, still important. Shortage of water was the main drawback to the expansion of cultivable land, but reclamation and irrigation schemes and the introduction of modern farming techniques held promise for the future.

1.5 The Structure of the Economy

The Libyan economy is dominated by hydrocarbon. At the time of independence (1951), the Libyan economy was based mainly on agriculture, which employed more than 70% of the labour force and contributed about 30% of the GDP. Before the discovery of oil and gas, Libyan was one of the poorest countries in the world. However, by 1961, substantial qualities of oil had been discovered and greatly supported the country's social and economic development. Thus, with a population close to 5.5 million, Libya had an estimated per capita income of US$ 6,800 in 2005. The share of the hydrocarbon sector has been constantly increasingly, and represented an estimated 70% of GDP at 2005. Oil also represented 93% of government revenues and 95% of export earnings. However, the share of oil in the economy has been on a slightly declining trend during the 1990s before rising to 32% in 2004. Libya appears as one of the less diversified oil-producing economies in the world.

The services sector is the second most important economic activity. The contribution of services to GDP declined from 46% during 1990-99 to 10% in 2005, reflecting the

soaring price of oil. However, output in services grew faster than total GDP, so that the share of services reached 46% of GDP in 2005 from about 40% in the early of 1990s. Despite this increase, the contribution of services to GDP remains below the average in upper middle-income countries (53.8%). Construction and manufacturing each contribute around 7% to GDP, a share that has remained largely constant overtime. At 9% of GDP, the Libyan agricultural sector contributes to the GDP around 8% more than the average of upper middle-income countries.

The Public sector dominated activities. In the most radical of the measures, all private property rights were eliminated in March 1978. In later years, most private trading, retail and wholesale, was abolished. The only type of private sector activity that the government did not actively seek to eliminate was small service-producing firms (mostly self employed), which were not viewed as inherently exploitative. The central bank's credit policy was confirmed to supporting the government's effort. It limited credit to the private sector and directed it instead to state entities. As a result of the severe repression of private business activity, a large number of Libyan manager and skilled workers left the country. However, private investment and ownership were encouraged in agriculture, even for foreigners.

The last phase of the socialist period was characterised by an intensive effort to build industrial capacity targeting diversified processes. But failing world oil prices in the early 1980s dramatically reduced government revenues and caused a serious decline in the economic activity. The decline in oil prices during the 1980s reduced Libya's advantage in terms of energy costs and greatly reduced the supply of foreign exchange. Whereas in the late 1970s, it may have been possible both to import industrial raw materials and subsidise food imports, by 1987 it was becoming increasingly clear that foreign exchange earnings was causing a rehabilitation of private sector activity. Beginning in 1988, Libya took some steps towards liberalisation with a greater scope allowed to private enterprise in the trade, small scale industries and agricultural business. In September 1992, a privatization law was passed, but this initiative had no impact on the structure of the economy.

1.6 Libya before Oil Discovery

At the time of independence, Libya possessed few minerals in quantities sufficient for commercial use, although iron ore was subsequently found in the Wade ash Shati in the south-central part the country. In turn, because of the absence of coal and hydroelectric power, the country had little energy potential. In the modern sense, Libya had practically no industry and, given the limitation of the agricultural sector, could produce few exports to be exchanged for the import commodities the country needed.

At independence, illiteracy was widespread, the level of skill was low and technical and management expertise and organization were at a premium (the lack of sufficient numbers of skilled Libyans in the labour force remained a problem in the 1970's. Despite large sums of money having been spent on training Libyans, the government still relied on foreign workers). A large part of national life was lived under nomadic or semi-nomadic, rather than settled, conditions and the high birth-rate added to the country's poverty. The rapid population increase strained the agricultural economy and resulted in the drift of excess unskilled labourers to urban centres, but these centres, also lacked sufficient adequately-paid employment.

In term of resources, including human resources, the outlook at independence was bleak. Throughout the 1950s, and the early 1960s, international and other foreign agencies, mainly the United States, Britain and Italy, continued to finance the gap between Libya's needs and its domestic resources. The foreign community was not in a position however, to undertake an across-the-board and sustained development programme to set the economy on a course of immediate self-sufficiency. During much of the 1950's, the country's administrative apparatus was unable to utilise all the resources made available from a broad.

1.7 The First Oil Boom

During the decade after the petroleum discovery, Libya became a classic example of the dual economy, in which two separate economies (petroleum and non petroleum) operated side by side. For practical purposes, no connection existed between them, except that the petroleum companies employed limited quantities of local labour and

paid a portion of their profits to the government in royalties and taxes. The financing and decisions affecting the activities of the petroleum economy came not from the domestic non-petroleum economy but rather from outside the country. Although this sharp dichotomy was in the process of relaxation, especially after 1967, it appears not to have been attacked conceptually, at least not with fervour, until after the 1969 change of government.

Crude oil production has benefited from dramatic changes which have happened all over the world, such as the Iranian revolution and the Arab-Israeli conflict (Khan, 1994).

In 1981, when oil prices started to fall and the worldwide oil market entered a period of glut, the present phase of independent Libyan economic history began. The decline in oil prices has had a tremendous effect on the Libyan economy. By 1985, Libyan oil revenues had fallen to their lowest level since the first organization of petroleum exporting countries (OPEC) price shock in 1973. This fall in oil revenues, which constituted over 57% of the total GDP in 1980 and from which, the government had derived over 80% of its revenue in some years, caused a sharp contraction in the Libyan economy. Real GDP fell by 14% between 1980 and 1981 and continued to decline in late 1986. The negative trend in real GDP growth was not expected to reverse itself in the late 1980s. The increasing importance of oil in the world economy and the arbitrariness of geology in concentrating the world's most prolific reservoirs in a handful of third world countries, made the overwhelming and long-lasting success of the landlord-state possible (Mommer, 1998).

The decline in real GDP placed a great strain on government spending, reducing the level of imported goods available in the Libyan market and increasing Libya's debt repayment problems, all of which combined to create lower living standards. The decline in oil revenues, as of 1986, also caused the Libyan government to revise its somewhat haphazard way of making economic policy decisions, because it no longer possessed the financial resources to achieve its many goals. Thus, during the early and mid 1980s, development projects were subjected to a more rigorous cost and benefit analysis than during the easy money time of the 1970's.

In regard to Libyan economic plans, Libya's five-year economic and social transportation plan (1976-1980), announced in 1975, was programmed to pump US$ 20 billion into the development of a broad range of economic activities that would continue to provide income after Libya's petroleum reserves had been exhausted. Agriculture received the largest share of aid in an effort to make Libya self-sufficient in food and to help keep the rural population on their land. Industry, of which there was little before the revolution, also received a significant amount of funding in the first development plan as well as in the second, launched in 1981.

In respect of extraction, oil exploration began in 1955. The first well began in 1956 in western Fezzan and the first oil was struck in 1957. Esso (subsequently Exxon) made the first commercial strike in 1959, just as several firms were planning to give up exploration. The first oil flowed by pipeline from an Esso concession at Zalten to its export facilities at Marsa al Buraygah in 1961. Since the early 1960s, the petroleum industry has increasingly dominated the whole economy, although in 1984 it provided direct employment for fewer the 20,000 Libyans. The development of the oil industry was remarkable in terms of its rapid proliferation. Libyan crude oil, while having rather a high wax content, is lighter and easier to handle than crude from most other petroleum areas. It also has a low sulphur content, which makes it easier on internal combustion engines and contributes les pollution than other crude. For this reason, Libyan crude had a receptive market in Europe from the start.

1.8 Conclusion

Despite substantial oil wealth, which is a gift from God, dealing with these revenues represents a challenge and difficult for task the Libyan authorities. In the mean-time (the wealth created or become a companion) to problems such as rent-seeking "Dutch disease" and corruption. On the other hand, oil prices have seen a dramatic change and more volatility then any other commodity and cannot be predicted even in the short-time. This puts pressure on the government and in some cases more schemes were cut as a result of the falling prices. Nevertheless, although a large amount of money was spent on development plans, the consequences were still modest. In the long-term, what should the government do to overcome such problems? Some solutions will be

suggested. Other countries' experiences will be reviewed, particularly the successful experiences.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

The hydrocarbon impact on an oil economy has been tackled by many economists over the years and demonstrates that oil and gas revenues have many benefits, if the countries have utilised them successfully. However, many of these countries have found out that these windfalls, based on exhaustible resources, become more a curse than a blessing particularly in the developing countries, which have suffered from a poor institutional system, and this is of great interest to some economists. In addition, many researchers have found that there is a relationship between resources and rent seeking, particularly when the country depends heavily on these resources and is perceived as lacking in political maturity. In contrast, a few countries have a good performance record in dealing with this windfall, particularly in Western Europe and North America (such as Norway, and Canada) and also Indonesia and Botswana. This windfall has provided a good opportunity for those countries to improve their economic performance and the standard of living for their people.

2.2 Other Countries Experiences in Dealing with Oil Windfalls

According to Okogu (2003), perhaps the most important challenge oil-producing countries encounter, is how to deal with, manage and use their oil wealth, taking into account its exhaustible character and with due attention to intergeneration equity, given their dependency on a depleting natural resource. This essentially needs sound fiscal policy that ensures the preservation of the oil wealth's value. In addition, Thorvaldur (2000) concludes that natural resource abundance tends to release forces that undermine sound economic management and this challenge means that the authorities need to put in place countervailing stabilizing mechanisms. Economic stabilisation is especially important in resource-rich economies.

Eifert et al (2003) state that the economic achievement record of mineral-exporting countries has generally been disappointing. Oil exporters, in particular, have not

done as well as resource-poor countries over the past few decades, especially when one considers the big revenue gains to the oil-exporting countries since 1973, when oil prices soared. Perhaps it is because of the way oil economies are run. Managing oil wealth is much the same as managing any budget well, but some issues are more important for oil-exporters. These include how much to save for future generations, how to achieve economic stability in the face of uncertainty and avoid boom-bust cycles, and how to ensure that spending is of high quality, whether in the form of large investment projects, public consumption and saving, or subsidies.

Barnett and Ossowski (2003) pointed out oil-producing countries face special challenges in managing their economies, not just, because oil prices and revenues are highly volatile and hard to predict but also because they must plan for the time when the oil runs out. The uncertainty of oil revenues has a number of implications for both short and long-term fiscal policy, while the fact that oil is a non-renewable form of energy raises complex issues of sustainability, intergenerational equity and resource allocation.

Subramaninan (2004) highlights that it is well documented that most countries do not benefit from their oil and gas endowment, largely because of poor economic management. Nigeria falls squarely into this category. Between 1970 and 2000, the country's poverty rate, measured by the share of the population subsisting on less than US$1 a day increased from close to 36% to just under 70%. This trend translates an imbalance in the number of poor, increasing from about 19 million in the 1970 to 90 million in 2000. Sala-I-Martin (2003) illustrated, based on cross-country evidence he found, that the natural resource curse is evident in most countries with oil or minerals, and this causes a depression in long-term growth, but countries that are rich in other natural resources, such as agricultural products and commodities, are not subject to the curse. Also, and more important, the curse works by demolishing domestic, economic and political institutions. The presence of oil or minerals gives rise to rent seeking and corruption, which adversely affect the climate for investment and growth.

Katz and Bartsch (2003) noted that policy in oil-exporting countries faces challenges arising from three features of oil revenue. Firstly, oil revenue is more changeable than revenue from other export commodities (largely due to rapidly fluctuating

international market conditions and the high fixed costs involved in exploration and production). Secondly, oil revenue is a foreign effect on macroeconomic stability. Finally, the development of the oil sector can lead to an appreciation in the country's real exchange rate, making its non-oil exports less competitive, which in turn, results in a decrease in the output of the non-oil export sector an effect termed "Dutch disease". However, oil revenue is an exhaustible resource with a bounded revenue stream. It is no surprise therefore; that the Nigerian economy has performed poorly since 1973, far worse than it did before oil became a major factor in the economic equation, with the living standard of Nigerians worse than in it was 1960. These same reasons clarify the low investment in education, which, in Nigeria, has resulted in an erosion of national competitiveness in the age of the "knowledge worker".

> *"Given a good example like Botswana who manages wealth well and who chose to act with wisdom, we can profit by learning from Botswana. It is better to get wise late than never. It we do not learn from them, just as we can from South Korea, Singapore and Malaysia, poverty may apply for a resident permit and confront those who say that God is a Nigerian* "(Utomi, 2003) pp 34

Furthermore, many economies that have very large oil, gas or mineral endowments still have very high poverty levels. Some of the economies in the world that should have had enough income to provide a comfortable living for their entire population for many years find themselves in dire economic straits and abuse their resources. Fiscal policy is clearly the key. We should at least be able to determine the real exchange rate fluctuation, rent-seeking corruption and of course, the general over-expansion of the public sector (Devlin and Lewin, 2002).

Fasano and Iqbal (2003) pointed out, that the windfall was accompanied with challenges, which started to emerge once oil was discovered. The rapidly increasing domestic labour force calls for a sustained drop in GDP, investment in human capital, and institution reforms. At the same time, reduction in vulnerability to volatile oil receipts requires a prudent fiscal policy and enhances structural reform to stimulate diversification. In addition, Varangis et al, (1996) propose that one way to manage oil price shocks is to create a stabilization fund, not to support or stabilize oil prices but to stabilize government revenues, along with diversification and structural

adjustment. Programmes should be carried out to increase economic capability, particularly in the booming sub-sectors. According to Auty (2006), in recent decades rent-rich states have tended to exhibit predatory motives rather than developmental ones, reflecting the strong political attraction of rent extraction and distribution compared with wealth creation.

Many oil-producing, developing countries have turned this blessing into a curse; an invitation to major power intervention, political corruption, and militarization and, paradoxically, given its income value, foreign debt. Oil wealth has also distorted national economies and interfered with development strategies. Along with oil, wealth instilled a false sense of power and false sense of long-term economic security in the minds of policy makers in oil exporting states (Tetreault, 2000). However, Collier (2003) notes that natural resource revenues have been a missed opportunity for many developing countries, yielding stagnation and corruption. At the heart of this failure has been a lack of transparency in the receipt of revenues, a lack of security in how they have been spent and a lack of stability in the economy.

Wantchekon (1999) explains that a rentier economy tends to create incumbency advantage, weak democratic governance and socio-political stability, and suggests that a crucial determinant of African and Asian political regimes is their level of dependency on natural resource revenues. As the case study on Norway would suggest, improving transparency of government revenue allocation should facilitate democratic governance. More broadly, the results also suggest that resource dependence quite clearly has more political significance than GDP allocation. Auty and Galeb (2000) conclude that contests for rent are linked to the political economy of resource-abundant countries and this leads to factional states that serve sectional interests. Such governments prefer a non-transparent manner for deploying the rents in order to maximise the room for political manoeuvring. The favoured channels for deploying rents are trade protection, job creation, and over-extended public expenditure. The economy is thereby diverted from its comparative advantage and accumulates economic distortion that hampers diversification or causes the economy to regress into a stable trap of dependence on a weakening primary sector. However, resource-abundance occasionally engenders developmental countries that pursue a modified competitive industrialization path.

Esanov et al (2001) stated that governments are a main topic in the large literature investigating the impact of natural resources on economic performance. This literature generally finds that countries rich in natural resources tend to grow less rapidly and experience higher macroeconomic instability than resource-poor countries. Dalmmazo and Blasio (2001) developed a model in which reform leads simultaneously to a reduction in rent appropriation by the elites and an expansion of private business opportunities. The results are that natural resource abundance reduces the incentives to reform and hurts growth. The oil shocks implied two major changes, a change in relative prices and a change in world income distribution. Largely, the price effects, because more apparent and immediate, drew most of the attention to the neglect of the, perhaps more important, distribution of income effects (El-Beblawi, 1983).

Rosenberg and Savalainen (1998) argue that, in Azerbaijan there are strong pressures to invest in large projects, which may bear a low rate of return. Moreover, the viability of the project would very likely rely on continued explicit or implicit subsidies and would be channelled to traditional export industries. However, many of these industries have little chance of benefiting from these subsidies. The earnings from petroleum revenues can be associated with and promote rent-seeking behaviour.

Linn et al (2004) stated that the windfall associated with the natural resource boom weakened the authorities' commitment to undertake necessary restructuring of underdeveloped sectors. Subsidies to these sectors, which were easy to finance during the boom, became hard to maintain after revenues from the booming industries declined. To avoid the consequences of a mismanaged natural resource boom, countries need to make important decisions about consumption, saving, investment and diversification policy and not relax attention on underlying structural problems. If the country does not prepare itself properly before the boom occurs, the end can bring economic disorder and collapse. Oil revenue has negative impacts on development, such as money expansion and inflation, imbalances, emigration to towns, economic equilibrium, aids the traditional productive sectors role, and encourages great in Arab countries economies (Abd-alhassan, 1999). There is investment at a constant pace in non-oil Arab countries compared with oil countries.

For example, in Libya the local investment rate to GDP was 37% in 1981, whereas it was 42% in 1960. This is one of the negative economic impacts while private and public sector consumption have been exacerbated, particularly with defence expenditures (Samak, 1987). According to Abd-allah (1986), oil receipts encourage a country to increase their imports and this situation leads to finance surplus decline and inflation import from industrial countries, which, in turn is responsible for the oil price increase. The balance of payments in Libya recorded a surplus for the first time in 1963. It suffered deficits for many years later as a result of the capital transformation from oil companies. The significant reason for this was the considerable demand, created by oil companies (Ghanem, 1985). Furthermore, the International Monetary Fund (2006) stated that Libyan oil proceeds reached 68% of GDP. Non-oil revenue declined due to non-transfer of the interest on the Oil Reserve Fund by the Central Bank of Libya and lower collections by customs and local governments. Partly reflecting the downside effects of the new tax law and customs tariff, government spending was increased by about 33%, reflecting a sharp increase in the wage bill 25%. The non-oil deficit widened to 35% of GDP. It affirms that the projected levels of growth and investment in the non-oil sector were among the lowest in neighbouring countries and not enough to create new job opportunities for the country is potential, and not sufficient to support the rapidly increasing Libyan labour force.

Peterson and Budina (2001) affirm that Kazakhstan stabilization funds firstly shield the economy from the negative effects of volatility due to variation in government tax revenues and secondly the stabilization fund reduces uncertainty emanating from fluctuation in revenues from natural resources. By transferring revenues to the stabilization fund, the government is able to improve overall fiscal discipline.

Developing horizontal accountability is essential to create a constituency for a long-term vision and enforcement of prudent and sustainable fiscal policies, although oil funds in Azerbaijan and Kazakhstan have some provision that allows for horizontal accountability but does not restrain actions. Hannesson (1998) proposed that a good thing for the next generation is a share in oil revenue and this can be possible only by transforming the non-renewable resource into a renewable one. By investing, the rent earned from extracting oil and gas in ways that increase the production capacity at

home or abroad, so the standards of living for the present as well as future generations are increased.

Allen (2005) discusses the Arab Gulf oil exporting countries that are generally estimated to have saved the bulk of the export windfall. Between 2003 and 2004 oil and gas export receipts relative to GDP are estimated to have increased by 3.5 percentage points whereas the current account improved by 3 percentage points in the oil exporting countries. This suggests that the private and public sectors taken together saved more than four fifths of the export windfall. However, only one third of oil rich countries have a formal budget process for handling the oil windfall. Uses of the windfall are subject to parliamentary scrutiny in only 40% of the countries where there is evidence that the existence of a formal mechanism to handle the oil windfall leads to higher saving, as countries with a special fund tend to place most of the oil export windfall in this fund. However, oil funds are not a panacea.

For the Arab oil exporting countries, the best investment the oil financial surplus in global institutions is to introduce easy loans and aid from the wealthy countries to poor countries such as Sudan, Mauritania and Somalia in the from of free trade, customs union and economic union, an emerging economy and an Arab Economic Integrated policy. Toungui (2007) Conclude that the African's Economy must diversified over the medium term if the sustainable growth necessary for poverty reduction is to be assured the dilemma is how oil revenues should be managed.

Governments in oil-producing countries usually try to obtain a substantial share of the petroleum rent through user fees or special taxes. There are legal-philosophical and practical reasons for this. The legal-philosophical reason is that oil deposits often lie underneath public land, so the governments in question consider themselves the rightful owners of these resources, in trust for the people who elect them. Hannesson (1998) notes that many practical problems are glossed over by this simple example. Oil prices are, as we have seen, volatile and can double or triple, or be reduced by a half, quite abruptly. This will substantially affect the petroleum wealth and change the amount that should be set aside accordingly. How should this risk be dealt with? The downside risk of low revenues is probably more difficult to live with than the upside risk of high revenues. Pomfret (2006) concluded that Uzbekistan must

diversify its economy and that it has more scope to do so than does Turkmenistan. The strategy for this requires policy reforms so that prices guide resource allocation in efficient directions. By the early, 2000s Uzbekistan appeared to be moving towards this with the adoption of a new attitude towards economic management aimed at helping small and medium-size enterprises. Removing the latter would be a major step in reducing the rent extraction in agriculture and in improving operation of the domestic price system.

The International Monetary Fund (2005) stated that the Libyan economy still largely remains controlled by, and is heavily dependent on, the oil sector. Three quarters of employment is still in the public sector and private investment is low. They added that complicated regulations hinders private sector activities, is restrictive of labour market practices, and leaves a legacy of bad policy. However, the recovery of the oil price in the oil market added to a significant improvement in the external current account surplus which reached about 50% of GDP. The report claims and urges that higher growth rates and diversification of the Libyan economy could only be achieved through deregulation, a significant scaling down of the dominant role of the public sector, and the development of the private sector. They expressed strong interest in these findings and, together with World Bank, will take a leading role in assisting Libya to reform the economy.

Ethiraika and Hamed (2002) wrote that oil prices have an adverse effect on real economic growth. From one year to another the fluctuation in the UAE was on average, about 5%t as a result of the change in oil prices. Heidrian and Green (1989) conclude that the Algerian economy has been heavily dependent on hydrocarbon export. A worrisome phenomenon is the increasing dependency of private consumption expenditure on petroleum revenues. Algeria is heavily dependent is this sector by a well-marked trend in oil exports. Therefore, the country's is objective must be the diversification of exports in order to help diminish the impact of volatility of world demand for exports of crude oil

McPherson (2002) stated that oil economic management should be given more consideration and concentration by developing countries that rely on it, where

failures have been of far more concern than successes, with adverse outcomes for development.

Schlesinger (2002) pointed out that the problem for Venezuela is that the government spends the money, owns the oil and gas sector, mineral resources, the largest businesses, and the largest employer and is the largest financial power. There is too much government control and too much government interference in every aspect of Venezuelan life.

Auty (1997), for instance, examined the relationship between broadly defined resource-rich groups of countries over the period 1960 to 1990. Sachs and Warner, (2000) show that there is a robust inverse relationship between growth and resource riches for a sample of 97 countries over the period 1970-1989. However, they found that the hydrocarbon wealth remained challenging and there was poor economic performance. Hausman and Rigobon (2002), while supporting the generally inverse relationship, point out that oil-rich countries performed well economically in the 1980s, when oil was doing well, contrary to what would be expected under the "Dutch Disease" hypothesis. In addition, Lederman and William (2003) have raised doubts about the robustness of the Sachs and Warner findings.

2.3 Economic Rent

In his "Principles of Political Economy and Taxation," Ricardo defines rent as

> *"That portion of the produce of the land earth which is paid to the landlord for the use of the original and indestructible power of the soil. The term is applied to whatever is annually paid by a farmer to his landlord. Moreover, rent is connected to income that is derived by methods other than planned productivity.*
>
> *"That part of the payment to an owner of resources over and above that which those resources could command in any alternative use. Rent is receipt in excess of opportunity cost. In some sense, it is an allocatively unnecessary payment not required to attracting the resources to the particular employment"*

> *'If all land had the same properties, if it were unlimited in quantity and uniform in equality' Ricardo pointed out, non-charge could be made for its use except where it possessed peculiar advantages of situation."* Ricardo (in Sraffa, 1976) pp 324

Clearly, both limited quantity and heterogeneity of land are factors that led Ricardo to develop his version of rent theory in agriculture. He argued that, as the margin of cultivation is extended to use land of inferior quality, cultivation on the land of higher quality results in rent. Moreover, this rent reflects the difference in the quality of "marginal" and that of "intra marginal" lands as cultivation is extended. Another way to look at this is by noting the limited quality or scarcity of land. The origin of rent, as Ricardo sees it is due to the physical characteristic of natural resources, which are perceived to be universal no matter what the nature of production might be. As a result, this concept is applicable to all periods of history. In fact, the phenomenon of rent is not unique to capitalism (Bina, 1985).

Sraffa, (1976) makes a distinction between rent and profit as part of a more general theoretical development. The laws, which regulate the process of distribution of "the produce of the earth", sit among the three classes of community, namely the proprietor of the land, the owner of the stock or capital necessary for the cultivation, and the labourers by whose industry it is cultivated. It is not surprising at all, therefore, that the origin of rent in Ricardo's sense is through technical consideration rather than social necessity. The cause of rent here is seen in the extension of cultivation instead of the monopolization of nature, which necessarily leads to the development of a particular structure of property relations in agriculture.

However, as different qualities of land and sometimes, additional investment in the same lands, at decreasing productivity, are required to satisfy demand, economic rents appear even on land of the poorest quality. Hence, tenants can always afford to pay some form of ground rent. In other words, the empirical fact that tenants always pay some form of ground rent is compatible with the assumption that the marginal ground rent on production is zero.

Moreover, competition amongst tenants will drive the economic rents in the form of ground rent into the pockets of the property owners, but because of competition in the product market, there is a limit to what can be paid. Therefore, once lease contracts have been signed, the tenants will be compelled to invest and expand production, as long as it is profitable to do so, up to the point where long-term marginal production costs are equal to market prices (Mommer, 2002).

Libyan oil rent inflated the size of an inefficient public sector in the economy and an increased oil dependency gave rise to large variations in fiscal balances and high levels of government borrowing which was necessary to maintain expenditure initiated during boom years (Ntamatungiro, 2004). Oil rents shape the political economy of a petroleum-exporting nation. Revenue income from black gold can finance production, physical and social investment, or fuel unsustainable consumption booms and eventual fiscal crisis. They can also improve public welfare through transparent distributional mechanisms, create elite arenas of competition, or underpin kleptocratic governments (Eiffert et al, 2003).

It is quite clear, that the concept of economic rent is one of very wide application, one capable of application, indeed, to any input whose supply curve in any occupation is of less than infinite elasticity. Consider the situation illustrated in Fig. 2.1 where market forces have resulted in a price of OP and a supply of OM. It is immaterial for present purposes whether the demand and supply functions relate to a productive input or a physical product. Since the supply schedule SS' is upward sloping (i.e. has less than infinite elasticity) every unit supplied except the last (at point M)is receiving a price (OP) in excess of that strictly necessary to obtain it. For example, the unit corresponding to the point M' would be forthcoming at a price M'Q; in fact it receives a price M'N' so that the difference, QN', is a payment over and above its necessary supply price. That is, it is economic rent. By similar reasoning, all of the area SPN out of the total payment OPNM (i.e. OM units at a price of NM each) is economic rent and represents revenue received by the supplies of the input or commodity which is in excess of that strictly necessary to bring forth that supply.

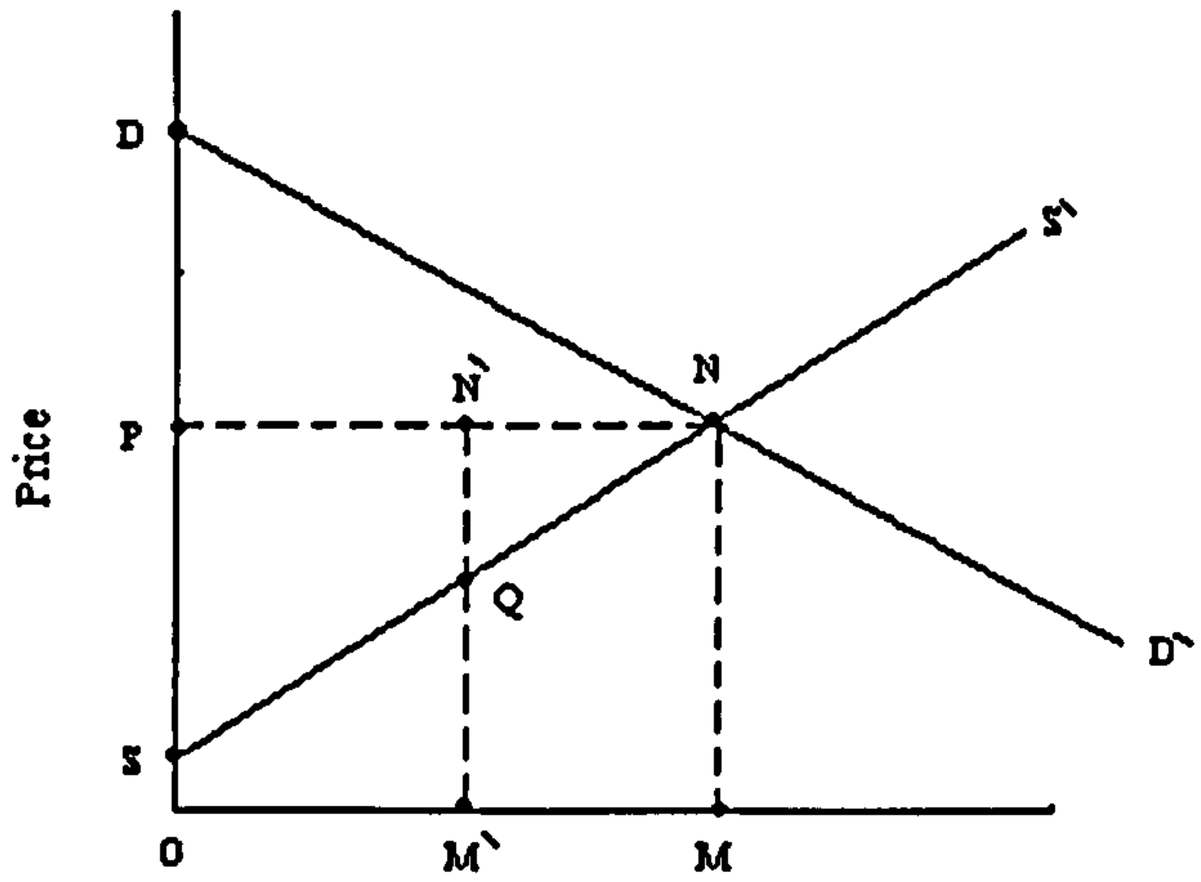


Fig 2. 1 Economic rent and consumers' surplus

2.4 The Rentier State

Rentier states are defined as those countries that are in receipt of, on a regular basis, substantial amounts for external rent (Bina, 1985). In cases where some important flows of income containing a rent component do not accrue directly to the state, it is not a rentier state.

Thus, the Libyan state is highly centralized and the rent received by the government has very little to do with the productive efforts of the community as a whole. Oil export prices are, in fact, totally divorced from the cost of total production. High levels of external capital in flows coincided with the initial stages of state building, creating a disjuncture between the development of regulatory, extractive, and distributive state institutions. The first structural impact of external capital inflows on the state from mainly the oil economy is the dismantling of extractive institutions. State controlled capital inflows enable governments to avoid the extraction of revenues and to shelter themselves from the political and social conflict that accompanies taxation. With no taxes, citizens are far less demanding in terms of political participation.

It is generally accepted that, in oil exporting countries, the state plays a significant role in the economy. This is mainly due to oil rents being the main intermediary

between the oil sector and the rest of the economy (Benli, 1995). The state role, however, is largely limited to the distribution of this rent to the population.

In oil exporting countries, the state's income determines GDP rather than the other way around and the differences in per capita GDP simply reflect the variable income opportunities and spending performances of each state structure. Thus, the state's simple act of spending domestically will maximize GDP growth, and clearly reflect the variable income opportunities and spending performances of each state structure. However, in economies where the state is of the non-rentier type, the largest part of the population obtains its income from sources different from the state itself. Thus, the state essentially redistributes income by relying on taxation.

The primary distinction between rentier and non-rentier states is the predominant function of the state. Hence, the relevant distinction appears to be one between "allocation" and "production" states. A rentier state inevitably ends up performing the role of allocating the income that it receives from the rest of the world. As long as the domestic economy is not used to raise further income through domestic taxation, the strengthening of the domestic economy is not reflected in the income of the state, and is therefore not a precondition for the existence and expansion of the state. This is a unique situation; almost without fail, rentier states are largely independent of a domestic economic production. On the contrary, when the income of the state is based on tapping the domestic economy, the state can grow and perform a basic function only to the extent that the domestic economy provides the income, which is needed to do so.

2.5 A Rentier Economy

In a celebrated passage, Adam Smith separated rent from other sources of income, wages and profit. *"Rent, it is to be observed," Asserts Smith "enters into the composition of the price of commodities in a different way from wages and profit. High or low wages and profit are the causes of high or low price: high or low rent is the effect of it"* (Smith, 1976). pp 325

A long tradition of hostility and mistrust was, thus born in the economic profession against rent and rentiers. Classical economists have few kind words for rent and rentiers (mainly property owners). Both liberal and socialist economists as

unproductive, almost antisocial assaulted rentiers, sharing in the produce without, so to speak, are contributing to it. "The rise of rent" affirms Ricardo" is always the effect of the increasing wealth of the country and of the difficultly of producing food for its augmented population. It is a symptom, but it is never a cause of wealth" (Sraffa, 1976).

A rent, it is to be remembered, is not merely an income for the property owner but generally a reward for ownership of the entire property and also a reward for ownership of all natural resources. Mines as well as land generally pay rent to their owners and this rent, as well as rent of land, is the effect and never the cause of the high value of their produce. The general perception of a rentier was that of someone who, though they do not participate in the economic activity, receives, nevertheless, a share in the produce and in time, a handsome share. In this stereotype analysis, a rentier is a member of a special social group who does not earn his income; he only apportions slice of the produce. This is of course a caricature, but somewhere deep in the subconscious of the social observer there is always a doubt on the legitimacy of the rent, a feeling that is shared by liberals and radicals alike (El-Bablawi, 1983).

The International Monetary Fund (2006) stated that Libya as a rentier economy, will remains heavily dependent on oil revenue and that diversification was still too far-reached to achieve.

> *"Diversification is the biggest challenge for Libya, as it implies sustained effort to promote medium-sized enterprises in order to expand the country's non-oil production and export bases, and create jobs to meet the demands of the rapidly increasing labour force. Policies to expand the production base should be centred on (i) land reform; (ii) the continuation of efforts to improve the legal and regulatory environment including the reform of the labour code; and (iii) the reform and consolidation of the judicial system to streamline and speed up conflict resolution, and improve the private sector's confidence in the country's legal institutions (p 16)"*

In modern economic analysis, an efficient allocation of resources would call upon rent as much as other factor prices. No value judgement is implied. Rent is an economic price, as any other price, but there remains, an important reservation on the social function of the rentier. Although not on the economic rationale of the rent, the

discussion of a rentier economy is thus concerned with a social group of rentiers rather than the economic significance of rent referring as it does, after all, to a special behaviour and spirit.

The notion of oil rent in the oil industry is nothing but the phenomenal form of the specific property relation that is unique to the oil industry. Historically, the separation of the ownership of hydrocarbons from the ownership of the oil fields resulted in the development of a barrier within the context of capital accumulation in oil production. In countries where the ownership of the surface soil legally includes the subsoil, the owners of capitalist oil producers are faced with the obstacle of the ownership of the oil lands. This relationship remains the same, even if the state as a legal form of landed property, owns the oil lands. The separation of ownership is part of an historical process, which is realized legally through the act of lease contracts concessions. At the same time, theoretically capital investments made by the owners of the subsoil are consistent with the separation of the ownership of the subsoil and the ownership of land. The owner of the land received to appropriate rent, while the capitalist investor receives appropriate normal profit (Bina, 1985).

Rent, it is to be remembered, is not a special general phenomenal known in all economies. In as far as there, remains differences in natural resources endowment, human knowledge and location there will always be rent paid or imputed. The differences among countries are however, one of magnitude. While in most countries rent is only a small fraction of income receipts and pure rentier are either nonexistent or very few, the situation in Libya is quite different, rent is in fact, the dominant factor, hence the epithet " rentier economy".

However, technically "income" oil revenues are not perceived in the Libyan state as property income accruing to the whole society. Of course, a more accurate assessment would reduce the income element in oil revenues to that part imputed to value added, the rest, that is the major part, being an exchange of assets or wealth (transformation or real asset-oil into financial asset-foreign exchange).

However, all this remains academic since oil revenues are perceived by governments and citizens as income and treated as such. In matters of behaviour, economic

reasoning is of little help, only perceptions count. No more than a third of total manpower is engaged in the oil production, while adding 30-50% to the GDP. Conventionally measured, the very high contribution of oil in the GDP is not, of course, only the effect of a remarkably high productivity of oil labour, a rent element is in fact, overwhelming. The fact that oil revenues are not directly related to enterprising spirit and hard work affects a large spectrum of behaviour and attitudes, both at the government and individual level. Oil revenues are perceived as windfall profits a gift of God.

2.6 Oil Revenue Volatility

Reliance on oil revenue, particularly when it makes up a large share of total revenue, renders short-run fiscal management, budgetary planning, and the efficient use of public resources difficult.

Table 2. 1 Spot Crude Oil Price (1972-2003 $/ bb)

Year	Brent	Year	Brent
1972	1.90	1988	13.20
1973	2.83	1989	15.68
1974	10.41	1990	20.50
1975	10.70	1991	16.56
1976	11.63	1992	17.21
1977	12,83	1993	14.90
1978	13.03	1994	14.76
1979	29.75	1995	16.09
1980	35.69	1996	18.56
1981	34.32	1997	18.13
1982	31.80	1998	12.16
1983	28.78	1999	17.30
1984	28.06	2000	26.24
1985	27.53	2001	22.80
1986	13.01	2002	23.85
1987	16.91	2003	28.10

Source: BP Statistical Review of World Energy, June 2003

The challenges largely stem from the volatility and unpredictability of oil prices. There is ample evidence that oil prices exhibit volatility in the short run and large fluctuations over the medium term, so one-third of the time the oil market will be faced with the prospect of a monthly price change greater than 8%. Therefore, at the average oil price in 2002, in any month there was a one-in-six chance that the post oil price might drop by some US$2 a barrel (Cashin et al, 2000).

In addition, the experience of the last few years has shown that large annual price movements can take place in either direction. Annual average oil prices surged by nearly 30% in 1995-96, declined by 36% in 1997-98 and then more than doubled in 1999-2000. Moreover, these fluctuations are often difficult or even impossible to predict (Table 2.1).

It can be seen from the table above, that oil prices have been through some dramatic increases. For instance, in 1972 the price was US$1.90, then increased to reach US$35.69 in 1980 then fell again in 1986 to US$13.01, and increased again in 2003 to arrive at US$28.01.

Oil prices have been highly variable, twice as variable as those of other commodities, even when changes are measured as deviation from recent trends. Changes have also been very poorly predicted, and it has been difficult to separate out temporary fluctuations from trends. If experience is a guide, shocks will continue to be poorly foreseen, and producing countries will be vulnerable to boom-bust cycles. Instability is very costly, as economic and budgets adjust asymmetrically.

Borqujari and Melhem (1990) and Amuzegar (1990) argue that the bigger challenge, which oil exporting countries face, is the economic diversification dilemma. These countries must balance rising oil receipts over time. They must take steps to ensure sustainable real economic growth, rather than a mere rise in current consumption. Furthermore, to accomplish a sustainable increase in real income, a reduction is required in the economy's dependence on the volatile world price and demand for oil.

The volatility of oil prices leads to corresponding volatility in the fiscal cash flow. The dependence of fiscal revenue on the oil sector renders public finances vulnerable to a volatile external variable that is, for the most part, largely beyond the control of

policy makers. For example, in Venezuela, oil revenue accruing to the public sector fell from 27% of GDP in 1996 to 12.5% of GDP in 1998 before rising again to 22.5% of GDP in 2000. In addition, a change in the oil price of US $1 a barrel on an annual basis is associated with a variation of close to 1 percentage point of GDP in Venezuelan public sector revenue (Barnett and Ossowski, 2002). An alternative explanation to this curse puts the emphasis on volatility growth, for investment, for income distribution, for poverty and for education attainment. Natural resource rents tend to be very volatile because the supply of natural resource exhibits low price elasticity of supply (at least in the short term).

Thus, dependence on oil as a major source of export earnings and government revenue confronts policymakers in oil exporting countries with the short-run issues of how to address sharp and unpredictable variation in oil prices and revenue, and how to use oil revenue. Thorvalder (2000) suggest that the analysis of the short-run fiscal stance in oil- producing countries should take into account the macroeconomic and fiscal costs of a volatile fiscal pattern, and the impact of fiscal policy on short-run macroeconomic dynamics. Amuzegar (2001) state that despite strenuous efforts in Libya towards self-sufficient food as an overriding national goal, the results were disappointing and the objective of reducing dependence on oil was only partly achieved.

2.7 Economic Development and Wealth Creation

Economic development refers to the development of economic wealth in countries or regions for the well-being of their inhabitants. Economic development is a sustainable increase in living standards that implies increased per capita income, better education and health. Public policy generally aims at continuous and sustained economic growth and expansion of national economies so that developing countries become developed countries. The economic development process supposes that legal and institutional adjustments are made to give incentive for innovation and for investment so as to develop an efficient production and distribution system for goods and services. Development is economics on a social level that has evolved into a professional industry of highly specialised practitioners normally working in public-

private partnerships that are sanctioned and many times at least partially funded by local, regional and state provincial tax money.

Economic development encompasses three major areas:

(i) Policies that governments undertake to meet broad economic objectives such as stability, high employment, and sustainable growth. Such efforts include monetary and fiscal policies, regulation of financial institutions, trade and tax policies.

(ii) Policies and programmes to provide infrastructures and services such as highways, parks, affordable housing, crime prevention, and education. The primary purpose of these programmes goes beyond economic development. Therefore, depending on its mission, an economic development organization may or not address these issues, as they have implications for economic development.

(iii) Policies and programmes explicitly directed at job creation and retention through specific efforts in business finance, marketing, neighbourhood development, small business development, business retention and expansion, technology transfer and real estate development.

