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The Impact of oil Exports on Economic Growth – The Case of Libya

Doctoral Thesis

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Abstract

The purpose of this thesis is to evaluate and measure the relationship between oil exports and economic growth in Libya by using advancement model and utilize Koyck disseminated lag regression technique (Koyck, 1954; Zvi, 1967) to check the relationship between the oil export of Libya and Libyan GDP using annual data over the period of 1980 to 2013. The research focuses on the impacts of oil exports on the economic growth of Libya. Being a developing country, Libya's GDP is mainly financed by oil rents and export of hydrocarbons. In addition, the research are applied to test the hypothesis of economic growth strategy led by exports. The research is based on the following hypotheses for testing the causality and co-integration between GDP and oil export in Libya as to whether there is bi-directional causality between GDP growth and export, or whether there is unidirectional causality between the two variables or whether there is no causality between GDP and oil export in Libya. Importantly, this research aims at studying the impact of oil export on the economy. Therefore, the relationship of oil export and economic growth for Libya is a major point. Also the research tried to find out the extent and importance of oil exports on the trade, investment, financing of the budget and the government expenditure. By conducting this research, there will be an attempt to investigate the positive and negative impacts of oil exports in Libya in terms of economic sustainability and development. Hence, in view of this, we tried to research on how oil export sector have contributed to economic growth in Libya.

From the analysis, it can be concluded that oil industry has an imperatively significant role in Libya. Its economy entirely relies on this sector. Oil industry is playing a significant part in progress of the nation. It is the basic revenue source of Libya. Libyan GDP has profited from opportunities produced by increase in the oil exports. Nevertheless, the lagged impacts are balanced by the existing period contributions that could recommend that the investment openings produced are not fully subjugated. The relation between exports and GDP in the constant prices, however allowing for improvements in the terms of trade, suggests that the export coefficient is highly significant in all periods. Conversely, the lagged GDP variable (presenting all the lagged exports via the Koyck geometrically decreasing weight

assumption) was not significant in any period which may suggest a lack of investment opportunities in all periods. It is obvious that there is significant relationship between oil export and economic growth as can be seen from the result obtained and the variables respectively.

Key Words: Oil Export, Economic Growth, Trade, Budget, Government Expenditure.

Abstrakt:

Cílem práce je určit a vyhodnotit vztah mezi exportem ropy a ekonomickým růstem v Libyi za pomoci Kyockova modelu s rozloženým zpožděním s užitím dat pro roky 1980 - 2013. Práce se zaměřuje za zkoumání vlivu exportu ropy na ekonomický rozvoj Libye. HDP Libye se odvíjí především od výnosů z vývozu ropy a uhlohydrátů. V práci jsou testovány hypotézy spojené s růstem ekonomiky hnané vývozem. Práce je založena na testování hypotéz, které mají potvrdit kauzalitu a provázanost mezi HDP a exportem ropy v Libyi. Význam této práce tedy spočívá ve studiu dopadů vývozu ropy na ekonomiku. Práce je rovněž zaměřena na určení rozsahu a významu vývozu ropy na obchod, investice a financování státního rozpočtu a veřejných výdajů. Na základě této práce je tedy možné postihnout negativní a pozitivní dopady exportu ropy v Libyi v rámci udržitelného ekonomického rozvoje. Vzhledem k výše uvedenému je třeba odpovědět na otázku, jaký dopad má export ropy na ekonomický růst v Libyi.

Na základě provedené analýzy pak může být konstatováno, že ropný průmysl je velice významný v Libyi, jejíž celá ekonomika se odvíjí od tohoto sektoru. Ropný průmysl se významnou měrou podílí na rozvoji země. Zpožděné dopady této závislosti na ropě jsou vyvažovány současnými přínosy, nicméně stávající možnosti investic nejsou zcela využité. Koeficienty potvrzující vztah mezi HDP a exportem ve stálých cenách vykazovaly významnost ve všech sledovaných obdobích, a to i přes prostor ke zlepšení podmínek pro obchod. Naopak, zpožděné HDP (představující zpožděný export na základě Kyockový geometrický klesajících vah) nebylo shledáno jako významné v žádném sledovaném období, což může poukazovat na nedostatek investičních příležitostí. Je zřejmé, že zde existuje silný vztah mezi vývozem ropy a ekonomickým růstem, který je patrný ze získaných výsledků a parametrů.

Klíčová slova: Vývoz ropy, ekonomický růst, obchod, rozpočet, vládní výdaje

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Dedication

I dedicate this research to my family for their time, energy, and assistance which was essential to the completion of my study. I would like to thank all of my family who supported me in completing this thesis. I learned about the enthusiasm, energy, and inspiration that one can acquire from achievement of someone else. I hope to perform this research with me long after current study has expanded our understanding of incidental education.

TABLE OF CONTENTS	page
Abstract	i
Acknowledgements	iii
Dedication	iv
Table of contents	v
List of abbreviations	viii
CHAPTER ONE: (Introduction)	
1.1 Introduction	1
1.2 problem of the study	5
1.3 Important of the study	8
1.4 Objectives of the study	9
1.5 Hypotheses of the Study	9
1.6 Methodology	10
1.7 Thesis structure	16
CHAPTER TWO: (Review of Literature)	
2.1 Introduction	18
2.2 Conceptual Literature	22
2.2.1 The concept of export	22
2.2.2 Crude oil export	22
2.2.3 Types of crude oil export in Libya	22
2.2.4 The concept of economic growth	22
2.2.5 Types of growth	24
2.2.6 Types of gross domestic product	24
2.3 Economic growth theories	25
2.4 The causality between export and economic growth	26
2.5Literature related to the positive effect of export on economic growth	27
2-6Literature related to disadvantages with Over-reliance on oil exports	29
2-7Literature review on impact of oil exports on trade of oil-producing countries	31
CHAPTER THREE: (Libyan Economy Development Characteristics)	
3.1. Introduction	34
3.2 Libya geography and climate	35
3.3 Population	36

3.4 Libyan economy before discovering the oil at glance	***38***
3.5 Libyan economy after discovering the oil	***42***
3.5.1 Agriculture sector	***42***
3.5.2 Tourism services sector	***44***
3.5.3 The energy sector	***45***
3.5.4 Financial services sector	***47***
3.5.5 Investment	***49***
3.5.6 Trade in Libya	***51***
3.6 The macroeconomic in Libyan economic	***53***
3.6.1 Libyan gross domestic product GDP	***54***
3.6.2Goverment Revenue	***58***
3.6.3 Government expenditure	***61***
3.7Exports and Imports	***63***
3.8 Fiscal Policy	***67***
3.9 Monetary Policy	***70***
CHAPTER FOUR: (The Libyan Oil Sector)	
4-1-Introduction	***73***
4-2 oil as a source of the world energy power	***74***
4.3 History of crude oil and gas industry	***75***
4.3.1 Oil exploration and discovering 1952-1969	***76***
4.3.2 The Libyan oil industry Pre-1969	***78***
4.4 The boom period	***80***
4.5 Libya's membership of OPEC	***82***
4.6 Sanctions against Libya	***83***
4.7 Contribution of oil industry in Libya	***84***
4.8 Oil Production in Libya	***86***
4.9 Oil Export in Libya	***90***
4.10 Libya's export Performance	***94***
4.11 Impact of oil exports on Libya economy	***95***
4.12 Oil and GDP relationship	***96***
4.13 Relationship between export and economic growth in Libya	***97***

4.14 Libyan economy depends on oil exports	***98***
4-15 Challenges in the oil sector	***102***
CHAPTER FIVE : (Oil performance and Libyan economy)	
5.1Oil development	***104***
5.2 Oil and Libyan macroeconomic	***106***
5.2.1 Government budget	***106***
5.2.2 Government expenditure	***107***
5.2.3 Gross domestic product	***108***
5.2.4 Trade	***109***
5.2.5 gross investment	***110***
5.2.6 Export and current account	***111***
5.2.7 Exchange rate	***111***
CHAPTER SIX: (Practical framework and macroeconomic model)	
6.1 Introduction	***118***
6.2 Impact of Oil exports on Libyan economic growth	***119***
6.2.1 Rate of growth of Libyan oil exports	***119***
6.2.2 Relationship between exports and economic growth	***122***
6.3 Impact of oil exports on trade in the Libyan economy	***128***
6.4 Impact on exports and imports of goods and services	***131***
6.4 *Impact of oil export on Libyan government budget and government expenditure*	***132***
6.5 *Impact of oil exports on investment*	***135***
CHAPTER SEVEN (Conclusion and Recommendation)	
7.1: Conclusion	***137***
7.2 problem facing Libyan economy	***141***
7.3 Recommendation	***143***
References	***146***
Appendix 1	***159***
Appendix 2	***160***
Appendix 3	***161***
Appendix4	***162***

List of Abbreviations	
ELG	*Export-Led Growth*
GLE	*Growth Led Export*
GDP	*Gross Domestic Products*
IEA	*International Energy Agency*
IMF	*International Monetary Fund*
MENA	*Middle East and North African (MENA)*
OECD	*Organization of Economic Cooperation and Development (OECD*
GCC	*Cooperation Council for the Arab state of the Golf*
(EEC)	*European Economic Community)*
OECD	*African Development Bank*
UNDP	*United Nation Development Program*
CIA	*Central Intelligence Agency*
Btu	*British thermal units*
OPEC	*Organization of Petroleum Exporting Countries*
FTA	*Foreign Trade Association*
FDI	*Foreign direction Investment*
GAFTA	*Greater Arab Free Trade Area*
NBC	*National Banking Corporation*
COMESA	*Common Market for Eastern and Southern Africa*
AMU	*Arab Maghreb Union(AMU*

CHAPTER ONE

INTRODUCTION

1.1 Introduction

The relationship between export growth and economic growth has been a popular subject of debate among development economists. Most of these debates ranging among development economists are focused on the question of whether strong economic performance is export-led or growth driven. This question is important because the determination of the causal pattern between export and growth has important implications for policy-makers' decisions about the appropriate growth and development strategies and policies to adopt. (Iqbal, Hameed & Devi, 2012)

The link between exports and economic growth has been closely studied by economists experts, mainly due to the outcomes attained by a country's growth though exports because of the results achieved by export-led growth in some countries. The theoretical basis for achieving growth through the development of export industries is that competition on an international scale requires efficiency, innovation and investment, all of which may encourage economic growth within a country. The source for realizing development through rise in exportation of goods is that success in the global market entails proficiency and modernization. The development of export can lead to economies of scale as industries expand and develop their markets overseas in response to foreign demand. Industries may promote world-class skills in product design, research and development and marketing, which increase their export capacity and promote economic development in their own country. The promotion of international trade leads to free trade policies that promote exports from the country and attract direct foreign investment into local industries .(EH Economic Intelligence, 2003)

Over the years, policy makers and researchers had a great interest in relationship between export and economic growth. Their main reason and motivation is that they want to know if a country should increase its export to lead to a more economic growth or they should stimulate economic growth from the outset

to lead to more export. Regarding the relationship between export and economic growth, four possibilities could be recognized: Some analysts believe that the causality direction is from export to economic growth which expressed as Export-Led Growth (ELG) hypothesis (Balassa 1978, Bahagwati 1978, Edwarards 1998). The export development and free entry and exit are considered as the key causes of economic growth. For example, firms can take advantage of more efficient allocation of resources, scale economies and encouraging creativity and innovation caused by foreign competition (Helpman and Krugman 1985). Moreover, export can cause more import of intermediate goods which leads to increase of capital accumulation and output growth. Also, there are various studies which support Growth Led Export (GLE) in a way that the causality direction is from economic growth to export growth. Regarding to the Growth Led Export hypothesis, export development is set off through benefits of efficiency caused by increase in interior work force's skill levels and technology advancement (Krugman, 1984, Bhagwati 1988). Two above approaches do not overlap. Therefore the third possibility is that there is a feedback relationship between export and economic growth. At last (as the fourth possibility) it is possible that there is no relationship or just a simple contemporaneous relation between these two variables. In this study, by using advancement model and utilize Koyck disseminated lag regression technique (Koyck, 1954; Zvi, 1967) to check the relationship between the oil export of Libya and Libyan GDP from 1980-2013.

Libya with its large land mass estimated to be 1.8 million square kilometers is one of Africa's largest countries. The country is bordered on the west by Tunisia and Algeria, on the east by Egypt, and on the south by the countries of Chad and Sudan. In spite of being touted as one of the poorest countries of the world when they attained independence, Libya has today emerged as one of the fastest growing economies of the world. Among the factors that helped Libya become an emerging economic power are its marginal population estimated in 2011 to be approximately 6.4 million and its natural resources. These two factors have made it possible for the country to quickly expand its economy in North Africa with an amazing speed.

Theoretical and empirical literature has written extensively on the link between export growth and economic growth by focusing particularly on the economies of developing countries and emerging markets. Libya's economic growth is primarily anchored on what develops in the local and international oil markets. Oil was discovered in Libya in 1958. Prior to oil discovery, the country was an agriculture driven economy until the country started getting its revenues through oil exportation. Libya generates an estimated 95% of all its export earnings from the sale of crude oil. All foreign currencies generated in Libya come from the sale of crude oil and other oil products. (Central Bank of Libya, 2007).

When oil was discovered in the end of fifties, the country's economy drastically changed, and unlike in the fifties when the country attained its independence, there has been significant development in its oil sector. The country's major natural resource is oil and within the last couple of decades, Libya has managed to transform its economy with support from oil exports (Ross, 2008). The objective was to diversify the economy in order to accommodate other drivers, especially agriculture like other North African countries. However, these objectives were not realized due to corruption and mismanagement.

Like other developing countries, Libyan economy is driven by specific properties. Although Libya has been considered as a small economy, its growth rate is high, taking into consideration that it had been predicted to be among the poorest in the world. Its main source of revenue is in natural resources, and especially crude oil, which accounts to over 95 % of the country's revenue. Libyan economy is characterized by most of the properties of the developing countries' economies. Despite the attempts by the government to diversify its economy, the country still depends on oil for its economic stability. Many attempts were spearheaded to find alternative sources of revenues in non-oil sector, but these attempts have not born any fruit. Over dependence on oil as the main economic driver is a worrying trend, taking into account that the country could have plunged into economic collapse following the 2011 civil unrest.

In 2011, a civil war erupted in the country. The civil war culminated with the death of Muammar Gadhafi, but left the country in great economic problems. Initially, oil exports had contributed to over 80% of the country's GDP, but fell steadily during and after the war to less than 40%. The war had led to the closure of some private companies and fleeing of workers from the oil fields. The impact of the war demonstrated how oil exports in Libya supported economic growth and helped in predicting future economic trends with continuous dependence on oil exports. By the end of 2011, most investors had resumed oil exploration practices, leading to an increase in the average oil production. Despite the fact that, previous oil production capacity reached around 1.6 million barrels a day, the civil unrest in the country led to significant drop, with production levels dropping to around 1.4 million barrels a day. (Libya Economic conditions, 2012)

Economic stability is influenced by among other factors, stability of internal and international socio-political frameworks, and in case any of the frameworks is affected, an economy can be significantly affected. Socio-political instability affects not only the willingness of investors to invest, but also affects production of major resources, especially those supporting economic growth. It is evident from the economic fluctuations due to political unrests that oil exports in Libya plays a significant role in the support of productivity growth, and in sustaining positive economic growth.

Most of Libya's exports are in the form of natural gas and petroleum. These two commodities actually account for 95% of the country's export, making the country's energy industry the lifeblood of its economy and the major source of income (EIA, 2007). Libya's oil well reserves are estimated to be half the amount of oil in Africa. This translates in the country having 3% of the total world oil reserve. In 2010, Libya was producing approximately 1.7million barrel per day making it Africa's second biggest oil producer (Fernandez, H.A., 2007). Even though economic sanctions against Libya have been lifted, its present oil production is still 50% of what it used to produce during the early 1970s. It is expected that with the nation's oil reserve expected to last for the next 38 years, the current production would increase to about 3 million barrels per day by the year 2015.

Libya's economic development plans are positive attempts to find ways to diversify the local economy by identifying new sources of generating income rather than depending heavily on oil revenues. Achieving growth in the non-oil sector of Libya's economy demands that key elements that drive a nation's economic factors play important supporting roles. These keys elements are in the form of capital goods imports and raw materials.

1.2 Problem of the study

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).

Libya was considered as one of the poorest countries upon gaining its independence in 1951. However, the oil booms in 1973 and 1979 supported Libya's economic growth, making it one of the largest oil exporting countries in Africa. The country has therefore been relying entirely on oil and hydrocarbons, a situation that can adversely affect the economy in case of international financial shocks.

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 manages 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 labor force employed in the sector in 2000, (International Monetary Fund, 2005).

The country's fiscal balance and stability are dependent on the international oil prices, and in case of fluctuations, the country's economy would be adversely affected (Collier and Goderis, 2007). The overdependence on oil and hydrocarbons to support the economy may affect the stability, since the resources are estimated to last for the next 30 years. The current non-hydrocarbon GDP and oil GDP has been very weak, meaning that the country relies entirely on oil (Meliha, 1996). There is projected high oil revenue in the country over the next five years, which is expected to support financial growth, but not necessarily improve economic growth in the non-oil sector.

The increase in dependence on oil revenue may be a challenge to the country's economic growth, especially with the current price fluctuations in the international market. Similarly, the overdependence on oil may lead to economic collapse after exhaustion of the oil deposits. In case there is a future oil price decline, the Libyan economy is set to be adversely affected and unless there is an increase in non-oil GDP, the Libyan economy might be in danger. There is a significant potential of the country to increase its oil production, and hence increase the oil and hydrocarbons' GDP (Dees, Pesaran and Smith, 2007). The country has a large oil reserve, which can sustain economic growth for the next two to three decades, unless the international oil price fluctuates. The country has over-consumed its bid to counter surges and fluctuations in the international oil prices. The existing over-predictions on more oil reserves may pose serious economic threats, especially if there is minimal improvement in the non-oil sector.

In addition, given the recent turbulence in resource prices, particularly that of oil, Cox and Harvie (2010) revisited this issue again by including the implications of this for government revenue (a revenue effect arising from revenue generated by the government from the production of the resource) and its implications for the fiscal budget. Given that oil production constitutes the major source of Libyan exports, the

major share of national income and the main source of government revenue, the sector exerts a significant influence on the economy. The impact has been more tangible since the oil boom and the development projects established in the early 1970s. From this point of view the Libyan economy presents an interesting case for analysing the macroeconomic effects of oil revenue on economic development over the last four decades. Its experiences are also likely to be of interest to other developing economies with a similar abundance of natural resources. This issue has become of even more concern to the Libyan authorities due to the recent surge in oil prices and oil production, which has further boosted government revenue and exports and intensified the need to identify how best to use this oil windfall for the sustained growth and development of the economy. Therefore, there is a need to analyses the aforementioned impacts arising from oil related shocks upon a number of key macroeconomic variables, and to identify the impact from alternative policies in order to maximize the benefits and/or to minimize the adverse effects arising from additional oil revenue in Libya.

With the civil unrest causing economic fluctuations, it is important to consider the ideal significance of oil exports on the economic growth and stability of Libya. Most oil-producing countries rely entirely on petroleum exports to support their economic growth and sustain productivity growth. However, in the case of Libya, over-reliance on oil exports nearly led to the collapse of the country's economy. The study therefore focuses on the significance of oil exports in sustaining a high GDP, supporting government expenses and other economic needs. Political instability affects not only the socio-economic frameworks, but also weakens the international trade relationships. Despite increased attention to productive sectors such as industry and agriculture in Libya, which attempts to diversify the structure of Libyan exports, it is worth noting that the Libyan economy is still depends mainly on the export of a single commodity which is crude oil.

There is no doubt that the commodity such as oil crude is a global commodity, supply conditions, including supply and demand are linked by external factors may beyond the control of the Libyan economy, and as long as the Libyan economy depends heavily on oil exports and revenues. This makes it susceptible to external

fluctuations caused by fluctuations in oil prices, which ultimately leads to destabilization of development plans and programs.

Moreover, the overall objective of the development strategy in Libya was on routing oil revenues to the development of all economic sectors, particularly the productive sectors of industry and agriculture in an attempt to create alternatives to the oil sector as a natural resource. However, the Libyan economy, it seems, could not be free from control of the oil sector, which still controls most of economic activity in Libya.

From the above, it seems that the relationship between oil exports and economic growth of Libya is very strong relation. Meanwhile, this fact may cause a real problem in the future because commodity like oil is a global commodity, supply conditions and demand are linked to external factors may be beyond the control of the Libyan economy, and as long as the Libyan economy depends on this commodity it makes it likely to be fluctuations by resulting from fluctuations in foreign oil a prices, which ultimately leads to disturb its plans and its development programs.

1.3 Importance of the study

The study deals with Libya's economic growth with particular focus on ways oil export affects the country's economy. As a developing country, the financing of Libya's GDP is dependents on such revenue which are derived for oil rentals and the exportation of hydrocarbons. The over dependence in oil revenue has always placed the Libya's economy in jeopardy in the event that prices and trade performance in the oil market collapse one day. This research is an opportunity to conduct an investigation on the positive and negative effects regarding the economic sustainability and development of Libya's oil exports. As Africa's second largest producer of oil, this study will look into ways by which an oil exporting countries would be able to sustain their economy and at the same time use the resources derived from the sale of oil to finance the economic growth and enhance the GDP of the non-oil sector and at the same time embark on a program that would help to increase the financial coming from the country's natural resources.

This research work has also take a critical look on the country's growth in light of trade and investment activities and the current efforts of the government. The research will also adopt ways of identifying the Libyan oil export that are capable of developing policies that would guard the country's economy from oil market volatility and fluctuating of oil export . This would be done without overlooking the benefits derived from the unabated oil price increase in the international oil market. The aim of this thesis is to find out the impact of oil export on economic growth during the period of 1980-2013. The thesis tries to contribute to literature by examining the effects of oil export on Libyan economic growth, Libyan trade, investment, Libyan budget and government expenditure.

1.4 Objectives of the study

The objectives of this study are categorized into general and specific objectives. The general objective of this study will look into the effect of oil export when it comes to the Libyan economy. The specific objectives will try to accomplish the following:

1- To determine the extent to which the Libya's oil exports and economic growth are related to each other.
2- To demonstrate the negative effects of a country's dependence on one product as its source of revenue. The key element for saving the economy is for the government to embark on the system of diversifying its export products.
3- To examine the impact of oil export on Libyan trade.
4- To evaluate the impact of oil export on Libyan government budget and expenditure.
5- To assess the feedback effects of oil export on Libyan investment.
6- To suggest, on the basis of empirical evidence, policies that would help the country experience economic growth.

1.5 Hypothesis of the study

In the light of study objectives, the major hypothesis will be as following:

Main Hypothesis: Libya's economy is mainly supported by oil rents and dependent on the available crude oil deposits, the country has the capacity to sustain GDP growth, government expenditure and development growth. There exists a controversial empirical relationship between oil rents and economic growth in

Libya, and hence the need to initiate policy frameworks to sustain economic sustainability.

The study is designed in a way that it will thoroughly examine the effects of oil export on the growth of Libyan economy. The sub- hypothesis is therefore postulated as follow:

H1: There is a significant relationship between oil exports and economic growth on the Libyan economy.

H2: An increase in oil exports will have a positive impact on GDP.

H3: The Libyan economy has become extremely dependent on oil revenue.

H4: Any increase in the price of oil has always translated to positive growth on the Libyan economy.

H5: Libyan investments are anchored on oil revenues.

H6: Libyan trade are influenced by its oil revenues.

H7: Any increase in Libya's oil export will result in the government increasing its budget. This will translate in increasing the expenditures in many sectors of the economy.

1.6 Research Methodology and model

In order to achieve the research objectives, the research will adopt a positivism research philosophy, which relies on facts and verifiable economic experiences. The positivism research philosophy concentrates on the existing facts, valid variables and existing theoretical frameworks.

Similarly, the research approach will be deductive in order to ensure that the information gathered is valid and relevant to the research topic. Under the deductive approach, the research seeks to use financial reports, market data and information related to crude oil rents, and also the export capacity of oil by Libya. In this approach, the research will use current and past financial data and literature materials on oil exports and economic sustainability in order to understand the

Libyan economic situation. Under the deductive approach, the data to be used has to be factual to avoid assumptions.

The research strategy will incorporate case studies on Libya's economy and generalized economic surveys on the oil export's impact, economic sustainability amid market fluctuations and increase in competitiveness among oil exports. Similarly, the objective of this study is to investigate the dynamics of the relationship between export and economic growth in Libya using the annual data for the period, 1980-2013 which includes the 33 annual observations. The two main variables of this study are economic growth and oil exports. The real Gross Domestic Product (GDP) is used as the proxy for economic growth in Libya and we represent the economic growth rate by using the constant value of Gross Domestic Product (GDP). Panel data analysis is used to examine the relationship between GDP growths and oil Export in the Libya for period 1980 to 2013. It is hypothesized that size of Gross Domestic Product (GDP) is influenced by the amount of oil export.

1.6. 1 Data and Variables

The data used for this study are basically time series data for Libya covering the period 1980- 2013. The two economic variables included in this study are exports of oil and the change in Gross Domestic Product (GDP) which is an indicator to measure economic growth. Data were sourced from The IMF and Central Bank of Libya.

1.6.2 Methodology

Various techniques were applied to enhance the research study and meet the objectives of the study. The general purpose of regression analysis is to study the relationship between oil export and economic growth in Libya. It is suggested that when dealing with time series data, a number of econometric issues can influence the estimation of parameters using SAS/ETS - Econometrics and Time Series Analysis system. All the variables are taken in their natural logarithms to avoid the problems of heteroscedasticity. Therefore, we use the SAS® system for analysis of econometric data and testing the hypotheses. Following the below mentioned techniques we employed to achieve the goals of our thesis and tested the hypotheses:

a. The postulation will use the export as a motor of advancement model and we utilize Koyck disseminated lag regression technique (Koyck, 1954; Zvi, 1967) to check the relationship between the oil export development of Libya and Libyan GDP. The following regression model were used:

$$\ln (Yt/ Yt\text{-}1) = b0 + b\,1 \ln (X\,t / X\,t\text{-}1) + b2 \ln (Yt\text{-}1 / Yt\text{-}2) + ut$$

Where:

Y = GDP

X = Oil exports.

t- Time period

Also the model is developed to check the effect of export development on entire non-oil yield (i.e. the inland result of commercial ventures other than the mining), notwithstanding confirm responses of these divisions' yields on development in oil send outs. The following regression model was used:

$$\text{Ln(Y- non-oil / Y- non-oil, t -1)} = b0 + b1 \ln (\text{X- t/ X- t-1}) + b2 \ln (\text{Y- non-oil, t -1/ Y- non-oil, t -2}) + ut$$

Where:

Y- non-oil = (GDP – Oil) estimated at constant import prices,

X- = Oil exports estimated at constant import prices

b. Various models and simultaneous-equation models are established and tested to verify the effect of the relationship between exports of oil and other economic variables will be confirmed and used to catch the effects of oil export, practically to find out the relationship between the following variables:

i) Impact of Oil export on trade in the Libyan economy. This shows the relationship between growth level of GDP and Oil export with considerations of time factor.

$$\text{Ln(Y- t / Y- t-1)} = b0 + b1 \ln (\text{X- t / X- t-1}) + b2 \ln (\text{Y- t-1/Y- t-2}) + et$$

Where:

Y = GDP

X = Oil exports.

t- Time period

ii) Impact of Oil on Export and Import of Goods and Services. The following regression equation is develop to show the relationship:

a- *Impact of export*:

$$Y = A + b\,X \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \quad (1)$$

Whereas:

Y is change in the percentage in export of goods considering 2010 as base.

X is the Libyan oil exports in million barrels.

b- Impact on import:

$$Y = A + b\,X \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \quad (2)$$

Whereas:

Y is the change in percentage in import of goods taking 2010 as base.

X is the Libyan oil exports in million barrels.

iii) Impact of Oil export on Libyan government budget and government expenditure.

$$Y = A + bX \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (3)$$

Whereas:

A is the fixed expenditures from other sources

Y is the estimated government budget.

X is the value of oil export used to finance government budget.

iv. Impact of Oil export on Investment. Simple linear equation is used to draw the relationship based on the variables of the equations.

$$Y = A + bX \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (4)$$

Whereas:

Y is the estimated value of the domestic product in billions;

X is change in the percentage of the total government expenditure with respect to GDP.

Correlation Analysis of Libyan economy (selected indicators: GDP, GDP / cap, export, import, government revenue and expenditure) on the development of oil prices and particularly on the volume of realized exports of oil was processed using basic statistical and mathematical indicators: Chain index, GEOMEAN - geometric mean, chain indices (in order to obtain the average rate of growth / decline in the period), correlation, determination index and functional elasticity (calculated on the basis of simple linear regression (individual logarithms were applied to data values representing the development of individual variables) which models the relationship between one endogenous variable (GDP, GDP /cap, Export, Import, government revenue and government expenditure) and one exogenous variable (the price of oil, the value of oil exports)). Individual regressions were confirmed at a significance level of alpha = 0.05. In addition to the above indicators, the analysis also focused on the problem of stability of development of values representing each analyzed time series - in this respect there is calculated an average deviation followed by a proportion of the average value of all the data representing individual time series. Following are the formulas used.

1) **The equation of the correlation coefficient is:**

$$\rho_{x,y} = \frac{Cov(X,Y)}{\sigma_x \cdot \sigma_y}$$

where x and y are the sample means MEAN (field1) and MEAN (array2)

2) **The equation for the geometric mean is:**

$$GM_{\bar{y}} = \sqrt[n]{y_1 y_2 y_3 \cdots y_n}$$

3) Simple linear regression is defined by the following relation:

$y = mx + b$

where the dependent y-value is a function of the independent x-values. The values of m are coefficients corresponding to each of the values of x and b is a constant.

4) The Coefficient of Determination - r-sqrd (Goodness of Fit)

The coefficient of determination (R^2) indicates how well data points fit a line or curve.

The R^2 value is equal to the square of the simple correlation of x and y in simple regression. R^2 can be interpreted as the fraction (or percent if multiplied by 100) of the total variation in the outcome that is "accounted for" by regressing the outcome on the explanatory variable. R^2 -value varies from 0 to 1.

This statistic is also called the goodness of fit of the regression line. The most general definition of the coefficient of determination is:

$$R^2 = 1 - \frac{SS_{res}}{SS_{tot}} \qquad (5)$$

where SS_{tot} is the total sum of squares (proportional to the sample variance);

$$SS_{tot} = \sum_i (y_i - \bar{y})^2 \qquad (6)$$

and SS_{res} is the sum of squares of residuals, also called the residual sum of squares.

$$SS_{res} = \sum_i (y_i - f_i)^2 \qquad (7)$$

R^2 -value varies from 0 to 1. The value of the coefficient of determination of zero means that no benefit is gained by doing regression.

5) The equation for average deviation is:

$$\frac{1}{n}\sum|x - \bar{x}|$$

6) Base index

The relative value of time evolution which is based on an observation in the basic time.

$$b_T = \frac{x_T}{x_0}, b_T = r_1 r_2 r_3 \cdots r_i$$

7) Chain index

The relative value of time evolution which is based on an observation in the previous period. $r_T - \frac{x_T}{x_{T-1}}$

1.7 Thesis structure

The study adopted a case study framework on the Libyan economic growth with respect to its oil exports. Similarly, the research will attempt to investigate the current and expected relationships between oil exports in the country and economy growth. By taking the Libyan petroleum export and the growth of GDP as the case study, the research will investigate ways through which the country will realize economic sustainability while relying entirely on oil rents. **Therefore, the study will be divided into Seven chapters as follows:**

Chapter one which is the general introduction of the entire study comprises of the statement of problem, objectives of the study, importance of the study, hypothesis of study and the methodology. **Chapter two** is providing a literature review to consider the critical points of current knowledge including substantive findings, as well as theoretical and methodological contributions that are particularly relevant to the topic. **Chapter three** is providing an overview of the Libyan economy before and after discovery of oil. Particular focus is given to the characteristics of the Libyan economy. This chapter consists of three sections. Section one reviews the Libyan social characteristics. Section two reviews an over view of Libyan economic sectors. Section three reviews the macroeconomic of Libyan economic. **Chapter four** deals with oil development and oil production and gives detailed description of the historical background of oil sector, performances of oil export, its contributions, challenges faced by the oil sector and other related issues to oil sector. **Chapter five** the purpose of the chapter is to shed some light on oil development and it is impact on a key number of macroeconomic variables for the Libyan economy the impact of such as the budget of the government, expenditure, trade and investment. **Chapter**

six will assesses the impact of oil export on Libyan economic by review of practical literature analyzing the macroeconomic process. **Chapter seven** presents the simulation results of the base macroeconomic model developed in chapter five, as will to summarizes existing gaps in the literature and highlights the policy implication and recommendation.