Economic development in its simplest from is the creation of economic wealth for all citizens within the diverse layers of society so that all people have access to potential increased quality of life. Job creation, economic output and increase in taxable bases are the most common measurement tools. When considering measurement, too much emphasis, and in some cases blame, has been placed on economic developers for "not creating jobs". Economic developers do not typically create jobs. It is the existing business and start-up activities that create jobs. It is however, a responsibility of the economic developer to make sure there is sufficient economic development programmes in place, to assist the businesses in their needs.

Economic development is a process directed at outcomes encapsulating improved standards of living and greater capacity for self-reliance in economies that are technically more complex and more dependent on global integration than before. The modern era of development began with the end of the Second World War, which marked the beginning of an unprecedented period of science and technology transfer (Todaro and Smith 2004).

Development of economically backward areas was to create investment opportunities and demand for the output of industries desperate to find peacetime customers. The modern era of development began brash and confident that the world and developing countries in particular, could be remade within a generation or two.

Development is a processed intended to achieve a well-defined outcome. But, the definition to which we subscribe must be just as relevant in reverse as it is in the identification of successful development (Gillis et al (1996). Development is a process for growth towards self-reliance and contentment. It is a process by which individuals, groups and communities obtain the means to be responsible for their own livelihoods, welfare, and future.

The theories of economic development in the 1950s and 1960s regarded the improvement of people's livelihoods and standard of living as little more than by-products of the building blocks of modernisation i.e. (i) economic return to successful accumulation of capital, and (ii) economic growth fuelled by productivity improvement arising from the transfer of technology from technologically and economically advanced areas to technologically and economically backward areas (Remenyi 2004). The key actors in the planning and implementation of development were technical professionals from all aspects of engineering, agriculture, administration and planning, demography and law. Technology transfer and massive investment in infrastructure quickly could bring Libyan economy on line, seamlessly integrating.

According to Hayami (2001), the major task of developed economies is to explore the possibility of emancipation from poverty for developing economies. It should be strongly focused on low-income developing countries where poverty is especially acute. How can low-income economies in the world be set on the track of sustained economic development for the immediate good or reducing poverty and the long-term goal of catching up to the wealth developed economies? 'Economic growth' has a connotation of quantitative expansions in economic variables, especially aggregate and per capita national income as measured by such statistics as GNP and NNP (net national product). Therefore the analysis of economic growth is concerned mainly

with measuring growth i.e. economic variables and identifying their interrelationship such as between the national income growth rate and speed of capital formation.

On the other hand 'Economic development' is usually concerned as a process involving not only quantitative expansions but also changes in non-quantitative factors such as institutions, organization, and culture under which economies operate. If we follow this usage, economic growth is considered a quantitative aspect of economic development. If so, in addition to the analysis of economic growth, the study of economic development must investigate the influence of institutional and culture factors on economic growth as well as the impacts of economic growth on those factors.

Moreover, the productivity of an economic subsystem, consisting of its resource endowments and technology, is conditioned by culture and institutions in society. The efforts to increase the productivity of labour by applying more capital have progressed since the beginning of human history. However, at the stage when natural resource endowments were the binding constraint on people's living, the primary concern would have been how to increase the productivity of natural resources by applying more labour and capital. It has been under the new technology regime since the Industrial Revolution that the substitution of capital for labour is seen as the central issue in economic development. However, many developing economies are trying to achieve rapid industrialization under high population pressure and severe natural resource constraints. A strategy commonly adopted has been to maximize the rate of capital accumulation under the government's directive. Villaneuva (1991) stated that exports affected, and are affected by, long-term economic growth through various mechanisms, including production and demand linkage, learning effects and improvements of human resources, adoption of superior technology embodied in foreign-produced capital goods, and the general easing of the foreign exchange constraint associated with the expansion of the export sector. Both in the short run and long-run, an increase in export activity will raise the growth rate of output. Although the short-run transitional dynamics in the standard neoclassical analysis of the relationship between export and economic growth remain valid, the modified model's long run result is at variance with standard proposition that the growth rate of output is independent of export activity.

No country has achieved sustained economic development without substantial investment in human capital and education. Much literature has emphasised the complementary relationship between human and physical capital, noting how imbalances in these two stock as well as human capital externalities, can effect economic growth. However, because human capital is typically treated as a homogeneous concept, very little is understood about how different types of education- tertiary, secondary, and so forth- shape the overall development process (Ramcharan, 2004).

Lopes et al (2002) conclude that there is a direct relationship between the share of construction in gross output and economic growth which is consistent only with a downturn economy. Romer (1989) concludes in a theoretical framework for thinking about the role of human capital in a model of endogenous growth. The framework pays particular attention to two questions: What are the theoretical differences between intangibles like education and experience on the one hand, and knowledge or science on the other? And How do knowledge and science actually affect production? One implication is that the initial level of a variable like literacy may be important for understanding subsequent growth. This emphasises that level of an input contrasts with the usual emphasis from growth accounting on to rates of change on inputs. Solow (1957) suggested a simple way of segregating shifts of the aggregate production function from movements along it. The method rests on the assumption that factors increase their marginal products, but it could extend to monopolistic factor. Romer (1986) stated that the rate of return on investment and the rate of growth of per capita output are expected to be decreasing functions of the level of the per capita capital stock. Over time, wage rates and capital-labour ratios across different countries are expected to converge. Consequently, initial conditions or current disturbances have no long-run effect on the level of output and consumption. Ruddock and Lopes (2005) have found that a major obstacle to economic, development and construction studies has been the lack of the appropriate information on the construction sector when they studied the relationship between the economic development and the level of activity in the construction sector.

2.8 Conclusion

Despite the rich economic literature reviews in oil wealth, there is a strong relationship between natural resources, particular oil wealth, and slow growth. Countries poor in resources show good performance over the last decades. The oil wealth abundance provides a good opportunity for the oil-exporting countries to diversify their economies. However, bad economic performance still dominated. Despite, the effort from these countries to reduce this dependence, the results are modest and were disappointing in for the most part. Some researchers attributed this to rent seeking and others, to lack of accountability, creditability, and others, to lack of transparency or "Dutch Disease". There is still a long road ahead for oil exporting countries trying to improve their economy and subsequently, increase their standard of living and sustainable development.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Case Study Methodology

Case study research excels at bringing us to an understanding of a complex issue or object and can extend experience or add strength to what is already known through previous research. Case studies emphasize detailed contextual analysis of a limited number of events or conditions and their relationship. Researchers have used case study research methods for many years across a variety of disciplines. Social scientists, in particular, have made wide use of this qualitative research method to examine contemporary real-life situations and provide the basis for the application of ideas and extension of methods.

The field of sociology has been associated most strongly with the development of case study research. This coincided with a movement within sociology, to make it more scientific. Feagin et al (1991) stated that a case study is undertaken by giving special attention to completeness in observation, reconstruction, and analysis of the cases under study. Case study is done in a way that incorporates the views of the "actors" in the case under study.

Researcher Robert Yin defines the case study research method as;

"An empirical inquiry that investigates a contemporary phenomenon within its real-life context; when the boundaries between phenomenon and context are not evident; and in which multiple sources of evidence are used" (Yin, 1994).

Critics of the case study method believe that the study of a small number of cases can offer no grounds for establishing reliability or generality of finding. Others feel that the intense exposure to study of the case biases the finding. Some dismiss case study research as useful only as an exploratory tool.

Hamel et al (1993) were careful to reject the criticisms of case study as poorly founded, made in the midst of methodology conflict. They asserted that the drawbacks of case study were not being attacked, rather the immaturity of sociology

as a discipline was being displayed. As the use of quantitative methods advanced, the use at case study as a methodology slowed down.

However, another criticism of case study methodology is that its dependence on a single case renders it incapable of providing a generalising conclusion. Case studies can be single or multiple-case designs, where a multiple design must follow a replication rather than sampling logic. Yin (1994) pointed out that generalisation of results, from either single or multiple designs are made to theory and not to populations. Multiple cases strengthen the results by replicating the pattern-matching, thus increasing confidence in the robustness of the theory. There are several examples of the use of case methodology in various types of literature (Yin, 1993).

3.2 The Application of Case Study Methodology

The case study as a research strategy comprises an all-encompassing method with logic of design incorporating specific approaches to data collection and to data analysis. In this sense, the case study is not a data collection tactic or merely a design feature alone, but a comprehensive research strategy (Yin, 1994). Case study research can include both single-and multiple-case studies. Though some fields, such as political science and public administration, have tried to delineate sharply between these two approaches and have used such terms as the *comparative case method* as distinctive from multiple-case studies, single and multi-case studies are in reality but two variants of case study design.

Therefore, case studies can include, and even be limited to, quantitative evidence. In fact, the contrast between quantitative and qualitative evidence does not distinguish the various research strategies. As a related but important note, the case study strategy should not be confused with qualitative research. Some qualitative research follows ethnographic methods and seeks to satisfy two indicators: (a) the use of close-up, detailed observation of the natural world by the investigator and (b) the attempt to avoid prior commitment to any theoretical model.

As a further note, some investigators distinguish between quantitative research and qualitative research, not based on the type of evidence, but based on wholly different philosophical beliefs; these distinctions have produced a sharp debate within the field of evaluation research. Although some believe that these philosophical beliefs are irreconcilable, the counter-argument can still be posed that regardless of whether one favours qualitative or quantitative research, there is a strong and essential common ground between the two (Yin, 1994).

As a research methodology endeavour, the case study contributes uniquely to our knowledge of individual, organizational, social, and political phenomena. Not surprisingly, case studies have been a common research strategy in psychology, sociology, political science, business, social work and planning. Case studies are even found in economics, in which the structure of a given industry, or the economy of country or a region, may be investigated by using a case study design. In all of these situations, the distinctive need for case studies arises out of the desire to understand complex social phenomena.

Depending on what type of data is required, either a quantitative or qualitative method can be used. Using the most appropriate method for data collection indicates strengths, weaknesses, opportunities and threats in detail.

In this dissertation we have used the qualitative approach by using documentation analysis interviews with members of the Libyan General Council Planning, Ministry of Planning and the Libyan Central Bank.

3.3 Research Method

Multiple methods of date collection have been used. These include qualitative and quantitative interview. Interviews are among the most widely used methods of data generation in the social sciences (Gubrium and Holstein 2002). While a great deal has been written for decades about the procedures for generating such data (how to ask questions, how to relate etc), rather less attention has been given until relatively recently to the analysis of such data. A focus on *analysis*, a focus on the researcher's expertise in the analysis of the interactional data as much as in the generation of it, changes significantly how interviewing may be pursued within the social science.

According to Baker, (2004) for many conventional science perspectives, the relevant researcher expertise is the getting of the data, and criteria of success at interviewing include such matters as whether there was good "rapport", whether the respondents talked a lot, and what they talked about, whether (and how) they divulged what the interviewer was after. All such criteria of success rely on the assumptions that there is pre-existing information of some sort (beliefs, attitudes, knowledge, and perspective) to extract from the respondent.

Interviews are the most widely used methods in cross-socio economic research. Some basic questions about designing of interviews have been raised. Where focus groups are being used, this is likely to be associated with a higher level of interview-led structure and intervention to facilitate discussion than where group interview as are being used. The size of sample may also be related to the topic.

Thus a focus sample designed to obtain views about Libyan economy reform and diversification are likely to be larger than a sample interviewee that explores a topic related to a more emotionally involved construct, such as attitudes to performance, related pay etc.

Sanders et al, (2006) stated that the use of non standard (qualitative) research interviews should allow us to collect rich information in detail, although it will need to develop a sufficient level of competence to conduct these and to be able to gain access to the type of data associated with their use.

Also, interviews can be differentiated according to the level of structure standardisation adopted. Different types of interview are useful for different research purposes. Furthermore, non-standard (qualitative) research interviews include two broad types that are generally refereed to as in-depth (or unstructured interviews) and semi-structured interviews. Non-standard interviews can be used to explore topics and explain other findings.

In this research, interviews have been conducted on a one-to-one basis with a single participant. Such interviews are most commonly conducted between the researcher and participant face-to-face. Here, qualitative research interviews have been chosen

as a method of data collection (face-to-face approach) because there are many advantages;

1-Where we are undertaking an exploratory study or a study that include in our approach which aimed to identify the income resources diversification. Also, an explanatory study is also likely to include interviews in order for the researcher to be able to infer causal relationships between variables. Essentially, where it is necessary for us to understand the reasons for the decision that our research participants have taken, or to understand the reasons for their attitudes and opinions. In such cases, it is important for us to conduct a qualitative interview. Furthermore, interviews may use words or ideas in a particular way, and the opportunity to probe these meanings will add significance and depth to the data obtained. It may also lead the discussion into areas that had not previously been considered but which are significant for understanding, and which help us to address our research question and objectives.

2- The interviews methods to be used depend on the nature of questions. Where the questions are large in number, a number of complex or open-ended and where the order and logic of questioning may need to be varied.

3- Participants are more likely to agree to be interviewed, rather than complete a questionnaire, especially where the interview topic is seen to be interesting and relevant to their current work. An interview provides them with an opportunity to reflect on events without needing to write anything down. This situation also provides the opportunities for interviewees to receive feedback and personal assurance about the way in which information will be used. Therefore the use of personal interview, where appropriate, may achieve a higher response rate than using questionnaires.

4- The time needed to obtain the required data may mean that an interview is, in any case, the best or only alternative, apart from the difficulty of trying to design a viable questionnaire schedule to cope with questions that are complex or open ended or large in numbers.

5- Depth of information. Interviews are particularly good for producing data which deal with topics in depth or in detail. Subjects can be probed, issues pursued and lines of investigation followed over a relatively lengthy period. The researcher is likely to gain valuable insights based on the depth of the

information gathered and the wisdom of "the key informant". Also, in terms of equipment, interviews require only simple equipment and build on conversation skills which researchers already have. Also, regarding informants' priorities, interviews are a good method for producing data based on informants' priorities, opinions and ideas. Informants have the opportunity to expand their ideas, explain their view and identify what they regard as the crucial factors. In regard the flexibility, as a method for data collection, interviews are probably the most flexible. Adjustments to the lines of enquiry can be made during the interview itself. Interviewing allows for a developing line of enquiry. Moreover, regarding validity, direct contact at the point of the interview means that data can be checked an accuracy and reliance as they are collected. Also, interviews have a high response rate. Interviews are generally prearranged and scheduled for a convenient time and location. This ensures a relatively high response rate. Finally, therapeutic; interviews can be a rewarding experience for the informant compared with questionnaires, observation and experiments. There is a more personal element to the method, and people tend to enjoy the rather rare chance to talk about their ideas at length to a person whose purpose is to listen and note the ideas without being critical (Martyn, 2003).

Miller and Glassner (2004) stated that strength of qualitative interviewing is precisely its capacity to access self-reflexivity among interview subjects leading to the greater likelihood of the telling of a collective story.

From their experience, interviewees will tell them, if given the chance, which interests and formulations make sense or no sense to them. Glassner and Loughlin (1987) describe instances in their study in which the interviewer brought up a topic that was seen by the subject as irrelevant or misinterpretation, and they afford correction. Also, they suggest that the existence of social differences between the interviewer and interviewees does not mean that the interviews are devoid of information about social worlds. The strength of qualitative interviewing is the opportunity it provides to collect and rigorously examine narrative account of social worlds.

3.4 Research Questions

Yin (1994) identified five components of research design that are important for case studies:

- A study's questions that determine and define the research question
- Its propositions (if any)
- Its units of analysis, by selecting the cases and determining data gathering and analysis technique.
- The logic linking the data to the propositions.
- The criteria for interpreting the finding by evaluating analysing the data.

The study's questions are most likely to be *"how* "and "*why*" questions and their definition is the first task of the researcher. The study's propositions sometimes derive from "**how** "and "**why**" questions, and are helpful in focusing the study's goals. The questions are targeted to a limited number of events or conditions and their inter-relationships.

The researchers investigate the object of the case study in depth, using a variety of data gathering methods to produce evidence that leads to understanding of the case and answers the research questions.

The unit of analysis defines what the case is. This could be groups, organizations or countries, but it is the primary unit of analysis. Linking the data to propositions and the criteria for interpreting the finding are the least developed aspects in case studies (Yin, 1994).

Furthermore, the researcher must collect and store multiple sources of evidence comprehensively and systematically, in formats that can be referenced and sorted so that a covering line of inquiry and patterns can be uncovered. Stake (1995) and Yin (1994) identified at least six sources of evidence in case studies;

(i) Documents

(ii) Archival

(iii) Interviews

(iv) Direct observation

(v) Participant-observation

(vi) Physical artifacts.

The final step is to evaluate and analyse the case study evidence. This aspect of the case study methodology is the least developed and hence the most difficult. As a result, some researchers have suggested that if the study were made conducive to statistical analysis, the process would be easier and more acceptable. This quantitative approach would be appealing to some of the critics of the case study methodology. However, not all case studies lend themselves to this type of analysis. Researchers use the quantitative data that has been collected to corroborate and support the qualitative data, which is most useful for understanding the rationale of theory underlying relationships. Another technique is to use multiple investigators to gain the advantage provided when a variety of perspectives and insights examine the data and the patterns.

In all cases, the researcher treats the evidence fairly to produce analytic conclusions answering the original "how "and "why" research questions. Case study is a valuable method of research, with distinctive characteristics that make it ideal for many types of investigations. It can also be used in combination with other methods. Its use and reliability should make it a more widely used methodology, once potential researchers better understand its features.

There are three research questions in this study:

1. ***How can Libya's oil revenues best be employed for achieving and maintaining a high rate of economic growth, consistent with the country's social objectives?,***
2. ***How can Libya best manage its oil wealth, taking into account its exhaustible character and with due attention to intergenerational equity, given the country's dependency on a depleting natural resource?***
3. ***Why is Libya continues to be heavily dependent on oil export and do not fully realiying the potential of its oil for utilizing, achieving and maintaining economic growth?***

The purpose of this work is to assess Libyan economy efforts to date. What progress has been made towards economic diversification and how can it be gauged?

How has Libya's economy performance compared with that a similar economic country? What particular problems must be overcome if the economic diversification process is to continue? What are the country's prospects for the future?

This study attempts to examine and evaluate the experience of the Libyan economy, during the crucial 1970-2000 period. Within the framework of some major hypotheses regarding the dynamics of developing economies in an oil-based economy, several fundamental questions are raised: How did Libya compare with other countries with allocating of their oil windfalls among competing needs? What strategies and policies did they pursue in optimising returns on their fortune during the oil boom, and controlling the damage during the oil bust? Moreover, to what extent were oil receipts allocated, to provide funding for strategies to help achieve a national, socioeconomic agenda?

More specifically, this research will consider how the compositions of the government's policy changes when oil revenues change. The significance of this subject arises from the fact that oil constitutes a significant portion of the central government revenues to the Libyan economy. Furthermore, historically, the price of oil has been highly unstable over the three decades and, as a result, policy makers in Libya have faced a high degree of revenue uncertainty. Libya's oil price, for example declined from US$19.54 Brega in 1992 to US$12.90 Brega in 1998. The analysis will also enable us to compare the diversification process of the Libyan economy with the economies of others. In addition, by tracing the revenue allocation of those countries over time, it will be possible to say whether there has been any significant change in their revenue priorities as a result of economic diversification and implementation of the economic reform programme.

Countries that depend heavily on oil revenues face the daunting challenge of transforming their economies to enable them to grow in an era of reduced oil income. However, this is not as difficult as may appear at first sight. In the early 1970s, many among us thought that the newly accrued oil wealth should enable Libya to build the foundation of a non-oil economy capable of sustaining long-term economic growth. Thirty years have elapsed and these foundations are not yet there.

To prepare for an economic future in the period when the prospects for oil will begin to decline requires immediate action. The task should begin today. The policies that favour future economic development do not bear fruit very quickly. Their implementation takes time. They only yield the desired results after very long gestation periods. To delay the formulation and execution of these policies will put the economic well-being of oil nations in serious jeopardy.

Whether the future of oil is threatened or assured, the wise course of action is to prepare for a day when revenues may not be sufficient or oil run out. To maintain the standard of living should oil turn out to be under threat, it is essential that the non-oil sectors are developed, thereby assuring the people's future with, or without oil windfalls.

Besides, the purpose of this study is to investigate another resource, instead of oil wealth that can sustain and bolster oil wealth in the economy and measure the impact of oil revenue role in the economic development process over time. The purposes are:

1- To build a long-term strategy toward diversifying the economy, and look at how future generations can gain benefit from non-renewable resources that will have been depleted before they were even born? In addition, addressing the challenges posed by oil dependence.

2- To investigate possible resources to replace oil wealth and economically manage their petroleum wealth in the changeable environment of the oil market.

3.5 Rationale for Research

In recent years, oil production has been very important in generating economic growth and social development, stimulating the Libyan economy, which has varied from almost 67% of GDP in 1988 down to 36% in 1999. Oil exports have also increased over time. The availability of oil revenue represents an opportunity and a challenge in Libya. Many economies that have very large oil and gas revenues still have very poor economic performance. Fiscal policy is clearly the key, and it is something that, at the least, should be able to substantially aid in the diversification process. The fiscal policy will determine the real exchange rate fluctuation, rent seeking corruption, and of course, the general overexpansion of the public sector. Oil revenue is a relatively painless way for the government to expand and their

overexpansion is determined by how to spend the money from oil receipts. There is an increasing awareness of oil revenue management among involved stakeholders and recognition of the opportunities missed.

Libya, as an oil producing country, faces special challenges in managing their economy, not only because oil prices and revenues are highly volatile and hard to predict, but also because it must plan for the time when the oil runs out. Besides the uncertainty of oil, these revenues have a number of implications, for both short and long-term fiscal policy, while the fact that oil is a non-renewable form of energy raises complex issues of sustainability and intergenerational resource allocation.

In many of the larger oil economies, oil and other hydrocarbon products on average, account for 75% of total exports (George et al 2003). The non-oil sector, on the other hand, has yet to generate sustained growth high enough to absorb the growing numbers of entrants into the labour force. Volatility and low growth in several of the oil economies are aggravated further by highly procyclical fiscal policy, as government spending tends to rise and fall with oil revenue. This is, in part, because of the absence of effective automatic stabilizers, which could cushion the severity of economic fluctuations.

Furthermore, abundant natural resources may imbue people with a false sense of security and lead governments to lose sight of the need for good and growth friendly economic management, including free trade, bureaucratic efficiency, and institutional quality. Nature resource abundance or intensity may reduce private and public incentives to accumulate human capital due to a high level of non-wage income dividends, social spending, and low taxes. Awash in cash, natural resource-rich nations may be tempted to underestimate the long-term value of education. In most countries that are rich in oil, minerals and other natural resources, economic growth over the long haul tend to be slower than in countries that are less endowed.

In terms of what the problem is, it is not the existence of natural wealth as such, but rather the failure to avert the dangers that accompany these gifts of nature. It is not inevitable that these abundant natural resources will prevent the emergence of a dynamic economy or that the discovery of such resources will act to dampen an already developed economy. Natural resources can be a blessing as well as a curse.

Unfortunately, Libya has been unable to properly manage these windfall gains, ending up spending too much, too quickly. This phenomenon has been referred to in associated literature as the 'natural resource curse.' A key question is whether the under-performance of resource-abundant countries that experience export booms is inherently linked with the fact that they are richly endowed with natural resources. Alternatively, might that symptom of the curse be avoided through prudent, economic management? The basic problem for oil-dependent governments is that they are exposed to a large oil price risk, which they are ill suited to bear.

Absorption through the government could follow a pattern similar to that in developing countries such as Algeria or Nigeria. Their revenues were not saved abroad or used to reduce budget deficits, but spent inefficiently as they were accrued. In contrast, Norway has used their resources to spur growth, undertake modernization, and economic diversification and to increase their control over key areas in the economic sector. (Gelb, 1988) noted that petroleum revenue is often spent on public investment projects and to a far less extent on transfers to households and enterprises (public handouts and subsidies).

Eifert et al (2003) showed that the economic records of mineral-exporting countries, in general, have been disappointing. Oil exporters, in particular, have done less well than resource-poor countries over the past few decades, especially when one considers the big revenue gains to the oil-exporting countries since 1973, when oil prices soared. Perhaps, it is because of the way oil economies are run.

3.6 Research Problem

Oil wealth could generate a sizeable permanent income for Libya. Although oil wealth is exhaustible, appropriate financial management can result in a permanent income stream that can be enjoyed indefinitely by further generation. The permanent hydrocarbon revenue steam can be calculated as an annuity, over an infinite time horizon. The permanent hydrocarbon income stream could climb to as much as US$20.4 billion (52% of 2005 GDP).

On the other hand, production and revenue projections are surrounded by considerable uncertainty. There are significant risks to future levels of Libya oil production depending upon OPEC's pricing, production policy and market circumventions and world demand for OPEC oil. In the more distant future, therefore, there are greater uncertainties about the growth of global oil demand, especially in developing countries. Also uncertainties about the growth problem based transport fuels demand, growing environmental concerns over hydrocarbon use and global warming. There are no resource constraints for the distant future, and new technologies continue to lower the cost of production. Thus crude oil prices are likely to remain extremely volatile, with economy forces exerting download pressure on prices while OPEC production restraint pushes prices upwards, often above the costs of production.

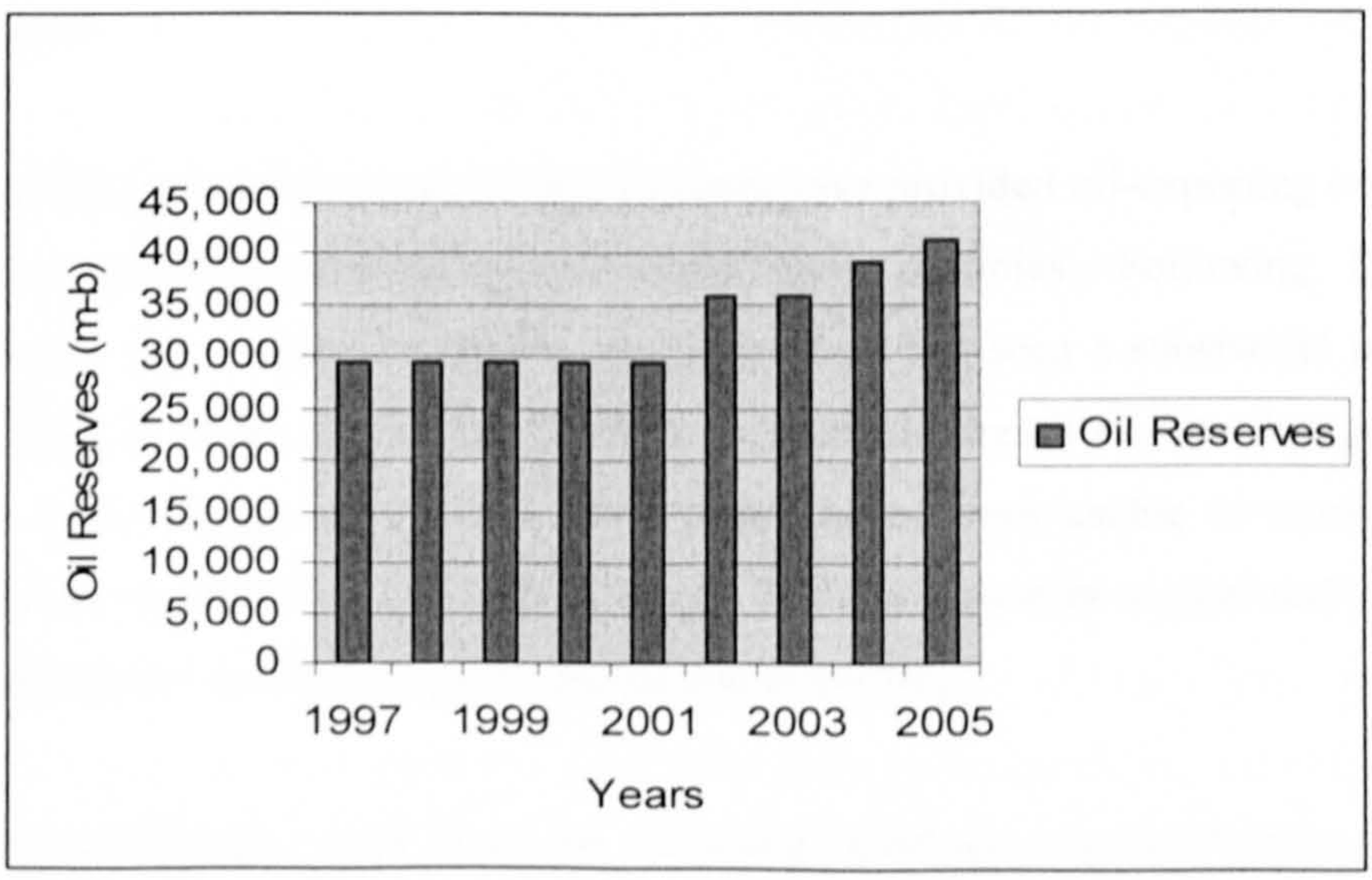
It is often argued that there is an association between oil abundant riches and poor economic performance, "*the resource curse,*" and a significant body of literature has grown seeking to explain the relationships between hydrocarbon abundance and economic performance. A key question in this regard is *how* Libya can avoid the resource curse and turn their abundance in resources into a blessing. This question is relevant for a large number of countries, particularly oil exporting countries. Many of these are low and middle-income countries in which hydrocarbon and mineral revenue accounts for over 50% of government revenue or export proceeds. In addition to the adverse impact on growth, resource riches can be a major contributor to corruption and social unrest. In a number of countries, oil and gas are associated with causing unemployment and mismanagement. Whereas a range of countries (including Botswana, Canada, and Norway) appear to have avoided these problems, which are usually caused by oil wealth through prudent, transparent management practices and economic diversification. Libya, despite the substantial amount spent on development schemes over the last three decades, has had disappointing results. The lack of transparency, accountability and creditability is still predominant. However, some modest progress has recently been achieved.

The Libyan national economy is and will remain for the forthcoming decades, massively dependent on the oil sector. As a central resource for national income, moreover, it is a fundamental finance for current government investment and

expenditure. Over the second half of the nineties, oil receipts reached more than 65% of the budget sources, close to 98% from oil revenue on the balance of payments. The oil share reached 35% of GDP over the period 1999-2000. The oil sector still dominates and leads the economy, particularly in the case of exports. Reserves reached 39 126.0 million barrels in 2003 (see Figure 3.1).

Expenditure development on services and productivity projects and infrastructures reached at 41 898.7 million dinar over the last three decades (1970-2000) and was intended to carry out a group of goals. One of the main, significant goals was to diversify the national economic structure, and create new sources of revenue to finance the general budget, reduce the oil sector control on economic activities and benefit the country as a whole. However, the oil sector contribution declined in gross domestic product from 63.1% in 1970 to 37.8% in 2000 (general and Planning Council, 2001).

There is a critical growth which occurs in non-oil activities reflecting a new source of national income. Nevertheless, the outcome of this was not encouraging. Furthermore, production activities' contribution, such as agricultural manufacture and services sectors was still less than expected. In terms of the government budget, for the last three decades it has depended heavily on oil resources to finance a part of its expenditure.



Sources: OPEC Annual Statistical Bulletin, 2005

Fig 3. 1 Libyan Proven Crude Oil Reserves (1997-2005)

Data indicates that the proportion of average shortfall in budget to gross domestic product rose by 11% over the period 1985-1990 and declined by 2.8% in 1995 returned to rise to around 7.5% in 1998. This was intended to fill the shortfall in the administrative budget that required borrowing from the banking system. This was followed by accruing general banking debt. The debt reached at 7,644 million dinars and the proportion was 50% of GDP in 2002. Crude oil revenue was the chief driver for the Libyan economy.

Non-oil sectors grew steadily in the mean time but did not contribute in any crucial form to develop an income based on diverse resources. This led to a vulnerable income. Fluctuation in the global oil market had a negative effect on the Libyan economy. These events required Libya to adopt a productive base economy and diversify its income sources, to protect the economy from the risks threatened by relying on one source which is vulnerable to depletion. To increasingly continue to rely on oil receipts may damage other sectors and cause a distortion in economic stability in the long term.

The history of oil-rich states, from Norway to Nigeria, provides ample evidence of a cycle of high revenue - high expectation - high expenditure, followed by an oil market slump, a decline in revenue, and social unrest caused by fiscal and budgetary adjustments.

Tsalik (2003) pointed out that the last 30 years have provided oil-exporting countries with an excellent opportunity to shape their destinies. Following OPEC's introduction of oil extraction limits, the price of oil has seen a substantial increase from US$ 3 in 1970 to more than US$ 70 in 2006 and the oil exporter has gained a sizable chunk of the capital. Yet, most beneficiaries were unable to translate the windfall into economic growth. The history of these countries to deal and manage their endowment is still very poor, dismal and dispiriting.

The main challenge which faces oil exporting countries is to implement income resource diversification to minimise the effect of oil revenue fluctuation and its influence on general expenditure and investment opportunities (Taher and Dandy, 2006).

Best management practices and financial controls in the taxation and expenditure stages of oil revenue accrual and disbursement are essential. Libya, however, failed to use centrally economic managed oil revenues to jump-start development and prevent precipitous declines in their GDP per capita as a result of oil price fluctuation.

Policymakers should be aware of a "dual hazard" in politics of revenue taxation and expenditure. Added to this, Libya has large unemployment and a small population whose basic needs are still not met. Their representatives are likely to press for higher tax rates and budget deficit and to lobby for borrowing against future oil receipts. Even with projected revenue growth in oil production Libya will still be a poor economic performer at the bottom of the medium-income developing countries. Generating accounting for, managing, and expending this revenue for the Libyan people are a huge responsibility that is complicated by being state-owned. A state-managed infrastructure, with poorly defined rights, an absence of a functioning legal system, a shattered public service, a lack of a consensus on how to own and exploit the oil reserves and the large number of Libyan poor with pressing needs are all obstacles that Libya needs to overcome. Eventually oil, the main source of income, will run out (Merza, 2003).

Privatization should be undertaken. The public education system should be improved. An effort should be made in good faith to build a consensus among the Libyan people that private ownership of industrial assets, including commodities and services, is economically more efficient than a government-owned system.

Oil revenue should be transparently, economically managed, adequately taxed and protected from government abuse and corruption. To facilitate this process, creating a professionally managed oil fund, should be seriously considered, and put in a legal frame (International Monetary Fund, 2005). Such a fund would protect oil revenues. These are some of the hazardous challenges facing the economic management of Libyan oil revenue and are likely to threaten Libya's future. These issues need a speedy resolution. The dilemma, which has recently faced Libya, is how to avoid the dependence on a single resource, since the diversification attempts over the last three decades have failed.

A central issue for hydrocarbon rich Libya is how best to use their hydrocarbon resource assets over time Barnett and Ossowski (2002) have developed a framework for formulating fiscal policy in annual, medium and long-term horizons. Two basic propositions underline their approach: First, in what is becoming the standard treatment, hydrocarbon riches are treated as wealth rather than income. Second, in line with the consumption to permanent income concept, a fundamental objective in each period should be to limit consumption to permanent income expectations. Within this framework, when formulating fiscal policy, hydrocarbon resources such as oil are treated as part of national wealth and are expected to finance other sectors rather than being treated as revenue.

Oil production provides the most dramatic illustration of the problems posed by resource riches for developing countries: very large, quickly growing, but time-limited production and revenue flows, combined with a high degree of volatility as a result of fluctuating world prices. When combined with administration, ownership of such wealth provides ample scope for inefficient policies, discretionary behaviour, and outright corruption, all of which contributes to poor growth performance and eventual dissipation of national oil wealth.

Libya and many other oil countries with large fiscal revenues derived from exploiting a non-renewable resource such as oil, typically face two main problems that the revenue stream is uncertain and volatile, and that it will eventually dry up sooner or later

3.6.1 Volatility and Uncertainty of the Revenue Stream

A volatile and uncertain fiscal revenue source renders fiscal management, budgetary planning, and the efficient use of public resources difficult. This is the case particularly when it makes up a large share of total revenue. The non-renewable resource sector is an important source of foreign exchange and fiscal revenue in many countries, making them vulnerable to external variables largely beyond the control of policymakers and domestic agents. The uncertainty and volatility of non-renewable resource revenues is typically greater than other kind of revenues, mainly as a result of unpredictable and frequently large fluctuations in international commodity prices.

When revenue falls sharply and unexpectedly, expenditure often falls sharply too, which is typically costly. Cutting current expenditure can be notoriously difficult and unpopular, and it may be socially damaging, especially if not done in the context of a medium-term comprehensive strategy of expenditure adjustment. Cutting capital spending might involve the abandonment of viable projects, where the return on some additional expenditure may be high. As a result, the productivity of public investment could be affected and if this raised negative oil price shocks, fiscal sustainability could be questioned.

In fiscal management, a distinction should be made between countries that rely on revenue from non-renewable resources and those that have a broader fiscal revenue base. For countries that have a relatively diverse production structure and alternative sources of fiscal revenue, the impact of resource price volatility would be less severe.

3.6.2 Exhaustibility of the Revenue Stream

Government revenue derived from exploitation of non-renewable resources differs from other revenue in that it partly represents a depletion of wealth. When a significant share of government revenue is derived from the exploitation of such resources, intergenerational equity and fiscal sustainability require considerations of the finite nature of the resources and of the prospective evolution of government net wealth, since analysis based solely on indicators of fiscal balance could be misleading. In particular, government wealth can be seen as the sum of net financial wealth and resource wealth. Thus, it is generally considered that if all the revenue from non-renewable resources were to be consumed, this would leave less wealth and lower consumption opportunities for future generations.

Nevertheless, considerations of long-term fiscal sustainability would generally imply saving a portion of today's non-renewable resource revenue and setting limits on the proportion of non-renewable income that is spent on the non-resource fiscal deficit. This approach would both stabilize usable revenue and provide for the accumulation of financial resources that would make up for the depletion of the natural resources, thereby helping to implement fiscal policies that are set within a longer-term framework.

3.6.3 Real Exchange Rate Volatility and "Dutch Disease"

Large revenue from volatile non-renewable resources has an impact on the economy as a whole, not just on the fiscal sector. Non-renewable resource shocks can affect the level of the real exchange rate through several channels including disposable income non-tradable, and short-run monetary disequilibrium. There is evidence that the volatility of the real effective exchange rate is damaging to the non-resource sector and capital formation (World Bank, 1993).

Moreover, an increase in resource revenues, particularly if perceived as permanent, may positively aid, the real effective exchange rate, with effects on the non-resource tradable sector (Galeb, 1988).

Moreover, high non-renewable resource revenues may be misused or otherwise subject to poor governance. Stringent institutional measures to prevent such behaviour may be required

3.7 Research Aims

This dissertation aims to explore whether this simple theoretical solution to managing government oil revenue and risk fluctuation might be able to work in practice and, if it can, what is preventing government from doing it?

This study is to determine whether Libya's economy has become significantly more diversified over the past three decades or whether it remains overly dependent on oil and gas resources. In addition, it will attempt to address the scope of economic diversification as a means to minimise adverse effect and impacts on the Libyan economy.

Also, the aims of this study are to investigate how the impacts of oil revenue fluctuations on key macroeconomic variables of the Libyan economy determine the direction of causality and measure the magnitude of such impact. This can be done through identification of how oil revenue and oil price fluctuation affects those key macroeconomic variables and the dynamic response of these economic variables, including policy variables such as government expenditure.

In addition, this dissertation aims at deriving some general principles that are important for formulating and assessing fiscal policy in Libya's economy. The

relative importance of oil to the economy, the size of oil reserves, maturity of the oil industry, stage of development of the non-oil economy and government financial position, all of which would effect fiscal policy decisions. Moreover, an aim is to understand how movement in oil revenue affects estimates of government oil wealth. As noted above, oil wealth is a key determinant of the size of the sustainable non-oil fiscal deficit, and thus an important variable for fiscal policy formulation (Barnett and Ossowski, 2003). Stronger precautionary saving motives are needed in times of wealth.

This study aims to recognize the impact of oil on the Libyan economy and the management of oil rent, as controlled by the government from 1970 to 2000.

Also, it will explore the sectors, which will be replacing the oil sector in an attempt to diversify the economy. Furthermore, the study will evaluate the contribution of the oil rent to Libya's economic and social development. Finally, to recommend what measures need to be taken to achieve an economic growth sustainable without reliance on oil revenue, overcome its obstacles and what can be done to minimize the risks from oil rent, which could become entrenched and thereby endanger fiscal sustainability.

3.8 Research Objectives

-To discover the contribution of oil rent to the national income of Libya in the past and the present, explore how productive sectors are able to develop and diversify resource income in order to achieve a reasonable degree of self-sufficiency by reducing the heavy dependence on imports of basic goods.

-To consider the effect of broadening the economic base by expanding and diversifying economic activities through accelerated growth in the non-oil economy.

3.9 Research Hypotheses

For the purpose of measurability and test-effectiveness, three major hypotheses are proposed:

1- The Libyan economy has benefited from oil revenue and from economic diversification;

2- Heavy dependence on oil receipts harm the economy and;

3- There is a significant relationship between oil wealth and economic growth

3.10 The Choice of the Topic and Its Contribution to Knowledge

The topic of the rentier economy and the associated development problems is of special to importance to Libya and other rentier economies in general. The importance of such an issue can be seen in two main factors. Given the fact that oil is a depletable natural resource that is associated with the risk of being substituted by other sources of energy, the country is pressured to search for other sources of income that reduce the magnitude of oil dependence. Therefore, sustaining the contemporary wealth and the high living standards in Libya requires the search for, and generation of, income sources other than oil. The second motive for choosing this topic is to examine the failure to develop a new income and diversify the rentier economy and attempt to identify the sources of such failure.

Moreover, the contribution of this dissertation is to relate the failure in economic development to the rentier nature of the Libyan economy. More specifically, it attributes development failure in Libya to the existence of a rentier mentality and rent-seeking resulting from the rentier structure of the economy.

Several studies have empirically examined the sustainability of fiscal policy in selected oil-production countries.

Galeb (1988), Vandewelln (1998), Amuzegar (1999) employed a framework focused on government wealth inclusive of oil in the ground similar to the World Bank analytical framework. This goes beyond sustainability, and focuses on the more normative questions of how the government should allocate resources and distribute over time.

Moreover, the results of this study could shed some light on the ways and means of implementing a nationwide impact agreement. It will further provide a mechanism for monitoring policy in the Libyan oil industry. In addition it will highlight fiscal policy design in the case of oil dependence. Finally, it serves as an example for other countries in which similar problems are found.