CHAPTER TWO

REVIEW OF LITERATURE

2.1 Introduction

Many researchers spent a great deal of their time looking into trade and trade related problems. It was only recently during the 1973 oil embargo by Arab countries that some researchers came to realize the effect of differences in oil exports in the light of activities of oil producing economies. The main aim of this chapter is to review the related literatures essential to the theme chosen for this research work to this research. The aim of this thesis is to determine to what extent that the Libyan economy has been affected by oil export. It will thus examine the relationship that exists between exports and economic growth as this in general has become a hot topic within the economic circles whenever economists attempt to explain the different economics growths taking place in a number of nations.

Several academic studies have documented the positive effects export expansions have in the growth of many countries' economies. Over the past several years, economics have taken more interest and thus paying more attention to import substitution and rising domestic demands and the way such factors affect the economy. The arguments of economists recently have centered on exports having a significant effect on the growth of the national economy.

2.1.1Theoretical background

Some theoretical foundations are needed on the relationship between exports and output growth in econometric model speciation. First, the advocates of the export-led growth hypothesis claim as follows. A rise in demand for exports fosters specialization, learning by doing, improvements in entrepreneurial, management techniques, skill and technology, and the economies of scale in the export industry and the real-location of resources from the nescient non-trade sector to the nescient

export sector, thereby enhancing productivity and output growth, as argued by Ben-David & Loewy (1998), Giles & Williamson (2000), Kugler (1991), Lal and Rajapatirana (1987), Yaghmaian (1994), and others. In contrast, the supporters of inward-oriented trade policy or the opponents of the export-led growth hypothesis argue that export-led growth strategy cannot succeed because of the worsening of international terms of trade (Prebisch (1962) and Emmanuel (1972)) and insufficient and unstable demand for developing countries' exports in the world market (Adelman (1984), Jade (1985)). Other dissenters of the export-led growth hypothesis insist that there are other factors to ex-plain the economic growth of developing countries more appropriate than exports. They assert that exports can be supported only by a sound domestic production basis, which is established by the growth in primary inputs and the productivity enhancement of those inputs as in Krugman (1984), Lancaster (1980), among others.

Lastly, the bi-directional or feedback relationship between exports and output growth could exist. That is, increased exports boost output through specialization, scale economies, and productivity improvement, and in turn output growth leads to expanded exports by promoting further specialization, scale economies, cost reduction, technical progress, and comparative advantage, creating an interactive mechanism, as argued by Bahmani-Oskooee et al. (1991), Bhagwati (1988), Helpman and Krugman (1985), Konya (2006), and others.

Several studies address the importance of exports on economic growth. The findings of these studies reveal that exports positively affect economic growth. We can sum-up these studies that have addressed the issue of causality between exports and economic growth as below:

The link between exports and growth in the economy in the UAE Between 1980 - 2010 was analyzed by Kalaitzi, 2013. The findings involved the double step Engle-Granger co incorporation trial and Johansen co incorporation method ascertain whether there was a link or not.

Furthermore, the findings involved a Vector automatic deterioration type to achieve an Impulse reaction utility and Ganger interconnection test to check the

connection between exports and economic development. A connection was discovered between factory-made exports, main exports and economic advancement. A rise in oil exports would therefore lead to growth in UAE's economy.

In 2013, Ahdi examined the vibrant relationship between the above by linear and nonlinear Ganger connection tests. Annual South Africa figures on real GDP and exports were used between 1911 and 2011. The linear outcomes indicated no major relationship between exports and GDP. Hiemstra and Jones (1994) nonlinear connection test showed a one-way connection form GDP to exports while Diks and Panchenko (2005) test showed a two-way link.

In 2009, Kim and Lin studied the effect of export structure on economic development which showed that their contribution is similar. Many growing nations rely on exports of raw goods, which experience changes in value. This group of exports mostly had insignificant effect on the economy's advancement. On the other hand, factory-made exports had positive impact on the growth of the economy.

In 2009, Ullah et al examined Export-guided development using period sequence econometric methods for Pakistan in between 1970 and 2008. Results on the paper revealed that increase in exports promotes rise in economy. An observation was also made on the nature of the connection between actual exports, real imports, actual per capita income, actual gross fixed capital creation and the economic advancement. The older Granger connection test indicated that there existed a one-way link between economic development imports and exports. Granger connection over vector fault rectification was also examined using the model's F-figure and the T-figure of the rectification term, where the outdated Granger's connection test is somehow resolved.

In 1995, Sachs and Warner demonstrated a heavily damaged connection between the actual GDP rise and ratio of exports from natural resources to the GDP in a try-out for 97 growing nations from 1970 to 1989. This sour connection remains intact throughout even when other factors that impact on economic progress like the original per capita income, administrative backing and trade regulations are taken care of. In the year 2001, Sachs and Warner furthered their study and involved other physical variables in an effort to substantiate deeply the disadvantage of having the

natural resources. They compiled data from the different states such as Iran, Arabic Gulf's states with oil, Venezuela and many more. The statistical figures employed were actual growth per individual from 1970 to 1990 to represent the dependent variable, GDP's record in 1970, an interface variable between the original pay and an openness variable, and exports from natural resources as a percentage of the GDP. It's discovered that the physical variables have less influence on the limitations of having natural resources. It's also proved that economies with natural resources in plenty are more expensive and therefore experience a fall in exports and subsequent fall in export-guided development. In 2001, Auty proved that advancement in non-oil economies is higher than that in oil-rich economies.

A thorough hypothetical and experimental writing to inspect the link between innovation and creation of a natural resource has been established. It offers varied descriptions on how the resource blasphemy takes effect. There are two main descriptions stressed in the writing. The first description says that the natural treasure causes disagreements during its exploitation causing bad officiating hence reduced growth. The dispute present here is on the lump sum amounts of income made which raises impulses from the concerned individuals like state officers or the investors to begin participating in wrong acts such as frauds, greed or even public disputes as it once happened in Nigeria (Hausmann and Rigobon, 2003). This act brings about economic downfalls and administrative disasters like a ruined production of resources that are not natural, inflation, weaker bureaucracies and therefore limited growth. Organizations have a key responsibility in influencing the state to embrace and pass laws which may somehow eliminate the negative impact on the economy's progress (Rodrick 2003). Firm organizations in other nations can pass reasonable regulations to tackle the blows and uphold the rise in economic status. Absence of such organizations leads adoption of weaker plans making the undesired impacts to prolong.

Secondly, the writing describes the issues coming up due to thriving of the resource and instability of the proceeds to be the main reasons for bringing about a resource blasphemy. Reduced progress in the non-resource area could be influenced by plenty of natural resources. This can be an explanation to the concept that success in one business area such as the natural resource leads to a down fall in the other

business areas such as the production sector. Proceeds collected from the oil sector leads to increased real rates of exchange, and thus the efficiency of the non-resource business sector is lowered and destabilized. Positive economic progress is hindered in the business sector that is still low by shifting the necessities of production to the booming natural resource business sector.

2.2 Conceptual Literature

2.2.1 The concept of export

- **Export:** is defined as those goods and services transacted across a country's border for the primary purpose of earning foreign exchange.
- **Types of export:** Export is of two kinds – visible and invisible.

-Visible exports: These are tangible good sold across the border of the country to earn foreign exchange. Visible exports can be seen with the naked eyes and touched with the human hands. They are in the form of crude oil, coal, tin, textiles, electronics, palm oil, cotton, etc.

-Invisible exports: These are intangible good that cannot be seen with the naked eyes or touched by the human hand. These are forms of services, and their values are determined by their costs. Invisible exports come in the form of insurance, banking services, insurance, consulting services, tourism, and etc.

2.2.2 Crude oil export: This a country's excess oil sent to other countries across the border to earn foreign exchange.

2.2.3 Types of crude oil export in Libya

Libyan crude oil is of Brent blend quality used as standard for setting the price benchmark for the trading of crude oil in the world oil market. Brent blend crude oil is of the highest quality and is found in oil wells of the North Sea off the coast of Britain and Norway, in Nigeria, in Libya, etc. Half of the traded crude oil of the world is of Brent blend quality making it the inevitable choice for setting the standard for world's crude oil benchmark prices.

2.2.4 The concept of economic growth

There are these hidden feelings which are sometimes expressed vocally that in actuality, many of the words used when expressing the idea of growth are words borrowed from the field of biological sciences (Kuznet, 1947). If this theory turns out to be accurate, it then means that these words are only analogous in economic context thus, further suggesting that the components in the field of economics could be conceptualized as the growing of vital organs.

Many similar analogies of this concept can be found in many literatures in the field of social sciences. Social Darwinism, for example, became important because its concept developed social theory. It is also well known that Social Darwinism directly affected the concept of evolution in a holistic manner especially to those are critics of traditional economic theory (Hofstad, 1955). It is also very clear that similar concepts influenced many economists especially those who are in the main stream of economic theory development. This is the only plausible way to explain the organic overtones found in many passages of classic economic theories. One good example comes from the categorical declaration of ALFRED MARSHAL: Progress" or "evolution" as well as industrial or social do not come about in the concept of increase or decrease. Such is rather the result of organic growth subdued and limited but sometimes changed by the deteriorating of the many economic factors which are either singly or collectively influenced or become influenced by surrounding events. The extent to which any of these elements influence depends on the stage that it has reached in growth and development (Marshal, 1956).

There are many concepts of economic growth as there are many ways of measuring them. However, growth in economic growth is generally defined with regards to an economy's ability to sustain productivity in a long term. Normally, economic growth is measured by actual growth in the country's Gross Domestic Product GDP. This is characterized by sustainable or balanced growth. There are other growths such as those measured in terms of wellbeing. Such growths are more akin to fulfilling welfare objectives and as such are more difficult and complicated to measure. With all these concepts, economic growth can then be defined as either a growth in income, real national output, or real GDP Growth. It is the percentage change occurring over a time period of one year of actual GDP.

There are two way of measuring GDP Growth. It can be measured as demand which is the expenditures incurred on goods and services, or it can be measured as supply which is produced goods and services. Sometimes, the growth of demand in goods and services can grow larger than supply especially when borrowing is involved, but this can be offset by income derived from the supply of goods and services (Kew, 2011).

2.2.5 Types of growth

Growth in output is classified into three major categories:

1. Growth through increased input in terms of labor and capital input. This type of growth could not continue indefinitely otherwise the economy will be hit by diminishing marginal returns.
2. Growth through improvements in productivity. These are the technological innovation required to improve long term standard of living.
3. Growth domestic product: This is defined as any product manufactured within a country's territory no matter the nationality of the manufacturer. For example, all goods and services produced within Libyan territory are part of Libya's domestic products even if a foreign national such an Egyptian basing his business enterprise in Libya is the one producing such goods or services since the output produced in this case is part of Libya's GDP. GDP is usually calculated with no deduction made to take care of depreciations of goods and services.

2.2.6 Types of gross domestic product (GDP)

1. Nominal GDP: This (GDP at current factor cost) is equivalent to a nation's GDP without indirect taxes net and subsidies.
2. Real GDP or GDP of the 2003 constant prices is equivalent to the GDP of the 2003 market prices reduced by the indirect taxes, net of subsidies. This will accurately give the measurement of the country's economic performance after inflation has been accounted for.
3. The GDP at current market prices is equivalent to the GDP at current factor cost when indirect taxes, net of subsidies have been factored in. This is the actual GDP at real market prices which customers pay for what they purchase in terms of goods and services.

4. The GDP at 1990 market prices equivalent of the 1990 factor cost added to the indirect taxes net of subsides.
5. Oil rent: This is defined as the international market crude oil price, multiplied by the quantities of oil.

6. Rentier States: These represent such economies that obtain most of their revenue incomes from external rents. The money derived from such rents goes directly to the state coffers or their leaders (Beblawi and Luciani, 1987).

2.3 Economic Growth Theories

There is a large part of economic theory analyzing the causal relationship between exports and economic growth. Ultimately, it is accepted that exports are a major determinant of economic growth as such an increase of exports leads to a subsequent increase in economic growth. Nevertheless, there are some other indirect factors that impact on the causal relationship of exports and economic growth.

In 1817 Ricardo did a study and determined that a higher level of national wealth is experienced as a result of trade facilitating products output with a comparative advantage within the country. However the causal relationship between exports and economic growth is less convincing according to recent empirical studies. This has been attributed to the focus on the methods that are used for economic growth via trade expansion as opposed to the causal relationship of exports and economic growth.

Basically, the priori argument propounded is that export expansion contributes to economic growth hence increasing the percentage of gross fixed capital formation as well as the productivity factor. The marginal productivities factors are anticipated to be higher in the exporting sector than the economic sectors precisely when there are incentives for investment of growth such as technology advancement.

Considering that the ratio for exports to gross domestic product exemplifies an open economy index it them means that a higher ratio is representative of a higher open economy. Subsequently, a lower ration in exports to gross domestic product is an indication of a more closed economy characterized by limited trade policy.

According to Solow (1956) there is more cumulative capital per work when there are larger investments and saving rates. Consequently Tyler (1981) upon conducting a study with a sample of 55 developing countries established that the main determinants of economic growth are exports and investments.

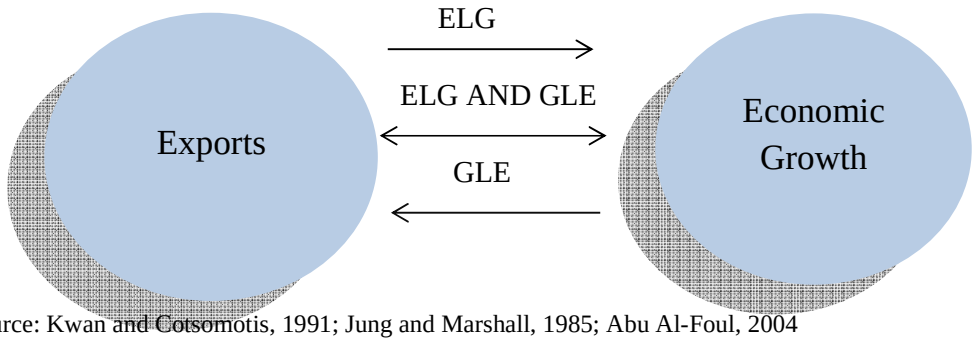
The significance of investments, human and physical capital in the long run quest for economic growth is stressed by newer economic growth theories. The long run economic growth is determined by the national policies that affect the level of growth as well as the investment efficiency.

From a theoretical standpoint, the gross capital formation affects the economic growth by either Plossner (1992) increasing the physical capital stock in the national economy directly or Levine and Renelt (1992) promotion of technology indirectly.

2.4 The causality between export and economic growth

A number of previous studies investigate the causal relationship between exports and economic growth. Most of these studies conclude that there is an unidirectional (ELG- Export-led growth)or a bidirectional causal relationship of ELG and GLE (Growth-led exports) and economic growth in developing countries (Balassa, 1978; Thorton, 1996; Al-Yousif 1997; Edwards, 1998; Abu Al-Foul, 2004; Albeydi et. al, 2010). In contrast, other studies argue that causality runs from growth to exports (GLE) or indicate no causal link from exports to economic growth (Kwan and Cotsomotis, 1991; Jung and Marshall, 1985; El- Sakka and Al- Mutairi, 2000). Figure (2.1) presents the causal relationship between exports and economic growth.

Figure (2. 1): The causality between exports and economic growth



Source: Kwan and Cotsomotis, 1991; Jung and Marshall, 1985; Abu Al-Foul, 2004

Some papers in development economics showed the lack of positive externalities coming from natural resource sectors (Neary and Van Wijnbergen 1986, Gelb 1993,

Auty 2003); analyzed the failures of resource led development. These papers suggested the economic and political factors that may have played a role in the disappointing performance of resource abundant economies. Berg et al. (1999); analyzed the adverse role of natural resource endowments on growth and manufacturing exports. There were effects of this theme also in the Dutch disease models of the 1970s and 1980s. Dutch disease models demonstrate that the existence of large natural resource sectors will affect the economy via wealth effects pull resources in and out of non-traded sectors (Sachs and Warner, 1997). Sachs and Warner 1997; determined economies with abundant natural resource have tended to grow slower than economies without substantial natural resources. Michaels (2003) showed that economies with abundant natural resource have not resulted in an economic development curse in the southern US.

2.5 Literature related to the positive effect of export on economic growth

Philippot (2010) indicated that natural resources have a positive effect on economic growth in transition countries, against the above studies. According to her survey; Esanov, Raiser and Buiter (2001) found that the probability of reform decreases as oil rent increases on oil abundant transition economies (Azerbaijan, Kazakhstan, Turkmenistan, Uzbekistan). Their conclusion states that oil wealth attracted foreign direct investment which generates positive externalities to the whole economy. Ahrend 2002 provides evidence that Russian regions in abundant oil grew faster than resource poor regions in transition economies. Uri 1995 find evidence of a curse of natural resources in transition countries. Reynolds and Kolodziej (2008) tested whether the fall in Soviet GDP caused the oil production decline or whether an oil production decline caused the fall in GDP. Brunnschweiler (2009) investigated the impact of oil on economic development in the transition economies during 1990 and 2006 periods. Her results tend to show that oil (production/reserves) has a strong positive effect on economic growth.

Alexeev and Conrad (2011) also find little evidence of a resource curse among the transition economies. Transition economies with abundant natural resource do not seem to perform worse. Behmiri and Manso (2012) analyzed the relationship between oil consumption and economic growth for Organization of Economic

Cooperation and Development (OECD) countries and found that there is bi-directional causality between them.

Al-Mulali (2011) Binti and Sab (2012) analyzed the cointegration relationship between oil consumption and economic growth for Middle East and North African (MENA) and Sub-Saharan African countries respectively. These papers found the cointegration relationship between oil consumption and economic growth both in the short run and in the long run for these countries.

In addition, there are also some studies that assessed the effects of export on the economic growth, particularly those of developing countries. These studies emphasized on the contrasts existing between developed and developing nations. Such studies made conclusions that export expansion is what helped in driving high the economic growth of developed nations. This can further be explained in the light that developing nations do not have that characteristics of political and economic stability and do not make provisions for incentives for capital investments which developed nations enjoy (Kohli and Singh, 1989; Levine et al., 2000; Vohra, 2001; Lee and Huang, 2002; Abou-Stait, 2005; Kim and Lin, 2009).

There are other studies such as Myrdal (1957), Michaely (1977), Tyler (1981), Feder (1982), Balassa (1985), Fosu (1990), Abu-Qarn and Abu-Bader (2004) that conducted investigations on the effect that export composition had on economic growth. A good number of developing countries depended on exports of basic goods which suffer a lot from massive price fluctuations. On the other hand, production in some countries like Egypt depended heavily on the import of raw materials which could affect the economic performance of such countries.

Rangasamy (2008) researched on the exports and economic growth relationship for South Africa. From his research, he came up with concluding evidence that unidirectional Granger causality exists in South Africa, and that it runs from exports to economic growth.

Nidugala (2000) discovered the important role of exports in influencing growth during the 1980s. Anwar and Sampath (2000) on their part made an examination of the hypothesis for export-led growth in 97 countries for a period lasting from 1960

to 1992. These countries included India, Pakistan, and Sri Lanka. The researchers discovered evidence of unidirectional causality in the courtiers of Pakistan and Sri Lanka while none was discovered in India. But Kemal et al (2002) were able to discover positive link between exports and economic growth in India and some South Asian economies.

2.6 Literature related to disadvantages with over-reliance on oil exports

Despite the surprising increase in oil production and exports, Libya's economic stability is at stake in case of socio-political instability as experienced in 2011. One of the major disadvantages with Libya's overdependence on oil exports is vulnerability to recession. The country's major markets are in the EU, some of the world's greatest economies such as Germany and China. In addition, most of European countries are first world countries and in case of instability in their economies, there are possibilities of affecting the economy of Libya (Aldroish, Khajiji and Alkdar, 2005). In case of recession in one of the country's main importers of oil and other hydrocarbons, there are possibilities of having the Libyan economy being greatly affected by the recession.

Another disadvantage of oil as the major economic driver is fall in demand for oil due to alternative sources of energy. Many developed countries are developing alternatives to fossil fuel due to the associated pollution and environmental degradation. Petroleum products are associated with causing major pollution, due to emissions of carbon monoxide and other toxic gasses into the atmosphere (Glyfason 2001). Similarly, hydrocarbons are also blamed for creating toxic atmospheric reactions, and to prevent this, many countries are searching for alternative sources of fuel. If the major market countries shift to alternative sources of fuel, the market demand will decrease, leading to a decrease in the country's GDP. Being the major contributor to the country's GDP, any fluctuation in the oil market is deemed to affect the country's economy (Lefton and Weiss, 2013).

Furthermore, another disadvantage is associated with the fact that income elasticity of demand for primary products is usually low and for this reason there are possibilities of worsened terms of trade (Auty and Miksell 2000). There is also uncertainty over the sustainability of the product, especially since there are estimates

on the average duration of expected oil production. Unlike other natural resources, oil is not sustainable, since it depends on the amount of oil in the oil reservoirs. It is a limited resource, which depends on the rate of drilling and the market demand (Ploeg and Venables 2009). In Libya, there are insignificant attempts to invest in other parts of the economy. Although the most of the country is a desert, proper management of resources can help in diversification of the economy, thus providing an alternative contributor to the country's GDP.

One of the major concerns in the country is the health of the hydrocarbon industry (Edwik 2007). In the 1990s, the Libyan economy was having a slow increase in its GDP, especially due to the stable prices. In the start of the 21st century, the country enjoyed rapid growth mainly due to rise in oil prices and stability in the global oil market. As of 2005, Libya was estimated to have annual government expenses amounting to over $15 billion (Dixon and Monk 2011). This estimate is inclusive of capital expenditures which average at around $5 billion. The government revenues, which are estimated at around $25 billion, are almost entirely from oil exports. It has been estimated that oil contributes to more than 90% of the entire government resources (Sachs and Warner 1995). This means that the country operates from oil exports, which are expected to increase to over 2 million barrels a day, if investors are assured of security and if political stability resumes in the country (African Development Bank, OECD, and UNDP 2012). Although there are major international investors in the country, there are five local refineries, which have a combined capacity of over 350, 000 barrels daily. The biggest refinery is the Ras Lanuf Refinery, which has the capacity to refine 220, 000 barrels of oil per day, and it is closely followed by Zawia refinery in terms of capacity.

Lack of economic diversification makes Libya unique against its similar oil exporters in North Africa. Unlike Algeria and Egypt, Libya has insignificant dependence on agriculture and any other industry that can sustain economic growth. Lack of diversification even after attempts by Gadhafi's regime to invest in other ventures makes Libya a pure oil economy (Alfitouri 2004). Towards the end of the 20th century, there were attempts to diversify the country's economy, but there were many hurdles, which subjected diversification into a long-term initiative. In 2006, Libya was ranked ninth out of 20 in the greatest oil reserves ranking by countries.

From the above analysis, it's evident that Libya relies entirely on oil for its economic stability. When civil unrest started in 2011, the country's economy was greatly affected, due to closure of oil companies and fleeing of investors (Brunnschweiler and Bulte 2008). It had been predicted that country would experience economic difficulties after the civil unrest, but rather, there has been one of the greatest and most surprising rebound after Gadhafi's death. Although the country is expected to take longer to reach its initial production of over 3.5 million barrels a day, there is hope caused by the new regime. In addition, the economic boost from western countries is expected to help in diversification and in sustaining economic growth in the coming years. Although there were damages to infrastructures and other industries during the civil unrest, it's expected that the country will use its oil resources to restore developments.

It's therefore, clear from the above literature review that the evidence regarding exports-economic growth nexus is rather ambiguous and mixed. A number of studies support the export-led economic growth while others do not.

Furthermore, studies on this issue in the context of Libya are only a few, and again provide mixed evidences. Also, the literature lacks studies including the period of recent years. Therefore, this study will an attempt to re-investigate the oil exports-economic growth nexus for Libya considering the period of recent. This study will provide the useful information helpful to Libyan economy. It can serve as a reference to subsequent research works on the issue 'exports-economic growth nexus' in the context of Libya.

2.7 Literature review on impact of oil exports on trade of oil-producing countries

Metwally and Daghistani (1986) raised some points in declaring that in industrialized countries, oil prices and economic growth are factors that determine the present export proceeds in all GCC member countries. The researchers argued that imports of GCC member countries do not influence industrialization in industrialized countries.

Salvatore (1983) on his part discovered the positive link between trade and growth. He was not as pessimistic his conclusion as some of the views that considered trade to be a retarding force in terms of development. But his views, on the other hand, are not as optimistic as the views of those who considered trade as an engine of growth.

Tamaschke (1988) also conducted a test lasting from 1955 to 83 on the interaction of the Australian economy and the result derived suggested that exports exerts a strong effect on the Australian income while imports had little effects on its exports.

Lee (1989), during the period starting 1952 and ending 1985 made a study of trade interdependence. Lee thus made a conclusion that the GNP equation logarithmic form, the labor force coefficient, and that of exports are all very important. Another conclusion he made was that the US imports and GNP are the two most significant factors pushing Taiwanese export models. These exports do not depend on the economic conditions prevailing in Japan since the imports are significantly based on the condition of the GNP and delayed imports and exports.

Tamascke (1990) conducted a study that tested the link between exports and income of Queensland and Alberta for the period lasting from 1961 to 83 with results concluding that a strong relationship existed between exports and income. The study also discovered that growth in services were very delicate issue when it comes to export growth. Both cases had no evidence of feedback effects.

Salehi Esfahani (1991) on his part conducted a test in 31 semi-industrialized countries to determine what their interdependence of exports, GDP and imports were. The test was conducted during the periods 1960 to 73, 1973 to 81, and 1980 to 86. The finding concluded that semi-industrialized countries on the average do not suffer import shortage since the exports provide them with enough foreign exchange to cushion any effect of input constraint.

Metwally and Vadlamudi (1992) conducted a study where he assessed the trade relationship of Australia with fifteen countries of Middle East during the period lasting from 1971 to 88 and discovered that Australia's imports from the countries of the Middle East never affected its income. However, no feedback was

ever made on the small shares owned by come Middle East countries in the Australian market. Sprout and Weaver (1993) conducted a study for the purpose of testing export-growth relationship. The two researchers discovered wide variations regarding the effects that export growth had among different LDC countries. Another finding they made was that of export sector structure playing a vital part in economic expansion. The researchers then concluded that primary exporters who are unable to diversify would definitely experience shrinking economic growth even with increase in export than those primary exporters who made the decision to diversify their export products.

Metwally (1993b) conducted a study of ten Asian countries where he looked into their trade interdependent and economic development from 1974 to 88. The result of his study indicated that to some extent, these countries under study had some degree of interdependence with each other and with the rest of the world in terms of economics. Perdikis and Asseery (1994) on their part made an assessment of the trade relationship Cyprus had with and the United Kingdom, the European Economic Community (EEC), and the GCC countries during the period beginning in 1965 to 1987. The two researchers discovered that Cyprus' exports to UK, EEC, and GCC countries are important factors that determined its income. The study also concluded that Cyprus' exports to UK, EEC, and GCC countries are heavily influenced by the income of these trade partners. Another finding was that the income of these trading partners of Cyprus is affected by the exports they made to the rest of the world that excludes Cyprus while Cyprus income is affected by the imports it made from its trading partners. The econometric results of the studies conducted by Metwally and Tamaschke (2001) on trade links between the GCC and the EU tend to suggest a significant feedback effect between their rate growths.

CHAPTER THREE

LIBYAN ECONOMY DEVELOPMENT CHARACTERISTICS

3.1 Introduction

At the time of independence, the Libyan economy was based mainly on agriculture, which was divided more or less evenly between field (including tree) crops and livestock products. Agriculture provided raw materials for much of the country's industrial sector, exports, and trade; employed more than 70 percent of the labor force; and contributed about 30 percent of the GDP, dependent on climatic conditions.

During the decade after the discovery of petroleum, 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 labor 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 after 1965 perhaps especially after 1967 it appears not to have been attacked conceptually, at least not with fervor, until after the 1969 change of government.

Libya's economy is structured primarily around the nation's energy sector, which generates about 95% of export earnings, 80% of GDP, and over 90% of government income (CIA 2014). Substantial revenue from the energy sector coupled with a small population give Libya one of the highest per capita GDPs in Africa, but Tripoli largely has not used its significant financial resources to develop national infrastructure or the economy, leaving many citizens poor. In the final five years of Qadhafi's rule, Libya made some progress on economic reform as part of a broader campaign to reintegrate the country into the international fold. This effort picked up steam after UN sanctions were lifted in September 2003 and after Libya announced

in December 2003 that it would abandon programs to build weapons of mass destruction. The process of lifting US unilateral sanctions began in the spring of 2004; all sanctions were removed by June 2006, helping Libya attract greater foreign direct investment, especially in the energy and banking sectors. Libyan oil and gas licensing rounds drew high international interest, but new rounds are unlikely to be successful until Libya establishes a more permanent government and is able to offer more attractive financial terms on contracts and increase security. Libya faces a long road ahead in liberalizing its primarily socialist economy, but the revolution has unleashed previously restrained entrepreneurial activity and increased the potential for the evolution of a more market-based economy.

3.2 Libya geography and climate

Libya is fourth in size among the countries of Africa and seventeenth among the countries of the world. Its coastline lies between Egypt and Tunisia. Although the oil discoveries of the 1960s have brought it immense petroleum wealth, at the time of its independence it was an extremely poor desert state whose only important physical asset appeared to be its strategic location at the midpoint of Africa's northern rim. It lay within easy reach of the major European nations and linked the Arab countries of North Africa with those of the Middle East, facts that throughout history had made its urban centers bustling crossroads rather than isolated backwaters without external social influences. Consequently, an immense social gap developed between the cities, cosmopolitan and peopled largely by foreigners, and the desert hinterland, where tribal chieftains ruled in isolation and where social change was minimal.

Libya is a country in the northern part of Africa that stretches 1,760,000 square kilometers along the Mediterranean coast. It is the fourth biggest country in Africa, and the fifteenth largest in the world. There are five different climatic zones that can be found here, but the two dominant ones come from the influences of the Sahara Desert and the Mediterranean Sea (Country Studies). It is in the costal lowland where the Mediterranean climate can be found. There, temperatures are calm with warm summers and mild winters. Word Travels, an informational traveling guide website, states that temperatures are the most manageable between June and

October, especially in the coastal areas where the weather stays around 80 degrees. The weather is cooler in the highlands and erotic weather can be found in the desert interior. In the desert, the summers can be very hot and the temperature range from day to night is very extreme. The Ghibli desert is so harsh that it can reach temperatures of up to 122 degrees Fahrenheit.

3.3 Population

The population of Libya has changed greatly in the last thirty years. Reports and vital statistics have shown a decrease in infant mortality rate and a positive change in standards of living which has increased life expectancy. Libya among all other countries in the world is considered to have a small population density (Vandewalle, 2011). The country has a population density of over 50 people per km^2, in the two greatest northern regions of the country i.e. Cyrenaica and Tripolitania but the density falls to less than 2.7 people in other areas of the country. Around 90% of the citizens live along the coast.

The majority of the residents live in urban towns and a few percentage of less than 12 percent in rural settings. The population is highly concentrated in four major urban Centers. The four towns are Tripoli, Benghaz, Baydao and Misrata.

Thirty percent of the total population was estimated to be less than fifteen years old before the last census. This is believed to be in a decreasing trend for the last thirty years. Since 1985, there has been a decrease in fertility in Libya. The fertility rate changed from seven children per woman in rate 1980s to three children by the end of the year 2005. This slowed down the population growth rate and also the percentage of the Libyan population under the age of fifteen years (Vandewalle, 2011).

Like many countries, there is population growth over a given period of time. Libya population has been to increase since 1931 up to 2012 when the last census was held. The following table shows the population of Libya for the last census. Population census since 1931 analyzed in this table and will be used to compare with the census results in 2013.

Table (3.1) Population of Libya since 1931 to 2006.

Year	Male (Thousands)	Female (Thousands)	Total Population (Thousands)
1931	_	_	704
1936	463	386	849
1954	564	524	1088
1964	813	751	1564
1973	1192	1057	2249
1984	1954	1689	3643
1995	2234	2168	4402
2006	2934	2723	5657

Source: UN Libyan population 2007

In every census there has been an increase in population. Libyan population growth trend has been slightly hampered by political systems in the country. Political upheavals have taken many lives and lowered life expectancy among the population. This has lowered the population growth compared to other Africans countries. Large population is significance to development of the nation. They supply cheap labor, which is a primary factor to the production process. A well-established population also provides stable market for finished goods and services. Cheap labor and market for the finished goods is important for the growth of the economy.

Libya population is believed to be the lowest among countries in Africa. Although the country is well supplied with oil as a natural resource, political unrest has led the country to remain among third world. Poor political systems and wars have lowered confidence of investors and this has greatly retarded the economy of the land. The following graph shows the graphical representation and growth trend of Libya population since the first census in 1931 to 2006.

The following data will mostly focus on the population structure of Libya in 2012 Census. Table (3-2) Shows distribution of Libya population (Libyan and Non-Libyan) by age group and sex.

Table (3.2) Libyan population by 2012

Age Group	Male	Female	Total Population
+75	51712	48372	100084
74-70	37885	28922	66807
69-65	39147	38364	77511
64-60	53764	56277	110041
59-55	59005	62691	121696
54-50	97888	96429	194317
49-45	130429	131471	261900
44-40	177416	178155	355571
39-35	216782	215270	432052
34-30	256056	235885	491941
29-25	264294	238716	503010
24-20	264023	243310	507333
19-15	241706	229866	471572
14-10	237767	228158	465925
5-9	285,149	271388	556537
0-4	333016	313756	646772
-	2746039	2617030	5363069

Source: Libyan Information and Documentation Report, 2013

By the end of 2012, when the last census was held the elderly above the age of 65 years formed a proportion of 3.9%. This consisted of 111,144 Males and 106,504 females (Vandewalle, 2011).

3.4 Libyan Economy before discovering the oil at glance

Before oil was discovered in Libya, Libya was one of the poorest and most backward countries in the world. Afterwards, the country still faced a lack of human and financial resources and institutions. British Admiration officials in 1952 estimated the income per head in Tripoli area at $30 to $40 per year (Segal, 1974). This income was subject to fluctuation; it needed to go up in good crop year and

down in drought years. With per capita incomes of less than $40 per year, one would expect level of nutrition and health to be very low.

In 1952, Libya's birth rate was 5.3% per year. The natural rate of population growth was kept down to 1.1% by a death of 4.2% which reflected extremely low health standards.

As illustrated Libyan exports and imports during the 1950s (representing the economic situation during the British and French period) were characterized by increasing deficits. Agriculture products such as groundnuts, almonds, olives and potatoes were main export items.

Table (3.3) Libyan Trade Balance 1950-1960, In US$ mil

year	Total Imports	Total Exports	Trade balance
1950	19.55	10.58	-8.97
1951	33.71	13.22	-20.50
1952	32.59	12.46	-20.13
1953	31.81	9.74	-24.86
1954	31.35	10.75	-20.61
1955	40.26	12.86	-27.40
1956	46.48	11.63	-34.85
19577	78.61	15.16	-63.45
1958	96.60	14.21	-82.39
1959	113.64	12.04	-101.60
1960	169.08	11.29	-157.79

Source: Central Bank of Libya, 1976

In 1958, Table (3.9) shows that the agriculture sector was the main sector in economy, and it contributed about 26.1% of the GDP. The industrial sector represented 11%. However, by 1985, the value of industrial sector had reached to DL 15695, of which 61% was from manufacturing.

Table (3.4) Libyan GDP at constant factor costs, in US$ mil, in 1958

Sector	Value (in millions)	Share in%
Agriculture	38.08	26.1
Petroleum, Mining &Quarrying	10.08	6.9
Manufacturing & Repairing	16.80	11.9
Construction	5.04	3.4
Electrets, Gas & Water	2.24	1.5
Transport & Communicating	8.12	5.6
Hole sale & retail sale	20.44	14
Banking & Insurance	26.60	18.2
Public Administrative Services	18.76	12.8
Total	146.16	100

Source: The Economic Development of Libya.1960, p.294.

The national economy in general suffered from dire underdevelopment in the early fifties. This was exhibited by the low per capita income and the population's living at subsistence level, if not below that level. The spread of disease and low standard of education were the direct causes of that poverty. Industry was non-existent except for some light industries of insignificant value and mineral resources were not known.

Despite the fact that agriculture constituted the major source of living for the majority of the population, it lacked the application of sound scientific methods and the use of modern machinery as traditional methods of ploughing and harvesting prevailed. Therefore, and in spite of its importance as a sector on which the majority of the population depended, agriculture was retarded and greatly affected by several other factors, chiefly by lack of necessary capital investment and of agricultural credit banks that could extend loans to farmers to improve their lot (Ministry of planning 1972).

A new era for the Libyan economy began during the 1960s, through the agreement between the government and the international oil companies. This agreement increased the Libyan share of oil profit to 50%. This introduced profound

changes in the whole economy, not only because of the new and relatively abundant financial resources received by the country, but also because of the changes brought about in the country's economic structure. The development of the industrial sector was accelerated by the establishment of the Agricultural and Industrial Bank, which led to the extension of credit facilities and also by the active participation of the government in establishing some factories. The oil sector became the most important source of finance for industrial development (Badi 1983).

The main exports of the country were agriculture product, livestock, and fish as shown in Table (3.10) with the number of employees as well.

Table (3.5) Value and Number of Employees in the Libyan economy 1958

Sector	Value L.D 1.000	% of total	Number of employees	% of total
Crude oil & natural gas	3449	36.1	3254	19.5
Mining & quarrying	120	1.3	400	2.4
Food, soft drinks & Tobacco	2932	30.7	4272	25.7
Textiles, clothing & footwear	654	6.8	2255	13.5
Woodworks & garniture	283	3.0	899	5.4
Paper, printing & publishing	232	2.4	374	2.2
Leather & Rubber	79	0.8	190	1.1
Chemical, non-metallic product	178	1.9	526	3.2
Basic metals	1150	12.0	4137	24.8
Other	480	5.0	344	2.1
Total Manufacturing	9557	60.9	16651	62.7
Public sector	3569	22.7	3654	13.7
Construction	1808	11.5	5244	19.8
Electricity	761	4.9	1008	3.8
Total Industrial Activities	15695	100	26557	100

Source: Ministry of National Economy, Statistical Abstract 1964

In 1950s. Its economy was extremely poor, and it depended upon foreign aid from various organizations and from countries such as the United States of America, and the United Kingdom. Table (3.11) provides a summary of relevant information. The total GDP of Libya did not exceed 5.5 million Libyan pounds by 1955, and as can be seen from Table (3.11), there was over 50% reliance on foreign aid in some years (World Bank, 1960).

Table (3.6) Summary of Public Finance in Libya for the Period 1954/1959

Item	1954/55	1955/56	1956/57	1957/58	1958/59
Expenses	7,897	12,978	15,433	17,031	19,179
Local Revenue	5,549	7,061	15,433	17,031	19,179
Foreign Revenue	5,641	6,270	4,234	12,069	11,045
Total Revenue	3,293	13,331	15,381	21,664	23,094
Balance	3,293	353	-52	4,633	3,915

Source: World Bank for Construction and Development, pp z; 33.($1 = 0.28 LD) World Bank for Construction and Development (1960), economic development in Libya, April19

3.5 Libyan Economy after discovering the oil

In 1958s, the oil was discovering in Libya, and the exporting of the first shipment of Libya crude oil in September 1961, there was no economic sector in Libya with adequate production and visible resources that could have been expected to raise the standard of living and foreign trade imbalances. In 1962, the situation had changed dramatically and since then profound structure changes have taken place in all fields; economic, political, and social (Allan 1983).

3.5.1 Agriculture

Libya currently exports only about 0.3% of its agricultural produce, including sheepskins as well as the products listed in Table 2.1. Tunisia is its main trading partner for such products. Abidar and Laytimi (2005). Exports of fruit and potatoes are a little over 1% of production. Almost no vegetables are exported, with imports amounting to about 6% of Libya's own needs. Olive oil imports are about 40% of domestic consumption, and are unlikely to have export potential.

The main agricultural consideration in Libya is its acute water shortage, alongside a level of food self-sufficiency that is already low. Agricultural output is already heavily dependent on fossil water pumped from the Nubian aquifer system. Although this could in principle provide a reasonably long term supply, the costs of pumping increasing quantities of water is becoming increasingly uneconomic. Desalination is already being introduced as an alternative, but with costs that reduce the competitiveness of Libyan agriculture.

Table 3.7 Agricultural production and trade by quantity 2004 (1000MT)

Agricultural production	Production	Imports	Exports	Available For Consumption	Balance	Self-sufficiency ratio %
Cereals	296.4	2457.94	0	2754.34	-2457.94	10.76
Potatoes	195	13.13	1.45	206.68	-11.68	94.35
Pulses	7.4	10.05	0.11	17.34	-9.94	42.68
Vegetables	697.5	43.18	0	740.68	-43.18	94.17
Fruits	650	49.46	0.72	698.74	-48.74	93.02
Sugar(refined)	0	56.22	0	56.22	-56.22	0
Fats & oils	37.7	144.59	2.08	180.21	-142.51	20.92
Red meat	81.63	38.34	0	119.97	-38.34	68.04
Poultry meat	105	0.02	0	105.02	-0.02	99.98
Eggs	55	0	0	55	0	100
Milk ,dairy products	230	480.68	0	710.68	-480.68	32.36

Source: AOAD (2009)

Libya is highly dependent on imports for much of its food supply, particularly cereals, and fats and oils. Approximately half of Libya's food needs are supplied through imports. Major suppliers are Tunisia, the Russian Federation, Turkey, the Netherlands and Italy.

Agriculture represents only a small and decreasing proportion of Libya's GDP, but a larger proportion of the workforce. Apart from Lebanon, Libya is the most highly urbanized of the Mediterranean developing countries, but agriculture, forestry and fishing still collectively employ over 7% of the working population.

Table (3. 8) Agriculture, forestry and fishing: Proportion of national economy and workforce

% percent	2002	2003	2004	2005	2006	2007
percent labor force	7.2	6.7	6.9	7.0	7.3	7.6

percent GDP	4.3	3.6	2.8	2.2	2.0	2.0

Source: IMF (2008)

Exports of agricultural goods are extremely small, and they consist primarily in animal and vegetable oils and fats, potatoes and beverages. Production inefficiencies are exacerbated by significant use of agricultural land by urban 'weekend farmers'. Local consultations have confirmed a prolific trade in smuggling subsidized food into neighboring countries, which suggests that much of Libya's agricultural exports do not appear in official statistics.

Table (3.9) Libyan imports by BEC grouping - 2003-2007 (1000 US $)

Import	2003	2004	2005	2006	2007
Food and beverages	870,295	935,066	955,386	1,145,836	1,423,312
Industrial supplies	1,359,603	1,758,154	1,845,125	2,127,214	2,754,194
Fuels and lubricants	336,447	552,181	786,067	829,271	1,207,859
Capital goods	1,578,362	2,203,492	2,058,954	2,397,387	2,731,282
Transport equipment	837,373	874,118	1,035,528	1,715,776	2,180,204
Consumption goods	748,577	925,602	958,648	1,164,375	1,347,014
Goods	49,141	77,524	106,621	88,550	218,552
Total	5,779,799	7,326,138	7,746,328	9,468,408	11,862,416

Source: UN Comtrade Database 2008

3.5.2 Libyan Tourism sector

Tourism as a recognized industry in the world is relatively recent and in Libya it is still to be developed. During the last few years, Libya has witnessed increasing development in the service sector in so far as the number and size of the companies are concerned. This has especially affected the tourism and hotel industries.

Libya has opened its doors for tourism only recently. There has been a successful start to tourism programs, which have given satisfactory results and recommendations. According to the Europa World Year Book (2002), the international tourist arrivals statistics of Libya are not very accurate. Visitors from Arab and African countries who seek working in Libya distort these statistics. In fact, these travelers use tourism as their purpose of visit in order to gain entry to the

country. Therefore, this should be taken into consideration, when studying international arrivals and receipts during the sanction period to 1999.

However, in 2006, the total international tourist arrivals were (125480), showing a huge increase compared to 2005 and 2004 according to data published by the Libyan General Board of Tourism on their Internet Web Site and prepared by (The Information and Statistics Department. 2007).

Table (3.10): International Tourist Arrivals and Receipts (Libya) 2004-2006

Year	International Tourist Arrivals	International Tourist Receipts (US $ Million
2004	42638	2,387
2005	81319	4, 553
2006	125480	2,998

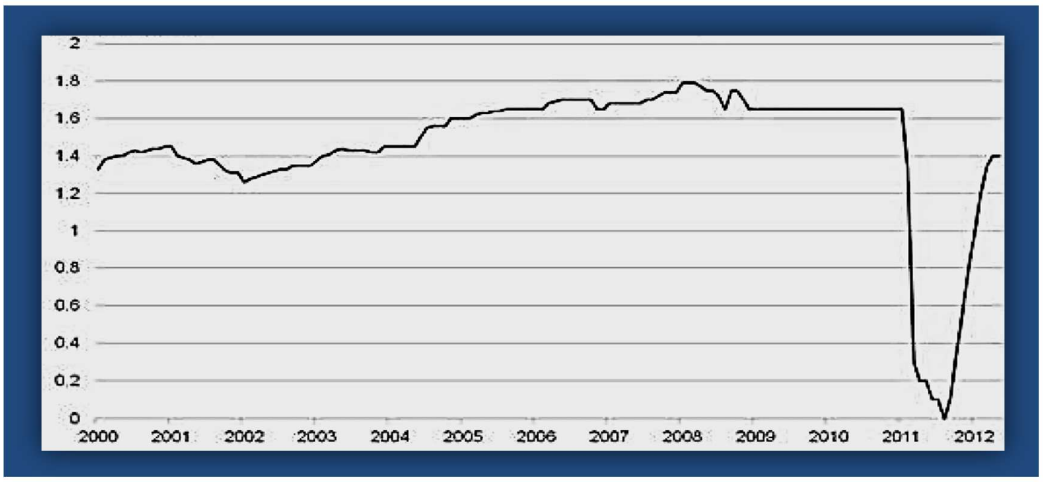
Source: The Libyan General Board of Tourism (2007)

3.5.3 Energy sector

The Libyan economy's dependence on hydrocarbons suggests that the continued recovery of the energy industry will be an important determinant of the country's near-term economic fortunes. According to the U.S. Department of State, oil accounted for approximately 95 percent of Libya's export earnings, 75 percent of its government receipts, and 25 percent of its gross domestic product prior to the political upheaval of 2011. EIA (International Energy Agency) estimates that Libya consumed almost 0.9 quadrillion British thermal units (Btu) of energy in 2010, of which more than 70 percent was from consumption of petroleum and petroleum products and almost all of the remainder was natural gas.

Libya, a member of the Organization of Petroleum Exporting Countries (OPEC), holds the largest proven oil reserves in Africa and is an important contributor to the global supply of light, sweet (low sulfur) crude oil, the fourth largest amount of proved natural gas reserves on the continent, which Libya mostly exports to European markets. Libya's oil production has been impressively restored after months of conflict and insecurity. However, considerable uncertainty surrounds the future of the oil sector and the political regime that will govern it.

Figure (3.1) Libya's **crude oil production, January 2000-May 2012**



Source: Oil world Energy, May 2012

Electricity sector

Electricity generation has more than doubled from 2000 to 2010. Growing power demand, which was greater than gains in installed generation capacity, have led to electricity shortfalls. Libya's oil sector has also been affected by power supply issues, which has compromised production at some of the country's largest oil fields.

According to the latest 2010 World Bank estimate, 99.8% of people in Libya had access to electricity, which is the highest among African countries. Despite the high electrification rate, the country suffers from power outages due to electricity shortfalls, which occurred even before the 2011 civil war, according to IHS CERA. In addition to end users being affected by outages, power shortfalls have also affected production at some of Libya's largest oil fields, including fields controlled by Agoco and Mellitah.

Electricity generation has more than doubled from 2000 to 2010, reflecting high economic growth and greater investment in the oil and natural gas sectors,

particularly after sanctions affecting foreign investment in the hydrocarbon sectors were deposed. Installed electricity generation capacity has not grown as quickly as power demand, which has led to regular power shortfalls. As of 2010, Libya had a total electricity installed capacity of 6.8 gigawatts, made up of power plants that are either fueled by oil or natural gas. Before the 2011 civil war, several power plants were converted from oil to natural gas to lower costs, but most of the country's power plants are still fueled by oil, according to IHS CERA. Improve these policies but its commitment to make Libya more competitive in the global economy.

3.5.4 Financial services

Libya's financial services industry is highly protected. Shares in some of the state banks have been offered to Libyan citizens, and private banks are permitted, but the banking sector has not been opened to foreign institutions. There has been some deregulation of the insurance market but it remains limited.

Experience with financial liberalization in other countries is mixed, and depends strongly on effective regulation. (Brownbridge and Kirkpatrick 2002) .The experience of the Asian financial crisis in 1997, reinforced by the current global crisis, has demonstrated the dangers of financial liberalization which is not supported by a strong regulatory framework. In Africa, it has been argued in the past that restructuring was insufficient to change the behaviour of financial institutions, that uncontrolled fiscal deficits combined with liberalization to increase public debt, and that regulatory and supervision mechanisms were inadequate to monitor the working of the system. (Hodge 2002).

The World Bank's report on Finance for Growth presents a strong case that entry of foreign financial institutions improves the efficiency of the domestic financial sector, strengthens its stability, and increases access to lending small SMEs. However, there are some issues with this study. Domestic banks may be more sensitive than international ones to local cyclical pressures for credit management, and more likely to address gaps in the credit system for disadvantaged groups and regions. (Stiglitz 2002).

Libya's banking system is dominated by four banks which are owned in full or in the majority by the Libyan Central Bank (Jamahiriya Bank, Wahda Bank, Sahara Bank, Umma Bank and the National Commercial Bank). These banks constitute almost ninety percent of Libya's banking sector assets. All of these banks have capital of at least 100 million Libyan Dinars, and two of them (Wahda Bank and Sahara Bank), were in the process of being privatized in 2006. France's BNP Paribas acquired 19% of Libya's Sahara Bank in July 2007, and took operational control of the bank. The deal also includes an option allowing BNP Paribas to purchase additional shares up to 51% of Sahara's capital over the next three to five years. In November 2007, five foreign banks were short listed for the privatization of Wahda Bank, including French, Italian, Jordanian, Bahraini and Moroccan institutions; Arab Bank (of Jordan) was selected. They bid on a 19% of the share of Wahda Bank, with the option to increase their ownership to 51% in three to five years. The Central Bank announced in October 2007 that it would merge Umma Bank and Jamahiriya bank into a single entity; that process was completed in 2008 although there are still branches open under the banner of each bank.

The Central Bank also owns the Libyan Foreign Bank, which operates as an offshore bank, with responsibility for satisfying Libya's international banking needs (apart from foreign investment). In addition, there are four specialized banks owned by the General People's Committee for Finance: the Agricultural Bank, Real Estate Investment Bank, Development Bank and Reefi Bank. There are also four substantial private banks (Bank of Commerce and Development, Amen Bank, Al-Jimaa al-Arabi Bank and Wafa Bank) and forty-eight smaller regional banks. The availability of financing on the local market is weak. Libyan banks offer limited financial products, loans are often made on the basis of personal connections (rather than business plans), and public bank managers lack clear incentives to expand their portfolios. Lack of financing acts as a brake on Libya's development, hampering both the completion of existing projects and the start of new ones. This has been particularly damaging in the housing sector, where particularly small-scale projects often languish for lack of steady funding streams.

The Libyan banking system is currently undergoing a substantial modernization program to upgrade available services/products, deal with large numbers of nonperforming loans, establish a functioning national payments system, facilitate the use of non-cash payment instruments and institute new standards of accounting and training. While foreign banks are technically able to enter the Libyan market under the Banking Law of 2005, the Central Bank has sought to delay their entry until the reform process has taken hold.

- **Specialized Credit Institutions (SCIs)**

As of 2008, SCI's were subject to less stringent supervision than commercial banks which could lead to more risky lending practices. SCIs have been aggressively expanding soft loans and their very low cost of funding have contributed to the depressed lending and deposit rates in the financial system. As part of improving the banking system, this will have to be addressed.

Table (3.11) Commercial Banks Credit to Various Sectors, 2010

Years	Loans to Economic & Services	Housing Loans	GMR Loans*	Social Loans	Total
1998	2290.8	1360.4	373	506	4530.2
1999	2647.9	1459.7	373	723	5203.6
2000	2802.9	1468.9	373	939.2	5584
2001	3156	1436.9	373	1091.7	6057.6
2002	3269.8	1398.1	373	1316.9	6357.8
2003	3549	1472.1	373	1381	6775.1
2004	3194.2	1456.2	373	1486.9	6510.3
2005	2701.6	1426.3	373	1665.7	6166.6
2006	3589.9	1394.4	373	1709.9	7067.2
2007	4544	1419.4	328	1899.9	8191.3
2008	6596.7	1300.7	174.0	2473.2	10544.6
2009	7341.8	1278.8	0.0	3192.1	11812.7
2010	8086.8	1187.2	0.0	3770.6	13044.6

Source: Central Bank of Libya *GMR is the Great Man Made River

3.5.5 Investment

- The investment climate in Libya:

The Libyan economy, including the productive base, has been affected by a number of factors that have curtailed development. Hence, the current investment climate in

Libya is influenced by historical developments in all spheres including the political, social, economic and financial, administrative and legislative. This section examines the Libyan investment climate.

The Concept of Investment Climate:

The World Bank Development Report in 2005 defines the investment climate as s set of location-specific factors shaping the opportunities and incentives for firms to invest productively, (create jobs and labor markets, 2005). The report emphasizes that: government policies and other issues associated with the government administration particularly corruption and lack of credibility could have strong adverse effects on the investment climate, as such issues affect the costs and would cause obstacles preventing fairer competition between the companies involved .

The Libyan government has begun a major program of infrastructural investment since the lifting of sanctions, and aims for a significant contribution from foreign direct investment. Much of the infrastructure is 20–30 years old, and many production facilities lack reliable modern equipment. Amendments to legislation have enabled foreign ownership, but licensing procedures are complex and time-consuming and some key sectors are excluded.

Libya would particularly benefit from investment in modernizing its technological base. In negotiating the provisions of the trade agreement, the country has to draw a balance between attracting such investment and retaining control of industries which it regards as strategic to its future development.

- **FDI in Libya:**

In addition to the direct effects of the FTA on the Libyan economy, its signing is expected to yield additional growth through an increased inflow of Foreign Direct Investments. The Cadot and Tschopp (2009) study attempts to quantify the effects FTA may have on FDI and resulting effects on growth. According to UNCTAD statistics, there has been a very rapid increase of FDI into Libya in recent years which can be seen in Table (3.17)

Table (3.12) Gross FDI inflows, Libya

Period	Amount (Mio. US $)
1990-2000	-6
2004	357
2005	1038
2006	2013
2007	2541
2008	4111
2009	1371
2010	1784

Source: UNCTAD statistics

The FDI represented approximately a quarter of Libya's total investments. By using the EU's trade share as a proxy for their share of Libyan FDI, and using worldwide average estimates for resulting effects of the signing of FTA with the EU on FDI, Cadot and Tschopp estimate the effects of FTA resulting in an increase of FDI by as much as 50%. According to gravity analysis, this could imply an additional 5% in Libya's growth. However, this estimate should be seen as an upper bound for a number of reasons. Firstly, as there is not enough data to conduct gravity estimation for Libya, estimates are based on worldwide averages. Secondly, the FDI data is hard to verify, and thirdly, since Libya exports oil which is imported duty free, the effects of signing an FTA must be accounted to political-economic effects rather than to trade preferences. (Cadot, Tschopp ; 2009)

3.5.6 Trade in Libya

Libya is a signatory of the Greater Arab Free Trade Area (GAFTA) and the Arab Maghreb Union (AMU), with ties to the Community of Sahel–Saharan States (CEN-SAD) and the Common Market for Eastern and Southern Africa (COMESA). It has bilateral trade agreements with Morocco and Jordan, and has applied for membership of the World Trade Organization (WTO). Lindberg et al 2007, Otman and Karlberg (2007).

The country operates a large trade surplus (Table 3.18). Some 97% of exports consist of oil, natural gas and petroleum-based commodities. The remaining 3% mainly consist of agricultural and fisheries products. In 2007, 88% of exports went

to the EU, with Italy as the main destination, followed by Germany, Spain and France.

Table (3.13) Imports and exports of goods and services (Mil. US $)

Export and Import	2004	2005	2006	2007
Exports	20,410	31,358	39,187	44,523
Imports	8,768	11,183	13,062	17,401
Hydrocarbon sector exports	19,533	30,458	38,207	43,395
Other exports	877	900	980	1,128
Services receipts	437	534	967	1,334
Services payments	1,914	2,350	2,862	3,251

Source: IMF (2008)

Libya imports a wide range of industrial and agricultural products. In 2007 18.9% of imports originated from Italy, followed by Germany (7.7%), China (7.3%), Tunisia (6.8%), France (5.7%), Turkey (5.4%) and the US (4.3%).6 China is now Libya's third largest supplier and the second largest after the EU as a whole.

Libya is highly dependent on imports for much of its food supply, particularly cereals, and fats and oils. As can be seen in Tables 3.19 approximately half of Libya's food needs are supplied through imports. Major suppliers are Tunisia, the Russian Federation, Turkey, the Netherlands and Italy.

Table (3.14) Major suppliers of food products to Libya 2007 (Mio. US $)

Exporting country	Trade Value
Tunisia	208,68
Russian Federation	160,83
Turkey	139,74
Brazil	92,35
Italy	92,12
Others	731,64
Total	1425,64

Source: UN comtrade database (2009)

Exports of agricultural goods are extremely small, and they consist primarily in animal and vegetable oils and fats, potatoes and beverages. Production inefficiencies are exacerbated by significant use of agricultural land by urban 'weekend farmers'.7 Local consultations have confirmed a prolific trade in smuggling subsidized food into neighboring countries, which suggests that much of Libya's agricultural exports do not appear in official statistics. Subsidized agricultural products from Libya reach Chad and other Maghreb countries by being smuggling through Tunisia and Algeria.

Libya is a net importer of fish and fish products, a trend that has increased over recent years as exports of Atlantic Bluefin tuna have declined and imports of processed pacific tuna have increased substantially. Fisheries exports are categorized by small volumes of high value premium Bluefin tuna and frozen fish fillets sold to the Japanese and Korean markets, with higher volumes of common varieties sold live or chilled to nearby Tunisia, Malta and Turkey.

3.6 The Macroeconomic in Libyan Economic

In analyzing the macroeconomic performance of any economy, it is exceedingly crucial to use certain indicators, which give the true picture of how the economy is performing. Different economic indicators are usually utilized in determining whether the economy is performing towards the right direction or it is moving towards a declining direction. It is through such economic indicators that a certain economy becomes measured. In case the indicators depict a negative movement, the concerned government has the task of employing the necessary macroeconomic policies to deal with the situation. For instance, depending on how the economy measures, a government may choose to apply contra dictionary and expansionary measures so as to ensure proper functioning of the economy. In this assignment, various macroeconomic measures will be analyzed; these will include government budget, gross domestic product, government expenditure, exports and imports. All these will be discussed in regard to the Libyan economy as from the year 2000 up to 2010. In the analysis, tables depicting the various macroeconomic measures will be utilized for the years indicated. In addition literature regarding the various macroeconomic measures will be discussed.

3.6.1 Libyan Gross domestic product GDP

Libyan Gross domestic product, constant prices:

GDP in Libya is reported by the department of census and statistics. Prices of Libyan national currency experienced a continuous rise from the year 2003 up to 2009 with an average of 41.622 billion. This is an indication that since 2003 Libya experienced a tremendous performance on its economy. Different sectors in the economy were performing well in the international market which catapulted the national currency of the country. Libya being one of the OPEC members it enjoyed a lot of advantages which were depicted from its international operations. Oil prices at this time were stable this is after the 1999 oil crisis at the international markets (Chivvis, 2012).

Table 3.15 Libyan Gross domestic product, constant prices National currency :(Billions) 2003-2013.

years	Gross domestic product ,constant prices
2003	33.620
2004	35.120
2005	39.289
2006	41.843
2007	44.501
2008	45.688
2009	45.327
2010	47.603
2011	18.053
2012	36.916
2013	35.026

Source: International Monetary Fund, World Economic Outlook Database, October 2013

The period between 2006 and 2010 experienced the highest national currency power. GDP of a country will rely on how strong and stable is its currency. During this period there was an average of 36.992 which is higher than the initial periods. This can be attributed to the recovery of the economic crisis in the Middle East. For instance Iraq which was a close relation of Libya suffered immensely from the invasion of the British and American soldiers. The period 2003-2005 can be interlinked with the same reason, basically the economies of the Middle East nations was affected by these factors.

There was a sharp decrease in the prices of the national currency in the year 2011. This year was one of the worst performance indicators of the time. It also points out the position of other trading partners of Libya and their performance. The war crisis in Libya commenced in the year 2010 and it was at its worst in the year 2011 where it halted a number of businesses in the country. It means that during the period the Libyan currency dropped immensely in the international markets. People were fearful of trading with Libya because of fear of experiencing losses in the war torn nation. However, in the year 2012 to 2013 the prices are seen rising slowly to stabilization. With the intervention of the international community Libya was stipulated to take measures to curb its dwindling prices in the market hence strict measures were laid by the central bank to boost their currency (DiPiazza 2006).

Contributions of exports as a major factor of the GDP cannot be disputed; this can be either directly through contribution to the GDP or indirectly through the contributions to the GDP per medium of spread effects. Exports possess the ability to attract or scare away investors. Oil exports fluctuations in the Middle East have been one of the major determinants of the GDPs of this region. The embargo endorsed on oil exports in is one of the aspects which can be attributed for the percentage change in the year 2003-2004. During this period the OPEC nations decided to alter their productions due to economic variability. The year 2004 took the full impact of the decision of the countries it is the year when the prices of oil were at their optimum (Chivvis, 2012).

Libyan Gross domestic product, current prices:

Libyan GDP in relation to the US currency has also been experiencing an upward trend. Since the year 2003, Libya has recorded tremendous efforts to strengthen its efforts in the international arena. The average price is 58.349 dollars, the period recording the highest price being 2008 with a price index of 87.236 dollars. It can be stated that from the year 2003 to 2007 the US currency was very strong against other major currencies in the market which is depicted by the lower value of the Libyan GDP (Vandewalle 2012).

Table (3.16) Libyan Gross domestic product, current prices: U.S. dollars Billions (2003-2013)

year	Gross domestic product, current prices
2003	26.186
2004	32.996
2005	47.335
2006	54.976
2007	67.690
2008	87.236
2009	63.069
2010	74.804
2011	34.707
2012	81.915
2013	70.924

Source: International Monetary Fund, World Economic Outlook Database, October 2013

The financial crisis which hit the US from the late 2007 impaired the US currency for the entire period; this was made worse with the Euro crisis which also hit the European nations in the years 2009 to 2011. This is the times when the US dollar faced major challenges and the Libyan GDP in return traversed over the US dollar. However, as the US dollar continues to stabilize in the year 2012 the Libyan economy starts to loss its strength against the US economy which comes out of recession. According to the data it can be assessed that there are two different periods for instance, from 2003 to 2008 there is a continuous positive increase in the Libyan GDP in relation to the US dollars. The period between 2008 and 2013 portray a wavy scale in which there are deceases and increases which can be traced to the current economic fluctuations in the world (DiPiazza 2006).

Libyan Gross domestic product per capita:

GDP per capita has been growing continuously from the year 2003 to 2010 placing Libyans among the wealthiest people in the world. The average per capita over the entire period is 63631.85 which puts Libya among the leading countries. In fact if the GDP per capita was to be used as a measure of development Libya could be a

developed country this is because it depicts a high per capita income value which is almost the same values exhibited by the developed nations like the US and Britain.