This dissertation will significantly assist decision-makers to discover new resources to finance the economic development process, given a heavy dependence on oil revenue, which are volatile and unpredictable, and will sooner or later dry up due to oil and gas being exhaustible. Almost all oil exporting countries encounter the problem of dependence on a single resource to finance their budget. Relying entirely on a single resource creates hazards for the national economy. Libya faces a serious problem when there is an oil price shock. Looking for other sources has become the most preferable and urgent of priorities. The significance of this study will lie in the difference it is capable of making in the quality of lives of the people; its premise is that human value should supercede the profit motive. One assumes that when a country realizes profit from its natural resources then its population will also benefit. As a country improves its wealth, the quality of life of its inhabitants should also improve.

3.11 Limitation of the Study

Although, oil receipts impact the Libyan economy over time, this study is intended to be complete and comprehensive, but there were a number of constraints in reaching the ideal goal in terms of cost, data, resources, time and non-quantifiable factors, the complex nature of the research and its relationship with the natural resources.

3.12 Impact Assessment Methodology in Rentier Economies

The impact of an economy dependent on natural resources and extractive activities has always posed a major concern not only for the government, but for many concerned social scientists and policy makers as well. Several conceptual and empirical approaches have been developed to measure the socioeconomic and environmental effects of natural resources in a given country.

In a study of an alternative interpretation of the "Resource Curse" theory and policy, Hausman and Rigobon (2002) applied a formal model of inefficient specialization. The model includes three sectors in the economy-tradable goods, non-tradable goods and oil. Oil is assumed to consume no inputs and generates a stochastic stream of revenues dominated by the tradable. The tradable and non-tradable sectors comprise a finite number of firms, each using capital and labour. They assume that capital is

owned by foreign investors and oil belongs to the government, which consumes it entirely in non-tradable goods. If the government decides to save its oil revenue, it will do so in foreign assets.

They used this formal model to determine which factors may have caused the "Dutch diseases" and answer the question as to whether this is caused by volatile oil prices or due to political economic forces unleashed by the presence of rents. Moreover, what are the policy implications of this problem? Barnett and Ossowski (2003) in studying operational aspects of fiscal policy in oil-producing countries, investigate the challenge which may appear in oil producing countries from the fact that oil revenues are exhaustible, volatile, and uncertain and largely originate from abroad.

Applying a medium term expenditure framework and fiscal rules removes the uncertainty and volatility of oil revenues facing the government and adopting this analytical framework addresses the underlying question of how the government should allocate resources over time. Several studies have empirically examined the sustainability of fiscal policy and allocation of resource issues in selected oil-producing countries. Liuksila et al (1994) and Chalk (1998) employed a framework focused on government wealth, inclusive of oil in the ground.

3.13 Impact Assessment Methodology in the Oil Industry

A number of impact assessments have been performed in the oil industry. Early studies to investigate oil impact on economic development process assessment were confronted with conceptual, methodological, and empirical problems. For instance, the difficulties associated with socioeconomic impact assessment of oil wealth are within the nature of wealth itself. According to Emil et al (2003) there are several specifically identifiable problems: (1) uncertainty, (2) conflicts, (3) information, (4) price, (5) royalties (which are payments may made to local units of government, landowners or the petroleum ministry), (6) the integration of diverse petroleum activities. Another problematic area of an oil impact assessment is the nature of an oil production swing, inherent in oil windfalls.

According to Ahmed and Motu (2003), there are a number of issues in this area including the right of sub-national region to raise revenues on natural resources, the ability of sub national jurisdictions vis-à-vis the central government and the stabilising of revenues in response to oil price uncertainty and volatility. Sub-national government provides inter-jurisdictional equity, redistribution, and the financing of a stable level of public services. There is also an overriding motive on the political economy a consideration associated with the assignment of natural resource revenues, particularly with demand for a direct share of the oil revenues from the regions where the oil fields are located.

According to Leistritz and Chase (1982), given a dynamic quality of the oil wealth and the uncertain nature of the resource, realistic projections of future productions and activities within the development region are extremely difficult.

While conceptual and methodological issues involved in the socioeconomic impact assessment of allocated oil revenue remain problematic generally, there are some well-developed tools of socioeconomic impact analysis. A number of their models and methods have proven empirically useful in researchers' understanding of oil wealth impact assessment and analysis.

First, the gravity allocation model is a widely used technique for projecting the settlement patterns of oil and gas related countries. The underlying premise of its use is that larger countries will gain revenues from oil wealth. This model goes further as a useful tool in estimating the magnitudes of secondary economic activities (i.e. employment, income and business volume). These result from petroleum activity and are an important aspect of any comprehensive social and economic impact assessment.

A second mechanism often utilized in estimating the secondary effects of an initial economic stimulus on a diversification economy, allocation resources, and output is the input/output model. This model, with quantitative estimates of the interdependencies of an economic sector (including factors such as suppliers of inputs, and purchasers of products) provides the basis for tracing the multiplier effects of a dramatic increase of petroleum activity in the economy.

In addition, some studies have adopted survey techniques useful to understanding the social economic impact of oil wealth as related to the economic development and diversification process on a country, and Leistitz (1981) and Leistitz and Chase (1982) these studies provide examples of the methodology of oil wealth impact on the economy.

The World Bank (1994) has estimated optimum saving rates, using a modified version of a model employed by banks, which assumes a simplified economy that can only receive income from the extraction of oil and gas reserves. This model provides a solution-saving rate that maximises economic welfare both during and after the oil era. The model depends on a number of variables, viz (i) the life span of the oil and gas reserves (ii) the real long-term rate of oil price and production cost changes (iii) the very long-term rate of return on investment and, (iv) the desired saving ratio in the post-oil era.

Takizawa et al (2004) draw a model to analyse how alternative government spending routes, out of exhaustible natural resources revenues, affect the welfare of the economy. They used of a variant of the standard neoclassical growth model, show how private agents maximize welfare by allocating income between consumption and investment.

3.14 Data, Sources Collection and Analysis

The socioeconomic and environment data presented for this study are drawn from several sources; primary and secondary data from archival records of federal and state government, oil industry records, the Organization of the Petroleum Exporting Countries (OPEC) and Arab Oil Petroleum Exporter's Countries, Ministry of Planning, Central Bank of Libya, National Oil Corporation, (NOC), the Libyan General Planning Council, books, journals, Documentation and Information Corporation, World Bank, information from statistical publications, various Research Institutes, such International Organisations as the OECD, the International Monetary Fund (IMF). Archives, the documentation, the published and unpublished writings of previous researchers in the oil management. However, when actual figures were not available, estimates were derived from the available raw data.

After data have been obtained through documentations and mouth interviews, they need to be analysed. Once the data are ready for analysis, the researcher is ready to test the hypotheses already developed for the study.

CHAPTER FOUR: OIL AND GAS INDUSTRY DEVELOPMENT

4.1 Introduction

The oil and gas industry plays a significant role in the Libyan economy. It represents the main source for foreign exchange proceeds and represents 98% of total exports. Also, its share of the budget revenue is substantial. It provides Libyan job opportunities and foreign investment as well. Recently, the government has become aware of the sector's importance particularly with foreign investment increasing in this sector. This is of vital importance in the future, when the manufacture and production of crude oil is undertaken in Libya, instead of abroad. In addition, the government has a growing concern about the Libyan economy when the oil will dries up.

The growth of the Libyan oil industry dates from 1951-the same year that Libya became an independent sovereign nation. There had been a small scale survey of a technologically limited kind in Libya in the Italian period. Some signs of oil had been discovered in Tripolitania as early as 1914, when water wells were drilled to supply Tripoli city (Waddams, 1980). More oil was discovered in Tripolitania in the 1930s and a full-scale exploration programme was prepared in the years 1937-1940 by the Italian national oil corporation under the geological guidance of Professor Ardito Deiso, but was never full implemented due to the onset of war. Indeed, Deiso returned as a consultant with the oil companies, working in Libya in the 1950s. Libya opened up its territory to oil exploration in 1955, when a petroleum law was passed establishing an independent committee to oversee the award of exploration licenses to international oil companies. The committee granted 137 concessions to 42 different companies between 1955 and 1968, when exploration operations were under way in 118 active concessions, a total of 586,000 sq km, and (one third of the country's land area).

Most concession-holders carried out vigorous exploration programmes and by 1959 several oil accumulations had been discovered, some of which were, thereafter, rapidly developed.

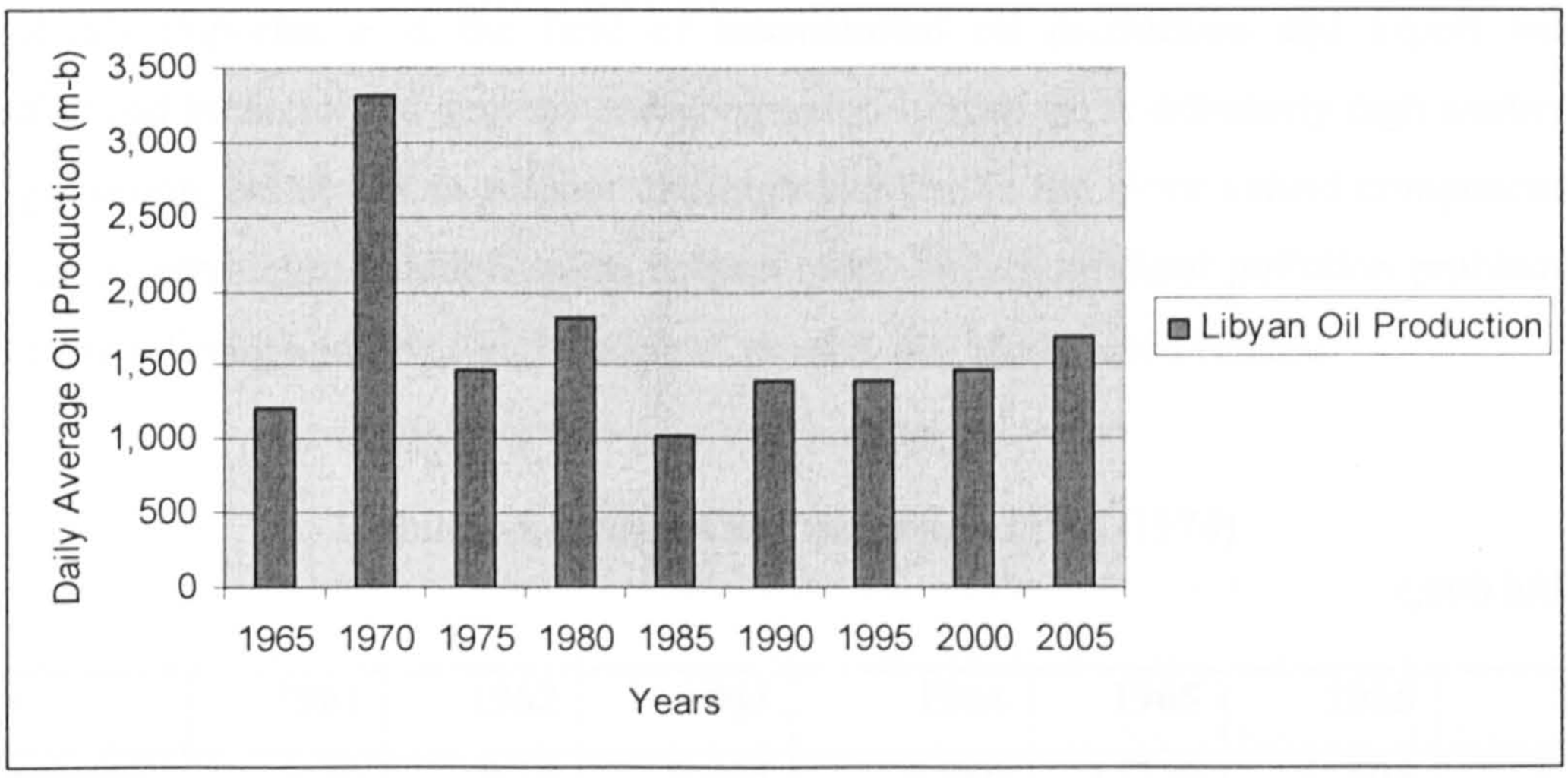
Since the early 1960's, the petroleum industry has increasingly dominated the whole economy. However, it provides direct employment for fewer than 20,000 Libyans. The development of the oil industry was remarkable, both in terms of its rapidity and in terms of its proliferation. An exceptional combination of circumstances contributed to the development of the petroleum sector. Libyan crude oil, while having rather high wax content, is lighter and easier to handle than crudes from most other petroleum areas. It also has a low sulphur content, which makes it easier on internal combustion engines and less of a pollution contributant than other crudes. For this reason, Libyan crudes had a receptive market in Europe from the start; not forgetting that Libya is close to the European markets, due to the oil ports of the eastern Mediterranean.

In addition, Libya's petroleum development benefited from the technology and experience acquired by the industry in other parts of the petroleum world during the preceding fifty years. Production of crude oil in Libya began in 1961 (see Table 4.1) and, by the end of the decade, Libya had became one of the leading oil producers and exporters in the world.

Since then, the industry has become more complicated and more mature. On the supply side, governments in countries where oil reserves had been found have acquired sufficient confidence in their sovereignty to demand higher shares of the gains from the production and sale of their oil. On the demand side, the post-war European market for oil was increasing at a dramatic pace, reflecting its substitution for indigenous coal and a greatly expanding transportation sector. Enlarged markets encouraged independent companies to enter the business, placing the long-term control of the international industry in a handful of major oil companies.

However, the oil income and the resultant re-positioning of the economy as an oil economy influenced other sectors and now play a vital role, with many other sectors dependent on an oil economy. Nevertheless, despite this role, the other sectors' roles

in the economy have declined. The industrial sector has declined from a GDP contribution of 11.5% in 1958, to 5.8% in 1962, 2.6% in 1965 and 1.9% in 1968 (Wershfani, 2003).



Source: OPEC Annual Statistical Bulletin, 2005

Fig 4. 1 Libyan Oil Daily Average Production (1965-2005)

Figure 4.1 demonstrates that the share of oil in GDP has a dramatically changed over time. Libya's production rose rapidly during the 1960s to third largest oil production countries by 1969 making if one of the dominant members of OPEC at the time. Libya's oil production has largely followed OPEC's over all production profile, although over the last fifteen years has been grown modestly, compared with OPEC's average growth of around 3% per annum. Libya's oil capacity has been constrained by lack of investment mainly due to economic sanctions. However, the country's oil sector is again attracting foreign capital and technology, and production is rising. Current production of 1.65 million barrels per days (mb/d) is little more than half the peak of the early 1970s. However, the country has the resource base to raise production capacity significantly

4.2 Historical Background

The expansion of the oil industry in Libya raced ahead during the early 1960s, with a steady increase in oil production as Table 4.1 demonstrates.

Libya's importance in the field of international oil production and export was enhanced by factors of geology and geography. Libyan oil is extremely high quality, light crude, being low in sulphur and high yielding in the more valued components such as petrol and aviation spirit. Libyan crude causes minimal pollution problems during refining and gives high financial returns, per barrel, once refined.

Table 4. 1 Libyan Oil Production (1961-1974)

(,000 b/d)

Year	**1961**	**1962**	**1963**	**1964**	**1965**	**1966**	**1967**
Production	0.20	0.18	0.465	0.860	1. 220	1. 505	1. 745
Share (%)*	0.1	0.4	2.0	3.5	4.5	5.3	5.7
Year	**1968**	**1969**	**1970**	**1971**	**1972**	**1973**	**1974**
Production	2. 506	3. 110	3. 321	2. 765	2. 240	2. 180	1. 520
Share (%)*	7.8	8.6	8.3	6.6	5.1	4.5	3.4

Source: BP Statistical Review of the World Oil Industry 1975

*Share of World Output (Excluding USSR, Eastern Europe and China)

Libya also possesses a measure of comparative geographical advantage against Gulf producers, being situated close to the then rapidly growing oil market of Western Europe. At the time, the assets of the oil companies in Libya were given far-reaching protection under amendments of the Petroleum Law. The consequence of the generous operating terms of this, and subsequent revisions of the Law (1965 and 1967), was a rapid growth in the number of concessions for oil exploring within the country. The process of drafting the Libyan Petroleum Law and the associated related laws, which laid the framework for the subsequent development of the Libya oil industry and the open-door policy pursued by the government, was deeply criticised at a later period.

The government's goals were quite clear and it went about achieving these by taking two very significant initiatives. In the first place, it wanted to bring oil companies in to look for oil in Libya. In order to accomplish this at a time when abundant reserves of oil had been discovered elsewhere, it had to offer attractive financial terms. In the second place, the government wanted to foster a competitive oil industry and to avoid a situation where the oil companies took concessions and failed to explore or to produce oil in order to suit their own worldwide reserve portfolios. Its 1955 Petroleum Law established a system that limited the size of concessions. This mandated extensive relinquishment of acreage within a very few years and allowed not only large integrated oil companies, but also smaller independent and state oil companies to become producers of Libyan oil (Gurney, 1996). Undoubtedly, however, it did succeed in attracting a wide spectrum of oil companies into Libya.

The best international techniques for exploration and development were put to work in Libya within a very short space of time, bringing the country rapidly into the rank of the main oil exporting states (see Table 4.2). The government gained through this competitive system. It was able to pressure individual companies successfully for its desired ends, as no one company was essential to the Libyan oil industry and there were always others willing to take over a relinquished stake.

Table 4. 2 Development of Producing Wells in Libya 1998-2005

Year	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**
Producing wells	1,425	1,430	1,436	1,545	1,498	1,573	1,595	1,585

Source: OPEC Annual Statistical Bulletin, 2004

By 1969, the year of the Libyan Revolution, Libya had become the world's fourth largest oil exporter, but it was receiving what were probably the lowest per-barrel revenues in the world. The new regime embraced a new strategy aimed at changing the whole basis of operation.

In addition to this, the way was opened to the eventual nationalization of some foreign companies operations and the conclusion of participation agreements.

The government began by abolishing the Libyan General Petroleum Corporation in 1970, and replacing it with National Oil Corporation (NOC). The new company was given wider power than its predecessor, including overall control over the national oil production level in order to reduce the rate of depletion of oil reservoirs. One of the first steps taken by the NOC was to raise official export prices in 1970 and increase the tax rate payable by foreign companies.

The nationalization of the Libyan oil industry began in 1972. New participation agreements were concluded which gave the NOC a holding of at least 51% in all concessions. British Petroleum, ENI, Occidental Petroleum and the Oasis group (the US companies Conoco, Marathon and Amerada Hiss), all accepted the National Oil Company's new terms. Royal Dutch/Shell and the four major US companies they operating in Libya, (Exxon, Mobil, Texaco and Standard Oil of California), all refused.

By the early 1980's, the government realized that foreign investors had remained in the country and the National Oil Company (NOC) were not capable of finding and developing new oil at a sufficiently high rate to replenish Libya's diminishing reserves base, especially with limited funds. In order to attract new companies to undertake exploration in Libya and to interest those already in the country to expand their exploration efforts, it began to offer exploration and production sharing agreements (EPSA). Indeed, in January 1980, the Libyan authorities drafted a new model exploration agreement EPSA-II in which production-sharing terms varied according to the prospects of the acreage concerned and the contractor's share of output was the net sum of taxes and royalties.

4.3 Oil Industry Development

The oil industry in Libya has seen many substantial developments, particularly in the early days of the 1980s, when the American companies withdrew. This was followed by the UN sanctions in 1992 which had a clear effect on exports, with disappointing consequences. However, the authorities overcame such problems by inviting other companies into the Libyan oil industry.

4.3.1 Discoveries, Exploration and Drilling

The first oil well production had been discoveries in concession contract number in the area Alatshan by the Esso Company on 20 January 1958. The production was not more than 500 b/d and in the view of the company, this production rate was not of commercial size, particularly as the company had drilled more than two wells in the same area and found them dry.

The first and crucial major discoveries in Libya occurred in June 1959, when US companies found six large fields, including two giant ones in the Sirte Basin. Esso discovered the giant Zelten field (later renamed Nasser), and according to concession contract number 6, production in this well was 17,500 barrels a day. Esso also discovered another production well and the preliminary production was 15,000 barrels a day in August of the same year. Oasis, a consortium originally composed of Marathon, Continental, Amerada and later joined by Shell, discovered the Dahra and Waha field.

The geological and seismic survey work was at its most intense in 1960 and 1961 and this reflected the high activity in early concession before the first surrender of 25% of acreage, five years after the original grant. Subsequently, survey activity was on a falling trend, with the exception of 1966 and 1967 for geological and 1967 and 1969 for seismic. This increase in activity was associated with the 41 new concessions of 1966, allocated from surrendered acreage. New concession-holders frequently negotiated with those who had surrendered the area for survey information, thus avoiding duplication of work. After these times, both geological and seismic survey work diminished and any of the favourable structure revealed by this was subjected to seismic survey.

Drilling activity rose to its highest levels in 1963 and 1964 in exploration and 1964 and 1965 in development. These levels reflect the culmination first of drilling, (Waddamas, 1980). However, there were other significant finds in the mid-sixties. Oasis found the Defa field, Mobil and Gelsenderg the Hafra field and Esso Sirte, the Raguba Field. Subsequently, the BP and Hunt partnership discovered the giant Sarir fields and Oasis discovered the giant Gialo and the smaller Samah fields.

Decisions on drilling programmes were taken many months before the completion of wells was reported although drilling activity was far lower before early 1966. There were smaller increases in exploration drilling in 1968 and 1969 and of development drilling in 1969 and 1970, attributable to the rise in activities from the 1966 concessions.

However, the bulk of discoveries during the rest of 1960s, all in Sirte Basin, were smaller and less dramatic (Gurney, 1996). The exceptions included Amoses discovery of Nafoora in 1966, Occidental's discovery of Idris (later renamed Intisar) and Augila in 1967 and Agip's discovery of Abu Attiful in 1968.

The Libyan company Ageco identified five potential productive structures in the western Hammada Al-Hmra plateau of the Ghidames Basin. The other significant area for discoveries in this period was the offshore Pelagain Sh- near Tripoli, Agip found the Bouri field there in the mid-1970s; with its estimated reserves of two billion barrels of original oil. Aquitaine Company also found offshore oil in this area. The most successful operator during the period was Repsol YPF, which struck oil with five out of eight wells drilled on Block NC-186 in the Murzuk Basin between 1998 and 2002, with the 4 most important discoveries being made between November 1998 and mid-2002.

4.3.2 Reserves

Official proved reserves increased dramatically from 3 billion barrels in 1963 to 36 billion barrels in 2003. At the 2003 rate of output (1.3 million barrels a day) Libya has a reserve-production ratio of 76 years, as Table 4.3 demonstrates.

In 1971, the government lowered the official reserve estimate from 35 to 25 billion barrels, arguing that oil companies had inflated their field reserve figures in order to justify over-production.

Table 4. 3 Libya Proven Crude Oil Reserves (1990-2005)

(Million barrels)

Year	**1990**	**1991**	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**
Proven Oil Reserves	22,800	22,800	22,800	22,800	22,800	29,500	29,500	29,500
Year	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**
Proven Oil Reserves	29,500	29,500	36,000	36,000	36,000	39,126	39,126	39,126

Source: OPEC Annual Statistical Bulletin 2005

In 2004, the Secretary of Energy estimated Libyan oil reserves at 100 billion barrels. Whereas in 2005, the Prime Minister announced that Libya has proven oil reserves of as much as 47 billion barrels. 113 billion barrels of oil-in-place has been discovered in the country since oil was first struck in the 1960s, of which 79 billion barrels were found during the first 10 years. Some experts think that the country's six large sedimentary basins–Sirte, Murzuk, Ghadams, Cyrenaico, Kufra and the offshore sites, could contain total oil-in-place of as much as 220 billion barrels, representing an undiscovered potential of 107 billion barrels.

The Sirte basin, which has been more extensively explored than others has accounted for fully 87% of known recoverable reserves. 3% of reserves are located in the Murzuk basin, 3% in the Ghadames basin and 5% offshore. Of the 21 fields in Libya with recoverable reserves of over 1 billion barrels, 19 are located in the Sirte basin.

However, with relatively modest domestic demand, it also has the potential to increase exports of both fuels well into the future. Libya's current level of recoverable crude oil reserves is 39.1 billion barrels. The estimates represent only proven economic reserves that are planned for development. They do not include undeveloped proven reserves or estimates of probable and possible reserves. Libya's profiles of cumulative production to date differ for oil and gas, with cumulative oil production to date equivalent to 60 % of present estimates of recoverable reserves. However, Libya has the potential to rise significantly in coming years given its large,

reserve base. The possibility of significant reserve growth could also expand its capacity to produce and export hydrocarbon fuel into the future. The only limitation to oil production and exports over the past 20years has been the lack of upstream investment and the commitment to OPEC quota. Given current investment plans to raise capacity, a major constraint might be adherence to its OPEC quota.

4.3.3 Production and Export of Crude Oil

Libya started to produce crude oil from the beginning of 1961 as Table 4.1 demonstrated. Output began in 1961 and reached more than 1.2 million barrels a day in 1965, when Esso and Oasis accounted for 88% of total production. By 1967, their share had fallen to 70% with the arrival of BP and Bunker Hunt's Sarir field and with increases from Amosas and from the Mobil and Gelsenberg partnership's fields.

In 1968, Occidental began production from its Intisar field at a rate only slightly below that of Esso and Oasis. By the middle of 1969, Libya was exporting 3.1 million barrels a day a level comparable with other leading oil exporters of the time (Iran, Saudi Arabia and Venezuela). In April 1970, production peaked at 3.7 million barrel a day a figure that represented the entire capacity of the pipeline system. This suggests that the companies were determined to produce as much as possible at this time, and that they may have been doing so to the detriment of the fields involved. Libyan leadership in this field was only temporary (Waddams, 1980), but as government take per barrel in Libya was higher than in Iran and Saudi Arabia, total oil revenue was about the same level, as those of the two Middle Eastern producers, although still behind Venezuela.

On an annual basis, production in 1970 was the highest. An immediate increase in production and exports, after the revolution of 1st September 1969, was not surprising. Oil exports were not stopped at the time of revolution. In the light of assurances given by the Revolutionary Command Council, most concession-holders were bent on exporting all the oil they could while the going was good.

The decline in production in 1971 and 1972 was a direct result of government restrictions on the production of each company. This was done partly, in order to prevent overproduction of fields and partly, to force the companies to agree to higher

taxes and new contractual arrangements. The restrictions were targeted at companies which had the biggest percentage production increase during 1969.

Despite the protestations of the government that the cuts were only intended to protect the oilfields from overproduction, the fact was that the new price agreement resulted in a relaxation of the government's allowable production levels.

Libyan production at the end of 1974 hovered around 800,000 barrels a day, hardly more than half its level in the spring of the year. The government became alarmed, especially as it had set a target production growth rate of 7.5% per annum. It realized its error and cut prices drastically, effectively stimulating production and export. By June 1975, output had risen to 1.5 million barrels per day and exports in the third quarter of this year averaged 1.9 million-barrel day. Libya was able to stimulate output somewhat in the second half of this decade but never sufficiently to reach its 2 million barrel a day official goal. It annual growth from 1965 to 1972 was 22% an impressive rate (Gurney, 1996), even for a country beginning promotion. By contrast it annual growth between 1970 and 1980 was minus 6%, compared for instance, to a positive 10.7% growth rate in Saudi Arabia.

In 1993, Libyan oil production fell slightly from 1.43 million barrels per day to 1.38 million barrels per day. Output was cut back in the second half of 1992 as a result of technical constraints caused by the US trade embargo against the country and due to the UN sanctions introduced in April 1992 and tightened at the beginning of December 1993. Libyan crude oil production declined further in 2002, averaging about 1.3 million barrels per day as against 1.32 million barrels per day in 2001 and 1.35 million barrels per day in 2000, as Table 4.1 displays. The decline was attributable to cuts in the OPEC quota assigned to Libya, which was fixed at 1,162 million barrels per day through 2002.

However, sanctions had impeded the transfer of technology and the commitment of the necessary investment. Among the technologies the Libyan authorities would like to see more widely utilized are seismic acquisition, geological modelling, infill and horizontal drilling.

Recently, US oil companies' returned to continue their works, which were interrupted after the US administration embargo in the early 1980s. Libya authorities

hoped to reach the previous production of the early 1970s, which was almost 3 million barrels per day by the end of 2010.

4.3.4 Crude Oil Export and Marketing

Libyan oil in the markets of Europe portrays a marked erosion of product prices between 1961 and the early part of 1965, which in turn, resulted in a lower production. At this point the Arab-Israel war upset the economics and logistics of oil supply, but prices and realisations in Europe were reasonably firm as a whole.

Table 4. 4 Value of Exports and Oil Exports (1982-2004)

($-million)

Year	Value of Total Exports	Value of Oil Exports	Oil Share* %	Year	Value of Total Export	Value of Oil Exports	Oil Share* %
1982	13,984	13,692	98	1994	8,365	7,170	86
1983	12,341	12,341	100	1995	8,510	7,763	91
1984	11,148	10,970	98	1996	10,155	9,543	94
1985	12,341	12,132	98	1997	9,576	8,905	93
1986	7,711	7,568	94	1998	6,032	5,612	93
1987	7,986	6,293	78	1999	7,961	7,734	98
1988	6,673	6,070	90	2000	12,697	12,230	96
1989	8,034	6,573	82	2001	11,246	10,875	97
1990	13,225	10,715	82	2002	11,681	10,482	98
1991	11,234	10,211	91	2003	14,344	13567	95
1992	10,793	9,326	86	2004	20,203	18,653	95
1993	8,522	7,689	90	2005	28,700	28,324	98

Source: OPEC Annual Statistical Bulletin 2005

Share* Oil value as a percentage of total exports

In France, the United Kingdom and West Germany, prices continued to fall, but the firmness of the average sales value of products derived from a barrel of Libyan crude between 1965 and 1967 may be attributed to a marked hardening of prices in Italy,

which hitherto had been a depressed market. In addition, the prices there may have been affected by the amendment to the Libyan concession in early 1966.

Although the volume of exports has changed, roughly reflecting changes in production volumes, the export destination pattern has remained substantially the same since 1998, as Table 4.5 illustrates.

Table 4. 5 Libyan Crude Oil Exports by Destination (1998-2003)

(, 000 b/d)

Destination	1998	1999	2000	2001	2002	2003
North America	-	-	-	-	-	-
Latin America	-	-	-	-	-	-
Eastern Europe	5.0	7.5	3.5	13.7	7.5	4.4
Western Europe	1 131.0	974.2	986.5	963.9	899.9	1 048.2
Austria	30.6	22.9	12.9	25.5	13.6	11.5
Belgium	1.6	-	3.2	0.1	3.7	-
France	49.5	46.5	48.5	60.8	46.5	70.9
Germany	264.2	250.0	233.7	202.5	187.7	180.1
Italy	539.7	438.9	466.9	409.6	484.6	431.7
Netherlands	-	-	-	-	-	-
Spain	130.8	128.1	140.7	145.5	29.9	153.0
Switzerland	19.5	37.5	36.6	47.7	43.5	49.3
United Kingdom	-	18.5	7.1	-	27.1	-
Middle East	-	-	-	-	-	-
Africa	20.0	10.0	15.0	10.0	13.6	20.1
Asia and Pacific	5.0	-	-	-	1.4	53.9
Unspecified	-	-	-	-	-	-
Total world	**1 161.0**	**991.7**	**1 005.0**	**987.6**	**922.4**	**1 126.5**

Source: OPEC Annual Statistical Bulletin 2005

Although the was a surge in exports to North America, mainly the United States, after 1975, the main market for Libyan crude oil has remained unquestionably Western Europe. Its share of Libyan crude oil exports averaged 93% between 1963 and 1979, decreased thereafter, it was predicted that it would remain the main market for Libya oil crude and returned to 90% between 1982 and 1993.

Within Western Europe, the German share declined somewhat. It was about 27% in the first decade or so of Libya production, dropped to 15% when exports to the United States surged, and averaged 22% to 25% from 1982 to 1993, except in the

mid-1980s. By contrast, Italy's share increased from an average of 26% in the late 1960s, to almost 44% in the late 1980s and early 1990s. The US market was significant in the late 1970s, and then decreased: ending in 1986. Britain's market share was 15% until 1971. As the North Sea production came more and more into production, its share fell to practically nothing.

4.3.5 Crude Oil Prices Policies

The Libyan Petroleum Law and accordingly, concessionary agreements, did not require oil companies to publish a price for Libyan crude. This was for many reasons, not least of which was that the law was drafted by the oil companies' themselves and the government's main concern was to attract oil companies to begin exploration. The first step was to find oil. Pricing was at that time, a secondary concern (Ghanem, 1975).

Given the high dependence of Libya's economy on oil, pricing policy became of critical significance later. Libya as a small producer of oil cannot have an impact on the global oil price. The Libya oil crude has an advantage in terms of quality, gravity and location compared to what normally prevails in the petroleum industry. Moreover, the oil companies were entitled, according to the Libyan legislation and concession terms, to make unrestricted marketing allowances from the officially announced, undervalued posted price, encourage exports of Libyan oil. They took full advantage of the situation and other buyers, at sharply discounted prices. A number of countries took the lead in oil pricing policies and ensured a profit-sharing agreement with major multinational companies.

The other oil companies operating in Libya selected the base posted price. The first undervalued Libyan posted price, connected with other discounts and allowances, stayed applicable in determining Libyan revenue from the oil sector until the end of 1964. Libya received the lowest prices not only in Africa and the Middle East, but in the world as well. Libya had no influence on oil price at that time. Subsequently Libya's ability to raise state revenues from crude oil deteriorated. This was mainly related to the bad Libyan economic situation of the day and its urgent need for a fund for social and economic development. Further, oil companies convinced the

government of the day that its tax revenues were rising more steeply than if they sold less a higher price (Tugendhat, 1968).

The financial provision of Libyan concession agreements was amended to cope with the agreement. The expensive Royalty Agreement has, among other things, collected (a) marketing allowances to be reduced to 5% barrel and (b) a new OPEC allowance on current posted prices plus a gravity allowance. The gravity allowance was expressed in term of cents per barrel for each full degree of API gravity in excess of 27 API°. Provided that all crude had API gravity in excess of 37°, it should be treated as if it was 37° API gravity.

The key instrument that of controlling production levels, was soon widely employed by states anxious to secure the best possible relationship between pressing fiscal needs and conservation policies. Production declined in Libya in the early 1970s. In September 1971 Libya employed a new pricing policy. The policy was based on mutual agreement between Libyan and international oil companies.

The Arab Israeli conflict on 6th October 1973 affected the international oil industry to an unprecedented level. The power base within the international oil industry shifted from the oil companies to the producing countries, while the shared fixing of posted prices was replaced by unilateral action (Abozrida, 1981). From 1973-1978 the oil prices system became OPEC member controlled, hence, the Libyan crude oil pricing base for the posted price of Brega 40° API was adopted by the Libyan government according to OPEC's decision and consequently controlled the production. In 1979, crude oil prices rose to unprecedented levels, as a result of the Iranian revolution, to reach US$40 per barrel in 1981.

However, OPEC pursued a new pricing and marketing system corresponding to the market situation, so as to obtain the best possible return on their crude revenue. The oil price in the 1980s was on a decreasing trend in general to reach US$14.72 per barrel in 1988 for the Libyan crude 40° Brega API.

In the second quarter of 1989, Libya operated a market-related strategy linking the export price of Libyan crude to the spot rate-dated North Sea Brent. In April 1990, Brega (40° API) and Zuetina (41° API) were priced at a premium of US$0.10 per

barrel to dated Brent, whereas other crude were priced at discounts, ranging from US$0.15/b to US$1.35 per barrel This formula was modified at the beginning of January 1995.

However, new companies entered Libya and the authorities sought to increase the production in response to the high oil prices and responding to the need urgent to enhance development processes. Libya tried to convince OPEC members to increase their share to post-sanctions 1970's levels at 3.3 million barrels a day. Libya has been eager to attract more investments in the oil industry and has ambitions to increase its crude oil production in forthcoming years and employ more workers in this auspicious and promising sector.

4.4 Refiners

The Petroleum Law of 1955 had made a provision in Libya for refinery development in Article 21, by giving any concession-holder who discovered petroleum the right to construct and operate a refinery in Libya. Further stipulating that if refineries were established the producing concession-holders might be required to contribute pro rata the crude oil required by the refinery to meet domestic consumption. This crude would be made available at 'field storage'; and a concession-holder would not be required to finish or build additional handling or transportation facilities for this purpose.

Furthermore, the law also required the crude to be made available at 'field storage'. Royalties would be paid on this oil, but even after the 1965 amendment, would be recovered as an offset against surtax due, since this amendment stipulated that the amount of royalty to be expended was 12.5% of the value of crude oil exported.
These provisions might have laid the foundation for the supply of oil for internal consumption in Libya at bare cost of production and refining. In the event, no satisfactory implementation of these measures was achieved.

Pursuing a strategy of diversification and vertical integration of production, refining and distribution activities, Libya long ago built up a substantial domestic refining capacity, and has since gone on to develop downstream activities. In its main

European export market, it has become a direct producer of refined products. In Italy, Germany, Spain and Switzerland, Libya's five domestic refineries have a combined production of 342,000 barrels a day, over three times the rate of domestic oil consumption. Libya is not fully utilizing its domestic refinery capacity, however, since production in recent years has consistently been in the range of 275,000–285,000 barrels a day. Altogether, therefore, Libya has a total refining capacity of some 642,000 barrels a day at present, giving it the possibility of processing over 40% of its crude oil production in its own refiners. The government's medium-term strategy remains to secure outlets for Libyan oil through the entire downstream chain, with the emphasis on the country's traditional export market in Europe. In particular, it plans to build up its European interest to the point where it has a market for 400,000-450,000 barrels a day of crude a cross the Mediterranean. As Table 4.6 shows, the Libyan refinery capacity has increased steadily.

Table 4. 6 Libyan Oil Output of Refined Products Development (1990-2005)

(.'000b/d)

Year	**1990**	**1991**	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**
Refined products	278.0	282.0	282.4	286.8	295.4	300.4	304.7	307.6
Year	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**
Refined products	317.6	324.9	337.8	341.5	396.8	322.7	356.7	356.7

Source: OPEC Annual Statistical Bulletin 2004

Refinery output has risen steadily yearly, since the mid-1990s having averaged 341,500 barrels a day in 2001.This compares to 324,000, barrels a day in 1999 and 342,000 barrels a day in 1997. Although refinery output in 2001 was more than double the level of domestic oil consumption (159,700 barrels a day) its composition does not correspond to the structure of demand, since the Libyan refining industry suffers from a serious shortage of conversion capacity and is unable to produce environment-friendly products such as unleaded gasoline, reformulated gasoline and very low sulphur gas oil. Meanwhile, the NOC has received plans for developing a new refinery at Sebha, which would process crude from the nearby Murzek fields. The project was originally conceived in the late 1980s, but was scrapped when United Nations sanctions were imposed.

Other projects for expanding the capacity of the domestic refining companies have also been shelved for the time being. They included 200,000 barrels a day export refinery in Misurata and the expansion of the Tobruk refinery, for which contracts were awarded in 1989. Libyan refinery capacity was 342,000 barrels a day between 1990 and 1999, then increased from 2000 to 2005 to 380,000 barrels a day Libya's largest overseas operation is in Italy, where Tamoil Italian operates a 105,000 barrel a day refinery and a 2,100 strong chain of service stations. Libya continued to consolidate its overseas refining and distribution interests by purchasing the Dutch independent distribution Cebeco in May 1993, thus adding another 108 retail outlets to its European network, while expanding its retail operations in Hungary, Spain and the Czech and Slovak republics. Those moves followed the purchase of an 80% holding in the German oil distributor HEM and an additional 300 retail outlets in Italy from Cameli Petroli. NOC has acquired a Swiss refinery in which they took over Gatoil and its 72,000 barrel a day plant in Collenberg. In 1991, moreover, Oil Invest – the investment branch of NOC in aboard - increased its holding in the 80,000 barrel a day Holborn Europa refinery in Hamburg from 30% to 66.33%.

4.5 Gas Production and Development

Libya started developing its gas resources in the mid-1970s, and by the end of the decade had reduced the proportion of gas flared to about 20% of gross output. The percentage saw a marked increase during the 1980s, although that trend was suddenly reversed in 1990. Continued expansion of gas production, processing and transport capacity remained a high priority for Libya in the 1990s, both to meet rising domestic demand and to increase the volume of exports. Libya started exporting gas in 1971, but the volume exported has been limited by the fact that the authorities have placed greater emphasis on developing petrochemical and fertilizer facilities that the use of gas as feedstock and expanding the use of gas as a fuel in industry and households.

4.5.1 Gas reserves

Libya has proven natural gas reserves that were estimated at 1,299 billion cu/m (45.87 trillion cu ft) on January 1993. Slightly below the previous year's figure of

1,309 billion cu m but still higher than the first revised estimate published by NOC at the beginning of 1990, which put them at 1,218 billion cu m. before that, the official estimate that remained constant at only 728 billion cu m since 1987. See Table 4.7 Libya's natural gas reserves.

Table 4. 7 Libya's Natural Gas Reserves (1990-2005)

(Billion Standard cu/m)

Year	**1990**	**1991**	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**
Natural Gas Reserves	1.208	1.209	1.299	1.289	1.310	1.313	1.311	1.314
Year	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**
Natural Gas Reserves	1.315	1.315	1.314	1.314	1.314	1.491	1.491	1.491

Source: OPEC Annual Statistical Bulletin 2005

Although the current figure takes account of new accumulations of natural gas discovered in recent years, including the Ghadames and Bouri field, the country's actual gas reserves are thought to have considerably increased due to discoveries made in the past two years, following a find made at Hamada on Block NC-169 in the Ghadames Basin, in March 1991.

4.5.2 Gas Production

Libyan gas production, which had increased steadily between 1987 and 1991, fell by 8.6% in 1992 to 14.2 billion cu/m from 15.6 billion cu/m the year before. However, the market volume rose to 6.8 billion cu/m, a level only equalled in 1989, which translated into an improved utilization rate of 47.6% and a drop in the proportion flared to 15.2% in 1992 from 23.6% the year before. In 1993, gross output fell to an estimated 14 billion cu m, of which about 6.6 billion cu/m was marked.

Since associated gas currently accounts for the bulk of Libya's gas production the output is tied largely to the rate of crude oil production. However, non-associated gas output will receive a boost in the coming years by the development of several new fields, mostly offshore, giving Libya grater flexibility to adjust the volume of output to demand.