Table 3.17 Libyan Gross domestic product per capita, constant prices (National currency) 2003-2013

year	Gross domestic product per capita
2003	6,067.406
2004	6,212.814
2005	6,809.462
2006	7,099.490
2007	7,388.455
2008	7,429.325
2009	7,237.582
2010	7,463.928
2011	2,867.834
2012	5,758.385
2013	5,364.998

International Monetary Fund, World Economic Outlook Database, October 2013

Per capita changes in GDP have largely impacted growth and development in Libya, however, in the year 2010 growth was impaired and pace of per capita growth affected by a number of factors in the global economy. This is the year which has recorded the least per capita value for the past 7 years since 2003. This is mainly attributed to the population growth rate and the GDP, it is during this period that Libya was infringed by the international community and its export was immensely curtailed. It is also the period when political crisis hit the country the biggest.

2010 is the period which experienced an uprising of the citizens against the government regime of the time. Instead of people engaging in production they concentrated on fighting which led to a drop in the level of GDP per capita. At the end of the war the per capita income starts to rise again as people start undertaking their jobs routinely. From the years 2003 to 2009 the breakdown of the GDP by contributing factors take an incremental position as the oil wealth begin to flow this is further catalyzed by the introduction of the agricultural sector which contributes approximately 25% to 30% of the national GDP. Libyan government in late 2002

introduced a system which was supposed to lessen the income gap between the rural and urban citizens. The process brought a huge difference as illustrated by the data.

The continuous rise of the per capita income between 2003 and 2009 is an indication of the reduction of the gap. It means that people in the rural area were able to maintain a high value of their disposable incomes which almost strikes a balance between growth and living standards in the country. The effects of the law set in 2001 also bring about a huge contribution to the distribution of incomes in the country. Unlike other countries in the region like Egypt, Algeria, Morocco and Tunisia, Libyan economy has some uniqueness which makes it one of the best economies in the region. The average government revenue for the period is 42.171 billion of the national currency (Zoubir, Yahia and Louisa 2013).

3.6.2 Government Revenue:

The year with the highest revenue generated in the entire period is 2012 with revenue of 74.174 billion of the national currency. 2003 and 2011 record some of the lowest revenues in the period. There is a continuous increase of the revenue from the year 2003 to 2008; however there is a tremendous increase in the year 2008 which can be explained by a number of factors. In the year 2008, the government was able to dig deep into its production means, both the agricultural sectors and the mining sectors contributed immensely to this huge increment in the period. Libya possess abundant energy resources which drive the economy, primarily it possess light sulfur crude oil and natural gases which are commodities with high demand in the world.

Table 3.18 General government revenue National currency Billions2010-2013

year	General government revenue
2003	16.614
2004	23.272
2005	37.413
2006	45.457
2007	53.091
2008	72.897
2009	41.786
2010	61.504
2011	21.349
2012	74.714
2013	55.782

International Monetary Fund, World Economic Outlook Database, October 2013

Late 2010 is the year when the country plunged into a political crisis which greatly hampered its production. A number of its sectors were completely rendered incapacitated. With the poor business environment investors were forced to withdraw from the country, thus Libya lost its revenue generating hotspots. Its failure to ensure diversification of different sectors can explain the economic fluctuations in the country since it over-relies on one sector. The impact of the year 2010 can be attributed to political crisis and world economy instability factors. 2012 the revenue shoots to a higher figure of 74.714 after the country resolves its political issues and gets down to normal activities. However, in 2013 there is a drop in the income generated this is because the oil reserves in the country are getting depleted making the Libyan government to cut down their exports.

The year 2012 is the one with the highest percentage of government revenue in relation to the GDP. Observing the data will tell that there is an increasing trend except for interruptions in the years 2009 and 2011. As the world changes each day the production techniques of each country try to conform to the changes. Major changes have been brought by technological factors which has hastened production. The year 2012 is one such example of full utilization of the technological advancement in the world. Initially from the early 90s Libya was struggling to

maintain its production at the optimum by trying to train its citizens and improve on its production techniques.

Table3.19 General government revenue -Percent of GDP 2010-2013

year	General government revenue -Percent of GDP
2003	49.421
2004	54.047
2005	60.410
2006	62.961
2007	62.280
2008	68.38
2009	52.889
2010	64.931
2011	50.257
2012	72.299
2013	61.625

International Monetary Fund, World Economic Outlook Database, October 2013

The average percentage of the GDP recorded in the period is 59.995 percent. 2003 has the lowest percentage of the entire period; this can be attributed to start of activities. Most of the initiatives in the government began during this period which means that the government was basically making an investment rather than reaping. The government regime of the time was trying to align the commercial sectors, health sectors and the private sectors to have a common objective of spearheading the economy of the country. The effects are seen in the subsequent periods which record significant growths; in 2009 there is a drop of production in the country from the impacts of political wars which disrupted the normal operations of the country (Zoubir, Yahia and Louisa 2013).

In late 2010 the government resumes its operations and records an improvement in relation to 2009, however, there was a drop in 2011 of the percentage of the GDP the impact in the euro zone was also felt in Libya at this time. Libya being a member of OPEC was immensely affected by the crisis since the Europe continent was one of the major importers of the crude oil from the Middle East. In 2012 there is an

improvement of production in the country which later follows with a decrease of 10.674 which is attributed with the economic impacts in the global scene (Vandewalle, 2012).

3.6.3 Government Expenditure

Government expenditure entails all investment and consumption of the government, but with exclusion to the transfer payments, which are made by the state. The government has to spend in various public goods such as security and the provision of other public utilities. This is a critical role since it is the obligation of the government to provide these public goods, which makes it compulsory for the government to spend; therefore, government spending has to be there in order to help citizens of a given state continue with their ways of life. Take, for instance, it will be exceedingly cumbersome for citizens and foreign investors to become involved in the act of investing if there is a lack of security. Therefore, the relevant government must spend in providing security in order to make investment and other activities successful. Hence, government spending is a crucial element in any economy. Increase in transfer payments mitigates government spending. For an expanding economy, the value of government spending keeps on increasing. Just like any other government or economy, Libya has part of its budget allocated to government expenses.

Generally Libya has a low expenditure rate this is because formerly Libya had a very low population. The entire period has an average expenditure of 33.297 which is much lower than other countries in the region like Algeria and Egypt which have an average of 40.334. From 2003 to 2008 there is an average increase of 24.108 which is attributed to government investments in the country, both the education and the transport sectors are improved at this time which makes the country spend more. The years 2012 and 2013 experience the highest expenditures of the period. This is the years when the country was coming out of war hence it was expected to start reconstruction Endeavour's to stabilize its economy (Vandewalle, 2012).

Table 3.20 General government total expenditure National currency Billions 2003-2013

year	General government total expenditure National currency
2003	14.475
2004	18.245
2005	17.994
2006	22.493
2007	28.727
2008	42.713
2009	36.853
2010	45.209
2011	24.170
2012	54.713
2013	60.674

International Monetary Fund, World Economic Outlook Database, October 2013

The year 2011 experienced the least government expenditure of 24.170 this is because at that time the government was not able to indulge in any production endeavors. It was basically a time of crisis in the country. Different sectors lay idle and no operations were taking place. 2013 recorded the highest percentage of the GDP; this is basically attributed from the operations which had taken place in the previous years in relation to the high productions in 2013. 2004 and 2003 record higher percentages of the GDP than the next 4 years since in the early periods of the Libyan economy production was highly concentrated in particular sectors of the economy as compared to the present years (DiPiazza, 2006).

Table 3.21 General government total expenditure -Percent of GDP2003-2013

year	General government total expenditure
2003	43.057
2004	42.372
2005	29.055
2006	31.155
2007	33.699
2008	40.059
2009	46.646
2010	47.728
2011	56.899
2012	52.945
2013	67.030

International Monetary Fund, World Economic Outlook Database, October 2013

The high difference of 13.317% of the national GDP between the years 2004 and 2005 is due to the emancipations the Libyan government had taken into perspective. During this time the government experiences fluctuations on its production, however, in the year 2005 is the year when the government tries to stabilize its economy. There is a general increase in the percentage of GDP from the period 2008 to 2013 with an average of 51.885% which depicts that at these periods the country was gaining control of its economic factors.

3.7 Exports and imports in Libya

The Libyan economy is chiefly characterized by its high degree of interdependence with the rest of the countries in the world particularly in regards to imports and exports. In view of this, it has been argued by some scholars that this kind of situation has inevitably made Libya to be heavily reliant on export of crude oil as the chief source foreign exchange income. This is typical of other oil rich countries in the Middle East region as well as North African countries. Nonetheless, Libya has attempted to diversify its economy through sustained investment in agriculture, manufacturing as well as other non-oil economy sectors in the country. The major exports in the country are oil and gas owing to its large endowment in these natural resources. Crude oil as the single most exportable commodity makes Libya to be

heavily reliant on it in terms of foreign exchange income. However, as it is characteristic of oil and gas resources these endowments are exhaustible thus cannot be expected to forever sustain the Libyan economy. Additionally, such kinds of natural resources as exports necessitate to be explored before they can be discovered and eventually mined. Other core exports in Libya include petrochemicals and fertilizers that are also reliant on raw materials from the oil based factories.

As a result of the developing nature of Libyan economy, and the limited natural resources availability other than (oil and natural gas), this makes the country to rely heavily on the intermediate inputs imports, as its way to sustain the living standards of the people as well as providing for the local market's various needs . This has occurred through structural changes in the local economy, via the plans for socioeconomic development. This has led to gradual but steady increase in the country real GDP as well as the value of imports.

Libya also imports significant quantities of capital goods and raw materials that are essential because of their potentially important role in the process of economic development, as a means through which the country would sustain its economic development plans. Since 1970, there has been a consecutive increase in the value of imports and its ratio in GDP was highest in 1975 (28.5%). However, in the 1990s the Libyan imports tremendously reduced because of the imports restriction policy that was put in place by the government in order to reduce the negative impact of the imposed U.N sanctions against Libya as well as freezing of Libya's assets. This led to a decline of the ratios of imports in GDP to 16.29%, 16.17%, 19.17% and 16.11% in 1990, 1995, 2000 and 2005 respectively. The suspension of the UN sanctions led to a significant increase in Libyan imports because of various reasons such as increased foreign exchange earnings from a regained high oil exports after trade barriers were removed, increased local market requirements, lack of capital goods production in the local market and the ambitious development plans. The table below indicates the evolution of exports and imports in Libya.

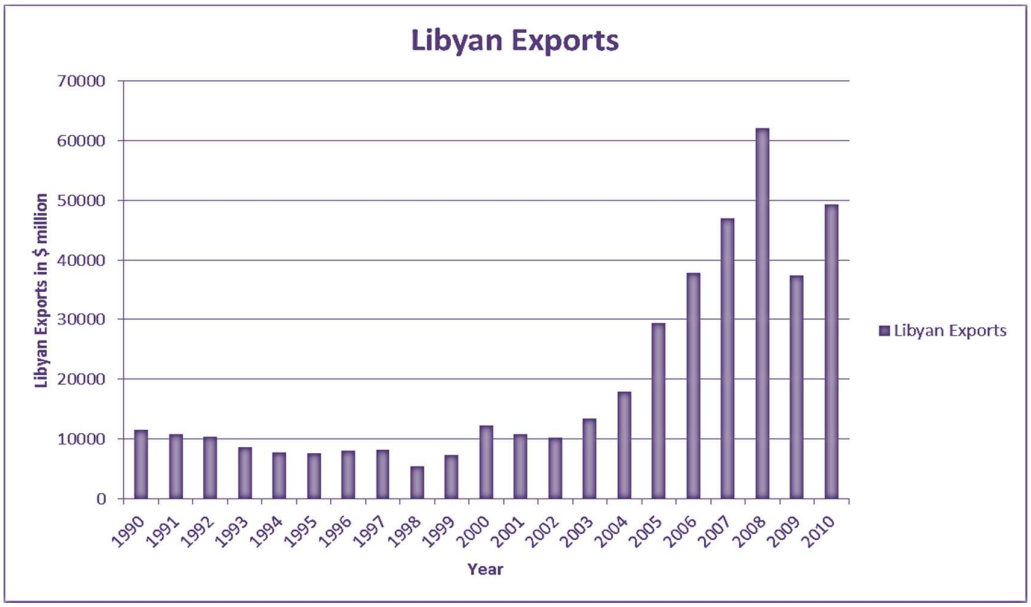
Table 3.22 Exports and Imports (1990-2010) (US$ million)

Years	Total Exports	Total Imports
1990	11468.4	8960.1
1991	10800.4	10733.8
1992	10291.4	8750.4
1993	8599	9604.7
1994	7741.2	7478
1995	7513.4	5755.2
1996	7955.8	6617.2
1997	8204.1	6675.5
1998	5365.8	5665.2
1999	7334.9	5290.7
2000	12210	5024
2001	10818	5859
2002	10252	8952
2003	13320	8797
2004	17862	10682
2005	29383	13523
2006	37962	15783
2007	47078.5	20366.5
2008	62157.8	26002.5
2009	37440	27065
2010	49345	30686.4

Sources: World Bank, 2012

Central Bank of Libya is the institution responsible of reporting Exports in Libya. There was a decrease in Libya Exports in 2009 to $37440 million from $62157.8 million in the year 2008. However, the Libya Exports average from 1990 until 2010 was $19671.56 million where the highest value of $62157.8 million was achieved in 2008; while 1998 recorded the lowest value of $5365.8 million. With least developed industry and agriculture sectors as well as possessing the largest oil reserves in Africa, Libya exports almost exclusively crude oil, oil refined products and natural gas. However, in recent years Libya has begun to export fertilizers and petrochemicals. A chart showing data for Exports in Libya between 1990 and 2010 is included below:

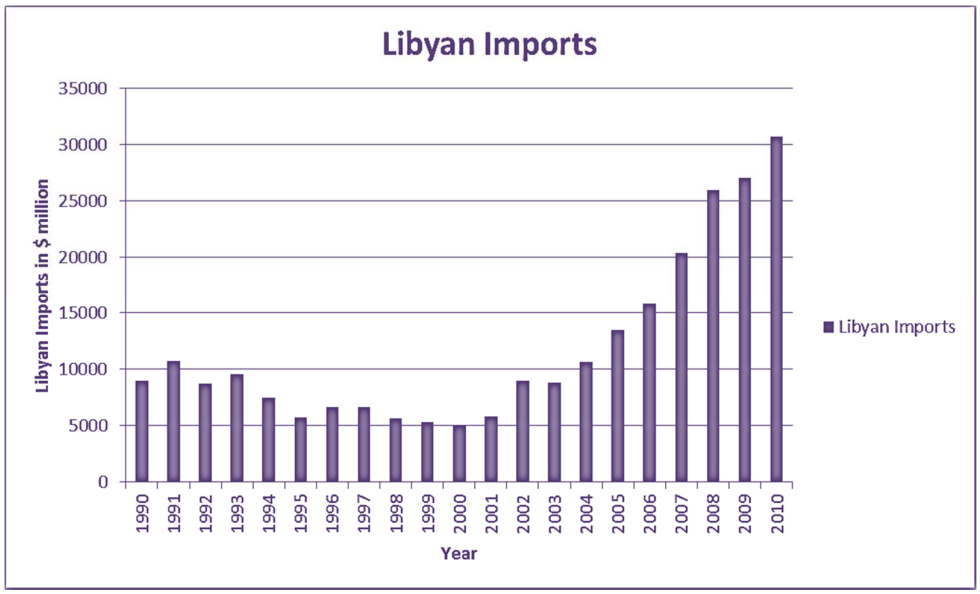
Figure 3.2: Libya Exports between 1990 and 2010 (in $ million)



Source: World Bank, 2012

Central Bank of Libya is the institution responsible of reporting Imports in Libya. Libya Imports increased in 2009 to $27065 million from $26002.5 million in the year 2008. However, Libya Exports average from 1990 until 2010 was $11822.4 million where the highest value of $30686.4 million was achieved in 2010; while 2000 recorded the lowest value of $5024 million. However, Libya's main imports are: foodstuffs, capital equipment and consumer goods. A Figure 3.8 showing data for Imports in Libya between 1990 and 2010.

Figure 3.3: Libya Imports between 1990 and 2010 (in $ million)



Source: World Bank, 2012

3.8 Fiscal Policy

Libya has abundant liquidity due to oil and gas revenue. The effects of this liquidity are mainly visible in budgetary and monetary policy and in Libya's external financial position. The rise in oil and gas revenue ended the budget deficits of the 1990s. The 2006 budget surplus was 39 per cent of GDP and oil and gas revenue 66.3 per cent of GDP, compared with just 5.4 per cent contributed by the non-oil/gas sector. Higher oil prices will further increase the surplus and the dominance of oil and gas revenue over other income.

The healthy budget situation enabled the government in 2004 to repay its debts to the banks and to stop printing money to finance public spending. Taxes on production were replaced by a sales tax (15-25 per cent) as a first step towards a value added tax; the sales tax also applies to imports, on top of the existing 4 per cent import tax (See table 3.26).

Table (3.23) Public Finance in Libya (percentage of GDP)

	Percentage of GDP(current prices)			Percentage changes, volume			Contribution to real GDP growth	
Gross capital formation	1999	2006	2007(e)	2008(p)	2009(p)	2007(e)	2008 (p)	2009(p)
	7.3	13.1	8.7	8.0	6.3	1.3	1.2	1.0
Public Private	2.1 5.3	10.9 2.2	8.5 10.0	8.0 8.0	6.0 8.0	1.1 0.3	1.1 0.2	0.8 0.2
Consumption	77.8	40.1	9.4	11.9	12.7	7.9	10	11.3
External demand	14.9	46.8	-	-	-	-2.4	3.4	-4.5
Exports Imports	31.7 -16.8	78.0 -31.3	7.3 20.8	5.5 21.7	4.5 22.8	1.4 -3.8	1.1 4.5	0.9 -5.3
Real GDP growth	-	-	-	-	-	6.8	8.0	7.8

Source: IMF and local authorities' data; estimates (e) and predictions (p) based on authors' calculations

The country has an overall budget surplus, but when oil and gas are excluded it still runs a big deficit, though the latter decreased between 2001 and 2006. Non-oil/gas revenue represented 7.5 per cent of total revenue, mainly sales tax (36.7 per cent), customs duties (19.3 per cent) and other income taxes (44 per cent). This structure illustrates Libya's policy stance of low taxes and trade liberalization. Private sector growth doubled the take from income and profits taxes between 2001 and 2006 and tripled the yield of other income taxes. This new revenue easily made up for the 70 per cent drop in customs receipts between 2001 and 2003. Due to high oil prices, strong external demand and buoyant internal demand boosted by an expansionary fiscal policy, recent years have seen acceleration in real GDP growth, to more than 7.2 % on average between 2005 and 2007. It fell to 3.8 % in 2008, mostly on account of a reduction in oil prices. Non-oil GDP grew by 8 % in 2008, supported by an expansion in construction, transportation and trade, as well as by a significant increase in government spending (45%).

Due to unprecedented oil revenues, Libya has registered very important fiscal surpluses in recent years (almost 25 % of GDP in 2008), even though the non-oil fiscal account is in deficit (32 % of GDP in 2008). However, as a result of the sharp fall in oil prices, the fiscal surplus is expected to narrow down to around 14 % of GDP in 2009. Libya's external position is very favorable. Due to high oil prices and strong external demand, exports have grown very rapidly in nominal terms over recent years. Despite the concomitant strong increase in imports and the deficit in the services and current transfer's balances, the current account surplus reached more than 40 % of GDP in 2006-2008. According to the Central Bank, the balance of payments posted a $ 37 billion surplus in 2008. Although Libya does not publish data on its external debt, it is understood that the country has very limited external debts. Its total foreign assets (foreign exchange reserves, the Oil Reserve Fund and the Libyan Investment Authority) are estimated to have reached $136 billion at the end of 2008. In March 2009, Libya was awarded investment grade ratings.

Despite sound macroeconomic fundamentals, economic reforms remain slow. Privatization of large companies is not advancing, except in the banking sector, where two of the five state banks have been merged and a further two sold to foreign investors. A new license for mobile telecommunication services was offered to private investors in 2009, and foreign investors are being courted to take part in new infrastructure projects, in particular power plants.

However, foreign investment is for the time being largely concentrated in the oil and gas industries. The development of the non-oil private sector has been more difficult than expected, due to Libya's underdeveloped financial system, inadequate infrastructure, inefficient public administration and the lack of an educated workforce. One of the main problems faced by private companies is the uncertainty created by different and shifting interpretations of the law, in particular the legislation on taxation, and the absence of rapid and transparent mechanisms for resolving commercial disputes.

High unemployment rates were among the main grievances that led to the Libyan uprising of 2011. The interim government inherits a labor environment of private sector rigidity, inadequate youth skills and a youth preference for public

sector employment. Initiatives to encourage self-employment have been hampered by the difficult business climate. The difficulties will be compounded, in the short term, by the aftermath of the war but the political changes underway are an opportunity for the country to address these challenges.

3.9 Monetary Policy

The Central Bank of Libya during the period from 2002 - 2010 to take many actions on monetary policy and achieve its objectives of achieving stability in the general level of prices and maintaining the integrity of the banking system, consistent with the purposes of the Bank and the means to achieve these purposes, in accordance with the provisions of the law.

Given the importance of the role of monetary policy in bringing about the change to be at the macroeconomic level, which depends on the utilization of data and information available to the monetary sector and to study their different effects on economic activity, the decision was made Governor of the Central Bank of Libya No. (32) for the year 2005, on 2005.4 0.7 m, the establishment of "monetary policy committee" bank with a membership of some officials of the Bank and some experts from outside to develop a general framework for monetary policy to ensure the achievement profits objectives, and study all matters relating to the performance of monetary policy, banking, and their effects on economic activity and submit its recommendations to the Governing Council to take the deems appropriate. In recent years, the government has increasingly favored structural reforms, especially gradual state withdrawal from productive sectors, a reduced role in the economy and greater transparency in public affairs. The reforms involve diversification, privatization and reform of the banking and financial sector. Diversification needs to be encouraged by growth in the non-oil/gas sector and by job creation, using oil and gas revenue to ease the transition to a market economy. Unlike other transition economies in the early 1990s, Libya has a healthy financial situation allowing it to build the safety nets needed to cushion the effects of transition. Optimal use of oil and gas revenue will require a transparent framework for drafting and implementing the budget, tighter medium-term management of public finances and above-board handling of oil and gas income. This will bring macroeconomic stability to the

transition and ensure the sustainability of the social safety nets and adequate funding for human resources development.

This strategy will require better management of oil and gas revenue, focused on stabilization and savings. Medium-term fiscal discipline through proper monitoring of expenditure is a pre-condition for a tax system compatible with the state of the production network. Making public spending more efficient will also require a broad range of reforms. Privatization and strengthening the private sector are the structural keys to transition to a market economy. A list was made in October 2003 of 360 state-run firms that could be sold off between 2004 and 2008, ranging from steel, petrochemicals and cement to agriculture. Sixty-nine of the firms have so far been divested and the rest are being modernized in preparation for sale.

The privatization strategy will need strong institutional support if the transition to a market economy is to succeed. Allowing a new economy driven by the private sector to develop is thus essential to faster growth of the non-oil/gas sector and job creation. The biggest challenges are building a healthy investment climate, with institutions that can support more open markets and with a stronger banking system, while ensuring effective and sustainable social protection for the most vulnerable groups to make the transition easier.

Libya's banking system comprises the CBL, ten commercial banks, three specialized ones and one offshore bank, the Libyan Foreign Bank (LFB). Three of the ten commercial banks – Jamahiriya Bank, National Commercial Bank and Umma Bank – are wholly owned by the CBL The Wahda Bank, in which the CBL had an 87 per cent share, sold 19 per cent of its capital to Jordan's Arab Bank in early 2008. The Sahara Bank was privatized in 2007 with France's BNP Paribas becoming a strategic shareholder. The private sector has a majority share in four banks, the Commercial Development Bank (77.8 per cent), Wafa Bank (100 per cent), Aman Bank for Commerce and Investment (100 per cent) and the Arab Unity Bank (100 per cent). It also owns the regionally decentralized National Banking Corporation (NBC). There are also 48 regional banks, now consolidated into a score of firms. The consolidation process is expected to continue until they are all part of the NBC. The three specialized banks – the Agricultural Bank, the Bank for Savings

and Real Estate Investment and the Development Bank – are wholly owned by the government.

The structure of the banking system is not necessarily the result of a policy of specialization; rather, it reflects the successive strategic choices made at various stages, as well as a lack of competition that could make the sector inefficient. The banking system continues to be dominated by the public sector, which accounts for more than 90 per cent of its business. The government has begun a thorough reform of the financial sector that will mainly involve privatizing state-owned banks and upgrading the payments system. This reform is one of the major tasks of 2008. Steps have been taken to streamline trade, among other things by eliminating the import licensing system and a fund to subsidies foreign exchange. Tariff barriers are still in place despite many efforts towards regional and international integration. Libya is involved in several regional integration processes, including the Arab Free Trade Area and the Community of Sahel-Saharan States. It has also taken steps to join the World Trade Organization and the Barcelona Process, which aims to set up a trans-Mediterranean free trade area.

CHAPTER FOUR
LIBYAN OIL

4.1 Introduction

The discovery of oil in Libya was late 1958 by forgiven companies. Before independence in 1951 Libya's natural resources were controlled by foreign powers. When the occupation by Rome ended in AD 643 rule by the Arabs was started under Amr Ibn al-As. In the 16th century the Ottoman Turks arrived and combined the provinces of Tripolitania, Cyrenaica and Fezzan to be part of their Empire. The Italians ruled from 1911 to 1942, and British from 1942 to 1951. Earlier Italian initiatives discovered no oil and in the 1930's geologists, including Desio (1935), doubted Libya had commercial reserves.

In 1953 Oil discoveries in Algeria spurred Libyan exploration. .However by 1959, most oil companies were ending exploration while Esso (subsequently Exxon) went on to discover commercial oil. As a result in 1961 a pipeline was built from Zaltan to Marsa al Burayqah. By 1965 Libya had become the world's sixth-largest exporter of oil, and by the end of 1969 Libya's production was 15.4% of OPEC's total and 7.5% of world's total. Libya's National Oil Corporation (NOC) was established in 1968 and by 1973 assumed control of exploration and development, production, refinement, processing and marketing. While production-sharing agreements with foreign companies proliferated, and NOC ended owning at least 51% of exploration. By 2003 Libya was OPEC's eighth largest producer. From 1993 to 2002, oil had been discovered in 136 wells out of the 270 drilled, a 50% success rate. In 1970 Libya produced a peak of 3.3 million barrels a day and currently produces some 1.6 million barrels.

Skyrocketing prices of oil proceed to initiate oil exploration Africa. Irrespective of the challenges in the business industry investments comes. Among the oil producing countries in Africa, Libya produces large quantities of oil (Abozed, Mohamad, Yassine & Karima, 2009). Approximately 85%of the oil reserves are found in Sirte Basin, which produces 90% of the total oil produced by the country

(Research & Markets, 2014). Other parts of the country have not been explored and there is a possibility that they have potential reserves holding substantial amount of oil. Most of the Libyan land has not yet been licensed. In the longer duration, Libya has an exceptional opportunity and progress of oil production (Ibrahim, Mohamed, Mahazan & Adel, 2013). According to surveys, Sirte Basin is projected to have 3.6 bn bbl. of oil which has not been discovered. It is also estimated to have 910 bn cubic meters of gas which has not been discovered. The Gadhames basin located in the south Tripoli is a potential reserve waiting exploration (Libya: A Division of the Spoils, 2011).

In 2012, reserves of oil and gas of Libya increased. At the beginning of 2013, it was projected that Libyan oil reserves increased from 47.2 bn barrels to 48.1 bn barrels. Likewise, gas reserves rose from 1.48 trn cubic meters to 1.54 trn cubic meters. This led to production of large quantities of oil (Twati, Jamal & John, 2006). During pre-civil wars of Libya top government officials said that oil and gas reserves had increased. This was as a result of discovering of new oil reserves. Discoveries were done in various parts of the country by both national and international oil companies exploring oil in the place (Research & Markets, 2014**).** Despite of being richly endowed with many oil reserves, the exploration is facing a political threat. This aspect of political instability is the major impediment in oil exploration and production industry and other sectors in general which are useful to both Libya and the world at large. Furthermore, the gas and oil reserves, a vital source of wealth are the principal source of conflicts (Ibrahim, Mohamed, Mahazan & Adel, 2013).

4.2 Oil as source of the world energy power

Oil will remain as the main source for the energy worldwide .OPEC believe that oil demand will continue to grow strongly see table (4.1). The oil crisis in the 1970s and 1980s resulted in long queues outside petrol stations and the sky-rocketing price of oil. In the following years, heated discussions about “peak oil” were based on the expectation of the world running out of oil within a few decades. Now in 2014, the peak oil issue is not making headlines any longer, however since oil is a finite resource this issue will return in the future. Global oil reserves are almost 60% larger

today than 20 years ago, and production of oil has gone up by 25%. If the unconventional oil resources, including oil shale, oil sands, extra heavy oil and natural bitumen are taken into account, the global oil reserves will be four times larger than the current conventional reserves. Oil still remains the premier energy resource with a wide range of possible applications. Its main use however, will be shifting towards transport and the petrochemical sector. In future oil's position at the top of the energy ladder will face a strong challenge from other fuels such as natural gas.

Table 4.1 world Energy fuel shares, in percentage

Year	Crude oil	Gas	Solids	Nuclear	%Total
1998	41.3	22.2	26.2	10.3	100
2000	41.3	22.4	26.1	10.2	100
2010	40.3	24.1	26.3	9.3	100
2020	39.2	26.6	25.8	8.4	100

Source: OWEM Scenarios Report, March 2000

4.3 History of Crude Oil and Gas Industry

A wide area of Libya is a desert. Due to its desert conditions drilling was frequently done in various places of the country in search of water. Wells were dug deeply leading to discovery of natural gas (Twati, Jamal & John, 2008). The gas reserve was discovered by an Italian company which was drilling wells. The discovery did not attract much attention because by then the gas was not a primary commodity. Even in United States natural gas was not utilized, instead it was released to the atmosphere as a waste product (Balhasan, Towler & Miskimins, 2013).

In 1935, a professor who coordinated the activity of drilling wells driven by academic interest opted to research on oil. Some few years later, oil was found in well water at Tripoli. The findings initiated a survey to investigate availability of Oil reserves (Abozed, Mohamad, Yassine & Karima, 2009). They dug one well in search of oil but they did not find any. However, in 1940 they initiated oil exploration but lacked the capability in terms of finance and machinery to do their exploration (Ibrahim, Mohamed, Mahazan & Adel, 2013).

In Libya, oil exploration started in 1955. In 1959 the first oil reserves were discovered. The oil fields were at Zelten and Amal. Later, almost 40 states were given tenders to help in exploration of oil and aid in discovery of more oil fields as the country could not manage by itself by then (Twati, Jamal & John, 2008). When Libya started producing oil in 1961, it gave 3 million bbl/d. This is about 17% of the total oil produced by all member states of Organization of Petroleum Exporting Countries (OPEC). In 1969, the Libyan imposed measures to regulate exploration to prevent exhaustion. In 2010, the production had reduced to 1.46 million bbl/d (Balhasan, Towler & Miskimins, 2013).

4.3.1 Oil Exploration and Discovering 1952-1969

The control of Italy on the politics of Libya weakened at the end of World War II. During this period no country or organization could permit companies to explore oil irrespective of having oil in their reserves (Abozed, Mohamad, Yassine & Karima, 2009). Due to this state, there was no oil exploration until 1951 when Libya got independence and became a sovereign state (Twati, Jamal & John, 2008). The independent Libya, in conjunction with experts from international oil exploration corporations formed mineral rights laws. In 1953, Libya government gave permits to 11 promising companies to explore oil (Abozed, Mohamad, Yassine & Karima, 2009). The companies using their experts carried geologic surveys to identify the places where oil reserves were. The first oil well was dug in the desert at the border of Libya and Algeria (Tripoli, Marriott & Sirte, 2001).

The leaders of Libya were prospective hence they could not grant concessions to companies. In case a company was granted concession after two years it was required to surrender a quarter of the concession after an elapse of years. This strategy was used by the leaders with an aim of controlling oil exploration (Balhasan, Towler & Miskimins, 2013). Using this, it was easy for them to give permits and grants to new companies which are likely to succeed if some failed (Abozed, Mohamad, Yassine & Karima, 2009). The companies were required to pay 12.5% royalty fee and tax equivalent to 50% of their profits. Operational and royalty fee was subtracted in computation of the profits of the companies (Tripoli, Marriott & Sirte, 2001).

The location of Libya, next to the Mediterranean Sea attracted many oil exploration companies. The political crisis had blocked channels of getting oil from Iran in 1951-1954 therefore; Libya was a better alternative (Twati, Jamal & John, 2006). Additionally, in 1956-1957 the Suez Canal was closed. Companies were forced to transport oil through the south tip of Africa. This alternative route increased the cost of oil transportation (Tripoli, Marriott & Sirte, 2001).

In 1957, many oil companies were permitted and some given concession to explore oil in Libya. Some of the companies are; Oasis a consortium of the 3 petroleum companies Conoco, Marathon and Amerada, Esso, the 7 majors and French petroleum companies and Bunker Hunt Oil Company (Tripoli, Marriott & Sirte, 2001). In the same year, Esso dug three well along the Libya and Algeria but only one was fruitful. The company produced 500 barrels of oil in a day. Esso also dug another well in Siritica (Abozed, Mohamad, Yassine & Karima, 2009). This well produced 17500 barrels in one day. By the end of 1959 six oil reserves were discovered in Siritica, whereby the Oasis and Esso led the exploration exercise (Balhasan, Towler & Miskimins, 2013).

Due to the increased production of oil, in 1960 Esso constructed a pipeline and a terminal where it could export its oil. The constructed a pipeline of 30 inch diameter from the oil reserves at zelten to Marsa Brega (Twati, Jamal & John, 2006). The terminal was officially opened in 1961 and exported 200 oil barrels daily. Also Oasis built a pipeline and a terminal of exporting its oil. Due to more discoveries of oil, the two companies lengthened their pipelines (Libya: A Division of the Spoils, 2011).

The British Petroleum Company had concessions but had not got wells with oil. In 1961 it bought buy a half share of the Hunt Company concession and used it to produce oil (Twati, Jamal & John, 2006). In 1966, Occidental Company was granted a concession after presenting a convincing proposal. In the proposal it was to use 5% of its profits in investing in the Libyan agricultural sector (Twati, Jamal & John, 2006). It discovered a well which produced 15000 barrels of oil daily. Later it discovered new oil fields. In 1966 and 1967, it found wells which produced more

than 40000 barrels of oil daily. At the beginning of 1968, Occidental started exporting oil from its Zueitina terminal (Tripoli, Marriott & Sirte, 2001).

4.3.2 The Libyan Oil Industry Pre-1969

Before 1969, the Libyan oil industry had made quite remarkable developments. The first discovery of natural gas happened in 1915 but it did not attract attention because it was not used by then (Abozed, Mohamad, Yassine & Karima, 2009). Most countries did not use natural gas which has gained popularity in use in the modern world. Since 1915 up to the start of Second World War there was interest in the oil industry of Libya (Abozed, Mohamad, Yassine & Karima, 2009). Even there was no adequate capacity of developing this industry. Libya had not attained its independence; still it was under the Italian leadership (Twati, Jamal & John, 2006). After World War II, the Libyan leaders gained power and weakened the Italian governance. At this period, there was no government or organization which was mandated to give permits to oil companies to develop the industry (Twati, Jamal & John, 2006).

Before Libya gained independence the oil industry was not developed despite the fact that there was knowledge that there were oil reserves in Libya. Surveys done at this time were purely for academic work not to get knowledge (Tripoli, Marriott & Sirte, 2001). Before 1951, oil companies had not received permits to explore and identify oil wells for processing. Several regions with oil reserves were unknown (Twati, Jamal & John, 2006). No development had taken place in the oil industry. The many oil reserves with a lot of petroleum were not known whether they exist (Abozed, Mohamad, Yassine & Karima, 2009). Only a few were known and it was known that there is oil in Libyan land but no organization could permit oil exploration companies to exploit it and carry out surveys to identify more. In short, no operations were done until Libya gained independence (Abozed, Mohamad, Yassine & Karima, 2009).

After getting independence, Libya was able to conduct most activities especially in the oil industry. The leaders came up with a strategy of developing the oil industry. They formed regulatory guidelines with the help of international oil companies (Twati, Jamal & John, 2008). They decided to give oil companies a

period of time in which they will explore oil in their allotted fields (Abozed, Mohamad, Yassine & Karima, 2009). This was done on performance contracts. Actually after an elapse of five years without much success, according to the law the companies were required to return the concessions and then new successful companies be given permits on performance contracts (Tripoli, Marriott & Sirte, 2001).

In 1952, oil exploration companies were established Libya as it was an alternative as they were facing transport challenges when transporting Oil from Iran via Suez Canal. They signed contracts with Libyan leaders, which gave specifications on terms and conditions. The companies did a survey and identified regions likely to have oil (Tripoli, Marriott & Sirte, 2001). They drilled wells where some successfully found oil and others did not. They installed pumps where some of them could pump up to 500 barrels of oil per day. Survey was intensified leading to discovery of more oil fields which increased the output of oil pumped per day (Abozed, Mohamad, Yassine & Karima, 2009). More companies invested in the oil industry and increased oil production and led to discovery of more fields with oil. At this time the oil industry was developing progressively (Twati, Jamal & John, 2006). Oil refineries were constructed. The oil produced was used both locally and internationally through exports. The industry developed and helped people, companies and the government to get revenue. Some oil exploration companies gave a part of their revenue in development of Libya especially agriculture sector (Twati, Jamal & John, 2006; Kilani, 1998).

Later, pipelines were constructed from the production sites to export terminals. During 1960s, many companies constructed pipelines for transporting oil to export terminals. At the export terminals, oil was exported to foreign countries (Twati, Jamal & John, 2006). At this time, the industry more developed as most companies had complete framework and facilities required explore, refine, transport and export oil to foreign countries (Abozed, Mohamad, Yassine & Karima, 2009). The growth of oil industry led to development of facilities especially the transport sector. Roads were constructed to transport oil to different destinations (Tripoli, Marriott & Sirte, 2001). The agriculture sector was boosted by the oil industry. Libya has a desert climate and for agricultural products to thrive irrigation should be

thoroughly done (Balhasan, Towler & Miskimins, 2013; Tripoli, Marriott & Sirte, 2001). Companies operating in Libya helped in drilling of water wells which provided water for irrigation purposes hence supporting agriculture. The economy also improved as there was continuous generation of huge incomes from oil exploration.

4.4 The Boom Period

The oil boom of Libya occurred between 1974 -1981. This period Libya produced the highest amount of oil ever. Production was at its peak whereby it produced oil worth 8,257 US billion dollars 1n 1974 and 14,930 billion US dollars in 1981 (Twati, Jamal & John, 2006). In fact if per capita GDP of Libya which was obtained from exporting oil was to be used as a parameter of identifying developed nations, then Libya was to be classified under developed nations (Abozed, Mohamad, Yassine & Karima, 2009). The per capita GDP obtained at this time was more than that of United Kingdom and two times greater than that of an average developing nation (Abozed, Mohamad, Yassine & Karima, 2009).

The large production of oil at this time, 1974 – 1981, was due to discovery of more oil fields where wells were drilled produced up to 50,000 barrels of oil per day. For example, the oil fields which were discovered by Occidental Company produced a lot of oil (Libya: Oil & Gas Report, 2014). More companies were given permits to explore prior to 1974. By the beginning of 1974, every oil company was producing a lot of oil which was refined, transported to export terminal and then exported to foreign countries (Twati, Jamal & John, 2006). Another contributing factor to the booming Libyan oil industry is that oil prices also increased. Therefore, the country was making highest revenue (Abozed, Mohamad, Yassine & Karima, 2009).

The military regime during the monarchy got an opportunity to consistently press for higher profits for Libyan oil through divide and rule strategy. The weak bargaining position of the independence at that time made many countries relied on Libyan oil for substantial portion of their revenues and this facilitated the regime strategy. For example, Occidental Petroleum received 97% of its total production from Libya (Vandewalle, 2011). The independents had fewer incentives to join

majors to cut production in 1970, which was a global move to restore prices as glut developed. As a result, the 1961 amendments on Libyan petroleum laws meant that independent paid less tax per barrel as majors did.

The government aggressively pushed for higher prices, greater ownership, and greater control over production. The committee established in December 1969 to address the frustrations of oil companies, which were previously overlooked by the monarchy. The committee discussed the increase of posted prices with the oil companies. The same month it reduced production allowances for individual companies (Vandewalle, 2011).

The sustainability of the growth patterns in Libya increased the profits from oils. The fiscal imbalances associated with oil price volatility and the unpredictability of oil revenues was addressed. Some oil exporting countries resorted to establishment of special funds that was designed to stabilize budgetary revenue. When the revenues from oils were high, some part of the money was channeled to the stabilization fund, which can be used later when there is a shortfall. The effectiveness of the stabilization funds were achieved through a transparency of their objectives, strict rules, management, and operation (Al-Moneef, 2006)

Oil gas sector attracted many European countries towards Libya for oil and gas investments. The government appreciated the interest shown by foreign investors. The issued foreign oil companies with licenses to operate in the country. The foreign investment boosted government revenue and development. The government moved in and offered many beneficial financial terms with the purpose of attracting more investment. Joint ventures of oil and gas sector pushed economic development in Libya (Otman & Karlberg, 2007). Foreign Direct Investment was important to the government because it was unable to handle the excessive amount of oil and gas. Leading oil companies were attracted to come and produce oil in Libya.

4.5 Libya's Membership of OPEC

Libya is a member of Organization of Petroleum Exporting Countries since 1962, two years after formation of the organization. Since it became a member, its policies concerning oil prices have largely been determined by Organization of Petroleum Exporting Countries (Twati, Jamal & John, 2006). It has experienced both higher and lower prices during the reign of Idris and Gaddafi. Both regimes were dedicated to using Organization of Petroleum Exporting Countries as avenue of selling oil and increase its oil revenues, pass policies which even resulted to conflicts with western governments and international oil companies which exploring oil in Libya (Abozed, Mohamad, Yassine & Karima, 2009). It was alleged that, in 1970s, the aggressiveness of Libya was behind the measures which Organization of Petroleum Exporting Countries put by raising prices of oil, controlling oil production and imposing restrictions (Abozed, Mohamad, Yassine & Karima, 2009).

Libya's government especially under the leadership of Gadhafi could either agree or differ depending on the implications of the move. In most cases, Libya agreed with the Organization of Petroleum Exporting Countries on policies which benefited its oil industry and disagreed when Libya could not benefit (Twati, Jamal & John, 2006). For instance, when oil prices decreased progressively, Libya and Algeria wanted to demand increase of profit shares while Organization of Petroleum Exporting Countries pushed wanted royalties fee to be increased. Libya and Algeria spearheaded their push for profit share increase independent of Organization of Petroleum Exporting Countries irrespective of being member states (Abozed, Mohamad, Yassine & Karima, 2009).

Libya's efforts resulted to an increase of 20% royalty fee increment, sharing of 55/45 profit with oil companies within operated in Libya. When other states saw the achievements of Libya's militancy they realized how they can control pricing of oil if they use more pressure (Libya: Oil & Gas Report, 2014). This is not the only benefit which Libya did under the umbrella Of Organization of Petroleum Exporting Countries gained. Libya together with other OPEC member states imposed sanctions against United States to protest United States' support on Israel's war against Arab nations; Egypt and Iraq. These sanctions existed for six months and caused oil prices

in United States to go up three times the normal price (Abozed, Mohamad, Yassine & Karima, 2009).

4.6 Sanctions against Libya

Before the sanctions, the United States and United Nations had good relations with Libya. United States and United Nations supported the attainment of Libya independence in 1951. United States had opened its embassy in Tripoli (Twati, Jamal & John, 2006). Things went wrong after the coup of 1969 which took Gaddafi to power. When Gaddafi nationalized oil companies, the relations of the United States and Libya became cold. The United States removed its ambassador in 1972 (Abozed, Mohamad, Yassine & Karima, 2009). The mob raided the embassy of United States and set a blaze, after which United States removed all its officers from the embassy. Controls on civil and military planes export were imposed and United States alleged that Libya is a sponsor of terrorism (Abozed, Mohamad, Yassine & Karima, 2009).

In 1982, the government of United States banned importation of oil from Libya and controlled products from United States which were required to be exported to Libya. In all transactions, permits were required for them to be done except medication and food. In 1984, United States banned exports to Ras Lanuf petroleum complex (Abozed, Mohamad, Yassine & Karima, 2009). This was to occur in the coming days until the time when normal relations were to be achieved. Further prohibition were imposed Bank financing of Exports and Imports (Abozed, Mohamad, Yassine & Karima, 2009).

United States continued imposing more economic prohibitions against Libya. These included complete prohibition of direct exports and imports trade, business activities and transactions associated with travel industry (Twati, Jamal & John, 2006). United States froze properties of Libya making commerce and business to be difficult for Libya. These transactions resulted to war between United States and Libya (Libya: Oil & Gas Report, 2014).

The United States are not the only one which imposed embargoes against Libya. Other unions and nations which executed bans on Libya include; United

Nations, European Union and United Kingdom (Twati, Jamal & John, 2006). United Nations banned transportation and selling of arms to Libya, issued travel and froze assets of specific people. All member states of the United Nations were required to impose these embargoes against Libya. Similarly, the European Union did exactly as the United Nations and added more prohibitions. These sanctions affected the economy of Libya (Abozed, Mohamad, Yassine & Karima, 2009).

4.7Contribution of Oil Industry in Libya

Libya without oil could have been a different country. Apart from changing the outlook of many regions, oil helped in shaping policies and progress of this country. Oil and gas industry is considered to be the principal source of income in Libya (Twati, Jamal & John, 2006). Hence, this industry has enhanced economic development and growth. In addition to that, it has led to dissemination of education and health services to the public. Libya trained people (employees) who worked in the oil and gas industry (Abozed, Mohammad, Yassine & Karima, 2009). The National Oil Corporation (NOC) is playing a significant role Libya's economy development. It has established institutions offering top quality training to the workers and employees working in the oil industry. These institutions together with the oil industry have provided employment hence reducing unemployment rate among the citizens (Tripoli, Marriott & Sirte, 2001).

The economy of Libya is majorly is reliant on the sector of energy. It taps 90% of total government revenue from this industry and 95% of income earned from exports. In addition, oil industry provides 80% of GDP in the economy. The development of infrastructure in Libya is as a result of oil industry (Twati, Jamal & John, 2006).

Oil and gas industry played an imperatively significant part in reduction of unemployment in Libya. It has been significant in the local economy by enhancing unemployment reduction by 35% between the year 2000 and 2011 (Twati, Jamal & John, 2006). The increased production of oil in Libya, gave opportunities of jobs to the untrained and trained unemployed people. This factor also resulted to growth and development of the economy of Libya (Tripoli, Marriott & Sirte, 2001).

The Libyan oil industry attracted many foreign investor countries and organizations. It accepted the interest of these nations and gave them working permits under stipulated conditions. To attract more investors who are beneficial to the country, it gave terms and conditions which are advantageous financially (Twati, Jamal & John, 2006). Cooperative endeavors in the oil industry boosted the economy. Foreign countries and organizations helped Libya in exploration of oil as it could not have managed to handle the excess amount of oil and gas found in the oil fields of Libya (Abozed, Mohamad, Yassine & Karima, 2009).

Oil exploration companies given permits to explore oil in Libya, for instance Occidental Company, offered a section of its profit in the development of agriculture. Wells were drilled to provide water for irrigation in agriculture sector. This contribution resulted to high yield of produce in agriculture (Twati, Jamal & John, 2006). This is evident as agriculture produce declined because of sanctions which were imposed to the oil industry.

The oil boom sparked or attracted many people to migrate into Libya. The rising government expenditure, increased private sector activity and improved in the oil producing countries. The number of Arab migrant workers rose from one million in 1975 to 3.7 million in 1985. The increase in migration affected the economies of the migrants' home countries in two different ways. It eased unemployment and increased the flow of remittance from oil exporting counties to labor exporting countries. The remittances became a major source of revenue for the countries that had laborers in Libya. The remittances from all immigrants' expatriate workers were estimated at $413 billion. The remittances helped other countries to develop and establish their economies (Al-Moneef, 2006).

The mechanism for the transfer of oil revenues to other Arab countries is more relevant to countries that have a well-established tourism infrastructure. The flow of tourist from Libya to other to countries such as Egypt, Lebanon, and Morocco increased as Libya economy thrived on the oil boom. This has helped other countries to boost their foreign exchange receipts and further develop their services sector as well as infrastructure. Inter-regional tourist has grown at a faster rate, especially during the oil boom of 1974 and again during the most recent during the

oil boom period 1980-2000 (Al- Moneef, 2006). The tourist arrivals from within the Arab world rose from 22 percent of the total tourists in 1999 to 45 percent in 2004.

The national oil cooperation came up with programs to empower local residents. The hospitals and social amenities were built under the management of Sustainable Development Department of the National Oil Corporation. They organized workshops, which gave lectures on the development of medical management and the modern technologies in the field of healthcare through using integrated healthcare systems. The contribution of the national oil corporation was immense. Its collaboration with international oil companies to contributed to the development of society through sustainable development programs, making Libyans lives better. The clinics were equipped with the latest surgical equipment and laboratories that matched European standard (National Oil Corporation, 2009).

The oil trade improved relationships between exporting and importing countries. The importing countries from Europe such as France, Italy, and Spain had a blossoming with Libya. The United States too had a good relationship and it helped Libya to improve oil production through aid and offering expertise services in installation of mining equipment and servicing of the machinery used in oil drilling (National Oil Corporation, 2009). Libya oil projects benefitted from foreign funding, as well as foreign government encouraging their home companies to invest in oil drilling in Libya. Even though the United States imposed a ban on Libya in 1982, Libya still benefitted from its close ties with Italy, France, and Spain (Reuters, 2012). Libya improved its relationship with other Arab nations through the bilateral and multilateral aid. The non-oil exporting countries benefited through financial institutions set up by oil producing countries governments or through collective efforts. Libya assisted developing countries such as Kuwait (Al-Moneef, 2006).

4.8 Oil Production in Libya

Libya holds the largest oil reserves and is an important contributor to the global supply of light, sweet crude. According to by Oil and Gas Journal, Libya carries 47.1 billion barrels of oil reserves (Hauslohner, 2013).The high oil price levels in the second half of the 1970s encouraged further exploration and increased oil production. The developments in the North Sea were probably the most intense. In

1975, growth accelerated and it became profitable the light of the Organization of Petroleum Exporting Countries induced high prices compounded by a favorable upstream tax incentive for oil companies. The production level increased to stand at 6.7 Mb/d in 1985. This was attributed to the new technologies that enabled new high cost fields to be profitable and t lowered the cost of production. When Organization of Petroleum Exporting Countries market share declined, because of the intense competition from non-OPEC members countries, the member countries were forced to undertake successive cycles of quota cuts in a move to stabilize the oil prices. For a while, Organization of Petroleum Exporting Countries was successful in controlling the production and prices of oil in its member states. Libya had to adjust to the OPEC (Okogu, 2003). The global oil demand increased by almost 10% in 1976 and 1979, after a slump witnessed in 1974 and 1975. The world economy returned to its growing path. The growth led to OPEC to accommodate its member's behavior including overproduction. The quota policy, though not successful, made the markets prices to stable for at least a long period (Okugu, 2003).

Before the onset of hostilities, Libya has been producing an estimated 1.65 million barrels per day of mostly light sweet crude oil. The production capacity has increased over the previous decade from 1.4 million barrels per day in 2000 to 1.8 million barrels per day in 2010. However, it remains below peak levels of 3 million barrels per day achieved n late 1960s. Libya also produced an estimated 140 thousand barrels per day of non-crude liquids, which include natural gas plant liquids and lease condensate (Okugu, 2003).

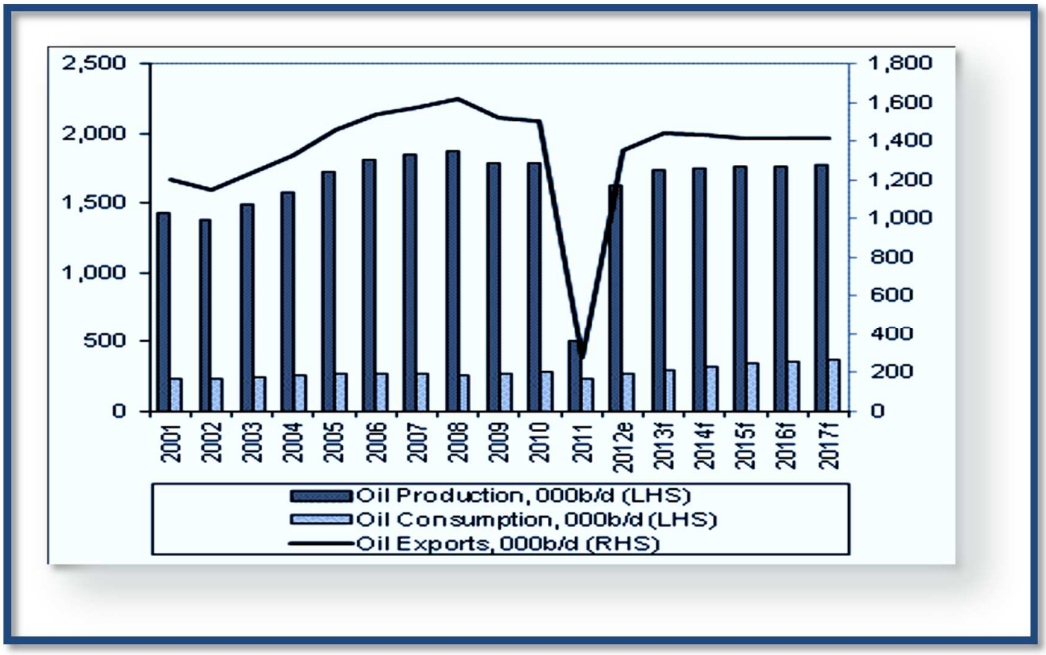
According to Energy Information Administration (2012), the oil sector in Libya was adversely affected by the political unrest, it experienced production shut-ins after the civil unrest commenced in February 2011, and it began to recover in September 2011. As of May 2012, crude oil production had been restored to an estimated 1.4 barrels per day.

Civil wars led to drastic reduction of oil production, shutting down of oil production sites and departure expatriate officers. Due to that, by September 2011, oil production had reduced to 50,000 bbl per day form 80,000 bbl per day produced

in June. Since the death of Gadhafi, October 2011, there has been restoration of oil production. Repsol, Wintershall and Eni used their 2012 profits to restore oil production (Twati, Jamal & John, 2006).

The new government formed in July 2012, is aimed at increasing production of oil and gas. It came up with projective goals to 2017 which it wants to strife to attain. It approximated its targets using statistics of oil quantities produced since 2011. The government's aim is to produce 1.78 million bbl per day by 2017 (Abozed, Mohamad, Yassine & Karima, 2009).

Figure (4.1) Libya Oil Production, Consumption and Exports between 2001 and 2017.

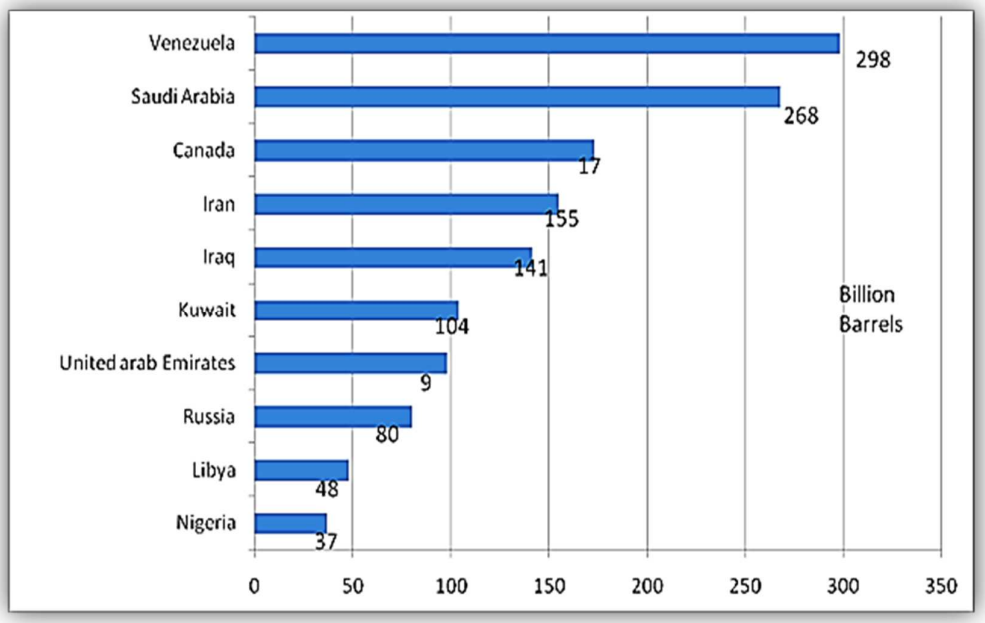


Source: EIA/BMI e-estimate f-forecast 2010

Meeting the projected new goals of oil production will rely on the investment strategies that will be used in production. The government set aside capital to be used in boosting oil production. The funds will be used in expansion and discovery of the new oil fields. In addition to that, international oil companies such as Eni, Repsol and Royal Dutch shell promised to help Libya restore its oil industry by giving funds, intensifying their survey and exploratory activities and coordinating in exportation of the produced oil (Abozed, Mohamad, Yassine & Karima, 2009).

According to Oil and Gas Journal, 2013, Libya has 48 billion barrels of crude oil reserves. It has the highest quantity of crude oil reserves in Africa, 38% of Africa 'soil reserves and this is expected to rise as more oil wells have not been exploited. Libya is the ninth worldwide in terms of oil reserves as illustrated below:

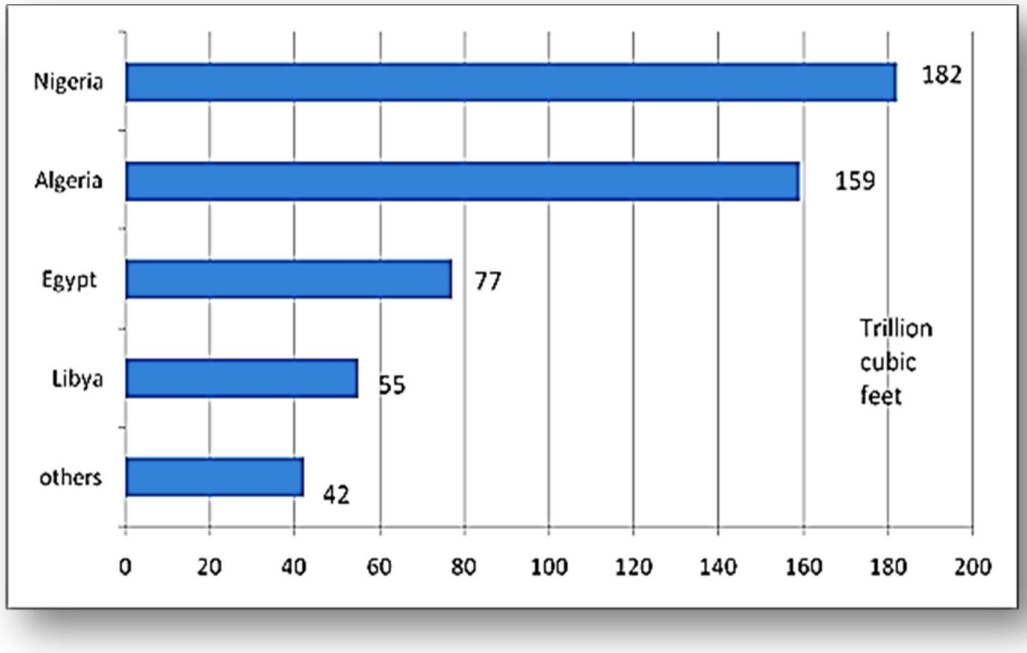
Figure (4.2) the world's Top 10 holders of proven crude oil reserves 2013.



Source: Oil and Natural Gas Journal, 2013

A part from producing oil, Libya is also producing natural gas since 2012. Italy is the consumer of most of Libya's natural gas through a pipe. It is fourth in natural gas reserve in Africa.

Figure (4.3) Natural Gas proved Reserves in Africa, 2013



Source: Oil and Gas Journal, 2013

4.9 Oil Export in Libya

Countries where large quantities Libyan of oil are exported include; Italy, France, China, Germany, Spain, United Kingdom, Greece and United States. There are others which import oil of Libya but in small quantities and when they are summed up they make up approximately 14% of the oil exported. Libya, the largest holder of proven oil reserves in Africa and recently it is the fourth largest oil producer. Libya exports most the energy it produces. Europe is the major market for both natural gas and oil exports in Libya. The outbreak of violence in February 2011, led to a reduction in the production of oil and gas to decline to 60 percent. This had a negative implication on the revenue from oil and natural gas exports in Libya. The sole consumer of Libya's natural gas is Italy. The natural gas was exported to Italy via the Green stream pipe stopped (Reuters, 2013). However, in February 2011, exportation was stopped because of the mayhem caused by protesters in various parts of the country. Thus, it led to losses and a further slump on the revenue from natural gas exports (Energy Information Administration, 2012).

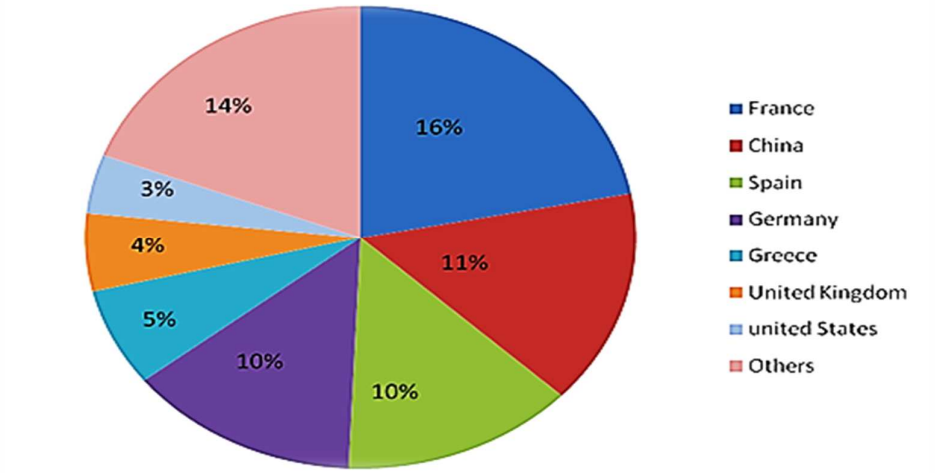
Libya produced an estimated 1.8 million barrels per day of oil in 2010, which stood at 1.5 million barrels per day were exported (Energy Information Administration, 2013). Libya exports nine different grades of crude oil to Asia, American, and European markets. The Asian markets are consumers of the heavier crude oil, while Europe imports light sweeter grades. Italy is the top destination for Libyan oil, which represents a 28 percent Italy total oil imports in 2010 (National Oil Corporation, 2010). United States imported an average of 70, 500 barrels per day from Libya in 2010. According to National Oil Corporation (2010), China imported 150,000 barrels per day, which represents 3 percent of China's total imports.