The biggest offshore structure being developed is the Bouri field, which contains associated natural gas reserves of an estimated 2,500 billion cu/ft. On the same block (NC41), there are also some 10 non-associated gas structures, which the operator, Agip NAME, is planning to bring into production as well.

Meanwhile, Agip NAME is already well advanced with the development of the Abu-Attifel site in the Sirte Basin, where the country's main onshore gas structures are concentrated. In mid-1991, it awarded a contract worth US$175 billion to Snamprogetti and Bonnati of Italy for the construction of a gas production and treatment plant.

The plan, which was inaugurated in September 1993, has a processing capacity of 3.5 million cu/m /day and a production capacity of 300 million ft/day gas is injected in the Zuetina 103-D field. Then in October 1991 Agip awarded a US$432 million contract to Bonatti for the construction of a 132 km, 10 inch gas line to carry the Abu- Attifel plant's output of natural gas liquids north, for feeding into the coastal pipeline system.

In mid-1992, the Arabian Gulf Oil Company (Agoco) invited companies to bid for Phase 1 of the al-Nafoora gas utilization project, covering a gas compression station and two gas lines, one 75 km long and 12 inches in diameter and the other 25km long with a diameter of eight inches.

Sirte Oil Company currently produces some 725 million cu/ft a day of associated and non-associated gas at five fields in the Sirte Basin.

Sirte Oil Company is now developing the Attahadi gas field in the Sirte basin, which has estimated reserves of 9-10 trillion cu/ft of gas and production potential of 250-350 million cu/ft a day. The project calls for the installation of a 36inch gas line to carry the field's output to Marsa El-Brega. Several other projects are underway or have been completed for recovering associated gas from oilfields.

4.6 Incentives for Foreign Investment in Oil and Gas

Many developing countries, rich in natural resources, have welcomed private investment in their oil and gas industries. Although projects in the extractive industries can have a serious environmental impact and be socially disruptive as well particularly if people must be resettled to make way for them they can make a significant contribution to the economic development of host countries if their adverse consequences are minimized through careful planning. Because they generate sizable revenues, create jobs and business opportunities, and often bring new roads and access to water and power to isolated rural areas, in which they are typically located, they have potential to stimulate economic growth and diversification and raise living standards. In addition, host countries benefit from being exposed to best international practice in project planning and implementation and are forced to build up their administrative and institutional capacity.

Oil and gas investment could be a boom for developing host countries, which lack the sufficient funds to work alone. Partnerships between foreign investors, governments and local communities are crucial for investment projects to have a lasting development. Although the Libyan authorities are eager to attract investment in all areas of the economy - construction, tourism and telecoms are the key potential growth areas - it is the hydrocarbons sector that is attracting the most attention.

In 2005, Libya's proven oil reserves stood at 36,126 million barrels and 1,491 billion cubic feet of natural gas, to make Libya the ninth-largest source of untapped oil and gas, equivalent to 3% of world reserves. Although gas reserves are small in global terms, 7% of world reserves, the sector is attracting a lot of interest (Gill, 2003).
Libya has to take two dramatic strides towards its stated aim of returning indigenous oil production to its historic peak of 3 million barrels a day and, in one stroke, reposition itself as a lead player in the Mediterranean oil and gas industry (Danieus, 2005).

Exploration licenses cover only one third of the country's surface area, so Libya is seen as a spectacular opportunity (Anderson et al, 2004). Despite high reserves, oil production has declined due to maintenance and re-investment as a consequence of

the economic sanctions, which were imposed by the UN nearly 10 years ago. Sustained capacity stood at 3.3 million barrels per day in the 1970s. Today it is less than half this level. Libya wants US$30 billion in foreign investment to hike production by 40% to 2.1 billion barrels a day over the next five years. Although Libya is still largely unexplored, recent finds have been modest.

The NOC will award no more than 40% of the concession to any foreign oil discovery company. However, this percentage has declined in some contracts to less than that. This unprecedented step was explained by the Libyan authority's desire to entice American oil companies to begin work in Libya after an estrangement of 3 decades. Once the American investors returned, they brought with them the urgently needed funds for oil development, a major obstacle for Libya in the oil sector. Therefore suitable foreign investments along with local investment represent a major factor in the activation of oil industry schemes. Oil industry technology is considered particularly complex and develops rapidly. Libya needs to acquire such technology and employ it on these programmes. It has been hindered in the past by the sanctions

Libya has a pressing need to increase exploration activities and to compound the global oil experience and acquire knowledge, to be disseminated at a local level. The oil industry's activities are expanding which, can spur opportunities, create work and absorb the increasing numbers of youth looking for work, In addition, the Libyan population has grown more than 3.5% a year and so Libya has an urgent need to provide work opportunities, particularly in the oil sector which has become the most promising sector (see Table 4.8).

Table 4. 8 Libya Crude Oil Production (1990-2005)

(,000 b/d)

Year	**1990**	**1991**	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**
Production	1,389	1,405	1,432	1,361	1,389	1,390	1,394	1,395
Year	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**
Production	1,449	1,287	1,347	1,323	1,200	1,431	1,580	1,693

Source: OPEC Annual Statistical Bulletin 2005

The hydrocarbon industry in Libya is confined to "upstream" activities, that is, the production and processing of oil and gas. "Downstream" activities have not developed, despite long-term government plans to instigate such growth. Such industries might include a diverse range of products. The productions of ethylene, fertilisers or refined lubricants typify such developments. Synthetics, notably PVC, might also be produced in the early stages of such downstream development. Thus far, no progress has been made on such developments.

The hydrocarbon industry has undoubtedly reshaped the economy and life of the state.

4.7 Conclusion

The most acute problem faced by the Libyan authorities since the revolution has been the unreliability of oil revenues. This problem has been largely of their making. Political upheaval and short-term oil policies have done a great deal to create difficulties. Libya was significant in bringing about the first oil price shock in 1973/74. Then, it was said a new era was dawning, uninterrupted and ever increasing oil earning; wealth, financial strength and political power in the international arena seemed the natural rewards for Libya's efforts in overthrowing the old oil pricing order.

■ *The significance of the oil sector*

The oil sector plays a critical role in financing government revenues. It represents more than 50%, and recently, has contributed 40-50% in GDP. Also, more than 20% are employed in the oil sector from the total Libyan employment. The oil sector is considered a promising sector, so authorities should pay more attention, and concentrate on taking significant steps to reform this sector, in the long-term.

These steps include the creation of modern infrastructure, improving workers' skills and reducing production costs. The urgent need is to increase production to previous levels in as short a time as possible. There is a significant need to increase the size of investment, especially foreign investment in this sector, which will lead to a rise in production. These commitments must be made during the recent, unprecedented surge in oil prices. There is also a pressing need to establish a strong chemical

industry, which depended on raw crude oil, to aid in the target of economic diversification.

■ *Challenges ahead*

Despite the brilliant success achieved in the oil industry, Libya faces a significant challenge related to production. The most fundamental challenge facing the authorities is to increase oil production capacity. Libya's oil sector deteriorated, as a result of the UN sanctions. This challenge is not new. Indeed, rising prices and the current thin cushion of spare oil production capacity have resurrected an old worry. Libya reopened its doors to US companies following the lifting of sanctions. However, a number of successful licenses have accrued and it is anticipated that new discoveries will start feeding into the development queue by 2007-2008. Meanwhile, there is a backlog of discoveries to develop and the possibility of enhancing production from some of the other major fields that have seen very little investment for 20 years. Libya hopes to reach the 3 million barrel a day target. This number will be a high priority and a challenge at the same time. This number depends on a successful exploration, combined with a focus on improved oil recovery projects. It is still early days for the reopening of the Libyan oil market and it remains to be determined how rapidly activity will pick up.

CHAPTER FIVE: LIBYA'S ECONOMY FROM DEPENDENCY TO DIVERSIFICATION

5.1 Introduction

Development planning in Libya has been shaped by a range of institutional, historical and ideological factors. The particular path to independence adopted by Libya, coupled with its distinctive political structure, has bequeathed planning models and structures which reflect the strong desire to develop the country. The Libyan economy is exclusively dependent on oil exports, with the share of crude oil and natural gas in GDP at 50% in 2005. The significant increase in export earning, owing to the steep rise in oil prices in 1973-74 was a turning point, not only in the socio-economic and political life of Libya, but in the industrial field as well. The hydrocarbon industry has undoubtedly reshaped the state.

This chapter outlines the evolution and objectives of development planning in the state it also examines the accelerating diversification, which is one of the dominant structural objectives of the whole economic development process, which will lead to self-sufficient and self-sustained growth. How does a long-term strategy for optimal exploitation of the available natural resources, especially the non-renewable resources, fit into the concept of economic diversification or self-sustained growth? Any rational policy for resource utilisation has to take into account the factor endowment, i.e. land, capital, raw-materials manpower, infrastructure, etc and the manner in which non-renewable resource could be conserved for future generations. The transformation of this structure from oil-dependent development to self-sustained growth lies in the mobilization of efforts for the full utilization and upgrading of the indigenous productive resource. Most of the economies of oil-exporting, developing countries exclusively depend on oil export revenue. The small size of the market and sparse population, together with the inadequate physical and social infra-structure limit the development process. Industrialization and economic

development depend on imports and technology, skilled manpower, machinery, equipment and managerial and administrative expertise from industrially developed countries.

Moreover, in an attempt to reduce the heavy reliance on oil and gas revenues and returns from overseas investments, development plans have focused on the need for economic diversification but planners now accept that the long-term growth of the economy depends on a more diversified economic base. With most of the state infrastructure, machinery and equipment, intermediate materials and even labour, being imported, the problems of such external dependency have become increasingly acute and make the economy more vulnerable to shocks.

The need for access to alternative sources of income and employment has also been underlined by the medium and long-term fragility of the oil economy. Planners and political analysts alike are aware that a prolonged slump in prices and production would threaten national revenues, increase unemployment and create political instability. The need for access to alternative sources of revenue and jobs has thus underpinned attempts to wean the economy away from its dependency on oil and gas. Diversification policies have been a central *leitmotiv* of the development debate in recent years (Masood, 1989).

The basic problem, which faces Libya, is how best to transform a dormant pool of valuable but finite oil reserves into a permanent flow of present and future income needed to raise its standard of living. The domestic policy implications of this objective involves a series of decisions regarding the level of production, and conservation, on exports and the use of income from oil revenues for current consumption or for future generations. The allocation of oil receipts must be used to improve domestic real capital formation (including social infrastructure).

Each decision in turn leads directly into others regarding the scale and pattern of diversification and hence the choice of specific fiscal, monetary and trade options, perceived to be best suited to Libya's long-term interests. In particular, the right choice of development process strategy for Libya is significant for two main reasons: First, oil

revenues, which underwrite development activities, cannot be relied on as a perpetual source to finance, owing to the non-renewable nature of oil deposits. These "revenues" are not continuous streams of future income flow, but rather a "cashed" value of a given stock of capital that is transformed from one form (oil reserves) to another (financial assets). Unless these assets are further transformed into a sustainable revenue base, economic development (and its expected contaminant, higher standard of living) cannot be ensured. Second, the startling similarity in undesirable consequences (i.e. inflationary pressure, cost overruns, delayed completion of projects, income gap, urban overcrowding, and social tension). Libya under a different political regime, economic and cultural background, seems to raise questions about the appropriateness of the chosen development models.

This chapter is divided into two sections. The first section examines the background of the previous development plans debate and more particularly, outlines some of the rationales behind those plans. A second section will investigate the diversification process and the sectors which can become alternative resource income and considers the prospects for sustainable economic diversification in Libya.

5.2 Diversification Concept

Economic diversification means heavily reducing dependence on the oil and gas sector by developing a non-oil economy, non-oil exports and a non-oil revenue source. By implication, it also means reducing the leading role of the public sector in the Libyan economy by promoting the growth of the private sector.

At the time of the first boom in the early 1970s, the Libyan economy had basic characteristics which hindered balanced economy growth. This included heavy dependence on oil production and exports, a scarcity of natural resources other than hydrocarbon, a limited domestic labour force and the initial lack of tradition of enterprise. The oil sector accounted for more than 30% of the gross domestic product (GDP), and an average of 95 % of exports and government revenues.

Initially, the economic diversification process was driven by a sense of uncertainty about the duration of the first oil boom, this was accompanied by a rush to develop physical and social infrastructure in order to provide a basis for the development of the economy outside the oil sector. Subsequent sharp fluctuations in oil prices during the 1980s and 1990s generated considerable instability, particularly in the middle of the 1980s, in the Libyan economy and made economic diversification one of the basic priorities of economic policy. In addition to the continued expansion of the physical and social infrastructure, economic diversification in Libya has to encompass the development of heavy industries, particularly petrochemicals and basic metal industries, as well as other manufacturing industries, agriculture and services, including financial services and, more recently, tourism. Increasing emphasis has also been placed on education and training to reduce the very large increase in the size of the expatriate for the non-oil economy. Privatization of public utilities and other government-owned enterprises, the reduction of domestic subsidies and the development of non-oil revenue sources have also been among major stated objectives of economic diversification plans.

During the last three decades Libya has pursued the above objectives with varying degrees of seriousness and success. There have been many impediments, among them the scarcity of agricultural land and water resources, the limited human resource base and the effective absence of a financial market. The momentum of the process of diversification has also varied over time. Periods of rising oil prices and revenues have distracted Libya from pursuing economic diversification, although the diversification priority sprang back in force as a prime objective during periods of failing oil prices and rising budgetary deficits. Some of the main results and achievements of the last few decades economic diversification efforts have included the establishment of a successful petrochemical industry, a wide base of manufacturing industries, the development of agricultural resources (albeit a heavy cost in terms of agricultural subsidies) and the growth of the services sector; including financial services and offshore banks, as well as tourism. Some modest progress has been made in privatization so far. In recent years, there has also been an increasing trend to relax and remove restrictions on foreign investment (Law No 5/97) in a bid to encourage such investments in diversification

projects and to expand local financial markets. Notwithstanding moderate achievements of the last three decades there is still more to be done if Libya is to break away from its heavy dependence on oil and limit the impact of future oil price fluctuations on its economy. The immediate challenge is to maintain the momentum of the economic diversification policy's structural reform programmes, in spite of the sharp rise in oil prices in 2006.

'Economic diversification' has been the by-word and catchphrase of economic policy in Libyan economy besides economic self-sufficiency, since the first oil boom in the 1970s. It was initially dictated by fears about the limited life of oil and gas reserves that had brought the Libyan people sudden wealth, and the awakened need to develop and diversify the traditional economy that lay beyond the rapidly growing hydrocarbon sector. In the last three decades, this policy has been pursued as a strategic objective, to overcome the economic instability inherent in the heavy dependence on oil exports, and to cater to the rapid growth of the native Libyan population and labour force. Within the context of the Libyan economy, therefore, economic diversification basically means development of the non-oil sectors and the reduction of the proportion of government revenues and export proceeds from oil and gas. By implication, however, it also means reducing the role of the public sector in the Libyan economy an objective which is central to the ongoing efforts to restructure and liberalize the economy.

The International Monetary Fund (2006) noted that;

'Diversification is the biggest challenge for Libya, as it implies sustained efforts to promote small and medium-sized enterprises in order to expand the country's non-oil production and export bases, and create jobs to meet the demands of the rapidly increasing labour force. Policies to expand the production base should be centred on

(i) land reform;

(ii) the continuation of efforts to improve the legal and regulatory environment, including the reform of the labour code; and

(iii) the reform and consolidation of the judicial system to streamline and speed up conflict resolution and improve the private sector's confidence in the country's legal institutions.' pp 48

5.3 Economic Development Objectives

Common to all previous plans is brevity and lack of coherence. There is also little precision in the plan's objectives. Indeed, in all Three Development Plans, the same fourteen points have been repeatedly stressed as the objectives for development. There is no one overriding development objective linking the others. This can be seen from the following fourteen specific objectives in the national development plans adopted by the government:

1 Diversify the economy and reduce dependency on oil.

2 Reduce marked disparities in the prosperity and growth of different areas and regions in the country.

3 Maintain a high level of employment.

4 Raise per capita income through an increase of productivity.

5 Maintain a relatively stable price level.

6 Encourage and foster good industrial labour relations to achieve increased efficiency and higher productivity.

7 Achieve a more equitable income distribution.

8 Develop an adequate and comprehensive national system of education.

9 Develop a comprehensive system of national health services to provide facilities adequate to raise the levels of all aspects of public health.

10 Provide adequate public services through:

(a) Improved communication means.

(b) Adequate water, sewage, and sanitation facilities to all areas of the country.

(c) Drainage and irrigation facilities for agriculture development;

11 Increase the economic development rate.

12 Provide adequate power facilities.

13 Encourage and promote private sector participation in all aspects of national development projects;

14 Increase and improve the standard of living and advance the quality of education.

The main problem with all national development plans is that they do not suggest how, or at what pace, these objectives can be met. These plans are also missing the essentials capital information, the structure and characteristics of the economy, important development data, and designation of responsibilities. So far none of these objectives have been achieved. Perhaps, the lack of responsibility, commitment, credibility, the absence of feasibility studies and many other reasons account for the poor performance of any development initiatives. Despite a long-standing pledge to diversify the economy, Libya's progress in some major development areas, which the government plans encourage, has not been very impressive. Unemployment was increased to reach 20% in 2004, and is prevalent through the country.

Perhaps the UN sanctions, which started in 1992 and lasted until 2002 resulted in the deferment of many projects, such as electricity power and railway projects. Vital projects, predicted to create many job opportunities, have been postponed, including the decision not to go ahead with the refinery and petrochemical complex in Sebha, affecting future employment patterns. It was anticipated that the above projects would create more than 20,000 new jobs under the 2006-2010 plans. Postponing them cost the government more than 25,000 new jobs. The government has not indicated which other productive sectors, apart from the mining sector, will create these jobs.

It is impossible to assess the success of Libya's plans in the absence of any development reviews since 1973. In an attempt to streamline its development policies, the government created the Economic Planning Ministry and later the General Council of Planning, whose functions include:

(i) The formulation and revision of relationship development plans.

(ii) Co-ordination of technical assistance activities.

(iii) Implementation of agreed development projects.

It was clear that there was a contradiction between the General Council of Planning and the Ministry of Planning. In addition, neither had ever assessed and revised previous plans, and it seemed that any new plan would be an exact carbon copy of previous ones. Moreover, the government's methods and private machinery to promote ambitious

development were inadequate. Also, any abrupt changes in the lethargic pace of development would not be well received by the elite authorities. The only positive achievement worth mentioning was the man-made river project. It was a modest success and, needless to say, it was implemented by foreign workers.

5.4 The Development Plans: A synopsis

5.4.1 The Third Plan 1973-1975

This strategy planned to achieve maximum economic growth rate, in particular, to accelerate the growth rate of some of the main economic activities. This goal derives its strength from some of the main economic activities, with a focus on the industry and agriculture, which have a clear impact on other non-oil economic activities. The plan aimed to ãccomplish a real gross productivity growth rate for the national economy with a rate of 36.8%.

In the agricultural field, the plan aimed to achieve self-sufficiency in the production of food-stuffs, to meet the people's needs. Furthermore, this rate of growth enabled the real gross domestic income to double within seven years. Moreover, it doubled the income generated from non-oil economic activities within four years. This 1973-1975 plan was aimed at creating a change in the national economic structure that benefited the non-oil economic activities, in particular, the industry and agriculture. This structure saw a rise in non-oil economic activities from 42.2% to 50.5%. In the agriculture, forest and fishing sectors, the percentage of share in GDP was increased from 2.6% to 3.0%. Also, in the transformation industry, the percentage was increased from 2.3% to 3.4% between 1972 and 1975. On the other hand, the oil exploration share of GDP declined from 57.9% to 49.5% between 1972-1975. Thus the plan fulfilling intention of creating a diverse economy, based in the industry and agriculture, with less dependence on oil activities.

As a result of this, the plan aimed to achieve more job opportunities for an estimated 125,900 workers. The plan was to increase the number of national workers from 557,000 workers in 1972 to 682,900 workers in 1975, whereas the number of non-national

workers increased from 80,000 workers in 1972 to 133, 800 workers in 1975, due to the population increased from 2, 084 million in 1972 to 2, 379 million in the 1975. The GDP per capita had been increased from 755.2 dinar in 1971 to 893.2 dinar in 1975, as Table 5.1 illustrates.

The GDP reached 2125.5 million dinar in 1975, with rate of growth 35% over the planned period, the share of gas and oil in GDP declined from 49.4% in 1972 to 41.8% in 1975. At the same time, the other activities for the whole gross product increase reached 58.2% in 1975 (Ministry of Planning).

Table 5. 1 Economic Goals in the Third Plan (1973-1975)

(,000)

Details	1972	1973	1975	Rate of growth%	
				1973	1975
Gross Domestic Product in million	1 573,8	1 782,5	2 125	13.0	35,0
Gross National Product in million	1 330,8	1 502,8	1 784	12.8	33.0
Population (,000)	2 084,0	2 177,0	2 379	4.5	14.2
Per capita from GDP	0,755	0,818	0,893	8.5	20.5
Per capita from GNP	0,638	,689	0,749	8.3	18.8

Source: Social and Economic Development for the Third Plan 1973-1975, Ministry of Planning, Libyan Arab Republic

As Table 5.2 shows, the non-oil economic activities witnessed a considerable growth rate and were as follows; transformation industry 24.5%, agriculture 4.5%, construction 23.5%, and electricity 21%. These achievements fell in line with the main purpose of the economic development, which aimed at emphasizing the importance of fast development of those production activities that had a considerable responsibility in expanding the economic diversification base.

Policy-makers and planners aimed at finding a diverse economic base, which the national economy could rely on as an alternative income to oil. The agriculture and industry sectors had the lion's share, which reflected the policy-makers intention to

found a diverse economy dependent on multi-productivity economic activities. The construction sector, whose plans aim to provide housing for all Libyan people, and the communications sector, also received a significant attention form the decision-makers.

Table 5. 2 Structural Change in Gross Product in the Third Plan

(1973-1975)

Percentage

Activities	**1972**	**1973**	**1975**
Agriculture, forest and fishing	2.9	2.9	3.2
Oil and gas exploration	**49.4**	**45.8**	**41.8**
Mining	0.2	0.2	0.2
Transformation industry	4.3	4.4	6.0
Electricity and utility	0.7	0.8	1.0
Construction	11.7	15.8	16.1
Wholesale and retail trade	3.6	3.4	3.5
Transportation and communication	5.1	5.1	5.7
Banking and insurance	1.0	0.9	0.9
Housing property	3.9	4.0	4.5
General services (except education and health)	11.6	11.1	11.1
Education services	2.9	2.9	3.3
Health services	1.6	1.6	1.7
Other services	1.1	1.1	1.1
Overall Total	100.0	100.0	100.0
Oil and gas exploration total	**49.4**	**45.8**	**41.8**
Other activities total	50.5	54.2	58.2

Source: Social and Economic Development for the Third Plan 1973-1975, Ministry of Planning, Libyan Arab Republic

The facilities sector saw a continuing increase in spending, while the oil sector, which is highly dependent on other sectors, saw only moderate spending. The research and

development sector also saw modest spending over the plan's period. The aim was to create a diversified economy, non-oil dependent, through this strategy.

5.4.2 The Social and Economic Transformation Plan 1976-1980

The third plan focused on the productivity sectors. Both the third plan and the fifth plan (1976-1980) made remarkable changes in the national economy, altering economy from one that is highly dependent on oil revenues, to one that is dependent on product diversification, particularly in industry and agriculture. As a result of the oil price decline in 1980, the non-oil sectors increased their share in GDP to 54.5%.

The policy-makers target was to increase the non-oil sectors, and their share in GDP. For example; the industry sector had 3.8% of GDP in 1975 and 9.6% in 1980, and the agriculture sector was 4.8% in 1975 with expected figure at 5.1% in 1980. So the decision-makers aimed to accelerate the share of the main non-oil sectors by a substantial amount through development programmes. The non-oil sectors raised their share due to the investments' incentive implemented in different sectors, particularly the industry and the agricultural sectors. It aimed to generate and create income in the near future and could result in a significant modification of the economic structure.

This considerable investment reflects the determination of the authorities to reduce reliance on oil resources. The investment policy was targeted at redistribution among different sectors; particularly in the transformation industry, agriculture, the infrastructure which generates electricity, transportation and communications, and housing. It implemented an investment incentive aimed at creating a diversified economy, based on industry and agriculture, through amending the economic structure, and furthermore, providing an appropriate and convenient form of support for the services sectors.

Table 5. 3 Structural Change in Economic Activities over the Transformation Plan (1976-1980)

Percentage

Economic activities	1975 start figure	1980 actual	1980 expected
Agriculture, forest and fishing	4.8	3.5	5.1
Mining	1.2	1.1	0.9
Transformation industry	3.8	6.0	9.6
Electricity and utility	1.0	1.6	9.6
Construction	25.4	22.0	23.1
Wholesale and retail sale	13.1	11.8	19.2
Communication and transportation	10.3	8.4	16.1
Finance and insurance and business	5.8	6.3	5.2
Housing property	7.7	6.2	5.2
General services (except education and health)	15.1	19.1	12.8
Education services	7,1	8,1	6,3
Health services	3.0	4.4	2.5
Other services	1.7	1.5	0.7
Real gross product for non-oil economic activities	100.0	100.0	100.0
Non-oil activities (except generals services, education and health)	74.8	68.4	78.4
General services, education and health	25.2	31.6	21.1

Source: Social and Economic Transformation Plan, 1981-1985, General Popular Committee for Planning (First part).

Table 5.4 illustrates the volume of spending and distribution of the real aggregate investment which was implemented by the Economic Productivity Plan, compared with the volume of spending and the planned distribution of the Social and Economic Transformation Plan 1976-1980. The table shows the considerable amount which was

spent on agriculture and industry to accomplish a set of agriculture and industry objectives alongside many other projects in Libya.

Table 5. 4 Fixed Capital Formation by Economic Activity in the Social and Economic Transformation Plan (1976-1980)

Million dinar

Economic activities	1976	1977	1978	1979	1980	Total
Agriculture, forest and fishing	162.0	169.9	185.5	169.9	201.5	888.8
Oil and gas exploration	22.6	39.4	80.5	33.0	32.3	207.8
Mining	2.3	2.1	2.5	2.0	1.5	10.4
Transformation industry	159.3	143.5	134.3	183.1	319.0	939.2
Utility and electricity	156.7	168.3	168.3	205.1	212.8	911.6
Construction	24.9	28.4	13.7	15.5	17.9	100.4
Whole and retail sale	6.3	12.8	19.8	29.7	31.6	100.2
Restaurant and hotels	6.3	1.8	19.8	29.7	31.6	100.2
Transportation & communication	186.2	203.5	227.2	196.3	305.6	1118.8
Finance, real estate and insurance (except housing)	0.4	0.9	0.8	0.8	1.1	4.0
Housing property	228.4	217.3	212.0	148.9	148.4	955
General services (except education and health)	104.6	118.1	129.2	137.6	129.9	619.4
Educational services	68.6	68.6	62.4	63.2	74.0	336.8
Health services	25.2	33.5	42.6	50.1	53.1	205.1
Other services	1.9	1.8	1.0	1.2	0.7	6.6
Total	1149.4	1208.1	1280.1	1236.4	1530.0	6404.1

Source: Social and Economic Transformation plan 1981-1985 General Popular Committee for Planning (First Part).

In terms of workforce, there had been significant developments, with an increase 677,100 workers in 1975 to 812,800 thousand in 1980 (an increase of 135,700). The Libyan workforce increased from 454,000 in 1975 to reach 532, 800 in 1980, at a rate of 3.2% annually.

Table 5. 5 Population and Workforce in the Social and Economic Transformation Plan (1976-1980)

Thousand

Details	1975	1980	Increase	Annual growth %
Libyan population	2316.5	2804.6	488.1	3.9
Non-Libyan population	366.6	441.2	74.6	3.8
Total population	2683.1	3245.8	562.7	3.9
Libyan workforce	454.1	532.8	78.7	3.2
Non-Libyan workforce	223.0	280.0	57.0	4.7
Total workforce	677.1	812.8	135.7	3.7
Workforce male	418.7	473.9	55.2	2.5
Workforce female	35.4	58.9	23.5	10.7
Total Libyan work force	454.1	532.8	78.7	3.2

Source: General Popular Committee for Planning, Social and Economic Transformation Plan, 1981-1985

The non-Libyan workforce increased from 223,000 in 1975 to 280,000 in 1980, a rise of 75,000 with an increase rate of 4.7%. Table 5.5 reveals Libyan and non-Libyan workforce development over the period of the Social and Economic Transformation Plan (1976-1980). Moreover, it can be seen that Libyan women were introduced to the work force and caused a significant change in the Libyan work market structure. It rose from 35,400 in 1975 to 58,900 in 1980, with an increase of 23,500 as in Table 5.5.

5.4.3 The Transformation Plan 1981-1985

The transformation plan 1981-1985 saw an accelerated shift to reliance on non-oil resources and a cut in the dependency on oil. This led to an improvement in the standard

of living through accomplishing this ambition by concentrating more on industry and agriculture. Furthermore, it achieved greater dependence on goods and services which had been given a high priority. This gained the maximum benefit from product and services through substantial investment. The plan focused on the agricultural sector aiming self-sufficiency in essential foodstuffs. This sector played a crucial role, as Libya imports more than 40% of its goods and services. The productivity of the agricultural sector needed to be increased and the dependence on foreign imports needed to decrease. Moreover, the plan gave more attention to the education sector due to the deficit in skilled workers, which could have a crucial role in the economic transformation process. The deficiency in the vocational managerial cadres of teachers, technicians and skilled workers represented the main obstacles that impeded the transformation process. In addition to the plan's target of accomplishing a suitable growth rate according to the national economic requirement, the plan built 206,200 housing units in addition to 80,300 housing units which had been built in the previous plan.

In brief, the plan targeted the traditional sectors to accomplish many goals, the most important of which were lessening the dependency on oil and gas revenues and increasing self-sufficiency. Moreover, it aimed to improve productivity ability, expand the industry sector, and focus on incentive training of the workforce and the creation of employment opportunities, particularly outside the cities.

5.4.4 The Plans 1986-2000

The Social and Economic Transformation Plan for the years 1986-1990 was allocated 10.9 billion Libyan dinar, of which 72.7% was financed by oil revenues, with the rest financed by Libyan government revenues which comes from tax. However, the plan did not accomplish this for several reasons, the most important of which was the sharp decline in oil prices (which reached a low of US$12 per barrel), which had a direct influence on this plan. The oil price fluctuations lead, ultimately, to volatile government revenues alongside the considerable volume of carry-over liabilities, which accounted for more than 4.5 billion dinar. Another factor was the lack of clarity in the most important policies.

Furthermore, a social and economic transformation plan for the period of 1991-1995 was set up as the first part of a 'comprehensive mobilization framework' for 1991-2000. The framework was established with 76% of the funding from oil revenues (about 3.1 billion dinar) and with 24% of finance from the government revenues and borrowing. The planned project concentrated on the previous goals; diversification, self-sufficiency, and the creation of jobs. In addition it focused on investment and pricing policies, without any consideration given to further financial, monetary and trade policies. None of the above objectives were accomplished due to the high level of difficulties which were encountered with the Transformation Plan in the period 1986-1990. Moreover, the 1996-2000 plan was set up as a lead-up to prepare for new development, but most of the goals in this plan were supplementary to the current projects and paid off the previous liabilities and maintenance for earlier projects' assets. 6.2 billion dinar was allocated for this plan and, of this amount, 1.2 billion dinar came from government revenues and borrowing and the rest (5 billion dinar) came from oil revenues. The available data indicates that this plan did not achieve the targets, particularly with regards to paying previous liabilities. It could be said that after 1986 there were no clear development plans, instead an annual expenditure plan on economic development was set up as, table 5.6 illustrates.

Table 5. 6 Transformation Budget Appropriations by Sector (1986-2000)

(Millions dinar)

Sectors	1986	1987	1988	1989	1990	1991	1992
Agriculture	212.6	188.1	156.7	98.7	360.0	619.4	95.0
Industry	270.0	273.5	224.8	140.0	139.0	267.0	170.0
Oil & gas	115.0	70.0	70.0	70.0	70.0	75.0	100.0
Electricity	270.8	141.2	136.2	100.0	80.5	66.0	80.0
Education & research	140.0	160.0	133.0	82.3	97.5	275.7	133.6
Media & culture	12.0	10.0	8.5	6.1	5.0	10.0	8.0
Vocational & training	18.1	19.9	38.3	28.1	26.0	31.0	29.0
Health & social care	64.6	60.4	53.1	36.8	42.4	57.0	76.0
Sport	10.3	8.0	8.0	3.0	2.0	6.0	5.0
Housing & facilities	347.3	343.3	844.0	204.9	203.0	476.0	160.0
Transport & communication	207.0	145.5	130.3	77.1	70.0	88.3	75.0
Economics	25.0	20.0	20.0	6.0	6.0	5.5	4.0
Planning	5.0	4.0	7.0	5.0	4.5	5.0	4.0
Origins development	0.0	0.0	12.0	30.0	30.0	30.0	28.0
Sea wealth	0.0	0.0	12.0	12.0	12.0	13.1	10.0
Justice & security	0.0	0.0	0.0	0.0	0.0	10.0	8.0
Working groups	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Project reserve	2.3	6.5	1.1	0.0	22.1	0.0	19.4
Total	**1700.0**	**1450.6**	**1855.0**	**900.0**	**1170.0**	**2035.0**	**1005.0**

Sources: General Planning Council, Social and Economic Indicators 1962-2000

Continued...

Table 5. 7 Transformation Budget Appropriations by Sectors (1986-2000)

(million dinar)

Sectors	1993	1994	1995	1996	1997	1998	1999	2000	Total
Agriculture	71.2	70.0	50.0	149	182.9	126.2	82.1	172.4	2634.3
Industry	63.7	50.7	24.0	20.0	71.0	8.0	9.4	17.0	1748.1
Oil & gas	75.0	75.0	137.0	30.0	158.0	100.0	101.5	77.2	1323.7
Electricity	60.0	97.0	90.0	40.0	100.0	105.9	107.4	81.6	1586.6
Education & research	125.0	125.0	80.0	27.0	59.6	115.9	103.0	249.3	1907.8
Media & culture	0.0	4.0	3.0	5.0	7.0	9.7	8.3	15.9	112.5
Vocational & training	0.0	10.0	10.0	12.0	36.9	24.2	21.1	46.1	350
Health & social care	57.0	95.0	50.0	60.0	61.5	65.4	77.9	132.4	889.6
Sport	0.0	0.0	0.0	0.0	2.5	12.8	10.1	20.9	88.6
Housing & facilities	0.0	130.8	85.0	82.0	95.0	168.7	138.8	261.7	3540.5
Transport & communication	0.0	84.8	50.0	60.0	51.0	132.4	115.6	251.5	1538.5
Economics	0.0	2.0	2.0	5.0	5.0	12.9	14.2	13.9	141.7
Planning	3.0	6.9	5.0	6.0	6.0	20.1	7.8	256.1	345.4
Origins development	21.2	40.0	100.0	100.0	120.0	100.0	50.0	108.7	169.9
Sea wealth	7.5	10.6	6.0	9.0	13.5	13.9	14.6	30.8	165.0
Justice & security	0.0	4.3	3.0	5.0	8.0	17.0	13.2	29.5	98.0
Working groups	0.0	0.0	0.0	0.0	23.0	20.0	20.0	0.0	63.0
Project reserve	0.0	83.9	40.0	145.0	8.0	20.0	0.0	0.0	348.3
Total	**484.5**	**890**	**735**	**785**	**1008**	**1073**	**895**	**1765**	**17752**

Sources: General Planning Council, Social and Economic Indicators 1962-2000

From the above table it can be noted that industry and agriculture received the lion's share of the budget, due to government reliance on these two sectors to instigate crucial diversification (an alternative resource to oil revenue and the main goal of diversification). However, the sharp decline in oil proceeds had a significant effect on

the development of economic expenditure. In 1986, agriculture had only 120.4 million dinar and industry just 201.3 million dinar and subsequently, in 1995 they received 5.9 million dinar and 26 million dinar respectively. Although the oil sector contributed a critical share to gross domestic product, it reached its lowest point in 1986 at only 1.2 million dinar, but then increased to 77.1 million dinar in 2000, which was a modest amount, relative to its percentage of GDP contribution. The government concentrated on increasing annual expenditure on housing and facilities and the government was given the amount of 2203.5 million dinar over the planned period 1986-2000.

There is no doubt that the sharp decline in expenditure on the Social and Economic Transformation Plan, attributed to oil revenues acute decline could be ascribed to and resulted from: (i) the sharp decline in the oil price in the mid-eighties and nineties and the negative effect on government revenues; (ii) the over-aspirant goals; (iii) the lack of real commitment from policy-makers and the financial and economic decision-making on expenditure on the development. For example, the state did not want to increase expenditure on the development plan by borrowing abroad. Despite the huge amount spent on development programmes to increase the non-oil contribution in GDP, the oil sector still dominated all sectors.

Table 5. 8 Economic Activities' Contribution to GDP, (1986-1994)

(Million dinar)

Economic activities	1986	%	1988	%	1990	%	1992	%	1994	%
Agriculture, forests and fishing	384.7	5.5 %	423.3	6.8%	482.9	5.9%	630.2	6.8%	827.9	8.6%
Natural gas and oil exploration	2595.8	37 %	1570	25.4 %	2055.5	39.3 %	2925.7	31%	2892.9	29.9%
Mining	58.1	0.8%	84.9	1.4%	105.5	1.3%	125.4	1.4%	137.5	1.4%
Transformation industry	359.6	5.2%	397.2	6.4%	457.6	5.6%	555.0	6%	604.0	6.3%
Water and utility	1116.6	1.7%	123.1	2.0%	152.2	1.8%	169.0	1.8%	203.8	2.1%
Construction	492.6	7.0%	383.8	6.2%	457.8	5.5%	458.8	5%	493.0	5.1%
Hotels, restaurant and trade	636.0	9.2%	721.1	11.7 %	789.5	9.6%	926.5	10%	1148.8	11.9%
Transportation and communication	484.6	7.0%	588.7	9.5%	645.8	7.8%	747.4	8.0%	804.2	8.3%
Business, insurance and money	413.5	5.9%	272.3	4.4%	308.7	3.5%	237.7	2.6%	223.7	2.3%
Housing property	252.6	3.6%	248.1	4.6%	304.6	3.7%	333.2	3.6%	360.4	3.7%
Administration services	450.1	6.5%	482.2	7.8%	544.5	6.6%	1133.2	12%	859.0	8.9%
Education services	428.8	6.2%	515.1	8.3%	423.5	5.1%	544.3	5.9%	645.2	6.7%
Health services	184.4	2.6%	205.8	3.3%	179.7	2.2%	219.3	2.4%	236.5	2.4%
Other services	103.3	1.5%	133.8	2.2%	174.2	2.1%	226.2	2.5%	233.9	2.4%
GDP	6960.7	100	6180	100	8246.0	100	9231.9	100	9670.8	100
Natural gas and oil exploration	**2595.8**	**37.3 %**	**1570**	**25.4 %**	**3243.8**	**39.3 %**	**2925.7**	**31.7 %**	**2892.9**	**29.9%**
Non-oil economic activities	4364.9	62.7 %	4616	74.6 %	5003.1	60.7 %	6306.2	68.3 %	6777.9	70.1%

Source: General Planning Council 2003

Table 5. 9 Economic Activities' Contribution to GDP (1996-2003)

(Million dinar)

Economic activities	1996	%	1998	%	2000	%	2002	%	2003	%
Agriculture, forests and fishing	1074.5	8.7	1394.3	11.0	1439.7	8.2	1348.8	5.4	1375.8	4.9
Natural gas and oil exploration	3960.3	32.1	2768.0	22.1	6661.0	37.8	13164.2	52.7	15782.6	56.5
Mining	187.5	1.5	98.2	1.6	313.5	1.8	364.0	1.4	382.6	1.4
Transformation industry	702.9	5.7	779.2	6.2	972.9	5.5	813.5	3.2	764.7	2.7
Water and utility	232.2	1.9	259.9	2.1	291.8	1.7	293.7	1.0	303.2	1.1
Construction	671.5	5.5	713.0	5.6	1087.1	6.0	1262.1	5.1	1326.7	4.7
Hotels, restaurant and trade	1488.0	12.1	1712.4	13.6	1700.3	9.6	2089.5	8.4	2204.9	7.9
Transportation & communication	986.2	8.0	1167.6	9.2	1252.0	7.1	1429.2	5.9	1530.1	5.5
Business, insurance and money sectors	287.8	2.3	275.4	2.2	350.3	2.0	414.2	1.7	439.9	1.6
Housing & property	420.2	3.4	442.9	3.5	481.3	2.7	515.0	2.1	534.1	1.9
Administration services	985.9	8.0	1183.4	9.4	1237.7	7.0	2859.5*	11.4	2910.0	10.4
Education services	713.7	5.8	880.0	7.0	921.9	5.2	-	-	-	-
Health services	321.3	2.6	479.0	3.8	506.2	2.9	-	-	-	-
Other services	295.2	2.4	337.2	2.7	404.5	2.3	427.5	1.5	451.2	1.6
GDP	12327.3	100	12610.6	100	17620.0	100	24981.2	100	28006.0	100
Natural gas and oil exploration	**3960.3**	**32.1**	**2768.0**	**22.1**	**6661.0**	**37.8**	**13164.2**	**52.7**	**15782.6**	**56.5**
Non-oil economic activities	8367.0	67.9	9824.6	77.9	10959.2	62.2	11817.0	47.3	12240.0	43.6

*Including health & education

Source: General Planning Council 2003

In terms of the different sectors' contribution, it could be noted from Table 5.7 that the main, traditional economic activities, which were targeted by the economic diversification process, have shown a poor performance. Their contribution to the gross domestic product is poor; agriculture was not more 5.5% in 1986, and then started a slight increase, only to decline in 2000 to reach 8.2%. Whereas the industry sector contribution was not more than 5.2% in 1986, then increased to reach its peak of 7.7% in 1993, followed by a decline to reach 5.5% in 2000. While the construction sector suffered a steady decrease from 7.0% to reach the bottom 3.9% and thereafter, started to increase to reach 6.2% in 2000. Overall, if we look at the year 2000, we find that the agriculture sector contribution saw little improvement in 1986. However, the only sector which has seen a real improvement is in restaurant and hotels. The dominant sector was oil; it represented a considerable share in the gross domestic product and was aided by an improvement in oil prices. If the oil sector contribution in gross domestic product increases, so do the government revenues. Any positive increase in the oil price has a positive effect, despite the level of production remaining stationary over the study period. However, the sectors targeted by the social and economic transformation budget diversification process nevertheless, showed poor performance over the study period, despite the substantial expenditure which was spent on them.