Libya's oil crisis deepened in 2013 according to a Reuters report. Protesters blocking the western fields shunned talks, therefore leading to delay in the reopening of the eastern oil terminal because of the fear more attacks from protesters in the west terminal. In 2013, Libya's exports dropped by 10 percent, which equals to 90,000 barrels per day (Reuters, 2013). According to Forbes, OPEC cut their output estimated based on the situation in Libya. The protests that affected the major parts of the country led to a stop on gas exports to Italy (Coats, 2013). The conflict affected several export terminals and this in turn reduced the output in oil produced in Libya. According to Energy Information Administration, prior to the fighting, ES Sider exported approximately 350 thousand barrels per day from the Waha concession. Some of the storage tanks were set ablaze during the fighting and it negatively affected the production of oil for export (Energy Information Administration, 2012)

Following the sanctions imposed by the United States of America and the United Nations, oil output in Libya declined. Libya could not import certain oil production equipment and new technology to boost drilling in oil mines from 1980 to 2004. According to Oil and Gas Journal, foreign investment from European nations and United States was withdrawn. After sanctions ended in 2004, many foreign companies returned to reclaim rights to their assets, including a United States oil company, Occidental Petroleum and consortium partners in the Waha Oil Company (Energy Information Administration, 2012). Subsequently, in 2012, Waha announced a field development plan to increase capacity at their fields to a total of 500,000 barrels per day. However, the protests at the Es Sider port almost

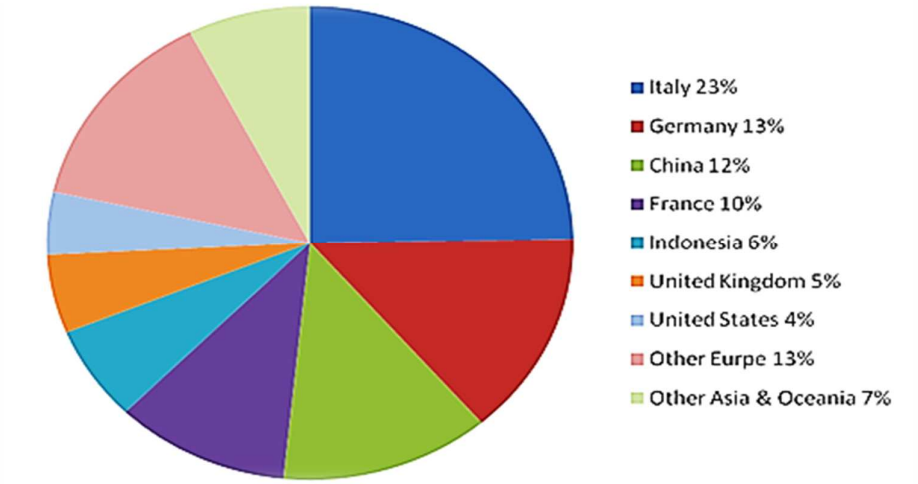
completely halted oil production in 2013 (Energy Information Administration, 2013).The following bar graphs illustrates the Libya's crude oil exports by destination both in 2010 and 2012.

Figure4.4 Libya's Crude oil Exports by Destination, 2010



Source: Oil and Gas Journal, 2013

Figure 4.5 Libya's Crude oil exports by Destination, 2012



Source: Oil and Gas Journal, 2013

The net export of Libya's was approximated to be 1.5 million bbl. /d in 2010. The huge quantity of Libya's oil is exported to countries in Europe including Germany, France, Italy and Spain. US began lifted the ban against Libya and started receiving oil from since 2004. The USA imports from Libya before March 1982are estimated at 150,000 bbl per day.

The United States oil companies' assets in Libya at the end of 1981 were valued at $500. Prior to the sanctions imposed in 1986, US companies accounted for the production of 1.2 million bbl per day. The oil prices reduced from $25 per bbl to $17per bbl in mid-January 1986 (Schott, 1982).

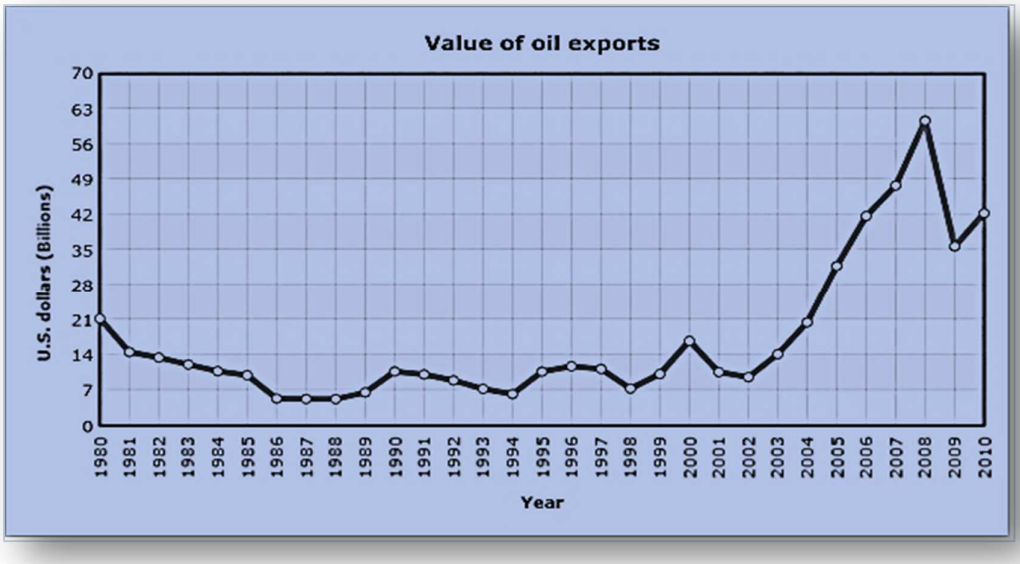
The sanctions imposed on Libya affected the oil production and exports up to 1990. Libya then collaborated with other European Nations, which offered loans and grants that helped in oil production. The effects of the USA ban eased up. The production level was high because of the collaboration and ready market from European nations such as Spain, France, Italy, and Germany. Libya no longer over relied on the USA for oil equipment and servicing. In the 1990s, the exports started

to increase despite the imposed ban from the USA (Peterson Institute for International Economics, 2004)

4.10 Libya's Export Performance

When the USA lifted the ban in 2004, Libya had gained stability its exportation. This further pushed for higher revenues from the oil exports. The oil boom period 2002-2008 saw an increase in exports since the markets grew further. Investment from USA oil companies in Libya meant that Libya could produce oil to meet the growing demands. The boom period was negatively affected by the protests sparked in 2009 to oust the government. The foreign oil company investment declined as from 2009, which saw a drop in production in 2009. The civil unrest slowed down the production and oil companies were not willing to invest more money on oil equipment (National Oil Corporation, 2009). In 2010, Libya struggled to find its feet in oil market and there was an increase in exporters before violence erupted in 2011. The protesters attacked oil mines and some were closed down as the unrest spread to various parts of the country in 2011(Energy Information Administration, 2012). Following closure of the main fields in 2011, the oil business slumped further and exports declined (Reuters, 2012).

Figure 4.6 value of oil Export



Source: CIA, 2013

From 1980 to 2010, exports of Libyan oil kept fluctuating. This was influenced by the prevailing factors in oil production, status of the economy and the relations between Libya and the importers nations. When oil production is high, oil exported to foreign countries will also be high. During the times of sanctions like when United States, United Kingdom and United Nations imposed embargoes against Libya oil exports were as well affected.

As illustrated by the table and graph above, from 1980 to 1988 the quantity of oil exported reduced. In 1980, the quantity of oil exported was worth $ 21.239 billion and in 1988 was worth $5.239 billion. This shows that there were either unfavorable factors for oil production and exports or the oil reserves were exhausted. As shown in the graph and the table, exports fluctuated from year to year. From 2002 to 2008 there was increase in the oil exports which was followed by a decline up to 2010 whereby oil worth $42.307 billion was exported.

4.11 Impact of oil exports on performance of government expenditure and budget funding in Libya

Libya's government remains highly reliant on oil export revenues to meet its budget funding and expenditure. Libya's government spending accounts for over 50% of the budget. The government expenditure is very high due to a high number of employees in the public sector. Notably, over 1.2million people in Libya are on the government payroll with more than 200,000 war veteran. War veterans are paid $400-$2,300 per month by the government. Remarkably, Libya's wage bill has increased to $15billion over the last few years. The Libyan government motivation for such large spending is the large oil exports (Kilian 2008). Remarkably, 75% of the government's revenue comes from oil export revenues.

Under Gadhafi's regime, the oil export sector generated 95% of the total earnings. Moreover, it contributed 90% of the country's budget. In this light, it can be seen that the government solely relied on oil to fund the budget and its expenditure. The overdependence on hydrocarbon export earnings makes economic development susceptible to oil price fluctuations. Moreover, it causes difficulties in

macroeconomic management. Despite Libya's high oil earnings, economic and national development remained low (International Monetary Fund 2012).

After the political upheavals, a great portion of government expenditure became skewed towards current expenditure. This is due to amplified wage bills and subsidies to maintain export promotion programs. In 2011, Libya experienced a balance deficit of 18.7% of the gross domestic product due to disturbances in oil production caused by the political revolution. In 2012, Libya's budget had a surplus of 24% of the gross domestic product due to restoration of oil exports. However, the country's monetary break-even point per barrel swelled from $67 to $74. The non-oil budget deficit increased from 139.6% in 2010 to 191% of non-oil GDP in 2012. Despite the oil revenue sustaining the high current expenditure in Libya, increased levels of subsidies and wage bill, and a frail government structure may hamper economic sustainability (International Monetary Fund 2012).

4.12 Oil and GDP relationship

Oil has become a very vital commodity in the economy and life of the world. As such, an earnest investigation into the relationship between oil and GDP can be done through world oil prices. According to many researchers and scholars, oil prices and GDP are negatively related. This means that an increase in oil prices leads to a reduction in the GDP or output growth. A conventional justification for the negative relationship between GDP and oil prices is that high oil prices increase the production costs. Alternatively, fluctuations in oil prices delay investments by facilitating uncertainties or expensive resource/production input allocations. This is because investors try to reallocate resources from sectors that are highly affected to the sectors that are lowly adversely affected. In this light, the aggregate output is adversely affected. However, the opposite is true in Libya (Bauer, Karam and Allouche 2013). Being an oil-producing country, an increase in oil prices means more oil earnings from exports, As such, the country's GDP increases. In Libya's case, increases in world oil prices are positively related to aggregate output/GDP. Reduced oil prices means that Libya will earn low revenues hence low GDP and hampered economic growth. In non-oil producing countries, increases in crude oil prices behave like increases in tax on consumption. Thereby, an increase leads to high production costs, high prices for products/services and increased levels of

inflation. Since employment is greatly dependent on aggregate output growth, increased oil prices decrease employment growth leading to increased rates of unemployment. However, Libya gains from high oil prices because it is major exporter hence high rates of employment (Kilian 2008).

According to Yahia and Saleh (2008), oil prices have significant effects on Libya's employment. In the period 1972-1982, the relationship between oil prices and employment was positive. However, in the period 1983-1998, employment was negatively affected due to recession. Remarkably, employment rates in the country have always adjusted partially to the prevailing situations. This implies a log-run correlation between employment rates and oil prices.

4.13 Relationship between export and economic growth in Libya

Libya's economic growth is export-led. Libya is a developing country hence it is vital to determine whether such a country should adopt trade policies that promote exports or import substitution. Import substitution policies promote local production through industrialization. In this light, the government imposes trade barriers and tariffs in order to ensure that local production substitutes imports. In contrast, export led growth entails strategies that promote manufacturing sectors. These strategies promote productivity level by promoting specialization in the manufacturing sector. Consequently, resources are reallocated form the inept non-trade segments to the efficient trade segments. Hence, the economy benefits due to increased exports and a better balance of payment. This enhances import of investment goods or facilities which are used for local production (Yousef 2006).

Remarkably, scholars support export promotion strategies instead of import substitution strategies. Libya's economic growth and exports are correlated. The Libyan economy shows elements of strong long-run bidirectional causation between economic growth and oil exports. This means that each macroeconomic variable is able to adjust and revert back to an equilibrium relationship in any situation. As such, Libya experiences economic growth when exports increase (Terry 2004).

Libya's export promotion strategies have several benefits. One, the country has achieved economic growth through spill-over from the export segment.

Increased oil exports have enabled the country to improve its balance of payments and increase its foreign monetary reserves. This has resulted to expansion of Libya's production capacity due to an increase in imported investment goods. Increased investment goods have enhanced local production of Libya by facilitating creation of better and larger industries (Elbeydi, Hamuda and Gazda 2010). Secondly, Libyan domestic oil market is smaller than the export markets. In 2010, Libya produced 1.8 million barrels per day. The domestic market consumed approximately 300,000barrrels per day and the remainder was exported (Energy information Administration 2012). In this light, export promotion has enabled Libyan to earn much more revenue from international markets which are much larger than domestic markets.

Thirdly, export-oriented promotions have enabled Libya to have more skilled workers due to specialization. This has boosted production and augmented economic growth (International Monetary Fund 2012). Domestic industries can compete effectively with international industries. However, export promotion policies are also disadvantageous. The strategies affect competition between local and international firms. The strategies used by the government can drive international firms out of the market. In return, other nations can opt to undercut Libya in retaliation hence killing many of the local industries. Due to the fact that these policies are implemented by the government, industry players are dependent on the government for tariff barriers and subsidies. This may affect the real cost of production hence hamper economic growth of Libya. Export-oriented promotion can kill small industries as it promotes reallocation of production resources from inept non-trade sectors to the efficient trade sectors. In this light, only the efficient manufacturing industries have a chance of survival under export promotion policies. Subsidies and tariff barriers may promote dumping. Libyan industries may sell their goods in international markets at prices that are less than the cost of production (International Monetary Fund 2012).

4.14 Libyan economy depends on oil exports

According to Dabrowska (2012), the Libyan economy had been predicted to encounter many development hurdles due to the political unrests in 2011 that led to the ousting and death of Muammar Gadhafi. During the period of unrest, there were

massive damages to the infrastructure and instability among the oil workforce, due to insecurity matters. Most of the international companies operating in the country were shut down temporarily, with workers fleeing in secure areas, thus leading to a significant decline in oil production.

However, the new government encouraged investors to return in order to rebound oil exports and within the first few months, the country had managed to increase production to a capacity of around 1.4 million barrels a day (Robinson, Torvik and Verdier 2006). In the year 2012, the significant rebounding in oil exports led to growth in real GDP by over 50 % (Auty 2001). This is despite the fact that the country's gross fixed capital formation was low due to security concerns.

Oil exports can therefore be identified as the major source of the country's GDP, and despite the fact that there are still major security concerns in the country; Libya is set to dominate in oil exports in the coming years (Gary and Karl 2012). One of the issues that have been positively transformed is the macroeconomic status in the country. Having been adversely affected by the civil unrest, the increased oil production and exports supported macroeconomic recovery and it is expected that the country will use these resources to repair the destroyed infrastructures.

Unlike other oil producing countries in North Africa and the Middle East, Libya's economy is one of the least diversified, relying almost entirely on oil exports to sustain its economic growth. The significant recovery in oil production and oil exports is expected to be the main driver of economic development in the near-term. Based on recent findings by the IMF, the average hydrocarbon exports, within which oil is part, accounts to over 95% of the total exports in the country and contributed to around 90% of the government's revenue (African Development Bank, OECD, and UNDP 2012). This over-dependence on oil and other hydrocarbons demonstrates that as long as oil production is stable, the country's economy will rely entirely on oil, and unless other non-oil sectors are improved, Libya's economy is, and will be driven by oil exports (Vandewalle 2011).

The country's oil production has been influenced by among other things, its oil quality. Unlike other crude oil wells, Libya is known for its low-sulfur oil, which

is conventionally accepted as light oil. For this quality, the Libyan oil is very popular among the European countries, the largest export market for the country's oil. The quality of the country's oil makes it popular among its buyers and hence establishes a competitive advantage over its competitors. Similarly, the country has been favored by a decrease in the production cost and an increase in the average oil prices in the market. 2012 has been one of the best years for the country, whereby Libya expects to make significant profits and hence encourage international and local companies to invest in the oil sector. Although the country is considered a long way from its oil prime days, there are possibilities that within a stable political environment, Libya would start producing over 2 million barrels per day in next five years.

Oil exports in Libya are contributing to economic development in the following ways; infrastructure development, promoting international trade, increase in the country's GDP, sustaining government revenues and facilitating government expenditure (Cavalcanti, Mohaddes and Raissi 2011). On promoting international trade, Libya has been enjoying significant support from Italy, France, Spain, Germany and the USA. Some of the biggest international companies in the country include ENI, an Italian multinational oil company, which enjoys an average of over 30% in total Libyan oil exports (Tabellini 2005). Other major multinational companies include Total, which is based in France and Respol, a Spanish oil giant. These companies, among others operating in the European region have been significant exporters of Libyan oil, therefore promoting an increase in the total country's GDP, and facilitating economic growth and stability. The return of these major oil exporters was influenced by the large oil reservoirs in the country and the unprecedented rebound of exploration and drilling in the country. In addition, the quick recovery of oil production in the country was influenced by the fact that during the revolution, the oil wells were not affected, and although there were damages to the infrastructures, the oil deposits and production sites were not affected.

The oil minister of Libya reported that oil is the sole source of revenue for the country's economy. His statement implied that Lydia's GDP is supported by revenues generated from the sale of oil. The per capita income of the country is

generated from oil related activities with majority of the citizenry finding employment in oil field or in oil related industries or hydrocarbon related businesses. The International Monetary Fund (IMF) made its prediction that the GDP of the country will grow to over 16% despite the country's inflation that currently stands at 15% (African Development Bank, OECD, and UNDP 2000). Also, the country would make use its expected revenues derived from the exportation of oil in financing post-civil war reconstruction efforts (African Development Bank 2004).

A limited number of researchers have tried analyzing and documenting the effects that oil export fluctuations have affected some of Libya's economic activities. Heitman (1969) made an attempt to assess the effect that the oil income had on Libya's economy before the 1973 oil embargo by Arab countries. His conclusion was that the Libyan government expenditure depended heavily on the revenues realized from oil exports. Abohobiel (1983) on his part used a macroeconomic model to test the Libyan economy. He utilized quarterly data that spanned over the period 1962 to 1977. Unfortunately, no study was made on the fluctuations regarding world oil prices.

Baryun (1980) attempt to analyze and document that factors that affected Libya's balance of payment during the years starting from 1962 to 1977. In the conclusion of his work, he stated that the effects of the increased oil export following the 1973 oil embargo by Arab countries on the country's balance of payments were susceptible the laid down monetary and fiscal policies. But there were no studies conducted on the effect of fluctuations on the world oil prices.

Aljerrah, (1993) made an attempt in finding the best method for transacting exchange rate in the countries of the Middle East. The conventional wisdom is that the economies of these countries could have benefited more and enjoyed better advantages with regards to exchange rate system had they adopted the exchange rate regime.

It is only through government spending that much of the money coming from the oil revenues of many of these oil producing nations of the Middle East trickle down to the common man and the economy in general (Metwally and Tamaschke,

1980). The decrees in oil prices that began in 1982 forced the Libyan economy to cut back in its importation of goods and services. This decline in prices also forced the Libyan government to cut down on expenditures especially in capital works.

The volatility in prices of oil raises legitimate questions on how long that relationship of oil exports and government expenditure would elastin the Libyan economic setting. The past thirty years has seen oil producing countries having substantial increase in their exportation of oil and spending a lot of money in investments and in the consumption of goods and services. Metwally (2000) conducted a research study in relation with GCC countries. The study showed that when an economy performs the role of a "swing producer", that economy is more likely to export more oil than any other oil producing economies where there is an increase in the price of oil. It would therefore be interesting to know what was Libya's rate of oil exportation was per year, during those years of fluctuations in world oil prices.

Shaalan and Handy (1991) and Haddad, (1993) stated that government expenditures normally increase at the rate with which its oil production increases. However, there are some oil producers who do not follow this rule. Metwally and Perera (1993) voiced their suggestion by claiming that the direct combined values of the oil export and government expenditure have remained unchanged in non-OPEC member countries. It would be both interesting and important to see if the economic growth of Libya, an OPEC member, will have any effect on the country's balance of payment.

4.15 Challenges in the Oil Sector

Despite the fact that oil and gas industry has played a significant role in development and growth of the economy of Libya, it has faced a lot of challenges which have led to fluctuation of oil production. These challenges were either directed to the oil industry or the government is responsible in management of business activities in the oil sector (Twati, Jamal & John, 2006).It is difficult for a government to run and manage industries which some of its stakeholders are foreign countries and international organizations and companies amidst conflicts (Abozed, Mohamad, Yassine&Karima, 2009).

Political instability is a big problem for the government of Libya and this cannot be easily solved because most of the Libyan political leaders have political vested interest. Potential foreign investors who are likely to do quality work oil exploration and production become insecure concerning political instability and security matters. Economic growth and political stability are directly related and oil industry influences both (Twati, Jamal & John, 2006).

Another problem facing the oil industry is lack of transparency and accountability in business transactions in the oil industry. The government of Libya has been criticized by international transparency organizations on accountability issues (Tripoli, Marriott &Sirte, 2001).It is significant for governments and other non-governmental organizations to be transparent in their transactions for the economy to develop. This is a challenge that has been there for a long period of time and need to be addressed urgently for the wellbeing of the oil industry (Balhasan, Towler&Miskimins, 2013).

Furthermore, logistic problems, issues in obtaining of visas, flying problems and limited hotels are some of the problems which are limiting foreign investors. Libya is facing a lot of challenges which are increasing with time (Balhasan, Towler&Miskimins, 2013). The rate of infrastructure deterioration is high because it is not investing in construction and renovation of the existing roads. Poor transport system discourage investors in the oil industry (Abozed, Mohamad, Yassine&Karima, 2009).The capacity of Libya's sea ports lack the capacity to handle oil which is produced for exportation. These delays transactions during oil exportation. These are some of the challenges facing oil industry in Libya. To solve them, the government needs to change its approaches in this sector in order to attract more investors (Twati, Jamal & John, 2006).

CHAPTER FIVE

OIL PERFORMANCE AND LIBYAN ECONOMY

5.1 Oil development

Oil has been known to be vitally crucial to the economy globally. The world has experienced growth and development in oil for many years since 1980s. The development trend has continued with the majority of the growth coming from the emergence economies, thus the global significance of oil is likely to continue (Anderson 2008). The relationship between oil and the level of economic development has been the subject of much attention by many nations. Because of oil development, Libya still enjoys its financial liberalization and reform. According to British Petroleum, the average global oil consumption in 2011 was ranging 88.00 million barrels per day. The distribution of oil has not been evenly because of difference in development. The advanced countries of the organization of Economic Co-operation and Development (OECD) and oil rich countries consumes greater amount of oil compared to less advanced countries. Over decades the consumption of oil has been declining in the OECD countries. Oil development has been hastened by its demand that control its price. It is very important to understand current and future oil consumption patterns and their effects to the economic development. This will generally affect the oil market (Huntington 2006). Changes in the oil prices and its consequences remain a vital factor confronting the growing economy of Libya and other countries.

Reviewing the oil performance and economy of Libya we consider economic reform programs and the new phenomena since 1980 in Libya and some related nations such as Egypt, Tunisia, Saudi Arabia, and Jordan. It was in 1999 when the economy of Libya was at edge and only new reform programs could have helped the transformation. At this period the government employed a rigid economic program reform, which was intended to change the Libya economy to a capital-based economy from a socialist planned. The new economic reform program enhanced the country to be close to a market economy. The oil development helped to transform

some major sectors in the country. Some of the vital changes that accruing due to oil development in Libya are training of labor, creating of employment, advancement in the investment, and selling of public enterprises so that the public expenditure could reduce. Libya is one of the countries that had suffered from deficiencies in the economy, growth, inflation, and low rate of employment. The development of oil in Libya solve the problem of irregularity in demand and supply that brought imbalance in the balance of payment and thus lowering the currency of the home country Libya. This favored other countries because they could import materials from Libya at a low cost. Whereas Libya had a hard time to import from other countries since it was very expensive (Chontanawat 2008).

Since Libya discovered oil the agricultural sectors is one of the sectors that was aimed to enhance development of industries in the country. Before 1980, Libya had already achieved a high growth rate in its economy. Therefore, starting 1980 the main plan was to develop industrial sector that reached the growth rate to 2.1% in1981 and 2.3% in 1985. It was in 1998 to 2001 when the rate of economic growth was rating at 3.5%. The gross domestic product has not been doing as expected since the government allocated more of the resources to development programs (Choi 2001). Because of oil development in the country, the government plan regarding the economic development program for a period from 1996 to 2000 was mainly to focus the economic and social transformation in production and services sectors in order to provide fruitful products and services that were needed in the local market and that discouraged importation. It was in 2003 when the Libya experienced a strong and higher growth rate in economy because of revenue from oil export. It was the same time when the GDP of Libya increased by approximately 2.7 and 3.8% compared to 2002. The main challenge at that time was unemployment due to drastic population growth which could not match the existing opportunities of employment that were available. It was in 2011 when the country got an opportunity to pursue the types of social and economic reforms after the fall of the Gaddafi government. It was this period when the Libya shifted temporarily from oil production and this affected the GDP of the country contracting it to 41.8%. In 2013after Libya stabilizing politically the economic growth started regaining its tract (Backus 2000).

5.2. Oil and the Libyan Macroeconomic

5.2.1. Government Budget:

The reserves of oil in Libya are about 47 billion barrels and this is considered to be the largest in Africa and the ninth largest in the world. It was in 2010 when production was 1.8 million barrels daily. The civil war in 2011 reduced the production and exports. The production of oil is the base for revenue earning by the country Libya. In 210, hydrocarbon receipts catered for 91% of government income. Government interference is one major factor that affected oil, especially under the Gadhafi regime there was lack of good management of oil revenues.

The impact of oil and its effects relating to budget of the government would be fruitful if only the new government will be transparent. Because of the high population Libya has unleashed the potential for more diverse and inclusive growth (Atkinson 1995). Any growth in the economy is greatly affected the policy of the government on rule in the country. Libya faced complicated and expensive obligations of rebuilding the whole economy, infrastructure, and institutions. This was due to the increasing population that increased demand as well. The improved governance came to solve the conflict that had accompanied the revolution. This as a whole had a severe impact on the economy that relies on hydrocarbon production. The National Transitional Council (NTC) is responsible for in promotion of peaceful political transition in order to normalize the economic condition that affects government budget of Libya. Government is responsible restoring security because this will help in bringing hydrocarbon production and maintain macroeconomic stability. Government is responsible in controlling of oil production in various ways. When there was labor unrest the issue affected the country until the overthrow of the Gadhafi regime. Oil conflict between the government and the militias can cause drastic decrease in the economic growth of Libya (Anderson 2008). According the government of Libya, security is one of the major threats affecting the budget of the country. With the most revenue coming from oil, in case this oil production is interrupted due to one reason or the other the planning and budgeting becomes difficult and challenging because of the insufficient funds available. On July 7th, in 2012 the country conducted a historic election to enable peaceful handover of authority from transitional authorities to the Libyan. For Libya to stabilize its

economic planning and budgeting plan, it invited assistance and support from the United Nations.

5.2.2 Government Expenditure:

Government Expenditure and government budgeting affects one another in directly. It most constitutes the country expenditure in order to allow smooth running of the economy. Government spend on goods and services in order to balance internal wants and needs of its citizens (Mankiw 1992). The Libyan economy extensively relies on oil. Therefore, oil revenues from them major main source of financing government expenditure and import of products in Libya. Increasing prices of oil has boosted populist expenditures especially after the Gadhafi regime. The government spending was high in 2007 when the price of oil was high. This eased exchange controls and liberalized foreign trade. Some major spending went to reconstruction of the public sector and banking system. The government tried to focus a bit on privatization.

In 1999 to the year 2005, inflation was realized in Libya because of the large amount in circulation. Economically, when the public hold more real money, the value lowers and this create inflation. In early 1990s the country was experiencing deflation but later from late early 2000s the inflation cropped in the economy. The economy growth and development of Libya is controlled by investment and spending of the government along with imports. The spending of the government of Libya depend s heavily on the revenue expected and experienced in the time of budgeting. According to economic analysts, the real GDP of Libya has followed the prices of oil since 1992 since majority of the incoming revenue come from oil. Since 2007 to 2012 the government has been increasing its plan for investment due to increased revenue accruing from the increased prices of oil. This attracted substantial funding in the 2008 and partly 2012. Therefore, it is evident that oil and gas sector dominates the economic growth and development since 74% of the GDP in 2006 came from the sector (Anderson 2008).

The government spending suffered a bit during the years of international sanctions; this is because exploration and growth in the sector of oil was not developing exponentially. This spending was affected because of lack of foreign and

local investment. It was during this period when the United States offered their support and Libya was able to regain and maintain old oil fields. This increased the barrels of reserves and boosted the production of oil and gas sector. For a period the Libyan government has been trying to diversify its economic expenditure. However, this has not given good returns and need for macroeconomic policies were considered. The country has a lot of liquidity because of the revenue from oil and gas sector. The impact of liquidity is observed in budgetary and monetary policies and in exogenous position of Libya. The fiscal policy is one of the policies employed by Libya to control its expenditure. This was employed because of the high oil prices that increased the surplus and dominated the oil revenue over other incomes. This policy enabled the government of Libya to repay its debts and stopping the printing of extra money to support the spending. It was this period where taxes on production was replaces by sales tax, this resulted to the value added tax. In 2006 the deficit in oil and gas sector resulted from scale of government spending that increased over 32% of GDP (Sharma 2005).

5.2.3. Gross Domestic Product:

According to IMF the Libyan GDP has been fluctuating since 1980 to late 1990s. Starting 2000 to 2013 after political instability reduced and the new old Gadhafi regime ended the GDP has picked well. The Libyan GDP had increased by 10% in 2010, however in 2011 the tragic of civil war affected the growth and development of the country resulting to a drop of 60%, in 2012 it was the worst since the GDP dropped further by almost 100%. After this period is when the country made several changes regarding the source of revenue and diversification was the solution. The newly elected government in Libya has splayed a big role in regaining the GDP to its original position and even higher. According to IMF, Libya has been recovering after the revolution in hydrocarbon production. A rise of GDP by 17% is what was targeted after upgrading security sector and regaining the production of hydrocarbons as before. According to the new government, normalizing security, reducing political instability, and being proactive in responding to the aspiration of the revolution are the basic to boost the GDP of the country (International Monetary Fund, 2013).

According to international Monetary Fund the inflation objective can help to avoid slow or downward movement of GDP trend. The Gross Domestic Product dependent only on oil sector, this is because the old regime being strict and not allowing external investors in the country (Backus 2000). The GDP trend since 2013 has been exponentially rising due to diversification and upgraded condition of oil sector.

5.2.4. Trade:

The Libyan trade has been affected by the flow of oil market since the oil development is the main thing that affects cash in the economy. Libya trade is both locally and internationally. In order to evaluate the real trend in Libya country, standard econometric techniques are preferred. According to this strategy, EU is the main supplier of intermediate goods to Libya. Many researches dealing with trade in Libya indicates those imports of capital goods and raw materials entails more than 80% of the total imports and has played a significant role in the diversification of the Libya economy.

Through trade this contributed to the non-oil sector greatly (Anderson 2008). It is evidently that Libyan economy is characterized by a high degree of interdependence with the rest of the world. Libya heavily relies on the exports of crude oil, as the main foreign exchange earner. Like those oil-rich countries in the Middle East and North Africa, it has relied more on oil exports than any other product. Having the challenges resulting from fluctuations and declining prices of oil since 1990, the country has exerted notable efforts in order to achieve the goal of economic diversification. This is what led to expansion of trade even to non-oil sector such as in manufacturing and agriculture sectors. The trade in Libya has grown because of the target of diversifying its economy. The great achievement that Libya intends to have is to have various ways of earning income apart from just oil. This is believed that it will sustain the spontaneous growth of revenue even when the oil sector faces threats. Trade of Libya is affected by the common factors that affect trades worldwide. Libya being among the developing countries entailing large area and low density of population with large endowment of natural resources, gas, and oil, it relied mostly on oil sector. With continuous growth and development of economy and limited endogenous resources the country focused on the imports of

intermediate inputs as a mode of maintaining the standard of people and availing various need for the local market. Because of extension of trade to other sectors apart from oil only because of structural changes in the economy locally (Chontanawat 2008).

The share of manufacturing in GDP rose by 10% from 1980 to 1999. The value form exports increased because of the increase of local market needs from various goods and services. This was an attribute in the development plan of Libya. Therefore, the subsequently the evolution of exports and imports and balance of trade stabilizes with growth of diversification in trade generally. The Libyan trade faced some barriers because of the government not agreeing be part of EU. The proposed trade agreement could have helped Libya to gain more advantages from trade. Agriculture, fisheries, and processed foods are sectors that Libyan government tried to adopt in expansion of its trade. Fishery sector has potentially a big impact on the trade and the environment in general (Mankiw 1992).

5.2.5. Gross Investment

In Libya Gross Investment has been affected by political stability. After the Arab Spring and Revolution, there was an emerged situation in Libya regarding the interim regime. It was this period when dependency on oil became an issue and the government wanted to change the routine and start depending on other sectors. The (NYC) announced this transition towards democracy with an economy based on government and private sectors. According to the managerial team of (NTC), in the reconstruction of Libya the new government will have more interest on those foreign companies in countries that were supporting the rebellion against Gadhafi. Generally, those businesses operating in post-conflict zones are subject to great business opportunities. Gross investment started to increase after the government solved the issue of leadership. Many countries that wanted to invest in the country were not able to intrude well because of instability during Gadhafi regime. Economically, when a nation faces political instability, very few investors will have the willing to put up their businesses in such countries. One of the companies that are a greater investor in Libya is Ram-boll (Atkinson 1995). The company has its firms specific and capabilities in relation to investing in Libya. The Danish firm is another investment in Libya that makes the overall gross investment of the country

to be notice globally. Libya being a resource rich country with financially better foundation for developing and reconstructing the country many great investors will want to invest in the country. Libya does have a high degree of national technical expertise and this create an opportunity for external countries to invest in it since competition is not stiff.

5.2.6. Export and Current Account

The current account and export has been increasing with the increase in the price of oil. Because of increase in export the current account follows the same trend. Depending on the estimation of regression model since 1980 the interpretation of price of oil on current accounts can be traced (Mankiw 1992). Current accounts respond positively to variation of price of oil. The impact is non-linear and always relies on the extent of financial development of oil exporting economies. Since 2003 the Libya has been experiencing a rise in current account surplus because of the increase in price of oil and thus export increase. Before Libya started diversifying its economy, oil was the major source of foreign exchange and this made it clear that oil development affected current account. This took time till 2002 when the country extended investment on non-oil sectors such as agricultural sector. This brought fluctuation of current account to control since in previous years the current account imbalance depending f oil on the price oil. Currently, the whole issue of current account being affected by oil has changed in Libya; it is more of institutional capacity rather than a reversal in oil price dynamics of economies (Srinivasan 2001).

5-2-7 Exchange Rate

The exchange rate policy:

Over the past decades, the national economy has witnessed several economic and financial difficulties that necessitated the adoption of a set of economic policies and measures aimed at addressing the imbalances that have occurred. These include the exchange rate policy. The following summarizes the evolution of the exchange rate policy implemented by the Central Bank of Libya (CBL) since its inception up to now.

The Exchange rate (the equilibrium value of the Libyan Dinars):

The Libyan Dinar (LD) has been issued as the national currency for the first time (under the name of the pound) early 1952. Its value was, then, equal to that of the Sterling pound of USD 2.8 (equivalent to 2.48828 grams of gold) each. In 1967, the sterling pound was devaluated by about 14.3% to USD 2.4. Despite the fact that Libya was, then, still a part of the Sterling pound area, the LD was not devaluated.

In August 1971, the United States announced that it is no longer commitment to replacing the USD with gold. In November of the same year, the USD was devaluated against the SDR by about 7.9%, to SDR1 = USD 1.0857, instead of the old rate of SDR 1 = USD 1. This has led to an appreciation of the LD against the USD to LD = USD3.04, instead of LD1 =USD 2.8. In February 1973, the USD was devaluated, for the second time, by 10% against the SDR to USD1.2063, instead of USD1.0857. This resulted in an appreciation of LD against the USD by about 11% to LD1 = USD3.3776, instead of LD1 = USD3.04. 77

In February 1973, the LD was pegged to USD at a fixed exchange rate of USD1 = LD0.29679.As a result of this peg, the value of LD against other currencies varied as USD varied against those currencies. Until 1986, the LD maintained its value against the USD and the other major foreign currencies because of the relative availability of foreign currency and the large increase in reserves caused by the soaring oil prices and an increase in proceeds from oil exports, as well as the lack of administrative or quantitative restrictions on foreign currency trading, whether to the individuals, the public or the private institutions, at least until 1982.

On May 1986, a margin was set to LD fluctuations at ± 7.5%. The lower bound of this margin was equivalent to SDR2.6046. However, the margin was later expanded several times. The abovementioned changes were introduced pursuant to the provisions of the Banking Law, which authorized the CBL to revise the exchange rate of the LD according to the economic and monetary developments so as to prevent the negative effects of such developments on the national economy. To that end, the CBL has, since February 14, 1999 until the end of 2001, implemented a program that enabled commercial banks to sell foreign currency for personal and business purposes, without any restrictions and in accordance with the offer prices set by the CBL. The new exchange rate, known as the "declared special exchange

rate ", was used beside the official exchange rate after the elimination of what was known then as the "commercial price" which was approved and used for certain purposes since 1994 until the beginning of 1999. The most important objectives of this program were:

1. To rationalize the use of foreign currency.

2. To resolve the problem of citizens who need foreign currency for various personal purposes through a legal mechanism, according to legitimate procedures and without restrictions on the exchange.

3. To raise the value of the Libyan dinar against the foreign currencies in the black market.

4. To support the purchasing power of the LD.

5. To lower the prices of goods provided and funded by the parallel market and to maintain their stability.

6. To eliminate the parallel market for foreign currency.

The program aimed at establishing an appropriate ground to adjusting the LD exchange rate up to its real effective exchange rate that fits the Libyan economic indicators; achieving efficient and rational use of available resources and eliminating distortions in the prices.

During the period 1999 – 2000, the LD has gradually been appreciated in terms of the declared special exchange rate, accompanied from time to time with devaluation in terms of the official Exchange rate. As a result, the official exchange rate of the LD against the USD fluctuated between USD3.54 for LD1, at the end of 1990, to USD1.55 per LD1, at the end of 2001. The LD exchange rates against other major currencies, also, varied according to the changes that have occurred in the LD as denominated in SDR.

On January, 2002, the exchange rates of LD were unified by a fifty percent devaluation in the official rate, compared to its value at the end of 2001, to SDR 0.6080 per LD, equivalent toLD1= USD1.3.

On June 16, 2003, the LD was further devaluated by 15%, to SDR 0.5175 per one LD in order to account for the tax of Man Made River, which was imposed on all credit letters and remittances of foreign exchange, as well as to eliminate the discrimination in the exchange rate among the tax-exempt and non- exempt. This rate is still in effect until now.

On June 21, 2003, Libya officially informed the International Monetary Fund (IMF) of its decision to accept the obligations of Article VIII of the IMF Agreement. Libya eliminated, hence, the restrictions that were involving approvals under Article VIII, including the tax of the Man Made River of 15% on remittances and purchases of foreign currency by individuals and the private sector, as well as all other restrictions that were imposed on the operations of the current account.(central bank of Libya) Libyan exchange rate policy.

Table (5.1) Rates of Libyan Dinar against Major International Currencies

Currencies	**U. S Dollar $**		**Euro €**		**Sterling £**		**Swiss Frank**	
year	**Selling**	**Buying**	**Selling**	**Buying**	**Selling**	**Buying**	**Selling**	**Buying**
2004	1.25064	1.24440	1.70188	1.69339	2.40385	2.39186	1.10141	1.09591
2005	1.35540	1.34864	1.59897	1.59099	2.33386	2.32222	1.03128	1.02613
2006	1.28821	1.28178	1.69515	1.68669	2.52631	2.51370	1.05608	1.05081
2007	1.22728	1.22116	1.80312	1.79412	2.45432	2.44208	1.08714	1.08172
2008	1.25160	1.24540	1.76450	1.75570	1.81430	1.80530	1.18580	1.17990
2009	1.24020	1.23400	1.77830	1.76940	1.96600	1.95620	1.19390	1.18800
2010	1.25750	1.25120	1.66410	1.65580	1.95090	1.94110	1.33400	1.32730

Libyan Central Bank 2010

Table (5.2):The relations existing among price of Crude Oil/barrel and Total Export Value of Crude Oil on one side and selected characteristics of Libyan economy on the other side (GDP, GDP/cap, Government Revenue, Government Expenditures, Total Value of Exports and Imports.

	Crude Oil Export Volume	Price of Crude Oil	Export Value of Crude Oil	Gross Domestic Product Value, current prices	Gross Domestic Product Value/Cap, current prices	General Government Revenue Value	General Government Total Expenditure Value	Total Export Value	Total Import Value
	(Million Barrels)	LYD/Barrel	Billions LYD	Billions LYD	LYD	Billions LYD	Billions LYD	Billions LYD	Billions LYD
2000	366.83	15.57	5.71	19.60	3747.28	8.18	5.42	6.25	2.57
2001	360.47	15.73	5.67	20.64	3871.69	7.89	7.88	6.55	3.55
2002	359.01	33.04	11.86	26.01	4786.90	12.85	10.97	13.03	11.38
2003	411.17	40.08	16.48	33.62	6067.14	16.61	14.48	17.22	11.37
2004	468.84	53.50	25.08	43.06	7617.02	23.27	18.25	23.31	13.94
2005	476.69	74.58	35.55	61.93	10731.59	37.41	17.99	38.44	17.69
2006	520.34	86.70	45.11	72.20	12249.41	45.46	22.49	49.87	20.73
2007	502.90	90.91	45.72	85.25	14153.41	53.09	28.73	59.44	25.72
2008	512.10	121.13	62.03	106.63	17334.58	72.90	42.71	76.05	31.82
2009	427.05	77.72	33.19	79.01	12614.72	41.79	36.85	46.93	33.93
2010	408.07	101.34	41.36	94.72	14851.52	61.50	45.21	62.51	38.87
2011	109.50	116.29	12.73	42.48	6748.05	21.35	24.17	20.20	14.32
2012	351.13	118.60	41.64	103.34	16119.17	44.71	54.71	65.61	22.71
2013	201.11	139.16	27.99	90.52	13863.84	55.78	60.67	53.96	38.34
Elasticity-Oil price				0.757741	0.663398	0.980599	0.935081	1.068292	1.043443
Elasticity-Oil export value				0.736093	0.668583	0.961486	0.776435	1.066052	0.958331
R2- Oil price				0.834327	0.799786	0.838694	0.871399	0.841388	0.844085
R2 -Oil export value				0.888165	0.916367	0.909576	0.677738	0.945162	0.803179
GEOMEAN – inter-annual growth rate	0.9548	1.184	1.130	1.125	1.106	1.159	1.204	1.180	1.231
Average deviation	85.495	33.174	14.22	27.452	4171.478	17.904	14.501	20.669	9.807
Average value	391.086	77.454	29.294	62.786	10339.74	35.914	27.895	38.5264	20.4956
Share of average deviation in total average value	21.86%	42.83%	48.54%	43.72%	40.34%	49.85%	51.99%	53.65%	47.85%

Source: WB, IMF, OPEC, Libyan government, Own estimations, Own calculations, 2014

Based on the above facts characterizing the dependence of Libyan economy on oil exports, it can be stated that all selected characteristics of GDP, GDP / capita, government revenues and expenditures, the total value of exports and imports are very closely linked to changes in the value of exports of oil and oil prices. In the years 2000 - 2013. Average value of index determination characterizing the relationship between the development of oil prices and the above characteristics of development of the Libyan economy averaged 0.8. The development of the Libyan economy then was also heavily dependent on the final value of realized exports. The value of index determination that characterizes the relationship between changes in the value of oil exports on the one hand and changes in the value of GDP, GDP / capita, government revenues and exports reached about 0.9. Only the value of imports, and in particular the value of government expenditures showed a relatively lower dependence on the performance of the realized oil exports (0.8 and 0.67). The high dependence of Libyan economy on the price of exported exported crude oil particularly on the final value of realized exports is very well observable through the measurement of the sensitivity of the monitored characteristics to change in the value of exported crude oil barrel, or to change in the value of realized export contracts linked to oil exports. Overall, the percentage change in the value of a barrel of oil, respectively, the resulting value of export contracts will cause a change in GDP of 0.75% and 0.73%. The degree of sensitivity of GDP/capita to changes in the development of oil prices and the value of the resulting contracts then is not as high as in the case of the development of the total value of GDP, but also not negligible (0.663% and 0.669% in relation to a one percent change in the value of oil prices and the value of oil contracts). This indicates a high degree of dependence between income on the one hand and the development of the oil economy on the other. Government revenues generally show extreme sensitivity to changes in oil prices and the value of export contracts. Percentage of sensitivity to the percentage change in the price of oil per barrel or resulting value of oil contracts reaches 0.98 or 0.96. Government expenditures are extremely dependent mainly on the change in the price of exported crude oil (the value of elasticity of about 0.93%), while showing significantly lower dependence on the change of the contracts (0.77%).

From this it can be inferred that, although correlation between government spending and oil economy is high - government spending shows a certain degree of autonomy (through the use of reserves and bond issues). Extremely high degree of sensitivity exists between the value of oil exports and their prices on the one hand and the development of Libya's total exports (1.068% and 1.066%). This testifies to the fact that the Libyan export grows and falls with the development of the oil economy. The high degree of sensitivity to change in oil exports also shows Libyan import which is funded mainly from the revenue from oil exports. Based on the above facts, it can only confirm the generally high dependence of Libyan economy on the oil industry and its ability to export oil and petroleum products. Value of oil exports, which constitute the vast majority of the country's income, a key source of formation of national GDP, per capita GDP growth and further represents and vital source of income for the government. Without oil revenues, the government budget and government spending would collapse extremely rapidly. The Libyan economy is also extremely dependent on foreign trade activities. However, these activities are in terms of exports extremely focused on export of mostly raw and unprocessed oil. As regards imports, Libya, due to the limited development of their own production capacity across a range of disciplines and then given the complete absence of certain types of production makes Libya extremely dependent on imports for the whole range of products (food, drugs, chemicals, industrial products, consumer technology etc.). These imports have to be carried out almost at any cost, because their lack could lead to a collapse of the economy. In this regard, it should be emphasized that without oil exports and income arising from them, the ever-increasing volume of imports could not be unified.

The results of the analysis also show a significant volatility of the monitored values of macroeconomic indicators. In principle, it is seen that the average value of the deviation is in case of monitored variables in range of 40-50%. Paradoxically, the most stable variable is then the volume of extracted oil, which oscillates in time on average around 20%. The above results can only confirm the fact that the development of the Libyan economy has extreme influence mainly on export of crude oil and on the price of realized oil contracts.

CHAPTER SIX

PRACTICAL FRAMEWORK AND MACROECONOMIC MODEL

6.1 Introduction

Various techniques were applied to enhance the research study and meet the objectives of the study. The general purpose of regression analysis is to study the relationship between oil export and Economic growth in Libya therefore, we using SAS® system for analysis of econometric data and testing the Hypothesis.

Following the below mentioned techniques we employed to achieve the goals of our thesis and tested the Hypotheses.

The simple linear equations were used to show relationship between oil export and economic growth. Data was mainly obtained from IMF.

Main Hypothesis: Libya's economy is mainly supported by oil rents and depending on the available crude oil deposits, the country has the capacity to sustain GDP growth, government expenditure and productivity growth. There exists a controversial empirical relationship between oil rents and economic development in Libya, and hence the need to initiate policy frameworks to sustain economic sustainability.

H1: There is a significant relationship between oil export and economic growth in the Libyan economy.

H2: The Libyan economy has become extremely dependent on oil exportation for much of its needed revenues.

H3: Any increase in the price of oil has always translated to positive growth in the Libyan economy.

H4: A rise in the world price of crude oil directly affects Libyan GDP positively.

H5: Libyan investments are anchored on oil revenues.

H6: Libyan trade and services are influenced by its oil revenues.

H7: Any increase in Libya's export will result in the government increasing its next budget. This will translate to an increased budget and expenditures in the many sectors of the economy such as social services.

6.2 Impact of Oil Export on Libyan Economic Growth:

6.2.1 Rates of Growth of Libyan Oil Exports

By the end of 1958s, after oil had been explored and marketed, the economic phase of Libya has drastically changed from one of the poorest economies to one of the richest countries (El azzabi, 2010). During 1963, for the very first time the Libyan economy had attained surplus in its stability of payments that reached up to LD35 million (Alfitouri, 2004). Then the national revenue flourished by 344 percent starting fromLD131 million during 1962 to LD789 million during 1968. It was due to the incessant increase of 835 percent in the oil exports during the same period (El azzabi, 2010).

During this time, the monarchy government, turned to utilize oil revenues as a machine for the economic growth. It supported capitalist philosophy that regulating the role of the government and boosting the private sector to grow both itself and the economy (Ghanem, 2009). For the minor size of the inland private sector, the majority of the growth projects were carried out by the foreign private sector (Alfourjani, 2005). Unluckily, very little is known about this phase mostly due to the deficiency of literature.

With the passing years, during 1960s, the oil sector started developing rapidly and become one of the dominated sectors of the economy. In Libya, the economic growth was ideal for the people working in the agriculture and the oil sectors. The cities located in the northern part of the country, mainly Tripoli and Binghazi, benefited more from the growth allocations plan than the rest part of the country (Ghanem, 2009).

However, economic progress was affected by the state ambiguity and insecurity. This continued to stall the governmental and economic evolution in Libya. The agenda to formulate a new constitution has been considerably deferred due to the political disparities, a disruption in the country's oil exports, and safety problems.

The interim government is concentrated on restoring safety and building the capability of public institutions to deliver basic imports and services. Oil revenues in the Libyan dinar were augmented by the huge deflation of the official exchange rate at the starting of 2002. Though, tax and customs revenues deteriorated, mostly as consequence of prevalent exceptions granted to public firms during 2002. Subsequently, entire revenues improved by only 2.5 percent of the GDP. The CPI dropped by 9.8 percent, driven mainly by growing competition resulting from the trade liberalization and exclusions from all the taxes and the customs duties allowed to public firms. During 2002, GDP stagnated, reflecting 7.6 percent deterioration in oil production, and almost 2.9 percent development in the non-oil sector. The exterior account shifted to a deficit for the first time since the year 1998 as import costs rose by around 40 percent to $7.4 billion, whereas export revenues fell by about 8percent, driven by waning in oil exports. Almost 75 percent of these imports are supported from the budget and the remaining imports are those of the public firms which were given foreign exchange at the pre-union official rate at the end of 2001, they were also exempted from the tax and the custom in 2002 (IMF, 2003).

The government intervention in the economy ensued in a continuous decline in the business climate, low financial growth, delicate macroeconomic conditions, and augmented susceptibility to exterior shocks (IMF, 2006). This led the Libyan régime to request the technical support from the WB or World Bank to improve and modernize its economy (IMF 2003). The employee from IMF mentioned that Libya requires strong and continuous economic progression to meet the requirements of its quickly growing labor force and a competent application of the state's resources. This can only be attained through the application of intensive market-oriented structural improvements that would boost the role of the private sector and stimulate economic diversification (IMF, 2006).

A strong oil-driven financial recovery during 2012 stalled in 2013 succeeding severe interferences in the oil sector in addition to the private (non-oil) activity persistent to be held back by the undefined economic forces and circumstances. Following 2011 battle, which led to financial contract by more than 60 percent due to big disruptions in oil production, 2012 led to a repetition of real GDP as oil production reimbursed to near pre-war levels (approximately 1.6 million

barrels/day). The government augmented expenditure on wages, subsidizations and transmissions to households, directing to a consumption boom. Investment spending, though, lingered stalled due to interruptions with the budget, organizational bottlenecks and disparities over how to progress with an enormous portfolio of projects contracted under Qaddafi. Recurrent strikes and obstructions by militias at oil amenities led to commotions in oil production beginning in July 2013, causing in a drop in oil exports and related government profits. The situation emphasized the susceptibility of the government and economy to the hassles of militias and fortified groups. Arms amnesties and efforts to dissolve militias have had small success, and Government ratified militias remain commanding. The commotion led the economy to deal, with development for 2013 anticipated at -2%, reflecting 11 % deterioration in the hydrocarbon production.

The hydrocarbon sector rules the Libyan economy. Oil and gas sector of Libya subjugates a vital position in the world energy poise on account of the size of the hydrocarbon stores, production, and possible capacity. With the recognized oil reserves of 48 billion barrels (2011), Libya accounts for 3.2 percent of entire world reserves— adequate to last for 85 years at present rates of production; its natural gas reserves are comparatively smaller, at 0.8 percent of the world's total. In relations of the domestic economy, the hydrocarbon sector symbolizes four-fifths of GDP. It produced almost 95 percent of the whole economic revenue and 98 percent of the export receipts during 2011-2012.

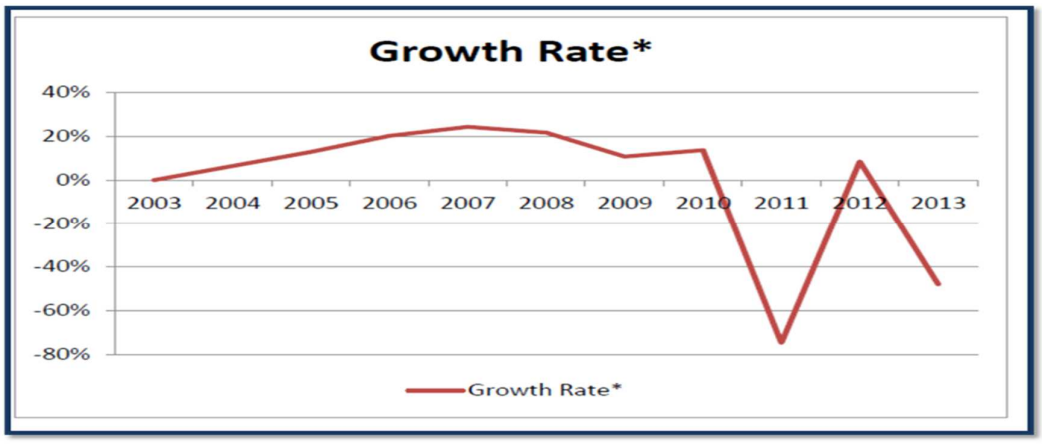
The Economy of Libya relies mainly on the revenues from the petroleum sector, which contributes basically all export wages and over half of GDP. These oil revenues and a little population have provided Libya the highest per capita GDP in Africa. After 2000, Libya documented promising growth rates with an expected 10.6% growth rate of GDP during 2010. This growth was interrupted by the civil war of Libya, which ensued in reduction of the economy by approximately 6.21% in 2011. At the end of the war the economy recovered by 10.45% in 2012.

Threats to the near-term provincial outlook are broadly composed and balanced. On the benefit, geopolitical shockwaves and supply commotions in the region may impulse oil prices higher. On the disadvantage, feebler global demand can put

downward pressure on the oil prices and development in oil exporters in the region. A constant deterioration in oil prices would leave several oil exporters in the region with economic deficits. Over the past few years, augmented expenditure has elevated financial break-even the oil prices – oil prices at which government funds are balanced – faster than the actual rising oil prices.

Total export and growth rate chart (Figure 6.1) show the individual scenario of exports of crude oil in every year until 2013 starting from 2003. From the beginning of 2003, the amount of total exports of oil is found to be gradually increased started from 432 to 536.8 millions barrel yearly. From the following year that means from 2008 a gradual decline of oil export is found, which sharply fall during 2010 and reached at lowest exports value which is found to be increased from the later phase and reached at highest during 2012. Parallel growth rate has been found in the linear upward trend until 2007 with gradual increase (from 0 to 24%). From the following year of 2008, curve has been found to be declined gradually along with sudden down fall (almost -78%) during the 2010-2012. During 2012, 8% increase is occurred, which again went under depression in the year 2013 (almost -48%).

Figure 6.1: Growth rate of export of crude oil (daily average of latest years 2003-2013)



Source: Oil and Gas Journal, 2013

6.2.2 Relationship between Exports and Economic Growth

Exports contribute to the economic development straightly (through the direct contributions towards GDP) and indirectly through the contributions to the GDP per

medium of spread (or even carry-over) impacts. Besides, the indirect contribution to growth contains Hirschman-type linkages and could broadly be deliberated as a series of multiplier-accelerator mechanisms (Hirschman, 1958). Moreover, it is also demanded that the variability of commodity costs has a significant effect on the economic growth (Love, 1986; Massel, 1990; Ghosh, and Ostry, 1994; Salvatore, 1998; and Cashin, and Mc Dermott, 2002).The anticipated relationship between the export growth and the GDP over time is crucial to the 'exports as an engine of growth' paradigm; hypothetically exports can contribute to the growth of GDP straightly and indirectly per medium of extent effects, which is expected to take time.

It is highly important to note even at this preliminary stage, that apart from the concept that the growth of the export segment and GDP are associated over the time (per medium of a series of multiplier-accelerator methods), the paradigm explains small or nothing about what span of time might really be involved, This limitation is evidently not restricted to the 'exports as an engine of growth' paradigm alone and seems to be very common to all financial theory assuming lagged time relationships between the variables, The question of defining time lags between the export growth and the economic growth must be dominant to econometric surveys of trade and growth. According to Metwally and Tamaschke (1980), this feature has in fact been miserably abandoned in the prevailing econometric literature in the area. Keeping this in mind the vital tool utilized in the investigation to follow, is the active (or lagged) regression relationship using annual data, which is the form usually taken by most of the significant available series. When primary inquiries recommended that the present period provided the most vital weight, geometrically decreasing weights were enacted from the presenter (that is a Koyck distributed lag scheme, Koyck, 1954). For the statistical reasons, discrete lags were utilized in other cases. The equations were calculated from the variables in normal logarithmic first difference form (i.e.: log eXt -log eXt-1), which is almost a percentage variation. There are a number of hypothetical reasons for this. First, as spread effects contain acceleration effects; appropriate description recommends that the equations insert some idea of change. Second, as we do not inevitably presume a constant effect on the budget over time of an export impetus of given strength (for example because of variation of the economy, import substitution and technological alteration) easy linear

relationships would appear to be incongruous (Metwally and Tamaschke (1980)). Therefore, normal log differences have been utilized in an effort to deal with these issues. The equations were verified for multi-co linearity along the lines recommended by Farrar and Glauber (2012) and provide no undue reason for concern. Review of the residuals in the series (that are exceptionally short to check the hypothesis of homoscedasticity among the residuals about the fixed equations), recommended that there is no reason for apprehension in this respect. Autocorrelation tests, utilizing Durbin "h" statistics, recommended by Durbin (1970) were not used in the small periods.

To check the relationship between GDP and Oil Export, first we need to check whether there is any relationship between them or not. So we need to test the last hypothesis:

Table (6.1) shows the econometric outcomes of the examinations into the relationship between the oil export growth and GDP (in recent prices) for the four eras that reveal variations in the oil prices. The following regression model was utilized;

$$\ln\left(Y_t / Y_{t-1}\right) = b_0 + b_1 \ln\left(X_t / X_{t-1}\right) + b_2 \ln\left(Y_{t-1} / Y_{t-2}\right) + ut$$

Y = *GDP*

X = *Oil exports.*

t- *Time period*

Table (6.1) Libyan Oil Exports and Gross Domestic Product (Current Price)

Period	N	b0	b1	b2	R2	F
1980-1990	11	0.005	0.136	0.111	0.536	8.079
		(0.630)	(3.811)*	(1.427)		
1991-2002	12	0.014	0.622	0.311	0.755	16.4
		(0.307)	(5.706)*	(1.681)		
2003-2009	7	0.039	0.641	0.149	0.987	26.03
		(2.084)**	(21.0)	(2.589)**		
2010-2013	4	-.174	0.721	0. 102	0.914	15.7
		(-1.81)	(3.903)*	(2.897)**		

Note: * represents 1 percent level of significance and ** represents 5 percent level of significance

Source: author calculations

The results of regression recommend that the existing period of export coefficient is highly significant in all four periods. In contrast of that, however, the lagged GDP variable (demonstrating all the lagged exports through the Koyck geometrically lessening weight supposition Koyck, 1954) is significant at the 5% level only in the phase that appreciated high oil prices (2010-1981 and 1999-2004). Being this part of the outcomes can be clarified as demonstrating the spread effects, the outcomes clearly suggest that the Libyan GDP has benefited from prospects generated by proliferation in oil exports. However the lagged impacts are balanced by the contributions of the present period, which could recommend that the investment chances caused are not entirely exploited.

Two vital points could be raised against the econometric outcomes in Table (6.1):

(i) These outcomes were calculated from data estimated at existing prices and therefore may show strong inflationary effects;

(ii) The outcome of the coefficients of the variable ln (Xt/Xt-1), may be an appearance of the simple statement that distributes are an element of GDP. To eliminate the inflationary impacts the correlation between oil export and GDP was re-valued in constant rates. As Metwally and Tamaschke (1980) discussed, that decreasing transfers by an index of

import fees and never by an index of export fees ought to be more suitable. Hence, both GDP and oil exports were flattened by the index of import prices. Provided that, proliferation in the value of exports comparative to that of imports (i.e. progress in the terms of trade) reveals a factual improvement to the economy.

The following paradigm was verified:

$$\mathbf{ln (Y- t / Y- t-1) = b0 + b1 ln (X- t / X- t-1) + b2 ln (Y- t-1 / Y- t-2) + ut}$$

Where:

Y- = GDP estimated at constant import rates (1980=100)

X- = Oil exports estimated at constant import rates (1980=100)

The econometric outcomes found utilizing this technique of decrease is revealed in Table 6.2. These outcomes follow partly with those in Table6.1 (where the variables are estimated at existing prices). The regression outcomes specify that the export coefficient is highly important in all the periods. In comparison with that, the lagged GDP variable was not significant at any of the periods. Hence, the progress in terms of trade, demonstrates that the oil sector in Libya is minor while valued at constant import costs and that extent impacts in this country rely more on export costs rather than on export amounts. It would be, of course, illogical to neglect the price effect of oil exports while the rest of the world is showing great anxiety about the nonstop rise in these costs and when a real export price increase (i.e. comparative to the expense of imports) signifies a growth in real income and hypothetically could produce its own arrangement of spread impacts. The Model was verified:

$$\mathbf{Ln(Y- t / Y- t-1) = b0 + b1 ln (X- t / X- t-1) + b2 ln (Y- t-1/Y- t-2) + et}$$

Y = GDP

X = Oil exports.

t- Time period

Table 6.2: Libyan Oil Exports and Gross Domestic Product (Deflated by import Price)

Period	N	b0	b1	b2	R2	F
1980-1990	11	0.361	0.393	0.429	0.531	10.0
		(1.901)**	(4.124)	(1.445)		
1991-2002	12	0.283	0.706	0.012	0.800	21.1
		(1.264)	(6.227)*	(0.071)		
2003-2009	7	0.188	0.560	0.256	0.821	17.0
		(0.662)	(4.994)*	(1.358)		
2010-2013	4	0.291	0.820	0.031	0.706	9.603
		(0.727)	(4.658)*	(0.377)		

Note: * represents 1 percent level of significance and ** represents 5 percent level of significance

Source: author calculations

To subdue the element impact, the influence of the oil (i.e. mining) sector from GDP has been omitted and the alterations in the production of the remaining sectors (i.e. GDP minus oil) were retreated on fluctuations in oil exports. To subdue both the element and the inflationary impacts (i.e. the rise in export which never represents a rise in actual incomes) the deflated value of entire non-oil production (i.e. the internal product of industries other than the mining) was retreated on the deflated cost of exports (utilizing an import price index with l980 =100). The subsequent paradigm was verified:

ln(Y- non-oil,t / Y- non-oil, t -1) = b0 +b1 ln (X- t/ X- t-1)+ b2 ln (Y- non-oil, t - 1/ Y- non-oil, t -2) + ut

Where,

Y- non-oil = (GDP – Oil) estimated at constant import prices,

X- = Oil exports estimated at constant import prices

The regression consequences are provided in the Table 6.3. These outcomes indicate that while both the element and the inflationary impacts are exempted there is no

indication of spread impacts of oil exports to the rest of the budget (non-Oil GDP).