5.4.5 Economic Development in 2000s

Macroeconomic performance has been shaped by fluctuations in oil revenue (as with most plans in the past). Real GDP growth was modest and volatile during the 1990s, shaped by changes in the price of oil and reflecting the decline in oil production as a consequence of economic sanctions enforced by the US and the UN since 1986. The average growth during that period was about 2.6%, with a peak of 13.5% recorded in 1991 and downturns in 1994, 1998 and 1999. During the 1990s, non-oil GDP growth was slow and volatile at 3% on average, due to pervasive state controls and the decline of the government's revenues. Reflecting significantly higher oil production and prices, Libya's economic performance has improved in the late part of 2005. The macroeconomic situation remains strong with real GDP growing at an estimated 3.5% in 2005, slightly down from 4.6% in 2004. Growth of non-hydrocarbon GDP accelerated to

4.1% in 2004 and 4.6% in 2005. Non-hydrocarbon GDP growth was broad-based, driven by construction and utilities, such as electricity, gas and water, but also trade, hotels, transportations and other services. However, growths in manufacturing and agriculture have remained tame. Non-oil growth would need to further accelerate on a sustained basis to absorb the labour force which is projected to grow by 3.3% in the years ahead (Central Bank of Libya, 2005).

5.5 Measures of Economic Diversification

The following indicated measures may be used to assess if Libya has achieved reasonable progress in the diversification policies. Owing to the limited data available, only some of these indicators can be applied in the case of Libya.

(a) the rate and degree of structural change, as indicated by the per cent contribution of oil versus non-oil sectors to GDP and the growth and/or decline of the contribution of those sectors over time. The change is assessed on the basis of initial conditions. It is also useful to measure real rate of growth of GDP by sector;

(b) The degree of instability of GDP and its relation to oil price instability. It is understood that diversification should reduce this instability over time;

(c) The evolution of oil and gas revenues as a proportion of total government revenues, since one of the objectives of diversification in Libya is to reduce dependence on oil revenues. Another useful indicator here is the rate at which the non-oil revenue base widens over time, as this indicates success in the development of new non-oil sources;

(d) The proportion of non-oil exports and the composition of non-oil exports. Generally, a steady rise in non-oil exports is indicative of increasing economic diversification. Short-term changes in this measure may be misleading, however, as they could be due to fluctuations in oil prices and exports.

(e) The change of total employment by sector. Obviously this measure should reflect and reinforce changes in the sector composition of GDP;

(f) The change in the relative contribution of the public and private sectors to GDP. This is an important indicator in Libya, since economic diversification in Libya implies

or presupposes a growth in the contribution of the private sector to aggregate economic activity;

(g) Pursuant to the above, it is also important to look at the relative contribution of the public and private sectors to gross fixed capital accumulation and rates of changes in this by sector;

(h) Diversification of ownership of assets between the public and private sectors. Where data availability allows, these indicators can be used to assess the degree of success of privatization programmes and to test and reinforce the validity of other measures that show changes in the contribution of the public and private sectors to GDP, employment and gross fixed capital formation;

(i) Production measures; these measures can be applied to various activities in the private sector to assess its rate of development and modernization, but are difficult to use in Libya, because of data limitations.

5.6 Perspectives of the Development Plans

Despite the progress which has been achieved in the implementation of the development plans over the last three decades, there are some weaknesses and obstacles remaining. First, it is unfortunate that, as yet, no single, overall body has been charged with all aspects of development planning. Whilst the General Council of Planning retains a degree of control, 'development' issues remain fragmented between the different ministries of government. Secondly, there have not been any mid-term planning reviews; such reviews would provide an opportunity to evaluate the delivery of the development programme and examine the extent to which budgetary provisions have been met. Also this would provide Libyan planners with a useful mechanism for re-examining the provisions of the plans. Thirdly, the absence of any longer-term perspective plan, this could serve to outline some of the macro-economic objectives of planners as well as providing an opportunity to develop some of the wider socio-economic objectives that are enshrined in the more detailed planning programmes. Nevertheless, development planning has continued to suffer from a lack of monitoring of on-going development projects. It may well be that such failures will be less likely, given the emergence of a tighter development administration with an increasingly well-trained personnel. Whilst

bureaucratic obstacles can still be formidable, an increasingly development-focused set of priorities is likely to ease such obstacles.

In general, three central themes of development planning are identified: objectives, requirements and constraints (Figure 5.1).

It may be argued that recent economic and political trends in the state have led to a sharpening of the objectives of development planning. Sustainability requires economic diversification; that diversification is seen as central to a strategy of encouraging business and job creation, in order to establish a secure economic base on which to build a distinctively Libyan culture and policy.

In terms of both requirement and constraints, development planning and administration have undoubtedly progressed in Libya. There exists a strong will for allocative forms of development, articulated by government and by an increasingly well-trained administrative cadre. Constraints on development planning continue to impede the full implementation of plans. Lines of responsibility are often reinforced by an autocratic style of government and administration, in which risk-taking and initiative are discouraged. There can be little doubt that development planning in the state has made remarkable progress in the last two decades.

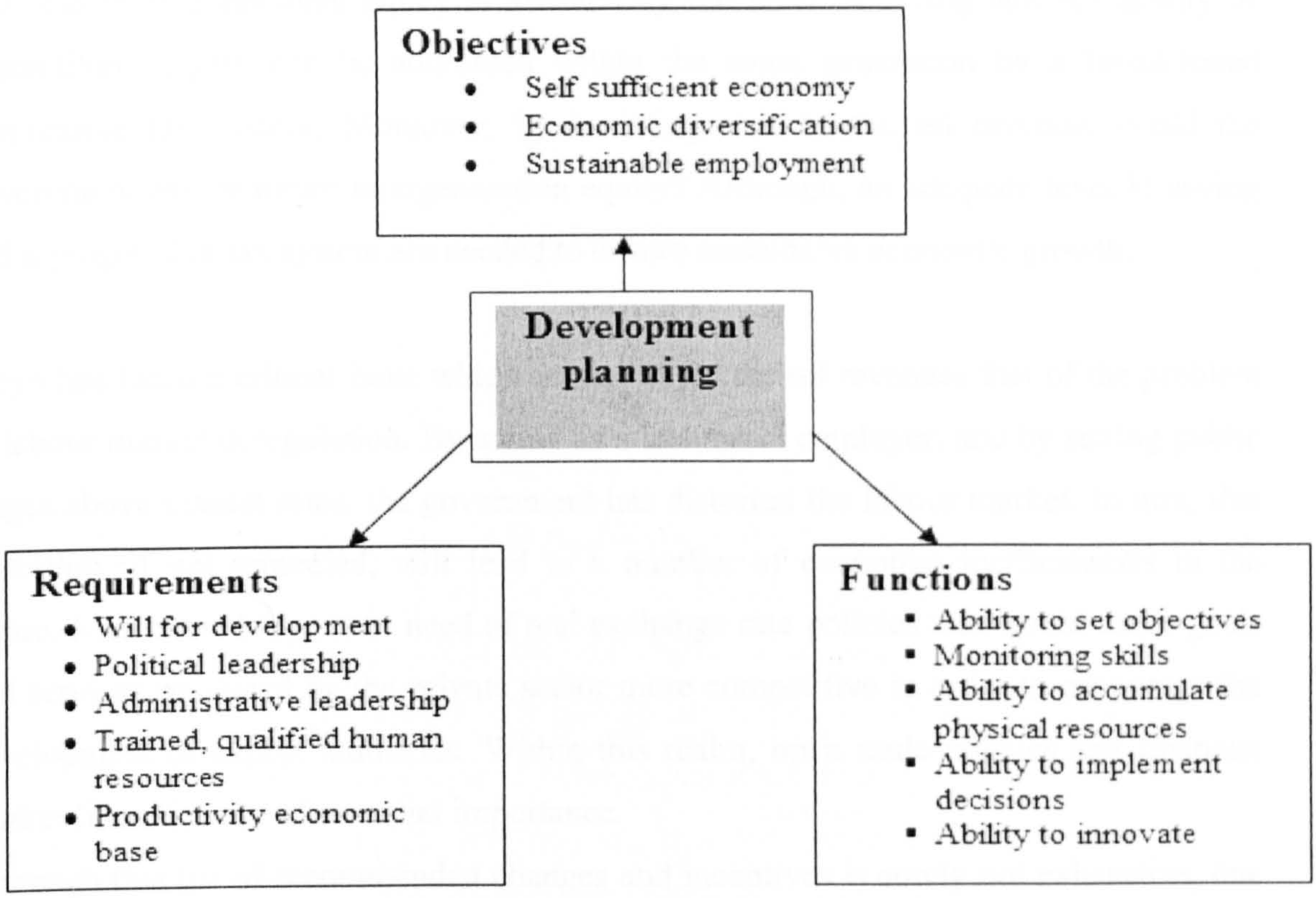


Fig 5. 1 Attributes of Development Planning

5.7 Macroeconomic Policy Management

If the optimal, or required, level of investment is less than that dictated by the need to compensate for oil depletion, the direction of policies should be changed. Libya should reduce its expenditure in order to increase saving. The level of investment is important in order to compensate for the depletion of oil, which in turn would compensate for intergenerational equity. A main concern for Libya is the budget deficit which reached 50% of GDP in 2003 and the heavy dependence on the oil sector.

Minimising dependency is the means by which the government can reduce the burden on future generations. In the case of an oil resource based economy, it is the depletion of oil and the quality of government expenditure that have the critical impact on future generations.

Whereas intergenerational equity is affected by the level of saving and the quality of expenditure, equity can be addressed within the same generation by a broad-based progressive tax system. Moreover, by investing part of the oil revenue, could the government ensure future intergeneration equity? Although, an adequate level of saving and a progressive tax system are needed to ensure sustainable economic growth.

Libya has faced a critical issue which accompanied the oil revenues that of the problem of labour market deregulation. By acting as a last resort employer, and by setting public wages above market rates, the government has distorted the labour market. In turn, this distortion, if not remedied, will lead to a number of economic inefficiencies in the future. Moreover, Libya is in need of real exchange rate policies that would make goals and services produced by the private sector more competitive in order to encourage the development of export industries. Within this realm, open trade policies and financial market liberation are of essential importance.

Although this list of recommended changes and incentives is surely not exhaustive, one should point out that they can be sustained if the necessary institutions, with transparency in decision making, are established. All these policies are essential to bring in the structural change towards diversifying the economy.

5.8 Export Structure

Although it is to be expected that Libyan exports are dominated by oil, the clear policy indication for a depletable resource-based economy is to attain growth through export diversification from oil. Export diversification is important for Libya, mainly because the reliance on oil exports alone renders Libya extremely vulnerable to fluctuations in the price of oil, and because as oil is depleted, it needs an alternative source of foreign exchange earnings.

Nevertheless, Libya is still heavily dependent on exports of hydrocarbons and petrochemicals, which, in turn, use oil and gas as feedstock. Export diversification can be achieved through current account investment, which in turn would yield foreign investment income to the service sector's account. Export diversification away from oil

refined products has only been achieved in the area of petrochemicals. Despite the previous attempt to increase the exports, the results were disappointing. The export efforts are seen as main goals in most plans, and a vital role in the economy.

5.9 The Diversification Dilemma

Economic diversification has been a constant element in the development strategies pursued by the state in preparing for a non-oil future. However, at least until recent years, the development plans paid little more than lip-service to such aims. Rather than elaborating clear strategies to achieve diversification under the state strategy, a diversified economic base was seen as vital. In the almost thirty years since then, the achievements have been muted to say the least. There can be little doubt that the expansion of the oil and gas industry has greatly improved the standard of living in Libya. No foreign debt, a state funded system of health and free education and increases in material prosperity. Such real achievements however, cannot disguise the fact that the hydrocarbon industry alone will not be able to meet the rising demands and expectation amongst all sections of society. A changed external and internal economic environment has necessitated the diversification moves.

5.9.1 Population Growth, Employment and Sectoral Growth

Libyan population has grown at an average rate of 3.5%-4% per annum, one of the highest growth rates in the region. It reached 5.5 million in 2002 and triggered a sizeable demand for foodstuffs, services, clothing and construction, which at present, are met largely by imports. Such import rises pose no difficulties for the balance of payments, since hydrocarbon revenues are sufficiently high to meet import costs. In the longer term, however, problems will arise when hydrocarbon reserves are depleted or if a prolonged period of falling or low prices occurs. The need for diversification is thus necessary, simply to meet the needs of the increased population.

Furthermore, most of the population are employed in the public sector, which represents about 75% of the total. The oil sector employs a very small percentage about 10%. The

unemployment rates have been a cause for some alarm in political circles. The rate of unemployment almost doubled in the last decade. The unemployment problem is structurally based and is due largely to the perception that employment in the private sector implies poorer wages and weaker benefits than the public sector; a reduction of posts in the public and oil sectors coupled with rising unemployment has made it imperative to expedite the process of diversification. Furthermore, Libya faces potentially serious problems from the structural imbalances in its economy with agriculture and manufacturing in particular being very poorly developed. Before oil was discovered in 1955, Libya was self-sufficient in foodstuffs such as wheat, barley, vegetables and fish. As a result of that, the values of imports have seen a substantial increase; therefore, there is a pressing need to diversify the economy to meet the increasing needs.

5.9.2 The Fiscal Investment and Banking Dimensions

Libya has considerable income which was put into a reserve fund where it remained for many years without any exploitation. Recently there have been some attempts to invest this amount by giving loans to young people to try to set up small projects managed by them. Much of Libya's excess revenue is banked rather than invested in development, and is held overseas rather than domestically, so there is little doubt that if part of such funds were to be invested in industries that could generate linkage, bring in technology transfer and develop export potentials, the benefits and multipliers to the country would be considerable. The hydrocarbon sector and the revenues it generates remain confined to particular enclaves. There are very few multipliers associated with the oil industry in the economy. The same may apply to the use of investment incomes from oil and gas. These are invested primarily overseas. Furthermore, the revenues which return to the state and population do so largely in terms of a range of 'trickle-down' welfare benefits which, whilst benefiting the local population in a very real sense, do not necessarily generate new income and job-creating industries. Indeed, the massive rise in imports (especially of consumer durables) indicates some of the effects of income redistribution in the state. However, investment incomes have not been employed to develop small-scale import-substitution industries. Besides, large quantities of income and profits are

spent on repatriation overseas. The state does not impose restrictions on this repatriation either for individuals or companies. Remittances from foreign workers in the state are high and company profits are often repatriated in preference to investment in local companies.

5.10 Diversification, Sectoral Choices and Promoting Selected Sectors which Have a Comparative Advantage

The sectoral diversification choice is bounded by the availability of natural, as well as human resources in the short and medium-term. Production is constrained by competition and market capacity. The abundance of oil and gas attracts investment activities under certain special conditions, the first of which is the possibility of increasing its competitiveness in the world market.

The most significant factor in restructuring the Libyan economy is the volume and structure of the labour force. The trade-off between economic and social factors will affect the choice of sectors. Assuming that finance does not constrain investment expansion, the choice will take place on the basis of labour and/or capital intensity. The current distorted population of labour force structures, where expatriates constitute the majority, will limit the expansion of labour-intensive activities and projects. The effort of education and job structures can be determined in the medium-term by training, education, restructuring and rehabilitation.

However, the abundance of oil and gas still has great impact on the formation of restructuring programmes aimed at attracting foreign direct investment. Libya has a comparative advantage in its geographical location, which can help in developing activities such as marine services, shipping building and repair. The services sectors, information, off-shore banking and other activities may also be investment-attractive.

Because of under-appreciation and expected or potential unemployment, services-related, transportation, offshore financial and construction activities, may be most appropriate for the absorption of the local force through training and institutional reform.

Data on the investment atmosphere in Libya indicates a growing trend in these investment channels. However, the scope of constitution and expansion is subject to competitive capabilities and local markets.

Underlying the multidimensional national objectives in Libya (and in fact in all mineral economies) is the concern with converting the predominant natural resource into a productive economic base, and a skilled workforce capable of sustaining a viable and diversified economy. The achievement of this task (as with disposing of any windfall source of wealth or gift of nature) involves two essential decisions; the pattern for national consumption and saving, and the allocation of saving so as to equalise the marginal rate of return. Once the essential decision is made regarding the magnitude of oil output to be exchanged for current consumer goods and services, the subsequent options represent three investments alternatives, all of which are expected to further the development of national economy:

(i) Oil can be left underground as a form of auto investment for future exploitation and use

(ii) The proceeds of oil exports (beyond current consumption) can be used for domestic capital information, promising larger future flows of goods and services, and

(iii) Oil revenues not currently consumed or domestically invested can be placed in foreign capital assets (real or financial) bearing future returns in capital or consumer goods. The level of public and private consumption, the magnitude of investment and the appropriate sectoral priorities depend on absorptive capacity.

5.10.1 How Should the Rent be invested?

The appropriate share of hydrocarbon rents to be invested depends on the right profile of the oil rent income and the rate of return on investment. In an uncertain world, where both the expected time profile of income and the rate of return on investment, and other relevant factors change over time in unpredictable ways, rules will be needed for what to invest in and how. The most basic choice is probably whether the funds should be

invested in assets that yield a visible pecuniary return or in less-tangible wealth that may not be measurable or yield a pecuniary return. This is by no means a straightforward choice. The productive capability of an economy does not depend solely on investments in building and machines; it depends no less on the educational level and the health of the labour force, and infrastructure such as roads, airports and telecommunications. Investment in education, health and infrastructure is seldom left to the private sector and when that happens, only partially, because the private return on such investment usually is much too narrow a criterion for success; such investment is typically the responsibility of government. Income from taxing hydrocarbon extraction will make it possible to undertake more of such investment.

Worthy as investment in infrastructure, health and education may be, there is reason for being cautious in using hydrocarbon rents for these purposes. Precisely because the narrow but clear criterion of a pecuniary return on investment cannot be relied upon to judge the desirability of such spending, the floodgates are opened for abuse.

Given that oil revenues are finite, exploitation of such hydrocarbons is not a sustainable activity. By investing an appropriate share of mineral rents in productive assets, it is possible to preserve oil wealth, albeit in a different form, and to turn the exploitation of hydrocarbon resources into a sustainable activity, in the sense of permanently raising the standard of living.

For example, Libya receives rent from hydrocarbons and wants to invest in financial assets with a fixed rate of return (a bank account or bonds). Suppose we have revenues of 100 million dollars per year for ten years. We assume the rent is fixed for ten years. By investing a certain amount of revenue, Libya could build up an investment fund which would allow us to spend the amount X per year in perpetuity, even long after the mining activity has come to halt, provided we maintain the fund. How much would we have to save? We can find this in a simple way. Each year we would spend X and put aside 100-X in an investment fund. If the rate of return on the investment fund is r x 100% the fund would have grown to at the end of the ten years period. F total revenue

$$F = [100 - \mathrm{X}]\,(1 + r)^9 + [100 - X]\,(1 + r)^8 + \ldots\ldots + 100 - X$$

$$= \frac{[100 - X]\{(1+r)^{10} - 1\}}{r}$$

From then on we could use r x 100 per cent of the fund annually, without dipping into the fund. This is *X* the amount that could be consumed in perpetuity, setting *X,* equal to *rF* gives

$$X = 100\left[1 - \frac{1}{(1+r)^{10}}\right]$$

Assuming a five per cent rate of return ($r = 0.05$), we find $X = 38.61$. In other words, saving just sixty percent of the mineral rent every year would, in this particular example, turn the hydrocarbon wealth into a permanent wealth that would make it possible to spend a value equal to just under forty percent of the annual revenues in perpetuity, even if the revenue stops flowing after ten years. Reality is, of course a lot more complicated than this simple example. The flow of revenue is not even, it is not known exactly ahead of time, and the rate of return is also variable and uncertain. Furthermore, we need not opt for a constant consumption per year in perpetuity; it might be more desirable to go for an increasing consumption over time. For example, if the population is expected to grow. In that case we would have to constantly invest some of the return on the fund (*r* F) to keep it increasing. The principle, however, remains much the same despite these complications; it is just more difficult to put it into practice, and in the real world where there is uncertainty about the future one may not exactly achieve what one set out to do. We can make this example slightly more general by assuming that the extraction period lasts for *T* years. Our formula would, in that case, be

$$X = 100\left[1 - \frac{1}{(1+r)^{T}}\right]$$

5.10.2 Stabilization and Saving Funds

Libya, with large exhaustible resources such as oil, can benefit substantially from them, but the revenues from exploiting these resources can pose challenges. Fiscal policy makers need to decide how expenditures can be planned and insulated from revenue

shocks arising from the volatility and unpredictability of resources so that they can be saved and invested. The general justification for such funds is how to deal with the huge financial surplus. In addition, some share of government revenues derived from the exploitation of a non-renewable resource should be put aside for when these revenues decline, because the price of the resource has fallen, or the resource has been depleted, or both. Stabilization funds aim to reduce the impact of volatile revenue on the government and the economy. Savings funds seek to create a store of wealth for future generations.

In some countries that are dependent on the export of oil and gas, governments have established, or are considering setting up, non-renewable resources to help in the implementation of fiscal policy.

Many countries have established separate funds for resources purportedly to tackle some or all of the problems accompanied with the resources. As Davis et al (2001) argue, however, establishment of a resource fund is neither a necessary nor sufficient condition to address this problem adequately. It is not necessary because, in principle, all of the issues can be tackled as integral elements of government budget and fiscal policy.

Libya, in benefiting from large flows of revenue from the exploitation of natural resources, needs to address several important issues. First, to take measures to stabilise the budgetary and liquidity impact of revenues, which are subject to high and unpredictable price volatility or other fluctuations? Second, since the resources are finite, policy should take account of the international distribution of income flows, as well as the distribution of spending and the immediate social impact of resource industries. Third, the impact of a large inflow of resource revenues on exchange rate developments and the non-tradable sector needs to be carefully considered. "Dutch disease" (characterized by an appreciating real exchange rate and the associated adverse impact on the non-resource tradable sector of the economy) is an important issue for Libya. A clear policy framework that recognizes all of these issues is an essential basis

for design of an effective saving and stabilising fund and a clear management system to deal with such issues.

Essentially, the argument is that a separate fund with clearly defined policy objectives can protect some portion of resource revenue more effectively from political pressure and potential waste and corruption than the government budget. Where the budget environment is non-transparent and administration is weak, such an argument has some merit, but whether it is more effective to set up a resource fund rather than improve overall transparency is arguable. Most importantly, if such a fund is set up, it should be transparent in all respect and a clear statement of policy with regard to use of resource revenue should be established. Furthermore, good practice should aim to integrate the operation as much as possible with the overall fiscal policy framework. Specifically:

1- There should be a clear specification of responsibilities over spending and borrowing by resource funds.
2- The fund revenues, expenses and balance sheets should be presented to the legislature and the public together with an annual budget.
3- Fund activities should be regularly reported to parliament and the public, and externally audited by an independent auditor, and reports and audit results should be published.
4- An independent supervisory board should be appointed to give assurance of good governance.

The investment policies for assets accumulated through resources revenue are stated in the annual budget documents. In these it can be seen that Libya is accumulating financial assets through saving of resource revenue, establishing a sound asset management strategy which becomes an important element of fiscal policy. The strategy should reflect the fund's objectives, such as the relative importance of saving and stabilization objectives, and macroeconomic considerations such as the desire to avoid exchange appreciation. It is essential that the separate asset management functions be carried out under clear investment guidelines that are available to the public, and that fund managers are accountable for investment performance. The guidelines should provide clear guidance on risks versus returns, types of assets allowed for investment and geographical and currency composition of assets. Asset management formulation should

be in the hands of the Finance Ministry to ensure coordination with overall fiscal policies; and changes to asset management policies should be clearly and publicly stated. The operational management could be delegated to the central bank or tendered to professional investment companies

Skancke (2000) argues that some oil exporting countries may still have to make substantial progress with respect to governance and transparency accountability. These countries should focus on building democratic institutions with transparent credibility and good procedures if attempting to implement a fiscal policy strategy that implies a substantial accumulation of government funds.

The conceptual basis for these funds needs to be viewed with caution.

- Stabilization funds seek to shield the budget from revenue uncertainty and volatility. In the absence of liquidity constraints, however, natural resources funds provide no direct mechanism to stabilize expenditure. Since resources are essential, the authority could bypass the operation of natural resource funds by financing spending in other ways. Expenditure smoothing therefore requires additional fiscal policy decisions besides the operation of the fund. Moreover, price or revenue rules which signal the need to accumulate or withdraw from the fund may be difficult to establish.
- Stabilization and saving funds designed to save for future generations face some of these problems. If there are no liquidity constraints, such funds would not necessarily lead to higher saving, since the government could finance spending by borrowing.
- A "Financing fund" requires the Natural Resource Fund to finance the fiscal deficit (its resources permitting) and receive the surplus. A financing stabilisation and saving fund provides an explicit link between fiscal policy and asset accumulation. Besides, the policy objectives of Natural Resource Funds could, in principal, be achieved through implementation of sound fiscal policy within the context of a medium-term budget framework. Furthermore this may be justified on political economic

grounds. Such funds may help the government to resist spending pressures if there are constraints on borrowing.

- A stabilisation and saving fund reduces the impact of volatile revenue on public finance and the economy, and saves part of the oil revenue. During upswings in oil prices, the existence of the stabilising and saving fund could help the government better manage its fiscal operations in line with the country's absorptive expenditure stability and enable the government to implement strong macroeconomic policies necessary to achieve strong, sustainable, and non-inflationary economic growth.

5.10.2.1 Justifications for a stabilization and saving fund for Libya

There are many reasons that can justify the rationale to establish the saving and stabilisation fund;

(i) The high dependence of the budget on, and hence its vulnerability to, volatile oil revenue, which makes a stabilization fund highly desirable;

(ii) The limited absorptive capacity of the Libya economy, the willingness of the authorities to progressively reduce the public sector's share in the economy and the need to shield the economy against "Dutch Disease"

(iii) the fund can be saved for future generations and could help the government resist spending pressures by formally limiting the resource available to the budget, thus dampening inflationary pressures and containing the potential appreciation of the exchange rate.

(iv) Such a fund can protect the budget from the uncertainty and volatility of revenues. In the absence of liquidity constraints, however, the saving fund provides no direct mechanism to stabilize expenditure. Such a fund cannot substitute for the commitment of the government to pursuing a sound fiscal policy.

The policy objectives of a saving and stabilization fund could, in principle, be achieved through implementation of sound fiscal policy within the context of a medium-term budget framework. Such a framework can help countries with highly volatile revenues design stable expenditure policy (Davis et al 2001).

5.10.3 Strengthening the Private Sector

Since the early stages of Libya's drive for modernization in the early 1970s, the public sector has led the transition from the primitive market arrangements that prevailed initially, to the relatively well functioning mixed economy of today. Reflecting the dominance of oil exports and skyrocketing oil prices, this transition was brought about by an expansionary fiscal policy and a sizeable public investment programme that provided the basic economic infrastructure upon which future development could be built. The government took the leading role in utilities, manufacturing, transportation, communications, and tourism through the establishment of public authorities and wholly or partially owned companies. Through this, the government assumed responsibility for providing Libyans with free education and health services. With the evolution of the development mission through two plans from 1976 on, the government embarked upon another transition mission through two clearly-defined, long-term objectives. The first was to lessen the economy's dependence on oil through the diversification of the economic base and the development of other sectors. The second was self-sufficiency. It was believed that these development projects would generate linkage to the private business sector that would encourage it to invest in a host of related productive activities. The ultimate step, now under consideration, would be the transfer of the public interest in these businesses to private sectors.

Non-oil GDP is clearly driven by government expenditures. As public spending rises, so do private sector activities and private investment has weakened considerably. In addition, the ratio of private investment to non-oil GDP has been falling. It dropped from over 21% in 1979 to 15% in 1986 and plummeted to 8% in 1990. This phenomenon is related to the legislations, which banned the private sector engaging in business following the sharp drop in oil price and revenues in 1986. Recently, the percentage rate began rising modestly after 2001. However, it is still below the 1975 rate. These results provide a strong indication that the government's policies to increase private sector participation in goods-producing activities have been unsuccessful.

Despite its impressive growth since 1970, the contribution of the non-oil sector to GDP has remained disappointingly low and stagnant in recent years, at the level of 4% of GDP. This reinforced the conclusion that diversification efforts, especially into goods-producing activities, have not been particularly successful. The reasons for this are that current public expenditure/saving policies discriminate against goods production, while other policies inhibit non-rent seeking investment, sanction monopolistic practices, distort relative prices, and distort the priorities and allocation of resources that would further the government's private sector development objectives. Furthermore, the role of public enterprises limits the investment opportunities open to the private sector. A full assessment of why government policy towards the private sector is achieving limited success should recognize the dominance of small-scale enterprises in Libya and explore the potential for promoting medium and large-sized firms engaging in goods production that could only profit through efficient management and economies of scale. It should also consider the impact of changing the present market structure on expatriate employment. Moreover, the government's social objectives are being reasonably well met, but at an increasing cost in terms of sacrificed opportunities elsewhere e.g. inefficient allocation among the public social service programmes themselves and standards of welfare for future generations. However, progress in developing a market economy has been slow and discontinuous. Libya needs strong sustained economic growth to meet the demands of its rapidly growing labour force, which requires high investment on physical and human capital, and an efficient use of the country's resources. This can only be achieved through the implementation of far-reaching, market-oriented structural reforms that would enhance the role of the private sector, improve the business climate, and promote economic diversification.

5.10.3.1 Why should the government strengthen the private sector's role?

Privatization of selected Libyan state-owned entities could certainly produce several positive results;

(a) As stated earlier, perhaps the most important impediment to private sector development in Libya is the lack of economically viable investment opportunities. Privatization of government holdings would provide the

private sector with investment opportunities outside its traditional activities. It would mobilize private resources currently invested in low-risk, local and foreign, interest-bearing instruments for productive domestic, profit-making ventures, the earning of which would add to the pool of domestic private capital.

(b) If privatization took the form of a public offering of government shares, it would expand the common stock ownership base among small Libyan investors and create a motive for increasing private saving. If safeguards were established to condition the control of the privatized concerns by large investors, the sale of public shares of these already trading companies would undoubtedly revitalize the stock market.

(c) By limiting the role of government, and expanding the role of the private sector in commercial-type activities, the productivity, responsiveness and entrepreneurial dynamism of the overall economy would improve, as the supply of private goods would be determined on the basis of purely economic criteria.

(d) With privatization comes professional management at the top and middle management levels. These positions could provide the right motivation needed for public managers and other aspiring public servants to seek employment in the private sector, thus reducing existing distortions in the labour market.

5.10.3.2 Strategy for privatization

As Successful privatization plan requires a clear statement regarding the government objectives that privatization is to achieve. The early development of the Libyan economy clearly aimed at the promotion of non-oil activities as a major objective, concurrently with developing the economy's infrastructure. Successive development plans clearly elevated diversification as the infrastructural base was approaching completion. It is now the most important government policy objective. Thus the key objective is to strengthen the private sector in order to facilitate and promote economic diversification.

5.10.4 The Role of Industry to Develop Alternative Income Instead of Oil

The development and transformation plans which have been implemented over the last three decades deal with the industry sector, which is considered a productive sector and has an effective role in producing the essential goods to meet consumption and generate income. In addition, it will create more job opportunities and many more goals, which will lead to national economic structure diversification.

To discuss the feasibility of continuing to adopt industrialisation in Libya and identify the individual industries which will yield the highest return in the future. This needs to be discussed within a topical climate and should not focus on the status quo only, (which shows an industry in deterioration), but should show all the immediate circumstances, including the possible changes in educational and population structure. In this scope it might be best to look at different countries performance in oil management, identify suitable sectors in Libya which can be diversified.

Successful experimentation for diversification in other Arab countries has been as a result of industry-oriented planning; however this has led to a failure on domestic demand service. Many countries such as Tunisia, Egypt, and other Arab countries in the Gulf are able to direct their products to more advanced countries' markets, in order to cast off the trap of selling to domestic markets only. Ultimately, these countries can produce goods at a proportionally cheaper rate due to manpower costs being lower than more advanced countries. The case of Tunisia on one hand, Egypt and the Gulf states in the other represent two cases from which Libya can benefit.

The important thing which fuels the success of this is that Tunisian goods exports over the period 1996-2000 overtook Egyptian exports by about 62%. This fact has substantial importance when it is noted that the Tunisian population was lower than that of Egypt by one seventh. This situation indicates that although the population volume is important in deciding the productivity lines and activities which countries can adopt, once established this factor could be neutral. In spite of that, the Libyan population volume has been

sinking proportionally (when compared with material provision), but is eclipsed by many Gulf States which have a diminished population, as the immigrant figures indicate (75% of all workers in the Gulf States, compared with 18% in Libya).

To achieve such goals, which will lead to national economic diversification, there has been a substantial expenditure on a transformation budget, more than 5 billion dinar over the last three decades. This huge investment has enabled Libya to establish a productivity industry base that reached 3 billion dinar and also created more than 62,000 job opportunities, in addition to contributing tax, paying about 3.8 billion dinar over the above period.

Although the targets accomplished by this sector were a success, the performance was very poor and has failed to achieve the main goal, which was production and income resource diversification. In addition, the capability to encourage export production remains an issue, along with the bottlenecks which can be outlined as follows :(Merza, 2003).

1-The diminishing of the real added value contribution of this sector in the GDP, which was approximately 5.8% over the period 1992-2000.

2-The realisation of a real growth rate which dropped and sunk to less than 53% over the period 1993-2000.

3-Workers' productivity decreased in the transformation industry from 3,500 dinars per worker in 1990 to 3,100 dinars in 1995.

4-Productivity capacities decreased for the industry sector by more than 50% in 1999.

5-Quality and specification declined in production, compared with imported industry production.

6-Prices and costs increased for many domestically produced industry goods in comparison with imported industry goods.

7-Most assets were rapidly consumed in industry projects, despite the hypothesized lifespan of more than 25 years.

8-A huge amount of manpower was employed in the administration, managerial and technical support for the industries, but these roles were not essential.

9-The creation of 65 new complexes and factories ceased. These would have represented 33% of total production from complexes and factories.

These bottlenecks mentioned above, and others which this sector has suffered from for a long time, require an earnest re-examination and suggestions of convenient and appropriate policies and procedures which could ensure capabilities and a change in direction. This could then increase contribution in GDP on one hand, and economic structure diversification on the other. The search for more oil revenue alternatives to finance the public budget could be achieved through the following steps:

1-Private and public contribution to the public industry firms targeting privatization after restructure, and activating law number 92/95 which will lead to the stimulation of the role of the public sector.

2-Insure that the private sector has an essential finance provision or warranty on loans for small firms who cannot get finance from a financial institution.

3-Encourage foreign investment in the operation of current firms and invest in new industry projects which will lead to the acquisition of technology, an increase in efficiency and worker training.

4- The gradual liberalisation of industry goods pricing, linked to the exchange rate, will create a competitive climate and provide freedom from monopolistic practices and aid in pursuing privatisation.

5- Restructure and reform industry through privatisation and transfer goods units to the private sector.

6- Grant exemptions from customs tariffs to the industry import sector in goods such as raw materials and operation necessaries, cancel the production tax, and increase the customs tariffs on production industry imports and identification for domestic production.

The application of such policies and procedures will enable the industry sector to increase its contribution in GDP from 5% in 2000 to 9.2% in 2009 and increase the share in non-oil growth from 8.3% to 13% in the same period.

5.10.5 The Industry Sector as a Pioneer for Diversification

In spite of the status quo for non-industry in the public sector, it is possible to establish evolution and growth in the industry sector, directed at foreign markets with skilled workers and a liberalised labour market. The re-structure and liberalisation of the labour market will increase the work supply and will reduce immigrant workers numbers. Then it will be possible to choose and develop the appropriate industry units which are capable of being internationally competitive. This must be based on previous studies aimed at encouraging and assisting the private sector in to playing a significant role, including government assistance in helping the new industry which will be created.

5.10.5.1 Programming industries

Libyan universities need to establish departmental links with programming, computers, electronics, electricity and engineering at undergraduate level and beyond. This will be aided by establishing a benefit fund and adopting a transparent policy to assist in such projects for a limited period. This requires:

a- Infrastructure promotion by the internet industry;

b- Adoption of a pricing policy that can help and encourage internet users;

c- Encouraging competition in communication sectors;

d- Conducting a study to set up regional technology centres, which are prevalent in advanced and developed countries.

5.10.5.2 Petrochemical industry's intermediate and final goods

Libya should focus on exploitation of the petrochemical industry's products, instead of exporting oil as a raw material. This has many advantages such as technology transfer, youth training, job opportunities and new industry establishment. Thousand of workers can be employed in this emerging industry, besides providing jobs for foreigners.

Furthermore, others sectors can gain, for example, exports, transportation and communication. It can transform the raw materials to intermediate products including ethylene, propylene, urea etc. So, the big added value in petrochemical industry is in producing products and goods, which are then used in most production and consumption products. There is no doubt that the competition in this regard is very strong and the options are very wide. Hence, developing new industrial lines could be very appropriate. In particularly the comparative advantage is very high. It could start to undertake specific production of high quality products and sell them to advanced countries which use these products as necessities.

5.10.5.3 Plastics industry

1-Plastic production is needed in many industries from simple uses to more complex ones. It can be introduced for use in such products as televisions, radios, computers, vacuums and spare car parts, or other consumer products like credit cards, electronic circuit bases, stationary, pens, furniture, and telephones etc. The preparations of these products are necessary for the making of T.V. units, computers, cars and other consumer goods, which are required by different countries or regions.

2-The production of high quality petrochemical textiles and woven fabric filaments such as polyester and propylene etc. which are used in the textile industry in emerging countries should be encouraged with the gradual expansion of production in textiles and materials to ensure a contribution of finished cloth to markets in developing countries.

3-Mixed textile products like cotton, wool or silk with other petrochemical materials are used in cloth production. The production levels will increase and experience of complex skill production quality will be gained while at the same time ensuring access to diverse markets.

5.10.6 Attracting Directing Foreign Investment

Libya needs more direct foreign investment flow in order to stimulate economic growth, create more job opportunities and reduce the gap between the rich and the poor. Furthermore, modern technology is urgently needed. Although, the government introduced many amendments, legislation and laws in recent years (act number 5/95) with a target of encouraging and attracting foreign investment, particularly direct investment, this has not been a success. Libya has yet to attract a significant amount of direct foreign investment, in comparison to other developing countries. The available investment data indicates that Libya has a poor direct foreign investment flow. Direct foreign investment could animate per capita income growth in Libya, expand job opportunities and increase use of local raw material. In addition, it must use modern management and administration methods, allowing greater introduction of modern technology, and furthermore, the foreign inflow will aid in reducing financial shortages, and could assist in developing human resources training and stimulate investment in research and development. A country with a comparative advantage in labour-intensive goods can strongly influence investment location for labour-intensive processes and component specialization with vertically-integrated international industries (Du Pont, 2000).

According to Moosa (2002), direct foreign investment is an important drive to transform technology, contributing relatively more to growth than does domestic investment. Libya, with its oil surpluses, can absorb more foreign investment, and achieve higher productivity than domestic investment. This has the effect of increasing total investment in the economy more than proportionately, which suggests the predominance of complementary effects on domestic firms. However, the effect of foreign investment on the level, composition and growth of the output of the host country also depends, to a large extent, on the macroeconomic policy in operation in that country. The benefit of foreign investment is to achieve full employment, provided it is as sufficient as any domestic means of resources utilization. Furthermore, it can exploit resources which are currently unemployed, and is capable of improving the efficiency of domestic resources

by shifting them from less efficient to more productive sectors of the economy, and then domestic output should rise.

5.10.6..1 The advantages of foreign direct investment

1- The training of domestic workers required for job opportunities in foreign companies and the acquisition of modern technology skills by using modern work methods and training. Workers can then move on, bringing their knowledge of science, technical and managerial skills to national companies.
2- Establish a scientific knowledge-sharing relationship between foreign companies' branches and domestic research centres, which will lead to gaining more advanced technologies, from, international companies who have already established their technology and research methods.
3- Foreign companies can provide for the requirements of local companies in terms of equipment and technical accoutrements by facilitating conditions in the local market to enable national companies to develop the goods and commodities, and hence be able to export such products to external markets.
4- Set up competition between multi-national companies and national companies, which will push the local companies to attempt modern technical and managerial systems and develop industry, therefore, the ability of local companies to acquire a modern system will increase.
5- Foreign companies who sell to the local market contribute in transforming the knowledge and expectations of the consumer concerning technical information, particularly when the introduction of this information and how to use these products is essential information from the producer.
6- Direct foreign investment will contribute to economic accumulation capital, and substitute the shortage and deficit in local savings and

invest profits back in to the Libyan economy. There is a strong possibility that this investment will contribute to tackling the imbalances in the structure of the Libyan economy, if the inflow through the industry sector and essential infrastructure projects sets up a modern economy dependent on itself.

7- Support and aid the balance of payment which foreign investment influences, initiated on balance of payment because the proceeds will increase.

5.10.7 Fishing and Marine Wealth

To promote the development of fishery resources, a number of potential estuarine and coastal areas have been identified for shrimp, prawn and fish culture. The long tradition of fishing in the state gives it the potential to expand in a managed and scientific manner. The government made major efforts recently to provide supportive facilities. A hatchery, fish ponds and training units have been established to promote aquaculture and offshore marine fisheries. The formation of fishing cooperatives has also been effective and successful. Loans are given for the purchase of fishing gear, boats and other necessities. However, the lacks of local expertise in the control of water quality, fishery management, and labour shortages have prevented large-scale commercial operations. Thus the commercial prawn farm started in the early 1980s has a lack of manpower estimated at about 35,000 workers.

The wealth of the sea is very important to the national economy as it is the main and essential source of protein and provides more than 14% of gross domestic meat. In addition, it still has an opportunity to provide jobs. The idea of exporting foodstuffs is not possible, except for sea wealth, as agricultural activity after the population increase is not sufficient for local needs, because of the limited water resources. Therefore, agricultural products will disappear in the near future and the authority cannot depend on this sector to generate hard currency.