Table 6.3: Libyan Oil Exports and the Non-0il GDP (Deflated by the Import Price)

Period	N	b0	b1	b2	R2	F
1980-1990	11	0.530	0.194	0.279	0.69	1.594
		(1.919)	(1.354)	(1.193)		
1991-2002	12	0.542	0.542	0.059	0.214	2.515
		(1.245)	(1.804)	(0.210)		
2003-2009	7	1.540	0.249	0.264	0.159	0.521
		(2.832)	(0.969)	(0.362)		
2010-2013	4	0.147	0.306	0.227	0.322	9.603
		(0.282)	(2.090)	(0.619)		

Note: * represents 1 percent level of significance and ** represents 5 percent level of significance

Source: author calculations

6.3. Impact of Oil export on trade in the Libyan economy:

The Libyan economy is described by high degree of interdependence with the rest of the world, predominantly in the field of trade interchange. As such, the country is heavily dependent on the exports of the crude oil, as the key source of foreign exchange rates (Wilkinson, B., 2002). Conversely, like the usual oil-rich countries of the Middle East and North Africa (MENA) region, Libya also has relied heavily on oil exports. With extensively fluctuating and usually decreasing the values of oil and profits during the last two periods, the country has since 1970s applied distinguished labors for gaining financial diversification. These efforts have directed to nonstop investment in the non-oil sectors, particularly in agriculture, engineering, and other sectors of the economy (USA Department of Commerce, 2009).Hence, the key objective of financial development plans in Libya is to diversify the indigenous budget and to find other sources of revenue rather than oil to gain such growth in the non-oil sector, capital goods imports and the raw materials may play a vital role in the financial development procedure, as a means of nourishing the country's financial development plans. Financial growth in oil-producing countries relies majorly on incomes from oil exports. Many researchers have studied the relation

between the oil exports and the growth in the members of the Organization of Petroleum Exporting Countries or OPEC. Metwally and Tamaschke (1980), analyzed the interaction between both the oil exports and the economic growth in eight members of OPEC such as Libya, Saudi Arabia, Kuwait, Algeria, Qatar, Iran, Iraq, and UAE, over the pass of 1960-1980. The experimental outcomes of the reinvestigation determined that the fluctuations in the oil exports appears to have anti-rival impact on the financial activity in small oil exporter such as Libya and proposed that there is a necessity for more information to evaluate investment ventures generated by a growth in oil exports. For such reason, this thesis tried to apply Libyan data to do this study.

Shojai (1984) attempted to find out the effect of oil affluence during the passé 1973 to 1979 on nominated OPEC Countries. Abdel-Rahman and Metwally (2009) studied the effect of oil boom on the same countries over the phase of 1970-82. The key verdicts of their investigation depict that the relationships between the exports and the GDP in addition with the relationship between exports and non-oil GDP are statistically significant. Nevertheless, their experimental outcomes never confirmed indication of spread effects, except for the industrial sector. Moreover, these assessments denote only to the period of growth in oil prices and never showed the effect of fluctuations in the oil prices. Yousefi (1994) examined the effect of fluctuations in oil exports on the economic development of OPEC countries over the phase of 1966-80. The key finding of the paradigm recommended that present period oil incomes never had an affirmative influence on the budget of some oil producers. It also showed that though income oil had an adverse effect on the non-oil sector, the lagged oil profits were more important in elucidating the variation in the non-oil sector. Additionally, this assessment shows that the short-run impact of oil revenue on growth of trade industries of some oil producers was very feeble. Though, this model did not illustrate the effect of the decline in the oil prices since the year 1982. The action of the import functions has been the issue of a number of pragmatic studies. One can mention the contributions of Hughes and Thirl wall (1979), Beenstock (1976),Khan and Ross (1975, 1977), Basu and McLeod (1991), Abbott and Seddinghi (2009), Gandolfo and Petit (1983), Khan and Knight (1988), Balassa (1978, 2009), Esfahani, (1991), Abeysinghe (2001) and Balaguer and

Cantavella-Jorda, (2004). Traditional analysis undertake that imports rely upon the expense of imports in indigenous domestic currency, the cost of domestically formed substitutes, as well as real revenue Murray and Ginman (1976), Khan and Ross (1975), (Houthakkar and Magee (1969), and Thorsby and Thorsby (1984)). However again these experimental analyses never showed how the variations in oil prices affected the import roles of the oil producers.

Metwally and Tamaschke (1980) have contended that in assessing the import-income relationship in the oil producers' one essential to take into account the actual gains from the trade that a country likes while its export values grow faster than its import costs. Hence, utilizing deflated revenue in guesstimate the import role might not be the most right arrangement in the case of these countries. Such argument would only be effective while the fluctuations in oil prices occur over the periods 2003-2009, 1980-1990 and 2010.

Table (6.4) Yearly Averages of Gross Domestic Product (1980-2013) along with Oil Exports:

Yearly Averages	First period 1980-1990	Second period 1991-2002	Third period 2003-2009	Fourth period 2010-2013
Oil Export Yearly(Million Barrels) early(million Barrels)	438.17	518.77	6 622.66	55 555.08
GDP Yearly (In Billion Local Currency) DP Yearly(in Billion Local Currency	32.94	33.69	40.77	43.40

Source: EIA, Independent statistics and analysis, U.S. Energy information and administration

Indicators of the table no (6.4) illustrate that the Libyan oil exports were extraordinarily advanced during four study periods, with the exception of the last phase of 2010-2013. In the second economic season average yearly oil exports is almost quantified by 80 million barrels which is 18% over the first phase, in the third period it is approximately quantified by 20% in comparison with the second phase. However in the fourth phase it gets reduced by 27% in comparison with the third period. This reduction is attributed to the fact that the Libyan economy was revealed to the imbalanced economic restraints phase which had a perfect effect on GDP which has concentrated by almost 14% in the fourth phase. While the gross indigenous product was augmented from about 32.94 billion dollars as the average

of the first period almost about 40.77 billion dollar in the third period, equaling to almost 25% more than it was in the initial period.

6.4 Export & Import of Goods and Services:

In this section we are going to discuss that how the effect of oil export impacts on the overall trade/business in Libyan. There are 2key indicators have been analyzed which have direct effect on trade - Export & Import. Statistical regression paradigms have been built to quantify the effect of oil export over Libyan Export and Import of Goods and the Services.

Table (6.5) Yearly Averages of the most important indicators related to Libyan foreign trade during the study period (1980-2013) along with Oil Exports:

Yearly Average	First Period 1980-1990	Second period 1991-2002	Third Period 2003-2009	Fourth Period 2010-2013
Oil Export Yearly (million Barrels)	438.17	518.77	622.66	555.08
Volume of Imports of goods(% change)	-1.17	3.70	10.99	11.41
Volume of export of goods and services(% change)	5.25	-1.59	6.28	29.68
Volume of Exports of goods (% change)	-0.79	1.75	6.83	9.22

Source: EIA, Independent statistics and analysis, U.S. Energy information

The growth and affluence of the exports sector, mostly attributed to development of the oil exports and remarkable increase in the oil prices, were reflected on the progress and growth of the Libyan indigenous product.

Hence, equation No (1) illustrates the relation between the export of goods and the oil exports, in order to demonstrate the extent of contribution of the oil exports to the total exports and thus their role, as an imperative sector in Libyan economy growth which contribute to the growth of sectors and other national deeds. In the first phase it was appeared that each growth of one million barrels in the oil exports shall end in the rise of the overall export of good and services by almost 0.05 units. The significance of those outcomes was statistically determined at 1% significance level. The value of the confirmation factors was quantified approximately 0.65. This points out that about 65% of the variations in the other exports denote to the changes in the oil exports and that about almost 35% of those variations refers to other factors have not been considered.

Y = -21.48+ 0.05 *X …… (1)

R-Square *0.65*

F Value *3.78*

Whereas:

Y is change in the percentage in export of goods considering 2010 as base.

X is the Libyan oil exports in million barrels.

Therefore, equation No (2) explains the relationship between imports of goods and the oil exports, for showing the extent of contribution of the oil exports to the overall imports and thus their role, as a vital sector in Libyan financial growth which contribute to growth of the sectors and other national activities. In the first period it was seemed that each growth of one million barrels in the oil exports shall result in increase in the overall import of good and services by 0.14 units. The value of the determination factors was amounted approximately 0.84. This points out that about 84% of the changes in the other exports refer to the changes in the oil exports and that about 16% of those changes refers to other factors have not been taken into consideration. The significance of those outcomes was statistically determined at 1% significance level as the F value is very high.

Y = -34.12+ 0.08*X …… (2)

F Value *10.57*

Whereas:

Y is the change in percentage in import of goods taking 2010 as base.

X is the Libyan oil exports in million barrels.

The linear equation shows the relationship between change in import and the level of oil exports.

6.4 Impact of Oil export on Libyan government budget and government expenditure:

Amidst great confusion and ambiguity in the Middle East, slight is truly heard about the promising economic fate for the Arab Spring countries. Conversely, Libya is an outlier in this regard. Looking at information presently available by the IMF, the Libyan economy is anticipated to develop by 20.2% during 2013 and 10.1% during 2014. Libya's meddle-term real GDP growth is supposed to be at 5% in 2018 Khalek (2013).

Needless to mention, these figures are very favorable. Skeptics may attribute this promising economic condition to Libya's great dependence on oil production. In fact, around 80% of government income today is collected from the sale of hydrocarbons in international marketplaces. Even prior to the revolution, Libya was capable to post remarkable growth rates benefiting from the growing and declining of global oil prices. However the variance today is the spending attitude of the Libyan government. This will spot a watershed in Libya's developing procedure in the decades to come.

In 2013, Tripoli proclaimed a budget of nearly US$51.2 billion with 31% going to public sector worker remunerations, 16% to grants and 28%to growth and reconstruction. In comparison with the pre-revolution budgets, the nature of government expenditure in Libya currently is bigger in size, much more development-oriented and under continuous public inspection.

In future, the Libyan government's overall spending attitude requires to be reconsidered. According to current IMF estimates, the country's excess in its balance of expenditures is expected to shrink from 25.8% during 2013 to 17.7% during 2014. In the middle term, Libya's balance of expenditures is predicted to be at minus 0.4% in the year 2018.This means that since Libya mainly relies on oil exports profits, the growth in domestic ingestion over the next five years will direct to larger imports which will subdue the positive impacts of oil revenue revenues on the country's balance of expenditures.

Moreover, as things stand, a 10 to 20% drop in international oil prices could extremely delay Libya's growth and reconstruction efforts. This reveals the weakness of Libya's present financial paradigm. Government-led growth expenditure based on oil income is much required in the short term for financial regeneration, job creation, housing and renovation. Conversely, in the middle to long term, severe efforts require to be made towards growing Libya's non-oil spreading sectors in addition to its indigenous non-oil sectors.

Indicators of the table no (6.6) below depicted the Libyan oil exports trend as well as Government's Overall Expenditure and Overall Investment. We are considering investment as Budget, since Budget reveals investment. Here we will analyze how the Libyan Oil Export impacts the Overall Government Spending as well as Budgets.

Table (6.6) Yearly Averages of the most significant indicators related to Libyan Spending and Investment/Budget during the study period (1980-2013) along with the Oil Exports:

Yearly Average	First Period 1980-1990	Second period 1991-2002	Third Period 2003-2009	Fourth Period 2010-2013
Oil Export Yearly (million Barrels)	438.17	518.77	622.66	555.08
Total expenditure(In Billion Local Currency)	0.24	6.00	25.93	46.19
Total investment (percentage of GDP)	24.74	22.87	32.52	24.35

Source: EIA, Independent statistics and analysis, U.S. Energy information and administration

The expenditure is illustrating normal growth over four study periods. It is obvious because the expenditure for any country always rises over time. In the second period Expenditure is almost 6 times to the first period, while in third period it came down to 4 times in comparison with the second period and in fourth period it is only doubled to the third period. Therefore it indicates that Libya had an influence on their growth of spending. Whereas for Investment or Budget, it is showing asymmetrical pattern. In Second Period it reduced but in third period it increased again in fourth period decreased. In fact this is a bit reflecting the type of Oil export, in third period oil export was maximum and in third period Investment is also maximum. In Fourth Period Oil Export falls down and Investment also falls down.

Therefore, equation No (3) illustrates the relation between the Government Spending and the oil exports, in order to depict the degree of contribution of the oil exports to the Government Expenditure and their role, as a significant sector in Libyan economy growth which contribute to the development of the sectors and other national deeds.

In the first period it was seemed that each growth of one million barrels in the oil exports shall cause an increase in the Government Outflow by 0.18 billion in the

local currencies. Though the value of the determination factors was amounted about 0.43 which points out that about 43% of the variations in expenditure refer to the fluctuations in the oil exports and that around 57% of those changes refers to other issues not taken into consideration. However this result is not highly significant at 1% confidence level as F value is remarkably very low. This is very usual fact as the spending always raises in any economy whatever the revenue they have through the exports or other sectors.

Y = -76.30 + 0.18 *X …… (3)

R-Square 0.43

F Value 1.56

Whereas:

Y is the estimated government budget or expenditure.

X is the value of oil export used to fiancé government budget

6.5 Impact of Oil export on Investment

The Investment or Budget is depicting irregular outline. In Second Period it is reduced but in third period it is augmented again in fourth period diminished. In fact this is bit reflecting the type of Oil export, in third period oil export was maximum and in third period Investment is also maximum in Fourth Period Oil.

Equation No (4) shows the relation between the overall Investment and government expenditure and the oil exports, for showing the extent of contribution of the oil exports to the entire Investment/Budget and thus their role, as an imperative sector in Libyan economy evolution which contribute to the development of the sectors and other national actions. In the first period it was seemed that each rise of one million barrels in the oil exports shall end in increase in the total Investment or Budget by almost 0.04 units. The value of the confirmation factors was quantified approximately 0.51. Thus points out that almost about 51% of the changes in the overall Investment or Budget refer to the variations in the oil exports and that about 49% of those changes refers to other aspects not taken into consideration. Moreover the significance of those outcomes was statistically determined at 1% significance level.

Y = 4.68+ 0.04*X …… (4)

R-Square 0.51

F Value 2.05

Whereas:

Y is the estimated value of investments;

X is change in oil export.

In terms of the quality of the budget and general financial management, prior to the conflict, Libya implemented a number of reforms through the confederacy of the existing and investment budgets, along with some improvements in budget categorization and the streamlining of government objects 'bank accounts. Even with these deviations however, the framework leading the state budget remained burdensome. Libya's new government has yet to generate a public budget, though provided its aim to disruption with the earlier government's policies it is anticipated that they will concentrate on improving the culpability and performance of the government management, including public economic management.

CHAPTER SEVEN

CONCLUSION AND RECOMMENDATION

7.1 Conclusion

This study has focused upon the role of oil export and it is effect on economic growth in Libya. The study have conclusively answered the objectives of the study. It can be concluded that oil industry has an imperatively significant role in the Libya economy. Its economy entirely relies on this sector. Oil industry is playing a significant part in progress of the nation. It is the basic revenue source of Libya. **The main conclusion point are summarized as a following:**

1- The GDP of Libya has greatly a positive improved growth owing to the opportunities associated with the increase in oil exports. However, the impact of these opportunities have been delayed by existing period contributions hence it could be argued that the investment openings are not being utterly utilized and controlled.

2- There is existing significant relationship between oil exports and GDP. Nonetheless, it is significant to realize that for improvements to be relayed in terms of trade then the export coefficient need to be significantly high in all periods. Alternatively, the lagged GDP variable presented in all the lagged exports through the Koyck geometrically decreasing weight assumption in this context was not significant in any of the period hence suggesting a short fall of investment opportunities throughout all the periods.

3- It is obvious that there is significant relationship between oil export and economic growth as can be seen from the result obtained and the variables respectively.

4- Subsequently the price of oil was noted to have a substantial effect on the Libyan export revenues.

5- The growth of Gross Fixed Capital Formation in the Libyan economy was noted to be significantly impacted by the fluctuations in oil revenue. Investment was noted to be adversely affected by the downturn in oil exports.

6- The oil slump in 1982 completely upset the import-income relationship in the Libyan economy due to the reduction in oil revenues. This took a toll on the established development in the boom years of 1974-1981. The Libyan income-import relationship has however improved since 1999 when the rise in oil prices are increasing.

7- The reduction in oil revenues of the Libyan economy following the oil slump in 1982 completely upset the import-income relationship which was developed during the boom years 1974-1981.The rise in oil prices since 1999 has improved the Libyan income-import relationship.

8- The decrease in oil prices yielded to a decrease in the proportion of Libyan exports which was relative to the proportion in merchandise exports and the GDP. Further the decrease on oil prices yielded to an increase in ratio of the imports to exports in the country.

9- Changes in the world prices of oil has led to the subsequent sharp fluctuation of the Libya ratio of trade.

10- Libyan oil exports are strongly determined by the changes in OPEC share in world oil supply. However there is no significant effect between exports and imports precisely because Libya imports to world incomes are fairly marginal.

11- The development of key macroeconomic variables in the Libyan economy has been substantially affected by the oil sector.

12- The impact of oil export on government expenditure and budget has majorly accrued in favor of the government hence its ability to expand on both

development (investment expenditure) and administrative (consumption) initiatives. Thus, oil exports have led to a subsequent increase in demand for both tradable and non-tradable goods.

13- The increased government spending on both consumption and investment in the domestic economy was as a result of an increase in oil exports.

From the above, the study has made very important conclusions regarding the Libyan economy. The results of the study have confirmed the initial hypothesis undertaken at the start which are:

Main Hypothesis: Libya's economy is mainly supported by oil rents and dependent on the available crude oil deposits, the country has the capacity to sustain GDP growth, government expenditure and productivity growth. There exists a controversial empirical relationship between oil rents and economic development in Libya, and hence the need to initiate policy frameworks to sustain economic sustainability.

H1: There is a significant relationship between oil exports and economic growth on the Libyan economy.

H2: An increase in oil exports will have a positive impact on GDP.

H3: The Libyan economy has become extremely dependent on oil revenue.

H4: Any increase in the price of oil has always translated to positive growth on the Libyan economy.

H5: Libyan investments are anchored on oil revenues.

H6: Libyan trade are influenced by its oil revenues.

H7: Any increase in Libya's oil export will result in the government increasing its budget. This will translate in increasing the expenditures in many sectors of the economy.

Further, it is clear that the reliance on oil as the main export product could hurt the Libyan economy in the long run. Apart from the Petroleum and mining sector, all other sectors in the Libyan economy have been neglected even as the economy has continued to gain from oil exports. From the study it can be deducted that there is clear relationship between Libyan GDP and oil exports. Any fluctuations in oil exports will have an impact on the Libyan economy. A rise in exports will result in an increase in Libyan GDP while a drop in oil exports will negatively hurt the GDP.

The political upheaval of 2011 clearly highlighted the implications of overdependence on oil for economic growth. The disturbances created numerous challenges for the oil-producing country. As a result of the disturbances, Libya halted the production and export of oil products and crude oil. This situation worsened further when the United Nations froze Libya's foreign assets. This impeded liquidity thereby leading to inflation which reached a high of 29.7%. In a nutshell, the political upheaval of 2011 reduced the country's gross domestic product by an estimated 60%. The economic fortunes of Libya depend extensively on the country's continued recovery of the oil sector.

From the research it can be inferred that, although correlation between government spending and oil economy is high - government spending shows a certain degree of autonomy (through the use of reserves and bond issues). Extremely high degree of sensitivity exists between the value of oil exports and their prices on the one hand and the development of Libya's total exports (1.068% and 1.066%). This testifies to the fact that the Libyan export grows and falls with the development of the oil economy. The high degree of sensitivity to change in oil exports also shows Libyan import which is funded mainly from the revenue from oil exports. Based on the above facts, it can only confirm the generally high dependence of Libyan economy on the oil industry and its ability to export oil and petroleum products. Value of oil exports, which constitute the vast majority of the country's income, a key source of formation of national GDP, per capita GDP growth and further represents and vital source of income for the government. Without oil revenues, the government budget and government spending would collapse extremely rapidly. The Libyan economy is also extremely dependent on foreign trade activities. However, these activities are in terms of exports extremely focused on export of mostly raw and unprocessed oil.

As regards imports, Libya, due to the limited development of their own production capacity across a range of disciplines and then given the complete absence of certain types of production makes Libya extremely dependent on imports for the whole range of products (food, drugs, chemicals, industrial products, consumer technology etc.). These imports have to be carried out almost at any cost, because their lack could lead to a collapse of the economy. In this regard, it should be emphasized that without oil exports and income arising from them, the ever-increasing volume of imports could not be unified.

The results of the analysis also show a significant volatility of the monitored values of macroeconomic indicators. In principle, it is seen that the average value of the deviation is in case of monitored variables in range of 40-50%. Paradoxically, the most stable variable is then the volume of extracted oil, which oscillates in time on average around 20%. The above results can only confirm the fact that the development of the Libyan economy has extreme influence mainly on export of crude oil and on the price of realized oil contracts.

7.2 Problems facing the Libyan economy

There is no doubt that the 2011 civil war will have a negative impact on Libyan economy, at least in the short term. Given that the Libyan economy has relied on oil exports for the last four decades, the interruption of oil exports during the 2011 a more detrimental effect on the economy than it should ordinary have. During the civil war that saw the ouster of strongman Muammar Gaddafi, foreign oil companies abandoned their mining activities as they sought to protect their staff. The facilities were also destroyed which slowed the process of returning to normalcy. The country's GDP reduced significantly in 2011 as a result of lost revenue during the civil war. Petroleum as a natural resource that is exhaustible, this means that the long term sustenance of petroleum as the single export commodity could be in jeopardy. The developments being made in technology could see the world move away from reliance on petroleum as a source of energy and this would lead to the collapse of the Libyan economy.

Economic analysts have argued that the over reliance of the Libyan economy is a major problem that could have a negative impact in the long term. Oil exports

largely account for most of the GDP. Fortunately, for the country, oil prices have remained high in the last two decades which has continued to favor the country considering it has a very small population. While Libya may appear to be doing well, the truth of the matter is that this wealth is a fallacy. The country has a very high unemployment rate and there is little or no diversification in the Libyan economy. The country imports nearly all that they require and this has lowered the standards of living in Libya. In the event that the oil exports are interrupted of they are faced with a decline in prices in the international market, Libya's economy would be hurt terribly considering they have not diversified in to any other economic activities. Over the last four decades, industries that had hitherto been a source of support for the Libyan economy have declined significantly. The agricultural and fishing industries had been major sources of revenue as well as employment. However, these industries have continued to decline as the country has over relied on the production and mining of oil.

Prior to the 2011 civil war and subsequently ouster of the Gaddafi regime, the economy attracted lesser number investors owing to the high level of government control. However, after the civil war, the Libyan economy has continued to suffer- this time from the lack of government control. The Libyan government is yet to fully exercise control on the economy. The business environment in some places is very hostile for investment as there is little or no government control. The threat of political instability remains very real and this has tended to turn away potential investors. The Libyan economy faces the challenge of a very large informal sector which accounts for about a third of the Libyan economy (Otman and Karlberg, 2007).The informal sectors has particularly flourished in the wake of the 2011 civil war.

The 2011 civil war resulted in massive destruction and retarded the economic growth. The exit of most expatriates who fled back to their mother lands, country in fear of getting caught in the cross fire had a serious impact to the economy. It does not help maters considering that the 2011 civil war was in some cases characterized by xenophobic attacks especially for Africans. The government has also changed the immigration policy with expatriates now being required to acquire a working visa. This is a major loss for the Libyan economy considering that the Libyan economy

has a shortage of skilled workers who have previously been imported to work in the oil mining and manufacturing industries. The continued absence of foreign workers could substantially reduce oil production which would in turn negatively affect the revenue gained from oil exports.

The financial sector which would be an important industry in helping the country diversify remains weak and is in need of reforms. Without a strong finance sector, the Libyan economy cannot diversify. The banking sector is still largely dominated by the government. Despite the small degree of privatization that has occurred with the introduction of government reforms, there is still a lot that needs to be done so as to allow more privatization and foreign participation in the banking sector. The Gaddafi government did little or nothing in the years that it was in power to help improve access to private financial services. If anything, the structural framework introduced by the Gadhafi regime appeared to have helped stifle access to private financial services. Special Credit Institutions (SCIs) provide zero rated financing which unfairly edges out commercial banks (Ali and Harvie, 2011). The Gaddafi regime also used lending as a political tool where only those with the right connections could access loans. This culture resulted in most of the population resorting to the informal sector where they get financial and banking services. Unless this situation is corrected early in the day, it will definitely have a negative impact on the long term economic growth of the country.

7.3. Recommendations

There is a need for economic diversification in Libya so that the economy does not just depend on oil exports. One area that they could consider is industrialization. The country has the energy to become an industrialized nation. While as the market in Libya may not be large enough, there are major markets that they could utilize both in the Arab world as well as in Sub Saharan countries.

The manufacturing industry in Libya is in its nascent form and it should be expanded to serve as a long term source of revenue in the long run. This will not

only help sustain the economy by providing alternative revenue but it will help reduce the unemployment in the country as well as reduce dependence on imports.

The government should embark on reforms that will change the economic structure in Libya. There is a need for government to exercise less control on the economy and should ensure that the political climate is conducive for investment both by Libyans and foreign investors. The banking and financial services sector will need to be reformed to allow for more liberalization and encourage more Libyans to use formal financial services.

As the new regime takes leadership, it is important that they embark on a process of opening up the government and the budget making process. Part of the reason with the Libyan economy is that the budget making process which guides public expenditure was not open and was largely done to suit the interest of the top political leadership as opposed to enhancing growth of the overall economy.

The study has also shown that the population in Libya is too small to sustain a market for an industrialized economy. It is recommended that the country embraces integration with countries in the Arab League and in the Sub Sahara Africa with the intention of creating a market for their products in the event that the economy is industrialized. It has also been shown that the Libyan population does not provide adequate human resource that can help build the economy in the long run. In this regard, it is important that the country adopts friendly immigration policies that will help attract foreign human resource.

Political stability is a key factor in enhancing economic growth. The effects of the 2011 civil war are yet to be completely resolved and this has continued to hurt the Libyan economy. Moving forward, the government of Libya should provide security and stability for the investors. The government should ensure they have control in areas where rebels still exercise some control. More than that, the government should exercise reasonable control and should not hurt investors with punitive licenses as the case has been in the past.

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6.4 Appendix:

For segment 5-2 & 5-3, Regression Model has been built using SAS software, SAS is Statistical Analytical Software used for statistical data analysis.

Regression Equation (1), Page No – 20:

Code to run Regression Model 1, to build regression line of Export of Goods over Oil Export:

```
proc reg data=LibyanData;
model ExportOfGoods= OilExport;
run;
```

SAS Output:

The SAS System 03:49 Wednesday, February 12, 2014 1

The REGRESION Procedure
Dependent Variable: Export of Goods
Independent Variable: Export of Oil

Number of Observations Read 4
Number of Observations Used 4

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	41.21324	41.21324	3.78	0.1912
Error	2	21.79564	10.89782		
Corrected Total	3	63.00888			

Root MSE	3.30118	R-Square	0.6541
Dependent Mean	4.25250	Adj R-Sq	0.4811
Coeff Var	77.62926		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	-21.48468	13.33718	-1.61	0.2485
oilexport	1	0.04823	0.02480	1.94	0.1912

Regression Equation (2), Page No – 21:
Code to run Regression Model 2, to build regression line of Import of Goods over Oil Export:
proc reg data=LibyanData;
Model Import Of Goods= Oil Export;
Run

The SAS System 04:01 Wednesday, February 12, 2014 1

The REGRESION Procedure
Dependent Variable: Import of Goods
Independent Variable: Export of Oil

Number of Observations Read 4
Number of Observations Used 4

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	100.61367	100.61367	10.57	0.0830
Error	2	19.03323	9.51661		
Corrected Total	3	119.64690			

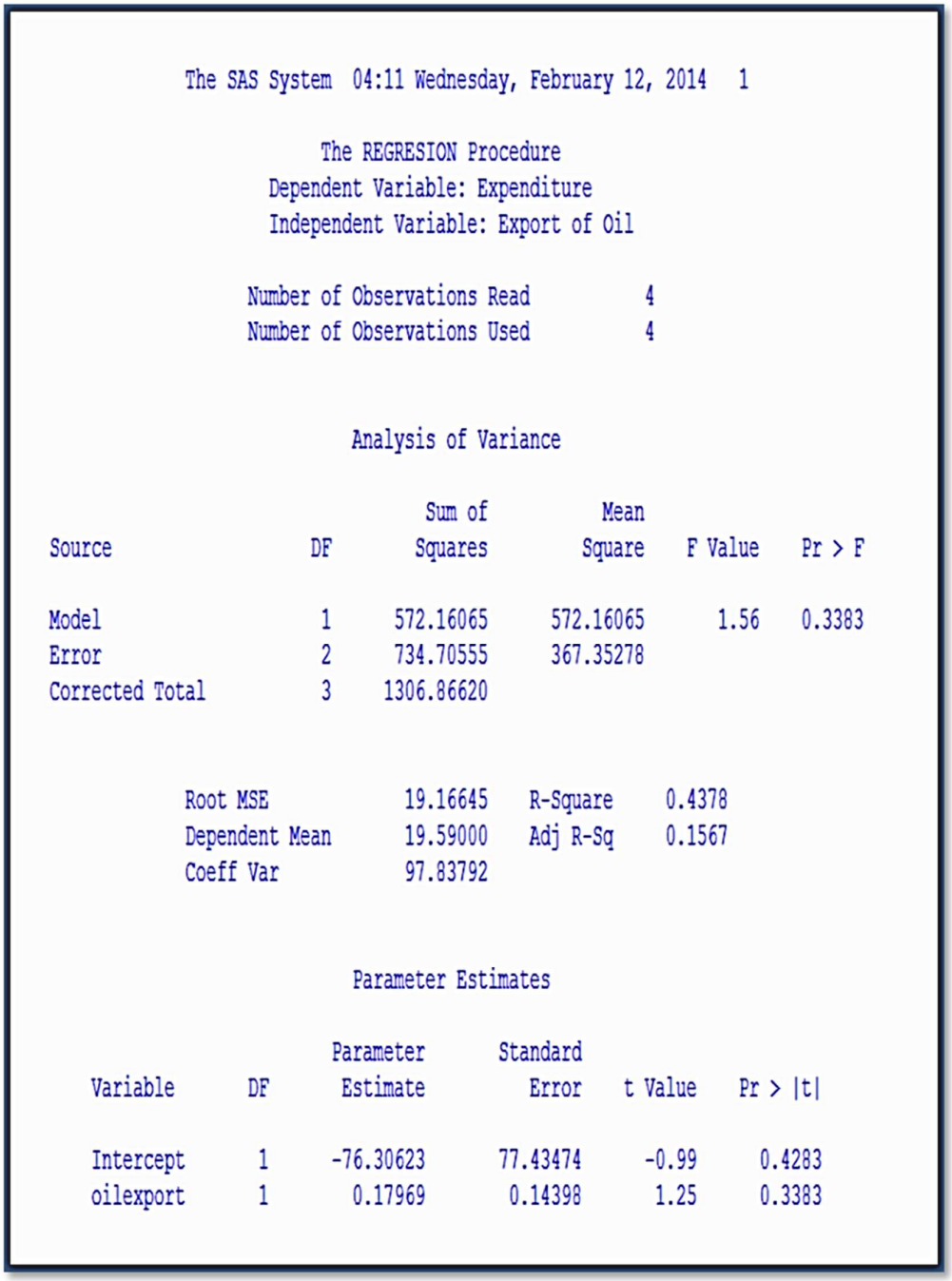
Root MSE	3.08490	R-Square	0.8409
Dependent Mean	6.08500	Adj R-Sq	0.7614
Coeff Var	50.69681		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	-34.12842	12.46337	-2.74	0.1115
oilexport	1	0.07535	0.02317	3.25	0.0830

Regression Equation (3), Page No – 22:
Code to run Regression Model 3, to build regression line of Libyan Govt. Expenditure over Oil Export:

```
proc reg data = LibyanData;
Model Expenditure = Oil Export;
        run;
```



The SAS System 04:11 Wednesday, February 12, 2014 1

The REGRESION Procedure
Dependent Variable: Expenditure
Independent Variable: Export of Oil

Number of Observations Read 4
Number of Observations Used 4

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	572.16065	572.16065	1.56	0.3383
Error	2	734.70555	367.35278		
Corrected Total	3	1306.86620			

Root MSE	19.16645	R-Square	0.4378
Dependent Mean	19.59000	Adj R-Sq	0.1567
Coeff Var	97.83792		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	-76.30623	77.43474	-0.99	0.4283
oilexport	1	0.17969	0.14398	1.25	0.3383

Regression Equation (4), Page No – 23:
Code to run Regression Model 3, to build regression line of Libyan Govt. Investment over Oil Export: 42

```
proc reg data = Libyan Data;
Model Investment= Oil Export;
        run;
```

The SAS System 04:20 Wednesday, February 12, 2014 1

The REGRESION Procedure
Dependent Variable: Investment
Independent Variable: Export of Oil

Number of Observations Read 4
Number of Observations Used 4

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	28.59716	28.59716	2.05	0.2889
Error	2	27.96264	13.98132		
Corrected Total	3	56.55980			

Root MSE	3.73916	R-Square	0.5056
Dependent Mean	26.12000	Adj R-Sq	0.2584
Coeff Var	14.31531		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	4.68102	15.10665	0.31	0.7860
oilexport	1	0.04017	0.02809	1.43	0.2889