The aggregate amount which was spent over the period 1980-2000 reached about 46.3 million dinar from the transformation budget. It accomplished many achievements in fresh manufactured fish production, the creation of job opportunities and the export of surplus in recent years. The authorities face some difficulties in preventing the increasing contribution in GDP and creating a significant resource as a support for oil revenue. However, the sea wealth has promising possibilities; in spite it suffering the same impediment in both the public and private sector. These impediments are as follows:

1- The allocation deficit for this sector is not proportional to its liabilities size.
2- Delay in implementation of the import budget for the purchase of necessary equipment.
3- Equipments perish and the property owners including factories, neglect essential maintenance.
4- There is a good skills shortage in the sea fisheries and there are obstacles which have a negative impact on performance. Production and achievement of a suitable rate of food security will remain the important issue, which needs more focus and attention from the government, in particular the contribution in GDP and providing an extra income resource which can support oil revenue by pursuing the following policies:

a- The government must undertake to implement and complete infrastructural projects, including the set up of maintenance, development, facilities and sea ports. Also, the authorities should embark on new projects relating to this sector;

b- Enable the private sector to build new freezing complexes and manage fish handling according to the technical and global standard, which will allow the sector to export the surplus to the international market;

c- The current factories' technical and health standards are exceptionally low and the government must undertake the development of the current fishing factories and encourage the private sector to establish new factories to contribute to other fishing projects.

d- Each municipality should construct new local markets which fit according to the health features of fish marketing,

e- Establish a new, huge fish farm to produce intensive fish to export. In this context the promising scope is:

1- Netting and fishing the immigrant tuna for export and manufacturing purposes.

2- Fishermen should work with investment companies as partners, in particular foreigner investors.

3- Fishing industry to substitute for foreign imports and the excess to be exported to the global market.

5.10.8 The Role of Tourism as an Alternative Resource to Oil Revenues

Tourism plays a significant role in the economic and social development of the global economy. It brings a considerable income to government budgets, in addition to the important role of providing job opportunities. Furthermore, the substantial contribution of tourism in GDP in some countries stands at more than 25-30% Abuharris (2005). This option could provide a promising diversification resource. It implies economic, social policy and procedure, which starts with infrastructure such as resorts, hotels, and net transportation, communication, sewage and payment systems. Therefore, the authorities must promote these fields gradually and steadily, including specific plans with high attention and care paid to providing the essential data and suitable cadre. To achieve this, a high standard of performance is essential. This option may require many policies, from analysing the current efforts to implementing projects, marketing and furtherance.

Libya has started on this with special care in recent years, given that tourism is a promising activity which could be effective and efficient in developing a new resource and that could substitute for oil resources. It could create more job opportunities, if appropriate clear policies were implemented and programmes developed to help draw up an appropriate economic and social climate. Libya has distinctive features and characteristics, better than its neighbours, with long beaches, beautiful coastline, rivers and wide valleys with forest and diverse scenery, including the vast desert. In spite of

these sizeable tourism constituents, the number of tourists who arrived in Libya in 2000 was still a modest number; approximately 130,000 a moderate revenue of about 126 million dinars and 1.6% share in GDP in the same year.

The promotion and development of the tourism sector would contribute greatly to GDP and help diversify the economy. The provision of diverse income and creation of new job opportunities may require introducing new policies, changing economic and social procedures, likely to contradict the environmental, traditional, and cultural policies of Libyan.

Although Libya has tourist facilities now, such as hotels, tourism villages and resorts, they have not been well managed and marketed to enable the sector to take off. Therefore, the sector may play a significant role in a suitable environment to achieve revenue of about 9.5 billion dinars in 2010 and create approximately 25,000 job opportunities. With a 30,000 bed capacity it would increase its share in GDP to reach 7% in the same year. There are some steps that should be pursued, in both policy and procedures, besides government commitment including a completion suggest plan as follow:

1- Issue a new law which could organize the tourism activity.
2- Accelerate the pace of Libyan planning and issue legislation of the tourist places which will attract tourism.
3- Simplify and facilitate all related activities such as land, arrival and departure security.
4- The government should, through its plans and transformation budgets, provide and develop the infrastructure for tourism such as roads, electricity combination, water and sewage.
5- Encourage national and international investors to implement tourism projects such as restaurants, hotels, villages, resorts and rest houses.
6- Train and prepare local workers in the different scopes of tourism fields by setting up a new college and faculty.

7- Maintenance and development of the arrival and departure outlets facilitating visa procedures and tourist safekeeping, to ensure they feel free to wear, drink and eat anything they want.
8- Protect the ancient and historical places.
9- Identify the tourism constituency and the required facilities by pursuing different marketing and promotion elements.
10- Provision of cultural welfare tourism requirements, which can increase revenue as well as developing and enhancing the traditional industries.

Furthermore, the government should adopt tourism activity, at least in the initial phase, through provision, support and financing of the general tourism plan. This may benefit this plan if the government sets up two departments to care for and pay close attention to tourism. The first department will build up new projects and sell to the private sector. In due time, this implies setting up a timetable to implement such projects and allocate the finance and capital return by possession. The second department will concentrate on marketing and promotion, merchandise and the day to day running of the tourism industry. Also, this department could be responsible for tourism, the traditional culture of Libya, expanding and strategy issues through studies which count tourism movement and make appropriate links with other international institutions in order to set up suitable policy to attract more tourists and enhance visits to more places in Libya.

5.10.9 Education and Economic Growth

It is difficult these days to ignore the fact that education matters. The Libyan authorities have assumed a substantial role in educating its citizens, and providing education for all is a central pillar of the economic development goals. A variety of motivations lead the Libyan government to provide strong support for schooling over the last few decades. The government used education to improve economic performance, social justice and, more generally, to develop society.

The enthusiasm in promoting education is well-warranted, but the fundamental question is how much the government should invest, as public investment in education comes at the expense of other public and private investments. The question is how to improve the

quality of education. Most studies of the economic aspect of education focus on school attainment, or the "quantity" of education. This appears logical from the perspective of both analysis and policy; the quantity of schooling is easily measured and readily tracked over time. But it distorts policies and potentially leads to bad decisions.

The policy challenges facing Libya are those that have to do with quality, rather than quantity. Higher quality translates into greater earning for individuals over their lifetime. Moreover, a society with a more educated labour force can also expect faster economic growth, even if the returns may not be discernible for many years. Quality, defined here by measured mathematics and science, reflects a variety of factors - family inputs, health, schooling, and so forth. To advance the standard of living, the clearest way to improvement lies in strengthening schools. Investment in education has a potential to deliver truly large economic, as well as social gains.

While a variety of models and ideas have been developed to explain differences in growth rates across countries (Barro and Sala-i-Martin, 2003), they invariably include, but are not limited to, the importance of human capital, which is enhanced by a strong education system. Education has the possibility of helping both the individual receiving it, and others. Specifically, a more educated society may lead to higher rates of innovation and invention, make everybody more productive by helping firms introduce new and better production methods, and lead to more rapid introduction of new technologies.

5.10.9.1 Difficulties in achieving better quality

Although many factors help determine cognitive skills, the Libyan government's efforts for improvement focus on schools; the place where they have the most policy leverage. Unfortunately, reforming school policies and improving performance are not just a matter of will, or of providing extra resources to schools. If the effectiveness of different resources, or combinations thereof, were known, it would be straightforward to define an optimal reform strategy on credible knowledge about how best to use new resources to improve the kind of education on offer.

The most straightforward way to illustrate these difficulties is to consider the relationship between resource usage and student performance. The results were a failure and the explanation for this failure is simply that insufficient attention has been paid to teacher and curriculum quality. Also, the sector came to play a core role as the "last resort" employer, which in turn leads to redundancies in teaching and administrative personnel (Eken et al, 2003). In any case, the public sector cannot afford to accept all students free of fees, it will need to push the private sector to participate with the public sector and make the education sector more efficient. Estimated differences in annual achievement growth between an average and a good teacher are large. Clearly, policymakers in Libya should focus on improving the overall quality of the teaching force. More attention should be paid to education, particularly in primary and secondary schools, which have seen poor performance over time as a result of the existence of obstacles in the educational process.

5.10.9.2 Education policy factors' suggestions

The suggestions are:

a- Accept policy amendments in secondary education, colleges and universities, set up new departments and delete others as labor market needs dictate. Currently most students graduate from human and social sciences, which represents about 60% of the total. Whereas students graduating in technology and science represent not more than 20%. It is recommended to increase this percentage to 40% at least, which in the end should eliminate the unemployment problem.

b- At the end of the secondary school stage students should be given vocational sessions directed towards the labor market and identifying existing choices to work as an individual or in a partnership.

c- Graduate students to visit secondary schools, colleges and universities to do incentive interviews regarding future vocational directions, which facilitate graduation and provide an easy way to find a job. Alternatively, introduction to a training program framework for habilitation or re-habilitation. Achieve a direct corporate coordination between public,

private schools and firms, and get help from technicians from these firms to teach in colleges for specialization courses. Moreover, this will improve the education standard and lower the number of school-leavers entering the labour market at an early age without sufficient knowledge to assist them in the labour market, despite training efforts. More attention to be given to students who are facing difficulties in education and cannot be accommodated in the traditional school educational system. The curriculum needs to be developed and improved in different education stages, particularly in higher education colleges and specialized secondary curriculum (especially technical and science specialization). This would reflect the labour market needs for work skills.

d- Computer users need to permeate all education stages according to the gradual plan, and education methods need to be developed which concentrate on student's access to knowledge resources from society as the core concern. In addition, staff must be retrained in different education stages; vocational skills developed in new technology methods, development and use of factual interaction, special care for students who have special needs, incentives to learn foreign languages and the setting up of special programmes in technical language learning. As the economic environment changes and new information and communication technologies develop, Libya encounters challenges in adapting education programs. Libya has been slow to react, in part because of cultural conservatism and regulations. More private sector involvement in the design of the curriculum, research partnerships, between universities and the private sector, and changes in remuneration policies to attract national scientists and researchers working or studying abroad will also be necessary.

5.10.10 Transit Trade

As Libya sits in the "heart of the world", this could assist to establish Libya as a transit country for many other countries, for instance Dubai in the Gulf and Singapore in South Asia. Libya has played a crucial role in the trade between sub-Sahara countries and Europe in the past. Existing facilities and infrastructure; ports, roads and communications, can help to build the entry port by investing a considerable amount in these areas. Certain procedures should be taken by the authorities such as lowering the tariff and visa requirements. This might create more job opportunities and subsequently increase more income. Many countries, particularly African countries, don't have a sea port and they lack the facilities, therefore Libya, by investing in this sector, will achieve many advantages and increase its revenues.

5.11. Growth and Diversification

Oil revenues can finance and promote different sectors, which could have an advantage in increasing the percentage of growth, if they perform well. The contribution of these sectors; to overall productivity growth increased in several sectors; the development of these sectors has been essential to achieve suitable growth.

Economic growth refers to an increase in a country's ability to generate more production. So how can Libya achieve appropriate growth by exploiting oil revenues to create other sources? The advantages of economic growth through oil are that an increase in real national income allows more goods for consumption. Growth is not an automatic birthright for an economy. For the Libyan economy to grow, the right conditions for growth must be created. Growth depends, to a significant extent, on the resources that Libya already has. The better the quantity and the quality of the resources, the more potential it has to grow; the sources of growth, therefore, include the oil revenues (in Libya's case). By exploiting these endowments Libyan can create more growth in the economy as Diagram 5.2 illustrates below.

In terms of diversification this is also very significant. Strengthening non-oil sectors such as industry and agriculture will increase resistance to shocks and broaden the revenue base. One way that Libya can encourage diversification and prepare itself for economic downturns, or the eventual disappearance of oil revenues, is to invest in the different sectors which can be an alternative for oil in the future. Also, by improving the education and health system economic growth is stimulated by raising both labour productivity and the participation of the labour force. It promotes other sectors and economic institutions. And of course, it makes possible a better, more fulfilled life for the country's citizens and improves the people's standard of living.

The primary economic objective of Libya has been modest economic growth and product diversification. The expansionary fiscal policies that followed the oil price rise accelerated this development process and strongly stimulated non-oil economic activities. Measured by the rate of growth of non-oil sector progress during the study period, this has been moderately successful.

However, as a result of tighter financial policies from the 1981-1986, the average annual rate of growth of non-oil GDP declined gradually. The relaxation of financial policies following the 1980-1990 oil price increase contributed to higher public sector investment, helped to raise the continued low level of economic activity in Libya, and the average rate of growth of the non-oil GDP declined. The weak domestic demands also lead to the virtual stagnation of non-oil economic activity during 1986, when the oil price reached US$12 per barrel. The most rapid expansion has been in construction and government services. Construction has emerged as a leading growth sector, as has electricity, water and other services, in response to high demand growth supported by low pricing policies. Libya has devoted a large proportion of total investment to the improvement of physical and social infrastructures, and a smaller proportion has gone into investment in productive sectors for diversification. In addition, diversification has been constrained by labour shortages and limited agricultural land. The share of the agriculture sector in the economy has declined, owing mainly to low investment priority;

changes in total GDP were markedly affected by change in the level of crude oil output and oil pricing.

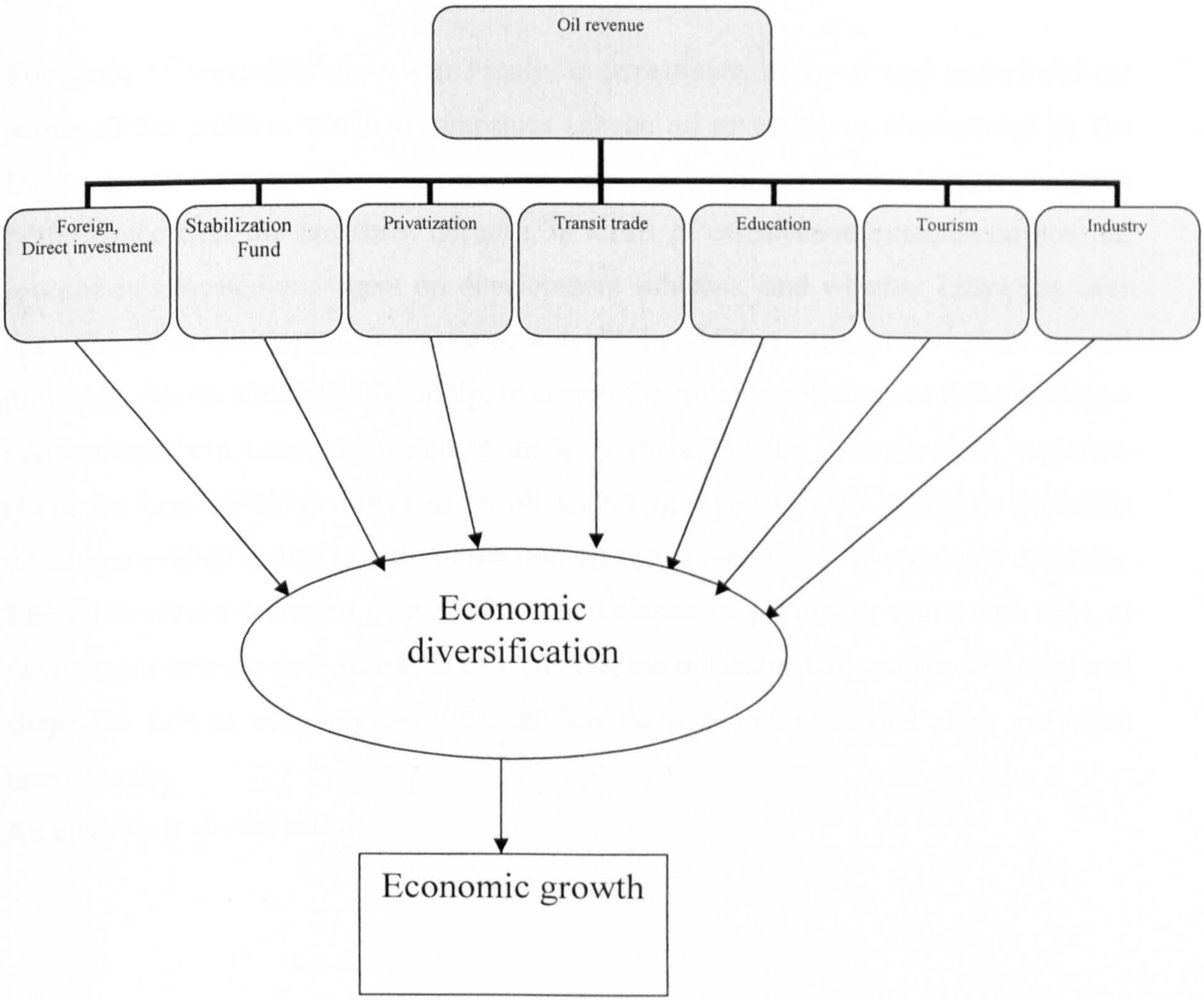


Fig 5. 2 Shows the Relationship between Oil Revenue and Economic Growth

5.12 Interview Analysis

Interviews took place in Tripoli, Libya. Around fifteen people were interviewed from Ministry of Planning, the Ministry of Economics, the General Council of Planning and Libyan Central Bank in the mid of 2005.

The goals of these interviews are: Firstly, to investigate, discover and understand the nature of the problem which accompanies Libyan oil revenues, as encountered by the Libyan government and the policy-makers' response to this. Also, the Libyan economic performance over the last three decades, in terms of oil revenue exploitation how oil revenue is allocated and spent on development schemes, and whether Libya has over spent the oil wealth expectation to be considered. In addition, attempt to explore the real problem with oil windfalls. Secondly, to search for suitable solutions to these problems and perhaps help Libya to overcome them by surveying the policy-makers' opinions about the best solutions. Libya as an oil exporting country faces economic problems which are evident in low growth in the non-oil sector and a lack of economic diversity. The oil revenues represent over 95% of the balance of payments, more than 65% of government revenue and over 40% of GDP. So, the oil sector will remain dominant and shape the Libyan economy for the next few decades unless crucial steps are taken immediately.

An analysis is shown below:

Interviews analysis

Questions	*Response*
Q1 The goal of development plans was to research alternative resources rather than oil to finance government expenditure and achieve income resource diversification. Do you believe that Libya has achieved this goal?	Most answered "No". They believe that accomplish this goal was not accomplished because of miscarriages of governance, the dominance the public sector and the government's concentration on an infrastructure project without any previous studies. Moreover, it was felt there was an absence of commitment. The evidence indicates that the diversification process has little attention and the non-oil sector's contribution to GDP is very poor.
Q2 To reap greater benefit from oil as a non-renewable resource in the long-term requires a search for another source rather than oil wealth. Which potential income should been considered in your opinion: (a) Industries in which Libya already has a comparative advantage (b) Tourism (c) Services and transit trade (d) Encouraging foreign investment?	Most answers were (a) Some noted that the petrochemical industry can be embarked upon if there are enough skilled workers, and some added that Libya can benefit if currently unused raw materials such as iron, copper and glass are exploited. (b) Services and transit trade (about 60%) (c) Tourism and (d) encouraging foreign investment (40%). These sectors can be developed in the short term but there are some sectors, which can have a major contribution if developed e.g. iron ore extraction and the industry sector.
Q3 The economic sanctions which are imposed by UN have a negative impact. Do you think these sanctions played a vital role in affecting previous development plans?	100% said "Yes" these had a negative impact on the Libyan economy. All agree that the Libyan people have been affected by the UN's economic sanction. It can not be said that UN sanctions hampered the diversification process because the sanctions started in 1992 until 2001 but the economic development process started in the 1970's.
Q4 A Stabilization Fund has been used in oil exporting countries such as Venezuela and Kuwait. Do you believe that Libya needs to establish a stabilization oil fund?	All agreed with conditions; good governance, including transparency, credibility and responsibility and the setting up of modern, scientific and effectiveness policy. Libya has a pressing need to set up such fund. We can rely on this answer if we have the necessary conditions to overcome any obstacles and also have good governance.

Q5 To maintain sustainable economic development, do you think that it is necessary to establish and create a progressive development plan?	Most of these questioned said "Yes" they agreed but noted that there must be a clear policy and study undertaken to aid planning in terms of strategy and efficient implementation. This will restrict squandering and waste of the government budget. To successfully accomplish these aims (Sustainable Economic Development) the private sector needs to participate in the process of economic development.
Q6 Libyan economic performance has been poor over recent periods and growth was volatile and fluctuated. Do you think this can be attributed to: (a) Economic mismanagement of oil revenues (b) oil price volatility (c) other causes (please specify)	Both (a) and (b) were behind the poor performance, and some added another reason was that the public sector was and is dominant and this results in a poor economic performance. This reply may be unreliable because there are other possible reasons that it was neglected such as a lack of commitment and skills training.
Q7 Economic reform is a significant process and it may also be a painful process. Do you think the Libyan economy can afford such reform? How could this be implemented?	Those questioned agree that policy reform may be harmful, but the Libyan economy can afford this for a short-time, because of their belief that this may be accompanied with unemployment. They agree, but for a short period and with precautions. Economic reform is very essential now but the government should protect the poorer part of the population from the shock.
Q8 Do you support the view that an economic reform is urgently needed in oil producing rather than in countries without resources?	They agree that this is a reality and the evidence is quite clear that with poor performance and money squandering the picture is bleak. Reform is needed in both non-resource countries and resource-rich countries (particularly with petroleum).
Q9 Oil revenues should be spent on education, training, and the creation of a general infrastructure, employment and health care. In addition the creation of other sources of income that can replace oil revenues is needed. Has Libya achieved these goals so far?	Libya has spent oil revenues on these goals in the past. However, the outcomes of the development plans were very poor. Libya should build a good strategy to achieve this policy by concentrating on education especially vocational education to rehabilitate its people in the face of globalization.

Q10 To decrease the unemployment rate for young people how can policy-makers make this a high priority and amend legislation to achieve full employment?	To eliminate unemployment the government should produce an effective and healthy economic policy by providing young people with loans with zero interest rate and creating a suitable climate to encourage Libyan's youth to join productive projects. Furthermore, to amend legislation which is considered an obstacle to the young joining the private sector and remove many laws which act as an impediment. The authorities should strongly push the private sector and foreign investment to build the country after years of infrastructures neglect.
Q11 In your view, what is the best rate of growth required to maintain a low unemployment rate?	50% agreed that Libyan economic growth needs a growth rate between 7-9% annually, particularly, in the non-oil sector. The other 50% suggested that Libyan economic growth must not be less than 12-13% annually, the non oil-sector represents only 3% growth rate. It can rely on 12-13% annually however, in the long-term 7-8% would be acceptable.
Q12 To what extent do you agree that the existence of an oil sector has diminished other Libyan sectors, particularly the export sector?	There is no doubt that the Libyan oil sector has had a bad effect on the Libyan economy over the last three decades. However, recently, some modest improvement has been accomplished. Of course the oil sector has a bad effect on the economy due to phenomena known as "Dutch Diseases" which hamper the other export sectors and create a new generation of dependency on oil revenues.
Q13 The optimum solution to prevent reliance on one sector is diversification. How can Libya affect a healthy diversification policy for exports?	To create a diversified economy, Libya should pursue a clear policy targeting the encouragement of exports and investment in any promising sector. Create free trade zone, exploit sea wealth and invite more foreign capital. Also invest in tourism, improve the infrastructure including roads, communications, railways and ports, and moreover, improve the education system and privatize the public sector.
Q14 To assist the economic reform process a restructuring of the Libyan economy must establish private and financial market sectors. Do you think this action wills detract from the public sector?	If the government pursues a clear policy, perhaps it will not diminish the public sector, but most responses indicated that there is no doubt that the public sector will be diminished. Libya has a pressing need is to set up a financial market that does not contradict the public sector. That is exactly what happened two years ago when the government set up a new financial market as well as new private sector organizations, but the steps are still very modest. It can't rely on the private sector but should establish a strong public sector in the long-term.

5.13 Conclusion

Oil has adversely affected economic growth performance. Oil revenue drives the real value of the domestic currency up to levels that other export industries and import-competing industries find difficult to cope with, thus reducing the economy's openness to foreign trade and investment. Furthermore, too many people tend to become locked in low-skill labour oil revenue-based industries, and thus fail, through no fault of their own, to advance their own or their children's education and earning power. Another related risk is that the authorities and other inhabitants become overconfident and therefore tend to underrate or overlook the need for good economic policies and institutions as well as for good education and good investments. Excessive dependence on the hydrocarbon sector can weaken various societal, institutional arrangements that need to be strong for the economy to grow briskly.

Libya's policy-makers predicted that the unprecedented transfer of oil revenues would make Libya rich beyond belief. Most of these predictions assumed that oil prices would not decline and that government policies would effectively transform this revenue into productive foreign or domestic assets.
Since that time, however, Libya has failed to widen the economic gap in its, favour and Libya became unable to diversify its economy away from oil. Revenues in the form of oil reserves have been run down, with only limited conversion into other forms of wealth, such as the productive economic assets necessary to guarantee future income and create the basis for future growth.

While economic growth during the 1970s was outstanding in Libya, the 1980s were a period of slow (at least per capita) real growth. Sustained economic growth has not been a Libyan characteristic. Widely fluctuating growth rates in Libya are, in large part, explained by erratic oil production and prices, combined with a large GDP contribution. The Libyan economy was totally dependent on a single commodity, i.e., exports of crude oil. Its revenue earning was related to the global demand-supply situation of oil and the resultant fluctuations in the barrel price of oil. In the absence of suitable avenues for

deployment of revenue, no real assets were created from the oil export earnings. Diversification of the economy, by setting up industries which either use hydrocarbon (oil and gas) as feedstock and/or as fuel was the first step to converting hydrocarbons into value-added products instead of exporting raw materials for process in developed countries. The value added tax which exists in developed countries is now being put in place in Libya itself. This process is accompanied by the setting up of capital intensive industries which *inter-alia* includes the creation of infrastructural facilities, the acquisition of technical know-how, and the upgrading of indigenous technological levels, and skills required for the operation and maintenance of the plans. The availability of capital and the large reserves of hydrocarbons were the strengths that were suitably exploited to attract foreign companies in joint ventures with the government. This can provide the transfer of technology and requisite skills to the indigenous workforce.

The joint-venture concept, with foreign equity participation, has been mooted to make foreign companies share the risks involved in the venture. In order to protect their investments, foreign companies are expected to given an all-out effort to make the ventures successful. The setting up of these joint ventures has brought about improvement in the infrastructure facilities in Libya, improved the skills of the local workers in operation and maintenance of the plants through in-plant experience and also the creation of training programmes abroad. As regards developing capabilities for manufacturing machinery, equipment, the tourism sector and transit trade; it is linked to development of a better overall level of technology and also to research and development efforts. This will be achieved progressively, in stages. The starting point is the assembly of imported machinery and equipment. With the development of the necessary skills and fabrication capability, indigenization takes place progressively. Scientific, technical and vocational training institutes are expected to play an important role in this direction. To create the base for indigenous entrepreneurialism, government policy has been to keep the ownership of the downstream processing industry units, mainly in the private sector.

Diversification in Libya tends to be concentrated in oil-related industries such as petrochemicals, fertilizers and metals. Libya needs to emphasize the importance of diversification into non-oil related manufacturing and in particular, high-productivity agricultural activities should not be ruled out. Also the Libya government should focus on the private sector or risk charges of favouritism by offering subsidies in order to encourage certain sectors. Libyan government policies, in terms of the economic diversification, diversify out of oil and gas. Furthermore, privatization and/ or public-private joint ventures, which enlarge the scope for private sector diversification, should be perused. Libya needs a comprehensive medium-term strategy to reform its economy and better utilise its economic and financial potential by diversifying the economy and reducing the country's dependency on oil. This strategy aims to maintain macroeconomic stability and rationalize the use of the country's oil wealth, accelerate the transition to a market economy, and establish a solid basis for the development of the non-oil economy.

The government should establish benign investment environments. Priority should be given to the establishment of regulatory and fiscal transparency, reduction of bureaucracy, implementation of effective commercial law, appropriate regulatory regimes and the abolition of corruption. Also, education and training should receive special attention, particularly in the fields of science and technology. In addition the government should move away from the 'welfare state' model and encourage individualism. In the meantime, the economy should be gradually opened up through the reduction of tariff and non-tariff barriers. However, the impact of this action on the manufacturing sector, and on small companies in particular, needs to be carefully monitored. Financial services should be liberalized and the Central Bank should maintain an appropriate and stable real exchange rate, raising the investment rate. However, the government should pursue consistent policies through periods of high and low revenues, alike. The 'asymmetric policy response' common in the past, should be dominant.

In three decades, a substantial amount has been spent on the development programmes and diversification plans. The national economy is still, and will remain for the next

decades, dependent on a single resource (crude oil) to finance the economy, current expenditure and the development plans. This situation is a critical condition for the Libyan economy while many other continues have depended on a heavy single source for export such as oil, diamonds, wheat, cacao, and many others raw commodities.

In this case, however, it cannot change things immediately. Necessity requires research for a mechanism targeting diversification, and goals are to change the current economic structure, which needs to become able and efficient to achieve the diversification of the economic structure. In addition to create new sources of income, this can be capable of supporting the oil revenue in the medium-term and substitute a full alternative in the long-term. Taking into account the fact that new resources will innovate energy resources on the global level, if Libya does not take suitable measures to utilize effectively its oil resources, it will place the country in a negative position and threaten government revenue. There is an urgently need, in the short and medium-term, to mobilise oil resources in the most beneficial way to give the best chance to the Libyan economy to enhance, promote, boost and restructure the national economy, re-open the scope to private, public and foreign investment and production. These ambitious goals cannot be achieved unless the following policies are pursued;

1- Re-examine the laws and legislation related to production, income, import and export.
2- Activate the law and decisions related to the private sector's contribution in selected economic activities such as tourism, communication, and education and health services.
3- Sustain oil allocations, which provide transformation budgets for the provision of a training infrastructure.
4- Promote and encourage foreign investment to manage industry, agriculture and tourism. This investment should complement domestic investment not substitute for it.
5- Encourage an increase in employment opportunities, and solve problems such as commercial bank loans to individuals and small companies, which will then enable them to embark on new activities, that can provide more chances to people who are unemployed.

CHAPTER SIX: THE CONTRIBUTION OF THE OIL SECTOR TO ECONOMIC DEVELOPMENT IN VENEZUELA

6.1 Introduction

Venezuela's economy has a long experience dealing with oil revenues management that has started since 1920s, when the oil has been discovered. Venezuela's oil revenues management has been selected as a basis for comparison with Libyan oil allocations due to both economic and political structure similarities as well as the features of both societies. The thesis has also, investigated oil revenues management and its role of diversification programmes in Venezuela.

Oil is of special importance to oil exporting countries as it accounts for a very high percentage of GDP, government revenues and foreign exchange earnings.

How well the oil sector performs in these countries depends critically on the industry structure. This chapter examines the evolution of the Venezuelan economy in recent years. Critical choices facing Venezuela in development strategy revolve around the prospects for, and limitation of their underlying economic structure as major exporters. Many oil exporters have not performed as well as oil-poor countries over the past few decades, especially when the massive receipts earned by these countries since 1973 are considered (Auty, 2001).

Also, this chapter aims to identify the problems which face Venezuela and consider that the government has done to overcome the issues which accompany oil windfalls.

The Venezuelan government agrees that variations in world market oil prices are an important source of risk and instability for oil exporting countries. Some oil exporting countries derive about half their export earnings from the hydrocarbon sector, whose

world prices are extremely volatile. Nor is such volatility purely short-term; much data suggest that oil prices undergo long periods of rise and decline (Warner, 2001).

In reviewing recent economic development from 2001-2003, it can be seen that the Venezuelan economy was subject to oil price fluctuation and political instability and the adverse effects of these shocks were magnified by inadequate policy responses. By early 2001, the economic situation was characterised by accelerating inflation, pressure on the Net International Reserves (NIR) of the Central Bank of Venezuela (CBV), declining non-oil GDP and waning confidence.

Venezuela became a major oil exporter in the 1920s. Important discoveries were made during the 1910s and major investments by Royal Dutch Shell and Stanford Oil of New Jersey caused output to boom throughout the next decade. By 1925 oil became the country's principal export, and in 1929 Venezuela became the first oil exporter in the world.

Up to that time, coffee and cocoa were the two major export crops. However, "Dutch Disease" had an impact on the oil boom in the 1920s. After the major boom of the twenties, development in the thirties took a much slower pace, both in terms of oil expansion and fiscal expenditure.

In the early 1940s, the regulatory framework of the oil industry was redefined through clearer and longer term contracts. Most oil concessions were renewed for a period of 40 years, and fiscal participation in the revenues was increased through royalties and income tax. From 1943 up to 1957, this produced a major expansion of the industry, with output rising by almost 10% a year and real prices generally increasing. The non-oil economy boomed through this period at an average yearly rate of 9% (Hausman, 2002), benefiting from the oil price recovery.

The windfall of oil revenues that flowed to the Venezuela economy during the seventies provided government officials with the financial means to stimulate the process of development and enhance the well-being of future generations. In spite of that wealth,

Venezuela is showing an alarming negative trend in its rate of growth, particularly in the non-oil sector, accompanied by higher levels of unemployment, poverty and income inequality in 1990s.

In some oil-producing countries, a history of prudent economic development, fiscal policies and the existence of large official financial assets and/or a low level of public debts has facilitated an orderly mix of adjustment and financing during temporary oil price downturns. For example, in Norway, the solid financial position of the government reflects to a large extent the more fundamental long-term policy objectives of spreading the benefits of oil over time - notably through high government saving rates and the build-up of foreign assets, resisting potential damage to the non-oil tradable sector from Dutch Disease and being able to withstand negative oil market development. The strategy choices seem to have helped Norway maintain macro-stability and reasonable growth rates in the context of an unfavourable oil market environment.

In contrast, in a number of oil-producing countries, including Venezuela, procylical policies and persistent fiscal deficits have led to less favourable financial positions and recurrent fiscal sustainability concerns related to the volatile and excessive use of oil revenues. A regular feature of fiscal policy in many oil-producing countries has been the inability to rein in public expenditure at the time of rising oil prices. Expenditure has subsequently proven difficult to reduce during oil price downturns. Here, may have been the belief that the oil price decline could be short-lived, promoting the temptation to ride out the downturn.

The resulting fiscal deficits have been financed with external and/or domestic borrowing. However, because of the level of borrowing, the interest rate of foreign loans, increased, combined with an increase in new loan applications has caused sustainability concerns. The latter has often been inflationary or has crowded out private sector access to credit.

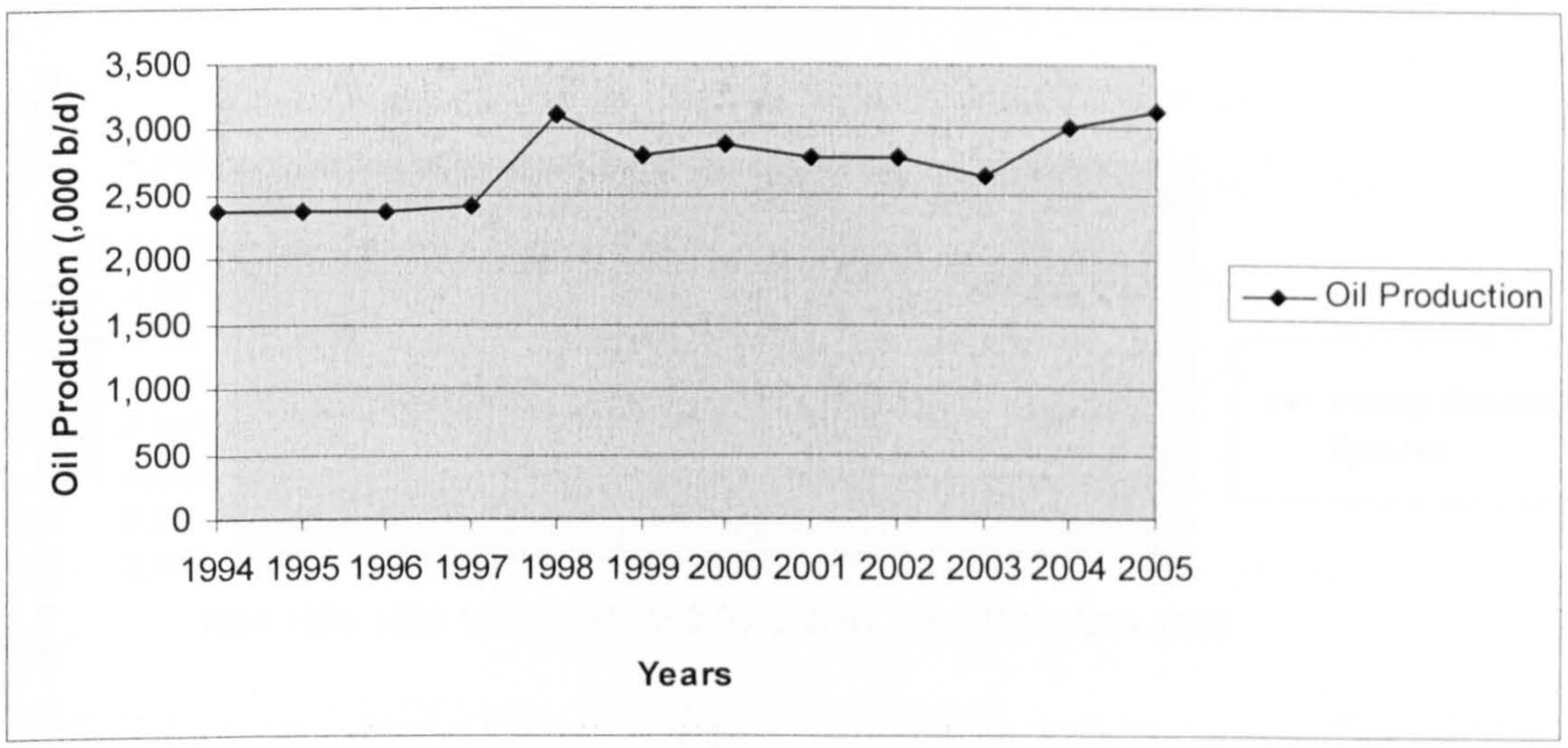
Thus, the Venezuela government is able to generate fiscal surplus during an oil boom that would permit the budget to withstand adverse oil shocks without falling into deficit which, in turn, leads to sustainability concerns; fiscal policy tends to transmit oil volatility to the rest of economy.

The oil sector plays a dominant role in Venezuela as it contributes (in real terms and based on the period 1999-2002) about 25% of its total GDP, 50% of public sector revenues and about 80% of exports. As a result, Venezuela's macroeconomic stability is highly dependent on - and therefore vulnerable to - the oil sector. The oil sector component of the GDP of Venezuela is also highly correlated to oil price fluctuations, (Alferdo 2005).

This chapter aims to contribute an analysis of the role of oil in the Venezuelan economy over recent decades.

6.2 Hydrocarbon Sector Development

Venezuela was the world's largest oil exporter from 1928 to 1970. After this, however, the oil receipts entered into decline. Only massive new investments in exploration and development could have contained and reversed the trend. Instead, in the 1960s, investment in oil was completely halved, due to the controversy about oil exploration. Hence, the first task Petroleos de Venezuela Sociaded Anonima (PDVSA) who is - National stated-owned corporation, committed to serving interstes of the Venezuelan public constitutionally, the rightful owner of the countries oil reserves. This company has developed ever closer links with the Venezuelan state that will allow coherent connection with present national project guidelines - and managing the oil wealth had to confront was to revive an industry in decay.

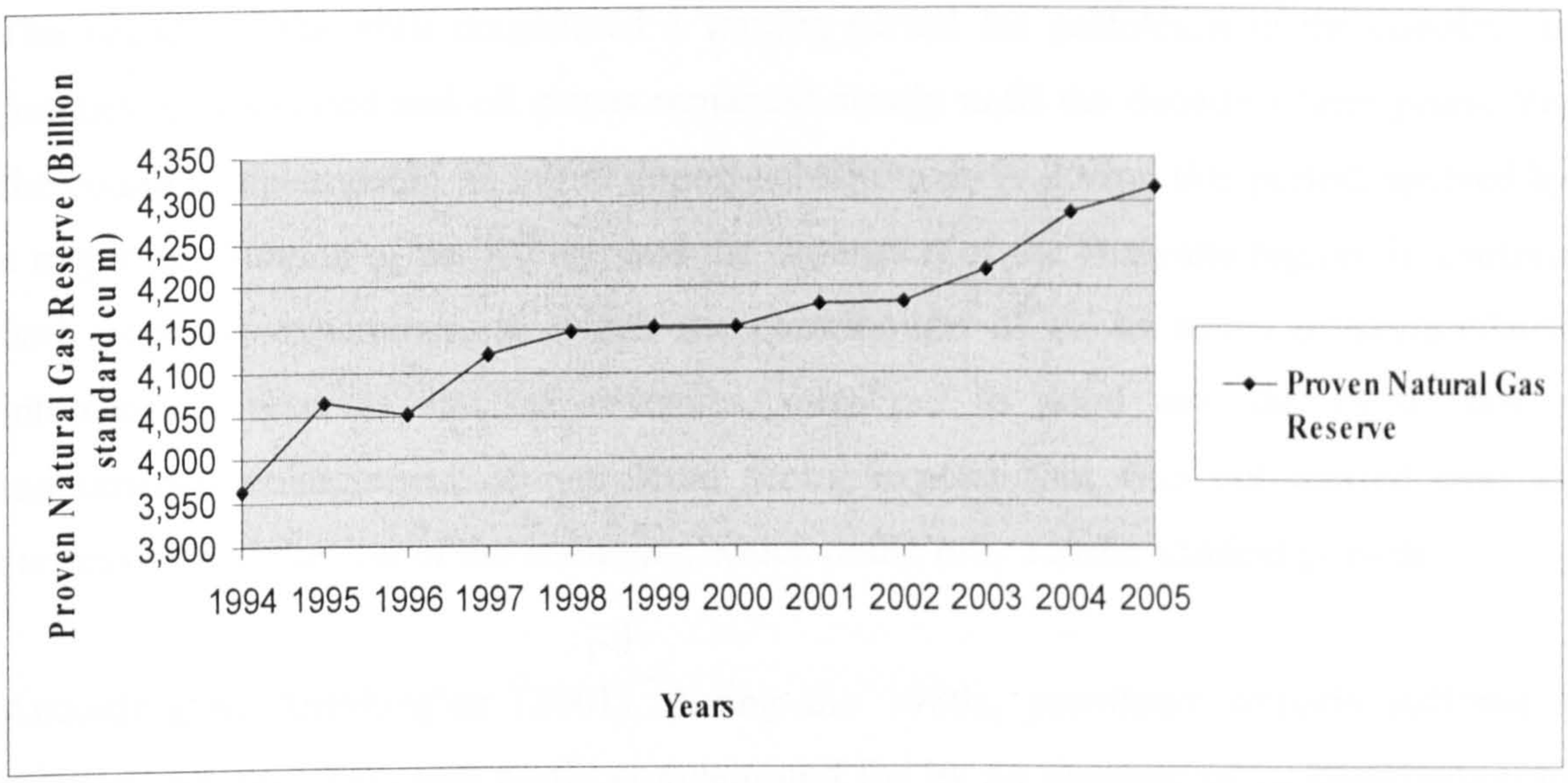


Sources: OPEC Annual Statistical Bulletin 2005

Fig 6. 1 Venezuelan Oil Production 1994-2005 (, 000 b/d)

Non-rent oil GDP per barrel can be used as an indicator for productivity. It increased steadily from 1930 to 1970, but has been decreasing ever since. At present, it is about three times as costly to produce a barrel of crude oil as it was in 1970. Most of the decline has to be attributed to nature and, in the 1980s, to the impact of OPEC quotas. But part of the decline is without doubt due to the managerial problems of PDVSA, as is made plain by the surprising current success of private investors in managerial fields.

The importance of the oil industry reached its height in 1950. In that year, non-rent oil GDP was 25%. Thereafter its importance declined, first because of higher growth rates in the non-oil sector and later, because of the industry's decay by 1975, its importance had reduced further, with the ratio of non-rent/total GDP having fallen to 7%. However, after nationalisation the industry began to recover its importance, slowly until 1985, and at a faster pace thereafter. Oil production reached an average of 3,128 million barrel/day in 2005 (See Figure 6.1). Besides, Venezuela possesses a substantial proven gas reserves in the world as Figure 6.2 indicates (OPEC, 2005).



Sources: OPEC Annual Statistical Bulletin 2005

Fig 6. 2 Venezuela's Proven Natural Gas Reserve 1994-2005 (Billion standard cu m)

Regarding excess profit in oil and fiscal revenues, the picture is different. They peaked in absolute and relative terms in 1980, representing 24% of non-oil GDP. However, regarding the percentage of excess profits, there was one strong upswing and downswing (in the 1960s) before the peak in 1980 was reached. In terms of the percentage of fiscal revenues, this movement was compensated for by an increasing level of taxation. Since 1980, both percentages declined, but more so fiscal revenues, since PDVSA was able to rely increasingly on excess profit for new investment in oil.

6.3 The Role of Oil Receipts in Economic Development

Since the discovery of oil in Venezuela, the economic development of Venezuela has been intertwined with exploitation of this national resource. The best depiction of this interaction is found in the relationship between petroleum exports and GDP from the early 20th century to the year 2002.

The decade of the1960s constituted a waning period for petroleum in the country, as production slackened and oil prices remained steady until the decade's later years. Yet the country implemented its initial import-substitute drive during this period, spurred by a major devaluation of the Bolivar and the expansion of the Guayana region. In contrast with previous experience, in which the contribution of oil in terms of accumulated international reserves and tax revenues, were put to good use, the 1970s saw a monumental enlargement of petroleum sector exports that was not carried over as successfully to the rest of the economy, which could only muster modest growth.

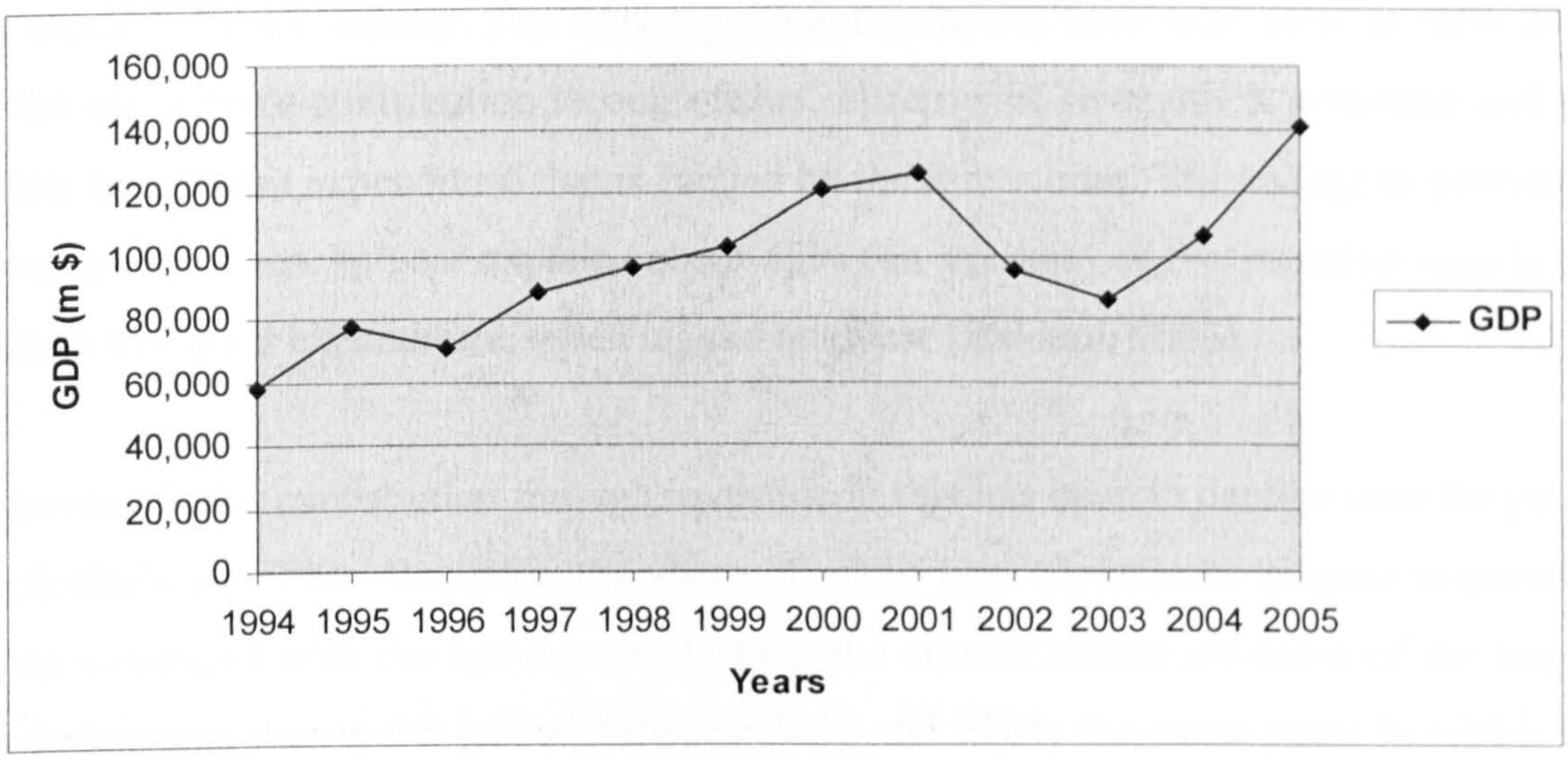
According to Ammuzghar (2001), during the 1980s, petroleum exports suffered a relative collapse. This was partly compensated for by an increase in its contribution to the overall economy, because part of this profits did not flow abroad but rather to the state through PDVSA.

Venezuela's oil production and exports were reduced after 1973, because the government thought the gain in exports made conservation both possible and affordable. The nationalisation of the oil industry in 1976 favoured and facilitated this policy. This move toward oil conservation was followed by another prudent measure in favour of foreign currency stabilisation. As the windfalls surpassed the country's domestic absorptive capacity, some of the new revenues were converted into foreign assets through the Venezuela Investment Fund (VIF) created for this purpose in 1974. After 1977 however, while the VIF and the national oil company were still increasing their overseas investments, Venezuelan public enterprises in the non-oil sector became net borrowers from the International Commercial Bank (Carrillo and West, 2004). By 1979, in aggregate terms, there was $16 billion of external debt overall in the public sector and another $10 billion of private sector obligations.

The country's wealth reached all social classes, so in order to ensure socio-economic democracy, the oil windfall was used to raise wages, workforce and output in the public sector. Between 1976 and 1980, public expenditure rose annually at double-digit rates. Direct transfers to households during the first oil boom were also part of the windfall use. A similar expansive platform was adopted with respect to capital investment at

home. The nationalisation of the oil industry in 1976 allowed public enterprises to double their investment outlays, particularly in the expansion of steel, chemical, and aluminium plants, absorbing one-third of the total non-oil, public investment. This large-scale resource-based industrialisation drive was designed to promote new exports, substitute some intermediate imports, and to establish a domestic capital goods industry. The period from 1976-80 emphasised the improvement of the physical infrastructure, the revival of the lagging agricultural sector and increased easy credit to the private sector. Much of the initial capital expenditure went into office towers, apartment buildings, multi-level highways and elaborate plants, underground subways, public works and general public facilities. Venezuela revenues from oil exploration for the last 20 years (1994-2004) are estimated at more than $310 billion but the oil receipts in 1993 were only slight more than in 1974. Annual income volatility was mainly attributed to oil price fluctuations. Venezuelan dependence on oil goes back to the late 1920s. In 1974, petroleum accounted for more than 24% of GDP (at current prices), over 70% of central government revenues and about 95% of total exports. Venezuela GDP production reached its highest level in 2005, as Figure 6.3 indicates as a result of the oil price increase.

Investment and growth were both heavily influenced and sustained by developments in world oil prices. The Venezuela government embarked on the expansion of their economic diversification. The allocation of oil windfalls included saving abroad, increased domestic consumption and an ambitious public investment programme designed to diversify the economy. Initially, the Venezuelan government responded to the first oil boom with caution.



Sources: OPEC Annual Statistical Bulletin 2005

Fig 6. 3 Venezuela's GDP at Current Market Prices 1994-2005 (m $)

Kaster and Yergin (1983) state that the international oil market grew rapidly, and Venezuela's industry has benefited from rising international demand. Venezuela's national budget became highly dependent on oil revenue and it can be said that the Venezuelan economy became oil-dependent on a single economic activity, which was controlled by a multi-national oil economy. Oil GDP continued to expand vigorously, whilst the non-oil GDP grew in modest way.

6.4 Oil Wealth Impact, Expenditure and Investment

At the beginning of the 1990s, the oil contribution was nearly 60% of all revenues received by the Venezuelan government. The receipts from oil windfalls in Venezuela made during the late 1990s further enlarged the share of government revenues from the oil sector. In recent years, however, that share rose as a result of oil prices increases.

Obviously, the government was having difficulty generating additional revenues from other sectors of the economy to make up for the decline in oil shares. This is suggested by the fact that total government revenue fell sharply, despite modest growth in the non-

oil sectors of the economy. The only significant increases here were seen in early 2002 in the oil sector's contribution through taxes, in terms of revenues it generates and the public investment expenditure that is fuelled by these revenues. The change in petroleum revenues from year to year explains about 45% (on average) of the variation seen in the change in capital expenditure, when lagged one year (Baldani, 2005).

In terms of oil's contribution through investment, this has been in decline over the years, particularly in 1990s. Recently, the share of oil in total investment is quite impressive when compared with the last decade. In fact, the current shares are some of the largest oil investment during the period between 2000 and 2004; the same years in which the overall investment rate hit its lowest level since 1992, and oil investment declined due to fluctuating oil prices.

The lion's share of oil sector investment was utilised in the production of petroleum, which increased steadily over this period (2000-2004) in relative terms. This included investment surveying, exploration, and extraction, as well as production. This type of investment not only leads to further production of hydrocarbons, but to the expansion of reserves. The second major use of oil sector investment was in refining. Here, the highest shares of investment spending in this category occurred in 1997 and 1998. This suggests that a significant reallocation of spending had taken place, with emphasis on production and refining.

According to Ahmed and Mottu (2002), sub-national government play a relatively important fiscal role in Venezuela, with expenditure representing about one-third of central government expenditure and it is estimated about half of this expenditure comes from oil revenues

6.5 Problems Which Accompany the Management of Oil Windfalls

The main problem which accompanied the oil windfalls was the increase in net internal and external borrowing, which leads to overspending policies in a number of oil

exporting countries – including Libya. Borrowing increases when oil prices decline. Managing the debt becomes a significant macroeconomic problem causing inflation (Stephen and Robert, 2001).

The Venezuelan economy suffered from inflation when oil prices decreased in 1991-1995. Accompanied by inadequate and incompetent fiscal policy, by early 1996 the economic stabilization was characterised by growing inflation, pressure on the net international reserves (NIR) of the Central Bank of Venezuela (CBV), declining non-oil GDP and waning confidence. The revenue from oil endowment causes wage expectations to rise which leads to a significant recovery in non-oil output, fuelled by an increase in domestic expenditure associated with higher real wages, the sharp increase in credit to the private sector, the expansionary fiscal policy and the huge amount of investment in the oil sector. As a result of these, the unemployment rate rose in 1997 thereafter it declined somewhat in 1998 (IMF, 1997).

According to Hausmann (1995), the Venezuelan economy has seen an increase on the balance of payment in the early eighties and fiscal accounts and showing impressive surplus. However, unemployment had doubled and inflation had remained high, even though the government had implemented a strict policy.

6.6 Economic Performance and Development Goals

Venezuela's growth generally has been slow since the 1970s. The decline in oil prices after 1986 and the lack of appropriate macroeconomic policies to foster diversification and productive employment caused poverty to spread. But as a result of the government's economic adjustment in employment in recent years the percentage of poor has declined and has benefited in real-terms (World Bank, 1995).

The Venezuelan economy is extremely oil dependent despite efforts at diversification. Venezuelan economy will remain heavily reliant on world oil markets supporting strong prices for Venezuelan crude oil (NIGE, 2001). According to (Jeffery et al, 2003) the economic performance of many oil exporters has been disappointing, even to the extent of prompting some observers to ask whether oil is a blessing or a curse

The performance of the oil sector in Venezuela over the last decade played a crucial role in the economy. Oil prices rose sharply to their highest level, and oil output continued to increase as a result of the investment drive initiated earlier in the decade. However, the performance of the economy over the long-term, including the last decade, has been dismal, largely due to unproductive public sector investment, and poor macroeconomic policymaking to cope with oil cycles. Much of the public sector investment and the human and physical capital has been unproductive and, in the process, has destroyed wealth. Real GDP per capita growth averaged -1.2% per year, and real non-oil GDP per capita growth averaged about -2% per year over the last decade, largely explained by decline in productivity. Second, inadequate and inconsistent fiscal exchange rate and monetary policies have not been able to neutralize. The impact of the external oil shocks on macroeconomic stability and the economy. While oil income fluctuations significant affect Venezuela's fiscal stance, they are not the only culprit. In recent years, despite a relatively high oil price (above US$ 50 per barrel on average), the consolidate non-financial public sector registered a deficit due to an expansionary fiscal and suffered from the lack of a consistent exchange rate policy which has also contributed to fiscal instability, given that over half of fiscal resources depends on oil revenues which in turn depend on oil prices and the exchange rate. The Venezuelan economy remains heavily dependent on the oil sector with major macroeconomic and structural imbalances, including a growing fiscal deficit and high unemployment. In terms of the economic development the current level indicates for instance in Venezuela 23% of Venezuelan's population lived on less than US$1 a day. The prevalence of malnutrition among children under age 5 decreased from 7% in 1990 to 4% in 2003, while 20% of the world population live on less than US$ 1 a day estimated in 2002. Also the net overall primary enrolment ratio in Venezuela in 2002 was 85%, 86.9% for girls and 83.8% for boys. Besides in Venezuela, maternal mortality rate was (43 per 100,000 live births) in 1998. While in the world wide, there are 400 maternal deaths per 100,000 live births. Finally, in Venezuela 81% of Venezuela's population had access to an improved water resource; in rural areas, access to safe water in 58% (Jorge and Barnnadette 2005).

6.7 The Challenges Ahead

The biggest challenge which faced the policy makers in Venezuela was to deal with the relaxation of exchange controls and legalisation of a parallel market for foreign exchange. This allowed for spill-over into the balance of payment. Banking difficulties continued, public finances remained weak and the inflation rate reached 57% recently. Despite this, the real GDP rose by 20% in 1999 whereas the non-oil economy grew very little. In addition unemployment rose to 10.5% of the labour force (Alferdo, 2005). Looking ahead, the reform of the social security system and the introduction of private pension funds will have a major bearing on the financial system.

Economic turbulence and continuing inefficiency in the large public sector have combined to lower private sector productivity. Consequently, Venezuela's petroleum dependency has grown. Oil revenue alone cannot sustain growth, even at a time of relatively high petroleum prices. GDP fell by an estimated 6.1% in 2002 and increased joblessness was one result of this. Unemployment rose from 11.3% to an estimated 14.3% in 2002. Most affected workers were outside the oil labour market. This unemployment rate does not count workers in the informal economy.

6.8 Conclusion

It can be concluded that oil's contribution through the investment and fiscal sectors was very large indeed over eighties and nineties. Although perhaps not as large as in previous periods, theory suggests this may be a sign of a maturing economy diversifying away from its staple, and that would be good news. Unfortunately, since public expenditures on capital appear to be largely fuelled by oil revenue, any fall in the latter will have dire consequences for this fragile economy in terms of new capital formulation The Venezuelan oil industry has contributed to the growth of other sectors. Its main contribution was fourfold:

(i) The financing of the public sector and the provision of services of an essentially public character by the industry, while absorbing a minimal portion of the government budget;

(ii) The foreign exchange earning it supplied;

(iii) The increase in economic wealth and productive capacity of the nation tacking place through petroleum investment, and the strengthening of the Venezuelan capital goods industry that it brought about;

(iv) The income and current-expenditure originating in the oil industry and the multiplier-accelerator repercussions they created throughout the economy, leading to an increase in aggregate demand and a large volume of saving

Oil has also a contributed a large share to government revenues. Taxes derived directly from the oil sector rose at an annual average compound rate of 106%, in nineties with their share in total tax revenues increasing as well. As in the balance of payments contribution, there were other effects of its public sector contribution such as low tax pressure on other sectors and the possibility of extending public services while averting financing deficit.

The investment contribution of petroleum from 1990 to 2004 was quite as impressive. Despite the fact that the share of oil in total investment declined through time, the investment contribution of petroleum was still substantial, especially in helping to further the development of the construction and metal industries.

Another important contribution was the exogenous income expenditure injection of oil to the matrix of the Venezuelan economy, which was quite considerable.

Venezuela needs more efforts to create consensus around reforms that restore macroeconomic stability, build a base for economic diversification and competitiveness, construct an efficient, accountable and transparent government and promote environmentally and socially sustainable development.

The government should foster and enhance the role of stabilisation fund and consumption. The advantage is to generate a smooth consumption pattern and saving extraordinary revenues and depleting the funds balance in front of a price downturn. Also, clear and strict rules must be issued to isolate the fund from political pressure. For

the case of oil revenues both the stabilisation fund and the hedging strategy can work as complement rather than as a substitute. While the fund can work as the main recipient of revenues, hedging strategies can be used to manage short-lived movement in prices.

It is quite clear, managing instability in oil exporting economy is an unresolved problem. The traditional idea of stabilization funds may be quite unworkable. In this framework, the government starts by fixing a baseline projection of oil income and then saves or dissaves the difference between that level and actual income.

CHAPTER SEVEN: FINDINGS AND RECOMMENDATIONS

7.1 Introduction

The sudden and dramatic increase in oil revenues and the resulting windfalls in the 1970s placed Libya under intense political pressure to move forward on three strategic points of economic development all at once; to improve the welfare of the population to undertake long sought-after projects of great popular appeal, and to develop the economy in such a way as to reduce future dependence on oil. All this was also to be accomplished through rapid modernisation without losing traditional social and cultural values.

Despite ample historical precedents from the failed policies of Spain and Portugal in dealing with their New World gold and silver fortunes, in eighteen century. Libyan authorities succumbed to similar strong temptations, and helped history to repeat itself. Directed from above and force-fed through the bureaucratic process, much development took place, but at an inordinately high overall cost and without any assurances for a prosperous future. The hasty expenditure of oil windfalls on a multitude of poorly-planned, and even more poorly-coordinated, public projects resulted in a feverish rate of development. Some weak of economic growth, production bottlenecks, power blackouts, housing shortages, port congestion and inflation were stoically tolerated by the rank and file in anticipation of better and happier days to come. But when the oil boom turned into a bust, the early euphoria gave way to widespread disappointment, frustration and social unease. Looking back at the two decades of the oil cycles, every accomplishment seems to have carried its own downside.

Libya has a substantial endowment of oil and gas deposits, estimated to be the fifth largest in the Middle East and North Africa. Oil production in Libya is projected to increase sharply starting in 2006, particularly after the United States companies returned

to the country alongside the major western oil companies, in the wake of the lifting of the United Nations sanctions. Furthermore, production is estimated to reach 3 million barrels (as in the early 1970s) by 2010 following the development of a gas field located in the Hamada and Murzk basin in south of the country, and the reserves are estimated to reach 100 billion barrels. The expected revenue windfall to the government of Libya over the next decade is substantial. However, given the known reserves and production profile, oil and gas revenues are expected to peak during these two decades and decline gradually thereafter (IMF, 2005)

Development of the economies of oil-exporting countries built on petroleum exports is a well-known phenomenon. Sympathetic commentators claim that oil-exporting countries will use part of their petroleum export revenue to develop the economic infrastructures needed to make future economic growth less dependent on oil sector exports, and to establish eventually, an economy self-sufficient enough to balance its international trade independently of oil resources. Some observers have suggested that petroleum export revenues might be a mixed blessing, Amuzugar, (1988).

7.2 Findings

7.2.1 Negligible Diversification

The analysis in this thesis indicates that periods of real growth in income per capita were associated with a relatively rapid growth in investment that was able to maintain aggregate demand; that the economy recorded negligible diversification in real terms, that increased factor productivity made little contribution to economic growth, and that the national saving–investment gap deteriorated steadily. The analysis also demonstrates that the stable macroeconomic environment contributed favourably to Libya's growth performance. The challenge of the period ahead is essentially in sustaining growth in real income per capita, within a framework of continued macroeconomic stability and a diversified economy capable of averting the vulnerability to which a monoculture (in this case oil-dependent) economy is exposed. So far, the impact of fluctuation in oil export prices has been tempered by downturns of accumulated foreign assets to sustain

aggregate demand. But the scope for continuing such downturns, without adverse consequences for exchange rate stability, is limited. Given the vulnerability of the oil sector to external factors beyond Libya's control, the authorities are faced with the challenge of sustaining overall economic growth by accelerating the growth of the non-oil sector and diversifying its composition.

7.2.2 Poor Management of Oil Revenues

The review presented here of Libya's growth performance since 1990 indicates that a sustained increase in income per capita would be contingent on the following points: First, effective mobilization of national savings to allow higher levels of investment and to reduce the saving-investment gap; second, efforts to enhance factor productivity through structural reforms and human resource development; third, implementation of a clear economic diversification strategy.

Libya faces the challenging task of reducing its dependence on short-lived and potentially volatile oil revenue. It is vital to the country's economic future that the government manage this revenue in a way that allows the diversification of the economy and the discovery of alternative revenue resources, in order to enable a steady increase in the living standards of the Libyan population. This is important not only because of oil price volatility, vulnerability to price shocks and the temporary nature of oil revenue, but also because the oil sector, while a substantial source of revenue for the country is not a source of much employment. Few countries that have been heavily dependent on the hydrocarbon sector have succeeded in managing oil wealth in a manner that allowed the simultaneous development of the non-oil sector. The list of countries that failed to avoid the problems associated with hydrocarbon resource boom is long. It is critical that Libya designs and adopts prudent and coordinated macroeconomic policies and institutional reforms that take into account these countries' experiences in order to avoid the mismanagement of national resource wealth and its implications.

7.2.3 Over Confidence in Oil Prices and Over-ambitious Targets

Libya was changing from a relatively poor agriculture country to one with a growing, diversified and industrial economy, based largely on hydrocarbon industries by 1980. Since then, the stated goal of government economic policy has been to expand production to enable the economy to reach a stage of self-sustained economic independence, build up the country's domestic market and improve income distribution. Libya has in its possession abundant reserves of petroleum and natural gas. These raw materials are the foundation of prospective economic development.

Oil windfalls bring risk. The heavy dependence on oil revenues may adversely affect economic growth and performance. Oil wealth-based activity sometimes drives the real value of the domestic currency up to levels that other export industries and competing import industries find difficult to cope with, thus reducing the economy's openness for foreign trade and investment. Furthermore, too many people tend to become locked in low-skill intensive natural resource-based industries, including agriculture, and this fails, through no fault of their own, to advance their own or their children's education and earning power. Another related risk is that the authorities and other inhabitants of resource-rich countries become over-confident, and therefore tend to underrate or overlook the need for good economic policies and institutions, as well as good education and investment. Excessive dependence on oil wealth can thus weaken various societal institutional arrangements that need to be strong for the economy to grow briskly.

7.2.4 Oil Windfall and a False Sense of Security

Heavy dependence on endowment tends to be directly associated with corruption, inequality, and political oppression, all of which can impede economic progress and growth. Libya has suffered from these obstacles.

Furthermore, authorities that believe the hydrocarbon sector capital is their most important asset may develop a false sense of security, and become negligent about the accumulation of foreign, social, human physical and financial capital.

By far the most common outcome of the oil bounty was the rise of a new petro-culture. This new culture - variously, quick-money fever or the catch-as-catch-can syndrome -

was planted, nurtured and pampered by oil windfalls. It gradually weakened the traditional work ethic among the native population; reduced incentives for risk-taking, hard work and independent entrepreneurship, lowered the natural tolerance for temporary deprivation and austerity, encouraged rent-seeking activities and raised popular expectations beyond reasonable means of satisfying them.

The new culture mindset intensified the desire on the part of the rank-and file for seeking easy solutions through state intervention.

Oil wealth is clearly capable of solving some socio-economic problems. However, this easy money can lead to in turn, to reduced financial discipline within the bureaucracy, the allowance of careless budgetary allocation, waste, unsavoury practices and widespread corruption. The results could hardly be more injurious to normal development. The state was elevated to an earthly deity. Cost-free or lower price public goods and services were taken for granted, as a matter of birthright. Most manual work had to be done by expatriate workers.

Reliance on oil money pre-empted any serious efforts to mobilise domestic resources through taxation, or realistic changes and fees for social amenities. The share of non-oil taxes in GDP fell 1980s. The growth of a fully-fledged welfare state and the spread of welfare throughout the state gave distributional issues greater prominence over production issues. With the state as the sole recipient and dispenser of the oil windfalls, rent-seeking activities became not only highly profitable financially but also extremely prevalent socially. The highest returns to entrepreneurial talent did not came directly from productive economic activities, but from obtaining a piece of the oil rent a special foreign exchange allotment, a lucrative government contract, an important quota, a commission on arms purchases, or an exemption from repatriation of export proceeds. The more absolutist and patrimonial the state became (where the nation's wealth was not distinctly separate from the ruler's), the wider the possibilities for such rent-seeking preoccupations. A common tendency in almost all oil economies is for the services sector to gain prominence over other sectors, and for private entrepreneurs to prefer trade over industrial or agriculture endeavours, was largely rooted in the high and quick

profits obtainable through clever 'deals'. The magnitude of the oil rent itself and the impetus afforded to rent-seeking ventures, also created an inhospitable overall climate for 'real' production. Worse still, the petro-culture undermined the traditional virtues of self-reliance, both at the personal and national level; it desensitised the people vis-à-vis genteel business manipulations, welfare handouts and big-brotherly tutelage.

7.2.5 Lack of Policy Coordination

A secure job in the bureaucracy became a symbol of social standing and prestige. The new oil psychology also drove an alarming wedge between the privileged, westernised, and progressive elites, who emphasised economic growth as a pre-condition for human development. In respect of lack of policy coordination, the domestic macroeconomic policies adopted often proved inadequate to properly manage aggregate demand, and in some cases actually aggravated internal crises. The double-barrelled aim of ensuring economic efficiency and enhancing distributional equity, without having sufficient administration and technical capabilities, confronted the Libyan government with an impossible mission. Wages and salaries, for example, were raised or allowed to rise for public servants and urban workers, with a view to spreading the benefits of the oil bonanza among people, securing the industry. Although wages rates did not catch up with inflation, the increase in real wages was not accompanied by a corresponding rise in productivity.

7.2.6 Exchange Rate Overvaluation

Rising prices caused domestic currencies to appreciate in real terms. Yet an overvalued exchange rate was allowed to prevail unadjusted over an extended period for a variety of reasons. The economic culture of a high domestic currency value was a matter of national pride, and devaluation was considered a sign of economic weakness, if not humiliation. Therefore, any other policy ploy that was not so highly visible (even if no more defensible and even more disruptive) was politically preferred to outright devaluation unless all other courses of action were exhausted. Furthermore, the choice of an import- substitution strategy, diversification and industrialisation plans required a

large degree of home-industry protection. Exchange overvaluation was a subtle means of implementing that strategy. At the same time, non-oil exports, which constituted a rather insignificant part of total national exports, and often faced low demand elasticity, would not gain much from exchange depreciation. (Central Bank of Libya, 2003)

In this respect, domestic energy prices are still below cost in order to keep inflation down and enhance the competitiveness of their energy-based industries in world markets. Pricing of energy products based on production rather than opportunity costs, however, caused serious economic distortions in domestic resources allocation, requiring new countervailing public policy. For much the same reasons, interest rates on savings deposits and investment loans were kept artificially low and totally divorced from the opportunity costs of capital at home and abroad (IMF 2005).

Equity considerations prompted the government to direct a sizeable chunk of the windfalls in to the creation of a western-style welfare state, without the benefits of prior industrialisation or adequate government machinery. Under strong political pressure from a largely poor, frustrated and impatient population, demanding to receive a share of the oil bounty, the government found it necessary and expedient to increase direct transfer of oil resources to poorer social and to expand the state. It is essential for the government to continue to give subsidies on food, fuel, electricity, housing and other amenities, with the threefold objective of helping low-income consumers, reducing costs of various economic activities and protecting infant industries against foreign competition, recently.

In the 2000s, early the desire for a larger, national population was another unhelpful policy. The objective was rationalised for a variety of reasons. Libya had a small a population and a larger birth rate were coveted and encouraged as a useful expedient and not to be worried about. It was considered a means of eventually reducing dependence on foreign labour. The policy was defended as a way of increasing national labour resources in the service and productivity of development. The average annual growth

rate of population in Libya from 1990-2000 was 4%, still considerably higher than the global rate.

In the absence of appropriate educational and labour policies, the population produced significant open or concealed unemployment. (National for Documentation and Information Corporation 2003).

7.2.7 The Failure of Policy-makers to Insulate the Economy from Oil Receipt Swings

Libyan policy has failed to effectively insulate the economy from the cycle of oil swings. Changes in domestic investment, with a multiplier impact on domestic demand, have been the main source of volatility of non-hydrocarbon GDP growth.

Savings of domestic investment have been closely associated with volatility in oil revenues. Domestic investment, dominated by the public sector, often had to be cut drastically to preserve the fiscal balance in the face of weak oil revenues, during much of the 1990s. By contrast, public investment has soared since 2000, due to the increase in oil revenues.

Despite efforts to spur recovery and initiate structural reforms, Libya remains on a slow diversification trend, reflecting a growth path, which is moving at a crawl effectively sidelined from globalization and the benefits of closer economic integration with the rest of the world. Although Libya still has an impact on the oil market, the benefit from oil that had brought about a marked improvement in living conditions in the 1970s and early 1980s, failed to generate a sustained growth, about to create regional economic integration. The slow-down in economic reforms is no doubt a key factor. Libya moved ahead with macroeconomic and structural reforms in the late 1990s. However, the early optimism about the depth of reform commitment of the government in Libya has waned, and the expected impact on economic growth has not been fully realised. One reason may be that the reforms did not achieve a necessary critical mass, or did not go deep enough to address long-standing structural rigidities and distortions. Complementary policy is important. Growth requires a moderate degree of success in several policy areas simultaneously, because poor performance in one area can thwart broad-based progress. Another key factor is Libya's ability to take advantage of increasing

globalization. Although this has its risks, countries that undertake policy and institutional reforms in areas such as trade, the financial sector and governance are better equipped to benefit from increased international trade and capital flow, and are therefore likely to experience higher gain in per capita income. Another important reason is the dominant public sector. Despite some progress with privatization, the economy is still dominated by inflated state institutions and large public enterprise sectors. In the face of rising unemployment, the public sector has increasingly served as the "last resort" employer inflating public payrolls and wage bills. However, by international standards, Libya continues to lag in the development of an economic and financial environment conducive to entrepreneurship, risk taking and private sector-led investment and growth.

7.3 Recommendations

Higher oil revenue provides Libya an opportunity to increase public spending on priority economic and social goals or, when appropriate, reduce distortive taxes. Libya, has a relatively strong financial position, a sustainable fiscal position (taking into account oil reserves in the ground and net financial liabilities), and a reasonable capacity to identify and implement good spending programmes, so an increase in the non-oil fiscal deficit would be appropriate, provided it does not lead to excessive demand pressures.

7.3.1 Oil Revenues Should Support Diversification

In meeting these conditions, a significant part of the oil windfall could be used to finance additional high-quality expenditure, such as investment in key infrastructure and efficient social spending. In Libya, important infrastructure gaps hamper the development of the non-oil sector. Part of the windfall could be used to finance productive investment and public infrastructure, with high rates of return. This way, oil in the ground would be turned, in part, into non-oil capital assets (both physical and human), that could raise the growth rate of non-oil GDP over time. To facilitate this, the government should develop a stock of projects from which the highest-yielding ones could be selected.

7.3.2 Economic Pressure Needed for Restructure Reforms

The oil windfall could also facilitate pushing ahead with reform agendas and tackling those structure problems that are a serious impediment to growth. For example, in the tax system, the civil service, pension system, labour markets, and public enterprises. In particular, it could help finance a social safety net to protect vulnerable groups from the impact of such reforms. Libya, with a significant skills mismatch between labour demand and supply, could use part of the windfall to fund education reforms and training programs aimed at reducing such mismatches.

Libya should give priority to undertaking expenditure that does not require significant, permanent commitments. Spending that creates substantial future entitlement programmes and recurrent outlays may be difficult to scale down, if the need arises in the event of an oil price decline. Also, the oil windfall and the opportunities it creates for greater corruption, add urgency to the need to improve fiscal transparency and enhance the quality of public spending.

7.3.3 Fostering the Role of Fiscal Policy

The formulation of an overall policy in response to the problem of oil price volatility may be aided by a medium-term expenditure framework. One of the important fiscal policy lessons to emanate from these experiences is that government spending levels should be adjusted cautiously in relation to sharp rises in oil income.

A medium-term expenditure framework can help improve spending responses to changing oil revenues. Multi-year expenditure planning allows a better appreciation of the future spending implications of present policy decisions, including the recurrent costs of capital spending, thus helping petroleum exports to avoid some of the mistakes of the past. Rising oil revenues make the formulation of a medium-term expenditure framework all the more urgent.

Libya, with sustainability concerns and a precarious financial position should save more of the oil windfall. Higher oil prices provide an opportunity for Libya to strengthen its

financial position, reduce vulnerabilities, and improve confidence. Thus, when the next oil price decline sets in, it will be less in need of adjusting, abruptly and in a disorderly fashion, with potentially serious growth and social consequences. The saving should be through assets held abroad, or through reducing gross public debt, taking due account of liquidity needs. A distinction should be made between repaying external and domestic debt, given the different macroeconomic implications. Specifically, considering perfect capital mobility, this could be expansionary and might imply the need for offsetting monetary policy measures.

7.3.4 The Urgent Need for a Saving Fund in Libya

Downturns should be prepared for through sufficient financing capacity. Budgets should incorporate cushions, in case the external environment turns out to be less favourable than anticipated, as well as transparent and well-specified mechanisms to deal with revenue windfalls and shortfalls. The government should also strive to build adequate liquidity, taking into account risk and the cost of liquidity.

The Libyan government relies heavily on oil revenues and should be encouraged to explore the scope of other incomes to hedge their budgetary oil price risk. Hedging can help the government manage oil price risk by making oil revenue streams more stable and predictable. Libya should be encouraged to start building up technical capacity and put in place sound and transparent institutional arrangements to exploit efficiently hedging opportunities over time. As the market develops, it may be possible for Libya to expand and protect its saved reserve. As an oil exporter, however, Libya is likely to remain constrained by market size, especially beyond the short-term horizon.

7.3.5 Adoption of a Sound Monetary Policy

Real and nominal appreciation of the currency is to be expected, although it may be appropriate to pursue monetary and exchange rate policies that slow the rate of real appreciation. Provided that the public and private sectors spend at least some portion of their higher oil revenues, real appreciation is inevitable.

The monetary authorities should not generally attempt to resist this through unsterilised intervention, since that would bring about inflation. However, some amount of sterilized intervention may be appreciated in due time for the trade goods sector to adjust and to augment foreign exchange reserves. It may also appreciate to the extent that there is a transitory component to the oil-related spending increase. That option is constrained be the quasi-fiscal costs of sterilization.

Moreover, higher, public and private spending, fuelled by oil revenues, is likely to result in a strong aggregate demand. In response, the authorities may want to counter this effect with some degree of monetary tightening. The need for such tightening is likely to be less when the monetary authorities have a relatively high degree of credibility in containing inflation.

As an oil exporting country both domestic and external factors contributed to Libya's poor overall economic performance in the 1980s. Key constraints to growth included inappropriate economic policies, inadequate human capital development, and low levels of private investment.

Furthermore, Libya, as oil exporting country, faces a number of immediate challenges related to oil's dominant role in its economy and the risk arising from the variability of prices. Libya has to accelerate its economy to reduce dependence on oil by promoting investment and private sector growth, thereby creating jobs for the population. It must pursue prudent fiscal policies and save its oil revenue windfalls at every opportunity, to help cushion the impact of oil price declines and increase - the resilience of the budget to oil revenue shocks - such as a broadened revenue base, reduction in unproductive expenditure and civil service reforms. Labour market reforms also need to be accelerated, due to its significant role in the economy.

In addition, greater efforts are needed to accelerate trade liberalization, reform financial and labour markets, and improve transparency, governance, and the quality of state institutions. Economic liberalization should ensure fair and open competition, where market places could create opportunities for more efficient allocation of resources and support the private sector's investment and growth. These reforms must aim at

transforming the business and investment climate that is crucial to economic growth, employment generation and the emergence of the Libyan economy into the global economy.

Libya as an oil exporting country needs to conduct fiscal policy by taking a longer view of it resource endowments and their impact on the country's welfare. Fiscal policy, the single most important policy instrument in oil producing countries, needs to cushion the effects on the economy of booms and busts in the oil market and, over the longer term, take account of issues of intergenerational equity in mapping out strategies for government spending, investment and financing of public sector operations.

Although the Libyan government has taken steps to isolate government spending from current oil receipts, a much more considered and comprehensive approach is needed to help diversify the economy and remove obstacles to developing the non-oil sector. Reducing dependence on oil would also require establishing modern tax policy structures and tax administration, with broad-based taxes and low rates.

7.3.6 The Pressing Need for Macroeconomic Stability

Libya needs to maintain macroeconomic stability and pursue structural reforms. It is the reform of the public and private sector institutions that, in the final analysis, will make the difference.

According to the International Monetary Fund (2003) there could be substantial economic gains for the Middle East and North African countries that introduce such reforms. Strengthening the quality of institutions in the advanced economies of the Middle East and North African regions, could result in a 20-fold increase in real capita GDP and a 3 percentage point increase in growth of real per capita GDP, (IMF,2003).

A more determined and sustained drive by the Middle East and North African countries toward a more open society. Embracing the fundamental, structural and institutional reform, would therefore appear to be the best assurance to achieve the potential for higher growth rates, and a decent dignified life. Opening the private sector to stronger competition, and strengthening the institutions that support private markets, can encourage investment and stimulate productivity growth. The positive impact on

employment, in turn, can be enhanced through targeted labour market reform, such as more flexible labour market regulations, to enable enterprises to respond to market signals. Through this process, the role of the public sector will need to be reshaped from the purveyor of jobs, to provider of sound physical and institutional infrastructures.

7.3.7 GDP Increase Per Capita

Although the recent recovery has been encouraging, Libya has a long way to go to make up for lost ground over the past two decades and to integrate itself fully into the world economy. In particular, growth rates are not high enough to make a real dent in unemployment. Thus, this is an argument for the need to raise per capita, real GDP growth rates substantially, and on a sustained basis.

In this respect, the outcomes of the economic analysis offer the following elements of a policy framework that could be implemented to promote sustainable economic growth and reduce poverty in Libya.

7.3.7.1 Enhance Libyan economic growth

To enhance Libya's economic growth performance, Libya, should seek to boost the ratio of private investment to GDP. Although private investment has increased in Libya, particularly in the oil industry in recent years, it needs to rise much further to help to achieve more dynamic and sustainable growth. Accordingly, the government should intensify its efforts to create an environment that encourages private investment, notably an environment that promotes confidence in the sustainability of appropriate macroeconomic policies, and ensures that the necessary infrastructures and qualified labour are available. It should create and maintain a transparent, even-handed, and efficient regulatory framework and justice system that safeguards property rights adequately enforces contracts, fosters healthy competition, and more generally, ensures good governance.

7.3.7.2 Government focus on public services

In support of these efforts, the government should focus on delivering essential public services and basic infrastructure, as well as promoting human resources and social development. The government should increase the quantity and quality of basic health care, education, and other high-priority services, with a view to improving social indicators appreciably over the longer term, consistent with internal development goals. Concurrently, they should establish, or reinforce, well-targeted social safety nets to mitigate the possible adverse effects of adjustment measures on the poorest and most vulnerable groups:

The government should also continue to implement sound, macroeconomic policies, in order to fully restore and consolidate macroeconomic stability.

The evidence shows that the macroeconomic environment matters greatly for growth. Specifically, reducing the ratio of the overall fiscal deficit to GDP can help to increase growth appreciably. The reduction could be achieved through a combination of policies and measures, including implementing tax reform, strengthening the tax and customs' administrations, and curbing unproductive outlays. With a cutback of the overall fiscal deficit, government borrowing from the banking system should be limited or eliminated, thereby providing greater scope for banks' financing of the private sector and strengthening monetary management. Moreover, it is critically important for the government to pursue a realistic exchange rate within its equilibrium level, in order to promote the growth of exports, and thus, on a more sustained basis, to implement growth-conducive structural reforms, particularly privatization programmes.

While some progress has been made in recent years, the government should accelerate the restructuring and privatization of public enterprises, in order to reduce reliance on budgetary subsidies and transfers, expand the scope for private sector activity, and promote overall economic efficiency and growth. Enterprises remaining in the public domain, however, temporarily, should be operated on a fully commercial basis, with independent managers making market-oriented pricing and employment decisions.

7.3.7.3 Financial sector reform

Financial sector reform can help to enhance growth by mobilising increased savings, financing productive investments, and containing inflation.

In Libya, and among other countries, the central bank still lacks the necessary autonomy. Financial sectors are not strong and have difficulty in mobilising domestic savings and attracting foreign private capital. Banking institutions are fragile, and intermediation is inadequate. Therefore, steps should be taken to:

a- Ensure that the central bank is independent and fully accountable,

b- Deepen and broaden the financial market,

c- Establish or strengthen the institutions responsible for the prudential regulation and supervision of banks.

d- Complete the rehabilitation of weak commercial banks and improve loan recovery,

e- Open the banking sector to healthy competition and international best practices in bank management, (particularly through privatization) and strengthen the legal framework for banking activities.

7.3.7.4 Trade liberalisation

Trade liberalization can also help accelerate growth by promoting the competitiveness of domestic producers and speed up Libyan integration into the global economy.

Although the process of trade liberalisation has advanced throughout the country, trade regimes are still significantly more complex and restrictive than elsewhere. Important tariff rates remain too high and too dispersed. In part, because the government is very dependent on this source of budgetary revenue of statutory, and piece meal exemptions. Eliminating these exemptions, preferable in the context of medium-term tax reform programmes, would allow tariffs to be reduced more rapidly. At the same time, export taxes could be substantially reduced, if not eliminated.

Efficient regional integration could allow Libya to surmount the obstacles posed by its relatively small size, permitting it to better realise its ability to trade on a global basis, thus further enhancing growth. In addition, trade liberalization would also help improve

the quality of governance, because complex and discretionary tax regimes are prone to abuse and create opportunities for corruption.

7.4 Looking Forward

A well-sequenced reform strategy, to implement comprehensive structural reform over the medium-term, would help reallocate resources, consistent with market signals, underpinned by a structural strengthening of fiscal position and thus, facilitate sustained rapid growth.

The following elements need to be included:

a- Fiscal consolidation and structural strengthening of the budget to ensure long-term sustainability in line with intergenerational economic objectives, insulation of the economy against periods of trade shocks, and improved incentives for private sector growth. This could require targeting and reducing subsidies, improving tax administration, adopting a modern tax system, reducing current outlays, and redirecting expenditures towards capital formation, both human and physical. Moreover, fiscal policy must move forward more decisively cast in a medium-term framework that assumes a conservative oil price. This approach is likely to reduce expenditure reliance on short-term oil revenue, building in a precautionary saving to face external shocks. In the process, domestic debt would be put on a sustained downward trend, thus providing greater fiscal space for productive spending. Given the close independence of the public sector and the budget, speedy structural reform and privatization of state enterprises would help reduce subsidies and enforce market competition.

b- Expansion of the private sector through legal institution reforms along with the privatization of state enterprises. This would require several steps, including

(i) Further reduction in controls and restrictions on private sector investment, common treatment of all investors - including foreign investors - and guaranteed property rights to help establish well-functioning competitive market systems.

(ii) A well-defined framework for the privatization of state enterprises to ensure market confidence and early correction

of the divergence of input and output prices including the long-term financing of utilities. Other services ably provide the public sector with market-based prices in order to reduce and appropriately target subsidies, and

(iii) Liberalization of restrictive, domestic trade and competition practices, which may have discouraged private sector investment.

c- Liberalisation of restrictions on foreign capital inflow, so that the needed capital and associated technologies are available to support privatisation and private sector development.

Steps towards such liberalisation could address three specific constraints:

(i) The discriminatory rules and regulations governing such flow, relative to those for domestic investment;

(ii) The lack of a level playing field for domestic and foreign investors, as reflected, for instance, in different tax treatment despite recent efforts to narrow this difference;

(iii) The relatively undeveloped capital market in Libya. Initiatives to address these constraints, including further increasing the efficiency of the financial system at the national level would help meet the increase in private sector demand for credit and services. An accompanying stronger regulatory and supervisory framework would be particularly important in the development of open and diversified financial markets

d- Labour market reforms, to prevent unemployment pressures from derailing the reform effort. To avoid weakening competitiveness, this challenge may have to be addressed through a long-term strategy to develop the necessary skills in the labour force. Jobs need to be created for national workers entering the labour market, including those possibly displaced by state enterprise reform, while integrating the presently segmented labour markets. The long-term objective should move forward more decisively by revamping education and training

policies and redirecting government expenditure toward building human capital. For the near term, steps should be considered to reform the labour market by progressively eliminating market segmentation. This process could include ending the *de facto* policy of guaranteed employment to national job seekers in the public sector bridging the remuneration gap between the public and private sectors for national workers, and expanding the information banks to bring together job seekers and private sector employers. The significant pick-up in growth is needed to create more jobs over the medium-term calls for ambitious, broad-based reforms. Opening new and strengthening existing the institutions that support private markets can encourage investment and stimulate productivity growth. Labor market needs reforms and redesign aiming to ensure that enterprises can adjust to market signals. In this process, the role of the public sector will need to be reshaped from that of a physical and institutional infrastructure.

Moreover, Libya needs to promote job creation, rather than avoid job destruction. Attention should be on phasing out wage subsidies, moving from supply-driven to demand-driven training, modernising labour codes and the development of affordable unemployment insurance that does not create negative incentives for work. In addition, more private sector involvement in the design of the curriculum, research partnerships between universities and the private sector, and changes in remuneration policies to attract national scientists and researchers working, or studying abroad will also be necessary.

e- Closer integration of the Arab Maghrib Union economies and coordination of policies, will lead to an expanded regional market that will facilitate not only the restructuring and privatization process, but also collective policy reforms. This integration, by creating a larger and more attractive market, as well as enhancing competitiveness, will also help the Arab Maghrib Union countries to benefit fully from ongoing globalization.

f- The non-oil fiscal balance should feature prominently in the formulation of fiscal policy. Decomposing the overall balance in to an oil/non-oil balance is critical

for understanding sustainability, and determining the macroeconomic impact of fiscal policy. The non-oil balance, especially expenditure on the non-oil balance, should generally be adjusted gradually. Furthermore, the government should strive to accumulate substantial financial assets during the periods of oil production to sustain fiscal policy in the post-oil period.

7.5 Strategic Policy Options for the Use of Hydrocarbon Revenues for a Diversified Economy

Libya's unsuccessful experiments with state-driven models of economic development based on import substitution, have drawn attention to the limits of using the oil revenue for financing investment of public enterprises in selected agricultural and industry sectors the target the diversification process.

Based on the experiences of Libya and other oil producing countries, there seems to exist two strategic options for using the large financial resources from oil as a means to foster the diversification process.

7.5.1 Policy Option A

1- Using oil windfalls to fund a higher public investment. Libya uses a large fraction of oil revenues to finance current and capital expenditure and the associated non-oil fiscal deficits. Surplus oil revenues are being saved in the Oil Reserves Fund. Libya should stimulate growth by using this accumulated saving to expand public investment in infrastructure. Higher public investment could generate productivity gains by filling the "infrastructure gap" which may increase the cost of business operation especially in transport, and information and communications technology. It could also contribute to better integration into international trade. Public investment could help to upgrade and expand housing, where social needs may be acute. In addition, the way that hydrocarbon revenues are intermediated, affects economic performance. When the hydrocarbon revenues are exclusively intermediated by the state, as is the case in Libya, the pattern of expenditures and the amounts allocated to

savings and investment may be different from the patterns that would prevail if the rents were transferred to the private sector. Hydrocarbon windfalls may be transferred to households and businesses through different channels such as lower personal and corporate income taxes, lower indirect and payroll taxes, or through direct transfers. In the case of Libya in particular, direct transfers of hydrocarbon revenues to households could be considered as a welfare-improving substitute to the distorting energy and consumption of food subsidies. Although the various instruments have a different impact, when hydrocarbon windfalls accrue to households and businesses, private consumption and investment will increase directly.

2- Transforming oil windfalls to households may also better insulate the economy from the volatility of oil windfall. Effectively insulating the economy from oil revenues calls for temporarily saving revenues for the future, with a view to stabilising expenditure which should be financed by the estimated, permanent oil revenue stream. Experience suggests that governments often fail to do so, either owing to poor governance, or because they find it hard to resist pressure from various constituencies when sizeable financial assets have been accumulated. Thus, governments often resort to procyclical policies that exacerbate the cycle of oil. Libya is no exception to that rule; by contrast there is ample empirical evidence that the consumption behaviour of households is precisely grounded on their perception of permanent income. Temporary changes in oil revenues, households, could thus spur saving rather than unsustainable domestic expenditures, and with freedom of capital movements in place, increased household savings could be diversified in a foreign exchange held portfolio. Thus effectively sterilizing the higher oil revenue inflows, still another option would be to transfer to households the income stream from the accumulated oil revenues.

Direct transfers of oil revenue to households should be appropriately designed so as not to distort the incentive to work. In addition, if the investment climate is weak, higher household and business sector revenues out of hydrocarbon windfalls may boost private consumption, but fail to be spontaneously converted into productive investment. This risk may be especially relevant in Libya, where weaknesses in the investment climate, constraints to the different use of resources and still poorly functioning institutions (including the banking system) hinder the mobilisation of saving and private investment. Shifting to a different model of intermediation of the hydrocarbon revenues may thus help unlock the economy's long-term productive potential, provide the necessary reform initiative to strengthen the investment climate, and promote the efficient use of resources, and are phased in at the same time.

7.5.2 Policy Option B

1- Using oil windfalls strategically, to facilitate the transition to a competitive, market-led economy, is a superior option for fostering non-oil growth and job creation. Achieving fast and sustainable growth in non-oil sector over the medium-term would call for well-coordinated initiatives to accelerate the transition to a market-led economy, fully integrated with the rest of the world.

Libya has built a comfortable financial position, thanks to high oil prices since 2000, and can afford the cost of the safety net needed to cushion the adjustment of the transition to the market. This would help greatly to step up the pace of required reforms, an important condition for a successful transition to a dynamic market-oriented economy. Strengthening Libya's human capital assets is also an important requirement for improved competitiveness and successful integration in the international economy. This option would call for using part of Libya's surplus oil revenue for designing an efficient safety net and enhancing the quality of human capital. The rest of the surplus revenue should be saved for stabilisation purposes, or for future generations. A variant of this option could also allow some fraction of the oil revenue to be reinvested in the oil sector, to

expand and modernise production capacity, and take advantage of high oil prices. Increasing investment in the export sector would not risk boosting domestic costs and disrupting competitiveness, as long as the extra oil revenues from greater production capacity were saved.

2- Making strategic use of hydrocarbon revenue calls for the strengthening of public finance management over the medium term. A prerequisite for implementing this option is a serious reinforcement of public finance management. A strong framework for budget formulation and execution, combined with expenditure discipline and sound practices for management of oil windfalls, would help meet several simultaneous challenges:

- Establishing strategic priorities in the use of oil revenues, to improve human capital and build a social safety net for the transition;
- Anchoring the transition on macroeconomic stability, by insulating the fiscal stance from the volatility of fiscal revenues, and securing fiscal sustainability in the face of a possible fall in the price of oil, social expenditure pressure, and the contingent liabilities of the public sector. Macroeconomic stability is an important anchor of the transition as it allows:

(i) Improved visibility and mitigation of risks for investors;

(ii) Hedging against external current account pressures in case of a sustained drop in the price of oil, which could put the reform programme and Libya's trade integration at a risk of back-tracking;

(iii) Securing the sustainability of social protection expenditure and safety nets, designed with the aim of absorbing the social cost of the transition.

- Coping with domestic cost pressure that stems from the over-spending of large oil revenues ("Dutch disease effect");
- Saving for future generations, in order to secure long-term fiscal sustainability and encourage intergenerational equity.

3- Maintaining long-term fiscal sustainability would require a saving strategy over time, because hydrocarbon fiscal revenues are exhaustible. Libya, as most oil producing economies, can afford the "luxury" of a large, non-oil

fiscal deficit, to the extent that the revenues from oil resources can secure a sufficient and stable financing over time. However, although in practice oil reserves may extend over a long period of time, based on intergenerational equity considerations, the country should eventually prepare for being an economy without oil. The saving strategy should aim at accumulating substantial assets, with two options in mind regarding the use of these saving in the long term;

- The income stream from the accumulated assets could be used to finance the non-hydrocarbon fiscal deficit, once hydrocarbon resources have been depleted. In a sense, this strategy could aim at transforming an exhaustible stream of hydrocarbon revenues through appropriate saving over time. This would allow the maintenance of a large non-oil deficit, even after the country runs out of oil revenues, and would keep taxes flowing.
- The alternative would be to finance the non-hydrocarbon deficit by gradually reducing accumulated assets once hydrocarbon resources are exhausted, while, at the same time, progressively increasing taxation to ensure long-term fiscal sustainability, when the accumulated savings are depleted. This option might be considered if the real rate of return on accumulated savings (a mix of bonds, stocks and real assets) was significantly lower than the rate of return on production of productive investments that would be financed by drawing savings. The level of required savings accumulation would be different in each case.
- The question of education is, however, open to question.

Although different options and curricula are available for Libyan students, there are concerns about the quality of the content and the actual access to up-to-date knowledge and expertise in the absence of information technology. These concerns are related to the country's isolation for more than a decade as a result of the UN sanctions, and the high unemployment rate, combined with

the displacement of local workers by foreigners from the curricula. Libya would need a strong human capital foundation to respond to actual needs as the economy opens up further, and private investment takes off. The education system will have to promote the kind of skills needed in an economy where internationally competitive services and the private sector have a more dominant role.

7.6 Conclusion

The biggest challenge for Libya is how to use its oil wealth wisely without squandering the proceeds. Oil is exhaustible and it is, therefore, inevitable that oil earning will, at some point, dry up. Therefore, focusing first on the long-term, a key challenge for fiscal policy is deciding how the government allocates wealth across generations. This challenge, reflecting a concern for intergenerational equity and general financial prudence, should be met by keeping a fiscal policy that preserves government wealth, appropriately defined to include oil. Analogous to standard permanent income arguments, the preservation of wealth requires that consumption in each period be limited to permanent income or, in this case, the implicit return on government wealth.

Libya, however, is confronted with significant uncertainty relating to it oil wealth. The volatility of oil revenue, because of the swing in oil prices, is problematic, especially for short-run macro-fiscal management. But it is the uncertainty about oil wealth itself, which stems from doubts about such issues as the future path of oil prices, the size of oil revenue, and the cost of extracting them that are the most important considerations for long-term.

The most significant issue which faces the Libyan government is how best to manage its oil revenues, taking into account its exhaustible and depleteable character, and with due attention to intergenerational equity. This essentially requires strong fiscal policy that ensures the preservation of the oil wealth's value. This could entail the government limiting consumption to the permanent income from total wealth.

Estimating the size of the hydrocarbon wealth and designing appropriate policies to optimise that wealth for the benefit of present and future generations, roughly encapsulates the nature of the challenge facing Libya.

CHAPTER EIGHT: CONCLUSION

8.1 Introduction

Oil prices have altered the perception and understandings of the role played by the petroleum sector, and have made oil-exporting countries more aware of their external dependence on petroleum, and of the linkage between the petroleum sector and rest of the economy.

The petroleum sector is linked in a variety of ways with the other productive sectors, including a relationship of complementary substitutability. These interrelations from parts of the petroleum sector are linked with the wider economy. The petroleum sector is also linked directly and indirectly with other sectors in the economy, so change in the petroleum sector exerts multiplier effects on prices, output employment, incomes and foreign trade. These impacts need to be taken into account, when diversification policies are being formulated. The impact of changes in petroleum product prices has been studied by several countries. The results appear to show that increasing heavy dependence on oil revenues undermines the magnitude of the diversification plans and the eventual exhaustibility of oil reserves should prompt Libya to follow an agenda of wealth conservation, namely the exchange of their natural wealth (i.e. oil and gas) for man-made capital (i.e. modern infrastructure, production plants and equipment, technical skills or financial assets). In following this policy, a common objective of some oil exporting countries is to adopt the diversification of their domestic production base as their prime goal. Reinforcing the compelling need for adopting such a guiding principle were the hazards of exposing the country's development efforts to fluctuations in the global demand for oil. This price vulnerability further enhances the need for greater financial security through diversified exports. Furthermore, the incentive for diversification reflected petroleum's inability, at least in the early phases of development, to generate production and consumption, or to create extensive employment opportunities. Finally, lurking behind the emphasis on product variety,

were certain national security considerations such as food self-sufficiency, defence preparedness and external political commitments. An essential concomitant of diversification was the enhancement of national productive capacity and expansion of domestic output.

The realisation of these objectives required substantial modernisation and development of infrastructural facilities, and improvements in labour productivity. Implied in the latter goal were both a guarantee of high employment and the development of skilled human power to meet the high-productivity requirement. Hence in Libya, with a large and fast-growing population, emphasis had to be placed on the need to expand and improve the quality of education and vocational training. Besides, reduced dependence on foreign (imported) manpower was a primary objective, and increased access to modern and advanced technology was thus needed to gain greater national self-sufficiency in basic needs and expand home-grown research.

Implicit in the objectives of steady growth and high employment was a universal desire for a sustainable rise in real per capita income and palpable improvements in living standards. Starting generally from a very low per capita income base at the time of their commercial oil discoveries, the Libyan government was compelled to place the objective of greater social welfare and improved social amenities on their national agenda. Social justice, equity and fairness in income distribution thus became other important, common goals for Libya. A major task to be tackled was a full provision of basic human needs (i.e. better nutrition and health care, more decent housing, more and better education, and satisfactory employment).

Moreover, maintaining the balance-of-payment equilibrium as a measure of financial security and avoidance of external debt was an objective. Protection of the environment was another emphasised goal. Elevation of the spiritual, social, cultural and intellectual needs of the citizenry was emphasised or alluded to in the periodic economic and social development plans for Libya. Some of the corollaries of these basic objectives also included a narrowing of the technological gap with the industrial countries; the maintenance of solidarity with political, and geographic allies; and co-operation with

other developing countries in the North/South, and particularly Magrib countries, in this context.

In short, Libya, with less emphasis and with varying degrees of firmness, adopted as their national economic agenda such objectives as; improving living conditions (nutrition, health, housing, education etc); reducing economic dependence on the outside world; catching up with the West; reducing income inequalities; increasing efficiency of productive factors, and maintaining established cultural value and social stability.

A successful achievement of these primary objectives necessitated the pursuit of other goals as intermediary means. These intermediate objectives included domestic price stability, a sustainable balance in foreign obligation, as well as fiscal and monetary discipline. The attainment of these secondary goals is crucial for orderly and sustained private capital formulation, preservation of national currency value and avoidance of burdensome external debt.

The dominant objective in the Libyan development strategy is self-sufficiency and economic diversification by industrialisation, emphasizing rapid development of heavy and light industries, with a correlative goal of expansion on intermediate industries. At the same time, Libyan planners are trying to deal with unemployment, skill shortages, stagnation of the agriculture sector, and inadequate and poorly trainined administrators and managers throughout. The problems are likely to be eased by carefully investing the large revenues from the hydrocarbon sector (both oil and natural gas). During the 1970s, development of the Libyan economy was characterized by extremely rapid growth of investment. Investment programmes were oriented toward social sectors, particularly construction and housing, and improvement of the economic infrastructure.

Hydrocarbon revenues bring risks. Too many people become locked in low-skill intensive oil resource-based industries, including agriculture, and thus fail, through no fault of their own, to advance their own or their children's education and earning power. Another risk is that the authorities and other inhabitants of oil rich countries become overconfident, and therefore tend to underrate or overlook the need for good economic

policies and institutions, as well as good education and good investments. In other words, nations that believe that wealth is their most important asset may develop a false sense of security of foreign, social, human and physical capital. Indeed, oil-rich countries can live well off their oil wealth over extended periods, even with poor economic policy management and institutions, and weak commitment to education. They may find that difficult reforms do not pay - countries without hydrocarbon resources have a smaller margin for error, and are less likely to make this mistake. In oil-rich countries, awareness of these risks, as well as a conscious effort and ability to contain them, is perhaps the best insurance policy against them (Amuzegar and Mehran, 1999).

Results of this study show the increasing dependency of the Libyan economy on the export revenue from the petroleum sector, which was 95% from the total export revenues in 2004 (Central Bank of Libya, 2005). Gross domestic product has been strongly dependent on petroleum exports throughout the entire period. A worrisome phenomenon is the increasing dependency of private and public consumption expenditure on petroleum revenues.

Since petroleum accounts for almost the whole of Libyan exports, the country is heavily influenced in this sector by world market trends. Therefore, the country's objective must be the diversification of exports of oil in the form of other products, in order to help diminish the impact of the volatility of world demand on exports of crude oil. However, from 1970 to 2000, the value of non-petroleum exports has declined, whereas the volume of petroleum increased dramatically. Exports of non- petroleum goods must receive more attention in government plans

8.2 The Goals of Diversification

Most discussions of economic diversification are based on one goal - the reduction of economic risk by creating new sources and spreading employment into various sectors, so a state would not have "all its eggs in one basket", as the state could lower its risk of losing significant revenues from oil windfalls aiming to diversify its economy. As the

Libyan economy has been historically vulnerable to an oil price shock, this is a special worry, and an important challenge in this country.

However, a thorough discussion of diversification should recognize other objectives as well. These include at least two others:

(i) Create new sector substitutes for the oil sector, such as the tourism sector and petrochemical industry

(ii) Set up new industries which can be competitive against current imports in the long-term.

To overcome such problems associated with oil windfalls, the authorities must follow a set of procedures to solve these problems:

8.2.1 Oil Revenue

1- Consolidate oil revenue management and treat all oil revenue as one source of finance.

2- Develop and maintain a model for long-term projections of oil and gas revenues

3- Develop institutional capacities for project selection, monitoring, and evaluation, including the establishment and development of a project appraisal department, as well as capacity building in fiscal policy analysis.

8.2.2 Level of Expenditures

1- Set expenditures of oil and gas revenues that are consistent with a long-term saving objective of conserving assets for the future, particularly given the short-lived nature of the windfall. The goal should be to ensure constant real expenditure out of oil wealth.

2- Use the concept of a sustainable non-deficit to provide an expenditure ceiling for the use of assets that is consistent with this long-term saving objective.

3- Avoid large fluctuations in the oil deficit.

4- Revise the estimate in the non-oil revenue deficit in the light of new information. The appropriateness of the sustainable non-oil deficit should be reviewed at regular and sufficiently spaced intervals, based on updated information on oil and gas reserves, production patterns and price developments.

5- As the sustainable non-oil deficit provides only an expenditure envelope for the medium-term, do not increase expenditure to its ceiling in the near future. This would not be advisable given the macroeconomic implication of excessive growth in spending. In particular, a rapid increase in expenditures consistent with this ceiling could exert substantial upward pressure on the exchange rate with all its negative consequences for the non-oil sector. It could also strain the government's institutional capacity for planning, executing, and monitoring expenditure, resulting in substantial waste.

6- The government should not borrow against future oil revenue to finance current spending.

7- Take macroeconomic stability considerations into account when deciding how much oil revenue to spend in the medium-term, with strengthened coordination between the Ministry of Finance and the Libya Central Bank (L C B)

8.2.3 Composition of Expenditure

1- Revenue should be utilised primarily for investment rather than consumption. Expenditure on physical and human capital will provide a solid foundation for the future growth of the country, while excessive current consumption could have a potentially destabilising impact in the short term. Capital expenditures have the added advantage of substantial import content, providing an automatic means of sterilising part of the substantial foreign exchange inflows associated with oil wealth.

2- Capital investments should target the building and maintenance of a well-designed physical infrastructure, necessary for improving the competitiveness of the non-oil sector, including the reliable provision of energy and water, and an efficient transport, communications and service, particularly in the regions outside the capital city.

3- A national investment maintenance fund should be established for meeting recurrent costs associated with physical infrastructure projects. This would increase transparency of already committed resources, and ensure persistent saving for long-term maintenance costs.

4- Reducing tax rates could be an alternative to increased expenditure, with the direct positive impact on competitiveness off-setting, at least in part, the negative effects of real appreciation.

Political pressures for excessive and speedy expenditure of oil wealth are inevitable. Successful long-run development of the economy will require that the government withstand such pressures. Nevertheless, this will not be easy. The Libya government will need to demonstrate to the population not only that oil wealth is being saved for future generations, but that it is also being used effectively to get benefit and improve the standard of living to the current population. The policies recommended above (focusing on infrastructure development and protecting non-oil competitiveness) should help generate new employment opportunities. Also, they should succeed in explaining to the population the dangers - not just to future generation but to the current population of Libya as well - of excessively rapid expenditure of oil wealth. Libya may succeed where so many other oil-producing countries have failed; it may manage to use its oil wealth to help develop the non-oil sectors of its economy.

Furthermore, oil revenue management is enormously important for oil dependent developing countries. Failures are more common than success, with adverse consequences for development. However, there has been a dramatic increase in attention paid to the issue in recent years, resulting in new models and new partnerships, which

hold promise for a future turnaround in this area, the deep-rooted nature of the problem notwithstanding.

Across various specifications, the evidence consistently suggests that economic dependency can magnify the adverse impact of oil price fluctuation on consumption. However, the negative impact of dependency appears less pronounced in economics with greater financial depth, suggesting that the benefits of diversification are larger when insurance is unavailable. Therefore, a potentially large trade-off exists between the efficiency gains from dependency and the risks from too little diversification in economies with limited insurance opportunities.

These results lend support to theoretical approaches that view this trade-off as important for the development process. Economies subject to uninsurable, risky production possibilities may optimally diversify, at the cost of lower productivity. Indeed, these results also raise questions about the long-term impact of oil price volatility and other economic shocks on economic development, and suggest an interesting area of future research. For example, do countries subject to oil price fluctuation experience different development patterns than those that are more stable?

Moreover, the ownership of natural wealth appears to be a mixed blessing. The experience of a great number of countries seems to indicate that extensive natural riches are accompanied by a tendency towards slower growth in the long-term than is generally the case in countries with no major oil wealth resources. For these inverse relationships between resources, abundance and long-term growth, there are a number of conceivable explanations which are briefly discussed here:

(a) The "Dutch disease", which pushes the real exchange rate or wages upwards, and increases exchange rate volatility, causing exports to decrease and slowing growth;

(b) Neglect of education, which may result from the fact that the education demands of the workforce for primary production are generally lower than that for other industries, which reduces the availability of well-trained manpower to other industries;

(c) Rent-seeking, which distracts the interest and efforts of society from creating wealth.

(d) Failure of economic organisation and policy, which could be the result of the false sense of security caused by abundant oil wealth, and imagined invincibility.

These explanations, and others which may be subsequently advanced, will need closer examination in the coming years, as economic research on the relationship between oil wealth and economic growth is still in its infancy. Furthermore, the oil-rich countries which have been reviewed here vary so greatly from one another, for example, with regard to their stage of development and type of government, that it could be regarded as highly questionable whether all of them, from Nigeria to Norway, should be grouped together for drawing general conclusions. Nonetheless, it would be inadvisable to ignore the indications which seem to present themselves from the experience of the oil-rich countries. A more advisable course appears to be examining carefully the theoretical and empirical argument, and to try to learn as much as possible from both.

However, the idea that hydrocarbon abundance is a mixed blessing is not new. In his book, *The Wealth and Poverty of Nations*, Landes (1999) tells the story of Spain following the colonisation of South and Central America, which made Spain rich in gold and other natural resources. These riches did not last, however, as Spain chose to waste a large part of its new-found natural wealth on luxuries and wars. In 1690, the Moroccan ambassador to Madrid wrote with discernible dismay of the Spaniards' apparent loss of interest in work, trade and industry. In short, they learned helplessness, as modern psychologists might want to describe the phenomenon.

He summarises his argument about Spain as follows: "Easy money is bad for you. It represents short-run gain that will be paid for immediate distortions and later regrets" (Landes, 1999). pp 56

This is by no means an inevitable outcome; however, according to Lewis (1985) "rapid economic growth is available to those countries with adequate natural resources which make the efforts to achieve it" (pp 123).

With the benefit of hindsight, Lewis' qualifications concerning natural resources were perhaps unnecessary, because human resources are surely more important for growth than natural resources. Even so, recent development in growth theory and mounting empirical evidence indicate that Lewis was right. The key to understanding this is the realisation that efficiency works like technology. Like improved technology, increased efficiency is a means of producing more output from given inputs or, equivalently, of requiring fewer inputs to produce a given output. In addition, efficiency is a broader concept than technology, and more powerful. A country cannot be advised to invent - imitate perhaps, but not invent - new technology in order to grow faster. But it can be encouraged to adopt policies that promote economic efficiency. Therefore, whatever a nation does to become more efficient - through more, and better investment and education, trade liberalisation, privatisation stabilisation, diversification. It will also help it to grow more rapidly for the benefit of all. Moreover, it needs to be on guard against the dangers that may accompany the gifts of nature. To grow or not to grow is, in large measure, a matter of choice.

8.2.4 Oil Sector-Blessing and Curse

Despite the efforts toward economic diversification, it can be concluded that the abundance of the hydrocarbon wealth reserves could be seen as a mixed blessing. The sector has been a main source of large financial revenues and hard currency proceeds that have facilitated the implementation of huge infrastructure projects and education improvements and enabled Libyan society to build assets by establish a saving fund and attain a high standard of living. Indeed, it has afforded the wherewithal to extend generous financial aid to other developing countries.

However, Libya embarked on diversification plans over the last three decades aimed to achieve economic development processes and reduce oil sector contribution. Nevertheless, the large hydrocarbon resources have also meant excessive dependence on a single sector, with attendant downside risks from oil price volatility. Over the past decade, Libya has focused on efforts to diversify its economy away from the oil sector.

The results have been disappointing. The hydrocarbon sector still dominates the economy and still represents the lion share of GDP and exports.

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APPENDICES

A. Map of Libya

B. Interview Questions

Q1- The goal of development plans was to research alternatives to oil resources to finance government revenues and achieve income resources diversification.

Do you believe that Libya has achieved these goals?

Yes	No

Comment ----------

Q2- To reap greater benefit from oil as a renewable resource in the long-term requires a search for other resources instead of oil wealth. Which potential income sources should have been considered?

(a) Industry in which Libya has a comparative advantage

(b) Tourism

(c) Service and transit trade

(d) Encourage foreign investment

(e) Fertilizer and petrochemical industry

Q3- The economic sanctions, imposed by the UN has a negative impact. Do you think these sanctions played a vital role in affecting and affecting the development plans programme?

Yes	NO

Comment ----------

Q4- A stabilization fund has been used in oil exporting countries such as Venezuela and Kuwait. Do you believe that Libya needs to establish such a fund?

Yes	No

Comment----------

Q5- To maintain sustainable economic development, do you think that it is necessary to establish and create a programme development plan?

Yes	No

Comment----------

Q6- Libyan economic performance has been poor over recent periods, and growth was volatile and fluctuated. Do you think this can be attributed to:

(a) Economic mismanagement of oil revenues

(b) Oil price volatility

(c) Others (please specify) ----------

Q7- Economic reform is a significant process and it may also be painful process, do you think that the Libyan economy can afford such reform? How could such reform be implemented?

Yes	No

Comment ----------

Q8- Do you support the view that the economic reform is in urgent need for oil producing countries rather than countries without oil windfalls?

Yes	No

Comment ----------

Q9- Oil revenues should be spent on education, training, employment, health and the creation infrastructure, besides creating other sources of income to replace oil revenues. Has Libya achieved these goals in your opinion?

Yes	No

Comment ----------

10- To decrease the unemployment rate for youth, how can policy-makers, make this a high priority and amend legislation to achieve full employment?

Yes	No

Comment ----------

Q11- In your view what is the best rate of growth required to maintain a low unemployment percentage rate level?

Comment ----------

12- To which extent do you agree that the existence of an oil sector has diminished others Libyan sectors, particularly the export sector?

Comment ----------

Q13- The optimum solution to prevent reliance on one sector is diversification. How can Libya affect a healthy policy for exports?

Q14- To assist the economic reform process a restructuring of Libya's economy must establish a private and financial market sectors. Do you think this action will detract from the public sector?

Comment ----------

Thank you for your help and co-operation

Adwick

Economic Researcher

Salford University

C. Domestic Refineries

■ *Marsa El –Brega Refinery*

The country's oldest refinery, Marsa El-Brega, is located near Tobruk and produces refined product for export. This Esso refinery was built in Belgium and shipped more-or-less intact, to El-Brega in 1963. By this time the Libyan government had set up their pricing base on all oil production sold in Libya.

While the Brega refinery was standing idle, the government sought agreements with European refiners, both state-owned and private, whereby they would provide products for the domestic Libyan market in exchange for guaranteed supplies of crude oil. In this effort it was unsuccessful, largely because it could not guarantee a regular supply of specific quantities of crude oil to any European refiner, as the oil companies themselves handled exports at this time.

However, Marsa El-Brega effective capacity is now 8,400 barrels a day, although it has a design capacity of 10,000 barrels a day.

■ *Zawia Refinery*

The Zawia refinery is the second refinery with a capacity sufficiently large enough to meet rapidly increasing domestic demand and to allow Libya to export products as well as crude. In mid-1969, it signed an agreement with Shell for the design, finance and construction of a 25,000 barrels a day refinery, capable of expansion to 40,000 barrels a day at Zawia. In addition, Shell was to build another at Zawia to produce 600,000 barrels a day of lubricating oil for consumption. In the negotiations with Shell over the details of the construction of this refinery, Shell was reluctant to proceed further with the proposal as it discovered oil in its two concessions south of Tripoli and in its single concession in the Western Ghadames Basin. In the meantime, in order to meet increased internal product demand, which, was, then more than 20,000 barrels a day The Libyan National Oil Company concluded an agreement with Montedison whereby it would ship crude for processing to Montedison's Sincat refinery in Sicily, with product sent back to

Libya. The agreement called for Sincat to process 30,000 barrels a day of Libyan crude, taking surplus naphtha in payment for processing and surplus fuel oil at cost.

■ *Ras Lanuf Refinery*

In 1977, the government moved the site of the proposed exports refinery at Tobruk to Ras Lanuf, partly as a result of increased hostile relations between Libya and Egypt and partly as a result of NOC's discovery of the large Messlah oilfields 12 miles North West of the Sarir field. It decided to ship the output of this new field, as well as incremental production from the Sarir field, through the Sirtica Pipeline to Ras Lanuf rather than send it to the terminal at Marsa Hariga, near Tobruk. In October 1979, two ENI subsidiaries, Snam Progetti and Saipern, began the constructions of the 220,000 barrel a day Ras Lanuf export refinery. Completion was scheduled for 1981. This refinery was fully operational by the 1980s. However, Ras Lanuf did not reach its full capacity rate of 220,000 barrels a day.

The Ras Lanuf refinery processes a mixture of Sarir and Mesla crude. It was designed to produce 124,000 barrels a day of fuel petrochemical complex.

■ *Tobruk Refinery*

The Tobruk refinery was launched in 1985 with an effective capacity of 18,000 barrels a day. Plans for expanding and upgrading the plant through installation of a 3,300-barrels hydrotreater and a 3,300-barrels day catalytic reformers have run into delays. The design and engineering contract for the work was awarded in November, 1982.

■ *Sebha Refinery*

The construction of a refinery in Sebha, designed to process crude from the nearby Murzuk field has still not begun. NOC awarded the engineering contract to CTIP in June 1989. The projected plant would have 20,000 barrels a day atmospheric distillation unit, a 6,200 barrels a day hydrotreater and a 4,500 barrels a day catalytic reformer.

D. Overseas Refinery and Distribution Activities

Libya started to invest in refining and distribution facilities in Europe in the late 1980s, with the acquisition of assets in Italy, Germany and Switzerland, which remain the hub of its European network. It is also investing in refining and distribution in Pakistan and in the development of service stations and pipelines in Egypt.

Until September 1993, all Libya's foreign refining and distribution operations were managed by Oil Invest International, a holding company established in 1988 under the control of three Libyan state entities: National Oil Corporation (NOC), the Libyan Arab Foreign Investment Company (LAFICO) and the Libyan Arab Foreign Bank (LAFB). In October 1993, Libya relinquished control of Oil Invest Netherlands BV, the Oil Invest International subsidiary that held all its downstream interests in Europe.

Libya's distribution network in Europe now comprises of over 3,000 outlets, of which more than 2,250 are in Italy, 455 in Switzerland, 180 in Germany and 115 in the Netherlands.

■ *Italy*

Libya gained its first foothold in Europe in 1988, when Oil Invest acquired an 89.5% interest in Tamoil Italia, which operated a 105,000 b/d refinery in Cremona and a network of 1,977 service stations and distribution centres throughout Italy. Tamoil is now 100% owned by Oilinvest, and controls both Tamoil refining, which runs the Cremona refinery, and Tamoil Petroli, which is engaged in oil distribution.

Tamoil Italia already held a 75% stake in Milan-based gas oil and fuel oil distributor Vulcan Oil, and a 75% holding in Bortolotti and Company. Bortolotti has a controlling interest in Decal, the operator of Italy's second-largest independent oil storage facility at Porto Marghera.

In 1994, Tamoil Italia purchased the remaining 25% stake in Bortolotti, so that the company is now wholly owned by Oil Invest. Early on, Oil Invest also purchased a 75% interest in F.A. Petroli, which has a bulk plant linked to Cremoca by pipeline.

■ *Germany*

Oil Invest entered the Germany market in 1992 through the acquisition of a 60% interest in the oil distributor Hamburg Eggert GmbH (HEM). It subsequently increased its holding to 80% the remaining 20% belonged to the Managing Director of HEM.

HEM is one of Germany's principal independent distributors, operating a network of 182 outlets and supplying another 200 service stations on a regular basis. It receives most of its refined products from the Holborn Europa refinery in Hamburg, which has a capacity of 75,000 barrels a day and is controlled by Oil Invest. The facility had been wholly owned and operated by Coastal Corporation up until then, and Oil Invest's agreement with Coastal provided for it to increase its stake in the refinery to a maximum of 66.33% over a five year period. Oil Invest's acquisition of a majority interest in the refinery also gave it control over three European affiliates of Coastal Corporation– Holborn Europa Raffinerie in Hamburg, Holborn European Marketing Company in Rotterdam, and Holborn Investment Company in Larnaca, Cyprus.

■ *Switzerland*

In June 1990, Tamoil acquired a 65% stake in Gatoil, whose assets included the 72,000 barrels a day Collombey refinery and about 280 service stations and 14 terminals in Switzerland. In 1991, Oil Invest acquired full ownership of Gatoil by taking over the holding of Sasea and Migrol, its initial partners in the acquisitions and set up a local subsidiary, Tamoil (Suisse) SA. In September 2002, Tamoil agreed to purchase the Swiss service station network to TotalFinaELF, which consisted of 177 outlets. The acquisition boosted Tamoil's market share in Switzerland from about 8% to 11%.

■ *The Netherlands*

In May 1993, Oilinvest finalized the acquisition of Cebeco OK, a member of the Dutch cooperative Cebeco Handelsraad. The company operates a retail and wholesale distribution network that includes around 115 service stations and its sales amount to some 650,000 tons per year.

■ *Spain*

In 1991, Libya set up a direct subsidiary in Spain called Oilinvest Espana, which opened two retail outlets in 1992 and seven in 1993. Oilinvest's original plan for building up a market share of 5% within five years by opening some 20 stations annually soon fell behind schedule, although it is continuing to expand its Spanish operations

■ *Slovakia and the Czech Republic*

In the former Czechoslovakia, Oil Invest acquired a 90% participation in Tempo Spol in 1992, but the company was subsequently divided into two, like the country, becoming Tamoil Slovensko in Slovakia and Tamoil Praha in the Czech Rpublic.

■ *Benin*

In September 2001, Libya decided to build an oil refinery in Benin to serve as a distribution hub for the West African region. The same month Libya and Zimbabwe signed a deal providing for NOC to supply Zimbabwe with US$90 million worth of gasoline.

■ *Pakistan*

Libya and Pakistan established a jointly owned subsidiary, called Pak-Libya Holding to finance the construction of Pakistan's first jet fuel pipeline. The company provided the US$6 million required for the construction of a 35 km pipeline linking Karachi International Airport to the nearby Karachi refinery, which is owned by National Refinery. It has a capacity of 10,000 barrels a day of JP-1 jet fuel.

Pak-Libya Holding is also helping to finance the construction of US$91 million oil refinery with a capacity of 25,000 barrels a day at Badin.

■ *Egypt*

Libya and Egypt set up a joint venture oil distribution company in 1992, called United Investment Company, which is 60% owned by Oil Invest, 30% owned by the Arab International Joint Investment Company (a private company based in Egypt which is moreover, owned by both Egyptian and Libyan interests) and 10% by the Egyptian General Petroleum Corporation (EGPC). The company planned to build and operate 17 service stations along the coastal highway between Egypt and Libya. A second venture, the Egyptian-Libyan Petroleum Engineering and Construction Company, jointly owned by Egypt's Project and Libya's NOC, was created to build and maintain oil storage tanks, refineries and petrochemical complexes.

Egypt and Libya are considering two pipeline projects that would cost an estimated US$1 billion and would enable Libya to supply oil to Egypt.]

E. Published Papers

1- Oil, Economic Development and Diversification in Libya, presented at 4th International Postgraduate Research Conference in the Built and Human Environment, University of Salford

2- The Management of Oil Wealth in the Context of Sustainability Presented at 5th International Postgraduate Research Conference in the Built and Human Environment, University of Salford

3- Economic Management in Selected Oil Exporting–Countries. Presented at 6th International Postgraduate Research Conference in the Built and Human Environment, Delft University of Technology, Delft, Netherlands, 3-7/4/2006